

DRAFT REPORT TO TEXAS EMERGENCY SERVICES RETIREMENT SYSTEM, Section 802.109 Texas Government Code

Presented by Jonathan Breth of AndCo Consulting (AndCo)

May 2020

On December 10, 2019, the State Board of Trustees for the Texas Emergency Services Retirement System (System) voted to authorize its investment consultant, AndCo Consulting, to conduct an evaluation of the institutional investment practices and performance of the System and to make recommendations for improving the retirement system's investment policies, procedures, and practices. The Board also delegated authority to its Investment Committee to oversee the project and to submit the final report to the leadership and the State Pension Review Board by May 1, 2020, as required by Texas Government Code §802.109.

The Board selected its investment consultant, AndCo Consulting, based upon the recommendation by the System Executive Director and under the authority of Texas Government Code §802.109(c) which enables a public retirement system to select a firm with which it has an existing relationship as long as the firm does not directly or indirectly manage investments of the retirement system.

The Board hired AndCo in January 2017 to serve as the System's investment consultant after a nation-wide competitive search. In its role as investment consultant, AndCo has an advisory relationship with the Board and does not have any direct or indirect authority over the management of retirement system assets. All investment decisions are made by the Board and executed by the Executive Director.

AndCo is an independent, employee owned and managed institutional investment consulting firm that advises over 690 institutional clients with approximately \$100 billion of assets under advisement, as of December 31, 2019, in over 31 states, the District of Columbia, Canada and Bermuda. Our mission is to represent the sole interest of our clients by redefining independence. Our independent structure benefits our clients as it helps enable our consultants to minimize conflicts of interest and remain objective. We believe this can help lead to better overall results.

AndCo has provided independent investment advisory services since our firm's inception in 2000. Institutional consulting is our only line of business. We receive 100% of our revenue from our clients for providing investment consulting services. AndCo has no parent company, affiliated business partners or joint ventures. AndCo is a limited liability company and taxed as a partnership. We provide investment consulting services for defined benefit, defined contribution, deferred compensation, non-qualified, other post-employment benefits (OPEB) and voluntary employee beneficiary association (VEBA) benefit plans, as well as endowments and foundations.

AndCo seeks to avoid conflicts of interest.

- We accept no form of compensation other than the direct hard dollar fees we collect from our clients.
- We do not pay any referral or solicitation fees.
- We do not recommend any WRAP programs.
- We do not participate in any soft dollar arrangements.

Our team of 92 professionals consists of some of the top talent from a variety of educational and financial industry backgrounds and features 34 dedicated consultants who average over 20 years of experience. AndCo's professional team holds the following credentials:

- 24 CFA® Charterholders
- 7 Certified Plan Fiduciary Advisor (CPFA) Designees
- 6 Chartered Alternative Investment Analysts (CAIA) Members
- 5 Certified Investment Performance Measurement (CIPM) Certificants
- 4 Certified Investment management Analyst (CIMA®) Designees
- 39 Advanced Degrees

AndCo's headquarters is located in Orlando, FL. We have satellite offices in Chicago, IL; Cleveland, OH; Detroit, MI; Reno, NV; Pittsburgh, PA and Dallas, TX. We also have consultants located in Atlanta, GA; Buffalo, NY; Charlotte, NC; Los Angeles, CA; Louisville, KY; Milwaukee, WI and Tulsa, OK.

*Significant Outcomes of the Report:*

*AndCo has no recommended changes for the System. AndCo works proactively as the System's consultant to proactively review the investment portfolio and investment policy and makes recommendations on an ongoing basis. It is our belief that not proactively making recommendations for changes to our clients is an indication that we are not fulfilling our role as a fiduciary to the System. The System is actively engaging outside experts to provide legal advice and guidance in areas of investments and actuarial science. These experts are actively serving similar clients in the state of Texas and operate as fiduciaries to the System. The System has demonstrated their willingness to listen and follow the guidance of their outside professionals and there is no evidence of this changing in the future.*

*AndCo does recommend that the System maintain its robust processes to both review the current investment portfolio while also seeking to identify new investments that can improve the System's long term expected risk and return while maintaining liquidity to meet its benefit obligations.*

*Since AndCo was engaged in 2017 the System has undergone multiple allocation studies and an asset liability study. The results of these activities have been multiple revisions to the System's investment policy statement, several investment managers changes, and the addition of several new asset classes. The changes implemented by the System have resulted in improved overall investment performance since 2017.*

**(1) Provide 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.**

The Texas Emergency Services Retirement System ("System") has an investment policy statement ("IPS") in place. The IPS outlines the objectives and risk tolerance of the System as well as the various management and administration responsibilities related to the management of the System's investment portfolio. The IPS defines that the Board of Trustees ("Board") is responsible for making decisions regarding the System's investment portfolio. The IPS also identifies and defines the roles of the Investment Committee which is comprised of three board members selected by the board chairman. All recommendations for actions in the investment portfolio are reported to and voted on by the full Board.

The Board has hired an outside investment consultant to assist the Board and the consultant's responsibilities are clearly laid out in the IPS as are the roles of investment managers hired by the board. The investment consultant is hired to assist the investment committee and board in

making decisions regarding the System's IPS, strategic asset allocation, manager selection, ongoing manager evaluation, and IPS compliance monitoring. While the above are monitored quarterly, an asset allocation study is reviewed in alternate years. An analysis of the IPS's key elements are outlined in the table below:

Scope & purpose	The purpose, asset base and organizational structure of the System's investment portfolio are clearly defined.
Governance structure	Roles and responsibilities for decision making, communication requirements, monitoring oversight, applicable law and future IPS modifications are clearly defined.
Investment, return, and risk objectives	Return objectives, risk tolerance, time horizon, asset allocation targets, investment guidelines, and other relevant portfolio considerations are clearly defined.
Risk management	Performance measurement standards, metrics for portfolio and investment manager evaluation, and compliance requirements are clearly defined.

The Board reviews the System's IPS on a quarterly basis. The last revision took place in August of 2018 where changes were implemented to reflect the addition of a new asset class within the overall asset allocation. Changes to the IPS are expected in 2020 as a result of the asset liability study conducted by the System's investment consultant in 2019. The Board monitors compliance to the System's current IPS during each quarterly performance review with the investment consultant.

We analyzed the System's IPS and the Board's compliance with the IPS. AndCo, as an independent, professional investment consulting firm, has determined that the System's IPS, and the Board's compliance with the IPS, is appropriate and comparable the structure of an effective investment policy statement as laid out by the CFA Institute (*ELEMENTS OF AN INVESTMENT POLICY STATEMENT FOR INSTITUTIONAL INVESTORS*, Copyright 2010 by the CFA Institute).

AndCo recommends the System maintain its ongoing review of the investment policy statement. We feel that including the policy statement in each quarter's board packet for review is a strong practice and should be continued. AndCo recommends that the System continue to track the changes to the investment policy and report them in a clear and transparent manner.

## **(2) Provide a review of the retirement system's investment asset allocation, including**

### **(A) Review of the System's process for determining target allocations;**

The System's process for determining asset allocation targets is executed and implemented through strategic asset allocation studies conducted by the System's investment consultant. Each strategic asset allocation study uses a combination of 10- to 15-year forward-looking asset class return, risk and correlation assumptions, historical asset class return and risk data, and a long-term (50+ years) building block return methodology to determine a target allocation that the Board believes will have the highest probability of achieving the System's return objectives within the risk tolerance defined in the IPS. The specific asset classes included in each strategic asset allocation study will include both asset classes currently in the System's portfolio as well as other asset classes that may be suitable for inclusion.

In addition to return objectives and risk-tolerance contained in the strategic asset allocation study, the System also considers its ongoing liquidity needs and the maintenance of an appropriate level of diversification in the portfolio when determining the appropriate asset allocation targets for the System. The last strategic allocation study for the System was conducted in March of 2017 at the outset of the relationship with the System's current consultant, AndCo. Changes were implemented during 2017 and 2018 as a result of this study. AndCo completed an asset liability study in the fourth quarter of 2019 which will lead to further allocation changes in 2020. The System's last asset liability study was conducted by the former consultant in mid-2016.

AndCo works directly with the System's Actuary and Trustees to incorporate the System's specific liability circumstances and projections to review the potential impacts of varying investment asset allocation policies on the key actuarial and liability metrics. For public pension funds, asset/liability studies are a critical tool to examine how well alternative investment strategies (differing asset allocations) impact the key long-term actuarial circumstances, including funded status and contribution requirements. As public pension funds value their liabilities using a static discount rate that represents an expectation of the System's long-term investment return, this assumed rate of return, along with specific cash flow, and liquidity circumstances drives the formulation of an appropriate asset allocation policy.

Asset/liability studies are the only standard analysis that evaluate several a Plan's key financial drivers including the Investment Policy, Contribution Policy and Benefit Policy. Asset/Liability studies for public funds help determine the appropriate risk and return levels the Plan should seek when setting asset allocation targets. Stress tests can also be reviewed with asset/liability studies by showing what can potentially happen to funding levels and contribution rates if expected rates of return are not met. You also have the ability to stress test the portfolio and review outcomes based on meaningful experience changes with contribution policies or benefit levels. Finally, you can run detailed liquidity and cash flow analysis that will hopefully result in better decision making surrounding the strategic asset allocation of the portfolio.

We believe a robust asset/liability study helps the consultant and Board review asset allocation mixes to determine those allocation strategies which could potentially best serve to protect or increase funding levels, while providing adequate liquidity for benefit payments and minimizing associated risks. AndCo believes that through a comprehensive discussion over the asset/liability study results clients can have a clearer understanding of practical plan investment expectations.

A comparison of the System's asset allocation vs public fund peers can be found in Appendix A of this report. The allocation table reflects that the System's overall asset allocations are in line with public fund peers. The only area that was not represented in the asset allocation at 8/31/19 was international fixed income. Exposure to this area was added in 2020.

AndCo recommends that the System maintain its long-term asset allocation structure and tolerance ranges. To this point the System has been responsive when presented with recommendations for expanding the asset classes in use within the portfolio and AndCo recommends the System continue the process of active review. Asset allocation studies and asset liability studies are being developed and reviewed every three to five years which is in line with what AndCo views as best practice in the industry and across its client base.

**(B) Review the expected risk and expected rate of return, categorized by asset class;**

The investment consultant utilizes the 10- to 15-year forward-looking asset class return and risk assumptions produced by a third-party provider, JP Morgan. These 10- to 15-year

assumptions are updated annually and have been consistently published for use by asset allocators for 24-years. The investment consultant also maintains an internally developed, stable, long-term (50+ years) building block return methodology for supplemental, long-term asset return assessments. Current year return and risk expectations for each IPS target asset class are detailed in the table below:

Asset Class	10- to 15-year Expected Arithmetic Return*	10- to 15-year Expected Annualized Risk*	Building Block Return Assumption
Large Cap Equity	6.55%	14.34%	10.00%
Mid Cap Equity	7.12%	16.30%	10.00%
Small Cap Equity	8.12%	18.95%	10.00%
Broad International Equity	9.17%	17.45%	11.00%
SC International Equity	9.17%	17.45%	11.00%
Emerging Market Equity	11.15%	21.12%	11.00%
US Core Fixed Income	3.16%	3.42%	5.00%
Core Real Estate	6.37%	11.07%	7.00%
MLP	5.93%	14.59%	10.00%
Multi-Asset	5.66%	8.16%	7.50%

\* Source is the 2020 JP Morgan Long-term capital market assumptions

It is important to note that expected returns do not reflect the effect of active management or contain an expectation of active manager alpha. Projections assume the underlying asset class returns can be achieved net of fees. Finally, where direct asset class expectations are not available for named IPS target asset classes, these allocations are proxied to a similar asset class or combination of asset classes that have assumptions.

The board is currently evaluating the addition of global infrastructure and non-core fixed income as a result of an asset liability study performed in 2019. The System added both global infrastructure and non-core fixed income to its asset allocation structure in 2020.

From the study it has been recommended that the board eliminate the allocation to MLPs going forward, this was completed in 2020.

AndCo recommends that the board and its investment committee continue regular asset allocation reviews with its investment consultant. AndCo also recommends that the board and investment committee maintain its policy of educating themselves on new asset classes that could be beneficial to the investment portfolio.

**(C) Review the appropriateness of selection and valuation methodologies of alternative and illiquid assets; and**

The Board relies on the System's investment consultant, and the investment consultant's expertise, to consider the appropriateness of valuation methodologies used by 3<sup>rd</sup> party investment managers that oversee alternative and illiquid assets for the System. Further, an analysis of the appropriateness of each manager's written valuation policy for their underlying strategy holdings is part of the investment consultant's standard due diligence process when they evaluate these types of strategies. Only strategies deemed to have reasonable and appropriate valuation methodologies will be considered and/or recommended for potential inclusion in the System's portfolio. Neither the Board nor the investment consultant selects the valuation methodology used by 3<sup>rd</sup> party investment managers that oversee alternative or illiquid assets. The performance and valuation of all 3<sup>rd</sup> party alternative and illiquid investment strategies that are part of the System's investment portfolio are also reviewed with the Board as part of the quarterly performance review prepared and presented by the

investment consultant. The Board utilizes the same process for the selection of alternative assets as it does for the selection of traditional asset managers. This selection process is detailed in question 4. AndCo feels that the manager selection process in place at TESRS is robust and is in line with industry best practices. AndCo employs a similar search and selection across its national public fund client base. In addition, AndCo feels that the System is in line with the process best practices laid out by the GFOA for selecting third party investment professionals for pension fund assets.

AndCo recommends that the System maintain its investment process for investment manager search and selection which relies on its investment consultant, investment committee, and board in selecting new investment managers for use within the pension fund's investment portfolio.

**(D) Review the future cash flow and liquidity needs;**

The System's cash flow and liquidity needs are reviewed by the Board each quarter as part of the investment consultant's quarterly performance review. This review includes discussions regarding the current, expected, and known timing variances of future contributions to, and withdrawals from, the System. Based on the System's current expectation that cash flow (net contributions less withdrawals) will be negative for the foreseeable future without a change in the contribution rate, the portfolio has been positioned to include higher allocations to public, liquid assets. In addition to the portfolio's maintaining larger allocations to the liquid equity and fixed income markets, the System's alternative asset allocations emphasize the production of income and do offer investors at least quarterly liquidity. At this time the System is not pursuing any investments that require multi-year lockups and offer no liquidity to investors. The asset allocation and cash flow needs of the System were analyzed in an asset-liability study in the fourth quarter of 2019. The result of the study indicated that the System could benefit from an increased allocation to real estate while allocations to US large and small/mid equity would be reduced and MLPs would be eliminated. The study also indicated the benefit of adding private infrastructure to the portfolio as well as non-core fixed income.

The System is in a cash flow negative position and to supply needed cash flow for benefits payments the System actively engages with the Consultant to conduct periodic rebalance actions to maintain an overall asset allocation that is in line with long term targets. Typically, the System will reduce allocations to investment managers that have demonstrated outperformance so as to not be overexposed to any individual asset class. In addition the Board, through their review of the asset liability study, actively moved to reduce the overall portfolio risk in 2019-2020 by lowering the overall equity exposure of the portfolio while diversifying into non-core fixed income, global infrastructure, and increasing the target allocation to real estate.

AndCo recommends that the System continue to work with the Consultant to actively rebalance the portfolio to provided needed cash flow and maintain its long term target allocations.

**(3) Provide a review of the appropriateness of investment fees and commissions paid by the retirement system;**

The Board reviews the fees (stated in both dollars and basis points) paid to administer the System's portfolio on a quarterly basis for each of its underlying investment managers and strategies in the quarterly investment review prepared and presented by the investment consultant. The fees for the System's portfolio contained in the most recent quarterly investment

review reflect a cost of 0.62%. Based on the 2019 NCPERS Public Retirement Systems Study, published on January 22, 2020, the average fee for the survey's 155 state and local government pension respondents was 0.55%. It is important to note the System also considers fees an important part of the decision-making process and evaluates the potential fee impact for each new investment manager and strategy considered for inclusion in the System's portfolio. The System considers the current fee of 0.62% reasonable and appropriate for its portfolio.

We reviewed the fees paid to administer the System's portfolio and the underlying investment manager fees. AndCo, as an independent, professional investment consulting firm, has determined that the System's fees are appropriate as evidenced to the comparison of national plans in the 2019 NCPERS public Retirement Systems Study. No changes are recommended at this time.

**(4) Provide 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**

The System's IPS contains clear definitions of the Board's responsibilities as well as the role of the Board's professional advisors in assisting the Board in fulfilling its fiduciary duties to the System with respect to the investment of assets. Direct investment authority for the System's assets lies with the Board. As such, all decisions regarding the System's portfolio including return objectives, risk tolerance, investment guidelines, asset allocation targets and manager selection and retention reside with the Board.

The Board utilizes an investment consultant to assist with setting the System's strategic policy and asset allocation targets, as well as, investment manager strategy evaluation and selection. The investment consultant is a fiduciary to the System, and all 3<sup>rd</sup> party separate account investment managers are required to be fiduciaries to the System. In addition, all comingled fund investment managers must be fiduciaries to the fund that they manage in which the System has invested. The System does not perform any portfolio management functions internally apart from overseeing the administrative activities including legal review and execution of agreements as listed below.

Governance for investment activities and related decision-making is a multi-step process. The process includes the following:

- a. Recommendations (policy, strategy, or both) are made to the Board by the investment consultant.
- b. The Investment Committee and Board reviews, questions, and evaluates the investment consultant's recommendation. This process may include a request for clarification, modification, and/or additional information regarding the recommendation. This process may also include investment manager interviews if a series of comparable investment strategies are being considered.
- c. Once a consensus approach on a recommendation has been reached, the final investment recommendation is officially considered by the Board for action.
- d. The Board accepts motions for action and votes to accept or reject those motions.
- e. Once an action is accepted by the Board, the Board's Executive Director (System staff) works with the investment consultant to execute the Board's desired investment action or decision, and when necessary, with the System's legal counsel for the negotiation and execution of any associated investment agreements.

- f. The Board delegates signatory authority to the Executive Director to execute investment agreements and issue direction to the investment consultant and the investment managers that oversee the various components of the System's investment portfolio. The System's investment consultant does not have any authority to take action on investment or move capital.

Trustees receive educational training upon appointment to the Board via an established process managed by the System's Executive Director to comply with the training requirements established by Government Code Section 865.0035. (State Board Member Training). The training program covers the roles of a Trustee, and membership responsibilities for the various Board committees associated with the System's governance structure. In addition to Trustee education provided by the System, the Board members are active participants in industry educational opportunities such as conferences. System trustees follow the requirements of Texas Administrative Code 607. The investment consultant has reviewed the System's tracking of trustee education and affirm it is in line with state requirements. Trustees are also encouraged to actively participate in national conferences and educational programs associated with investment oversight. The board has designed the investment committee with the goal of including as many seasoned investment professionals as possible on the committee. This leads to a thorough vetting of performance and manager issues in advance of board discussion and helps maximize the effectiveness of board discussion on investment. In working with the System AndCo has found the staff and the trustees to be actively engaged in oversight of the investment portfolio. All investment decisions and allocation decisions have been made in the best interest of the System.

We reviewed the System's governance processes related to investment activities, investment decision-making, delegation of investment authority, and education. AndCo, as an independent, professional investment consulting firm, has determined that the System's processes are appropriate. No changes are recommended at this time.

#### **(5) Review of the retirement system's investment manager selection and monitoring process.**

The investment manager selection process for the System is conducted in collaboration with the System's investment consultant. Whether a specific investment strategy review is directed by the Board or the strategy idea comes from the investment consultant's research group, all potential investment strategies must go through the consulting firm's due diligence process and subsequently be presented and approved by the investment consultant's Investment Policy Committee before being shown as potential strategies for the Board to consider for the System's portfolio. Regardless of whether an existing portfolio strategy is being replaced or a new strategy is being considered for the System's portfolio, the investment consultant will prepare and present a comprehensive manager evaluation report to the Board that includes multiple candidates for consideration, discussion and subsequent interviews with the Board.

Candidates are vetted by the consultant's research group to identify the best and most appropriate managers for the System in each investable asset class.

##### AndCo Research Process:

All investment managers that are presented for our clients' consideration must be approved by AndCo's Investment Policy Committee. Our Research Group identifies potential investment managers using our database resources and investment industry network. Our due diligence process for selecting and monitoring investment managers is as follows:



1. Identification: The first step in our due diligence process is identification of investment opportunities. Our firm's process is unique because we maintain an open-door policy. This means that any investment manager that wants to participate in our due diligence process has the opportunity. Identification occurs from many approaches including:
  - Database Screening/Research Team – we use several databases to search and review strategies including Investworks, eVestment, Prequin, and Morningstar Direct in conjunction with our research team's investment manager network.
  - Consultant Sponsored – our consultants can identify and sponsor investment ideas. These ideas are then reviewed by the Research Team and eventually our Investment Policy Committee, if applicable.
  - Client sponsored – many times our clients have great ideas and can request that we review them. Similar to our consultant requests, our Research Team will review them.
  - Investment Manager Requested – we maintain an open-door policy for any manager wishing to be considered can request to enter our due diligence process.
2. Preliminary Questions: After we have identified a potential manager, we ask the manager to complete our initial due diligence questionnaire (DDQ) to efficiently confirm that the manager meets specific minimum criteria with respect to their firm and the specific strategy, as follows:
  - Does the strategy have a three-year institutional track record achieved by the same individual or team?
  - Does the firm report strategy information, including performance and portfolio data, to the following databases: Morningstar Direct, Investworks and eVestment Alliance?
  - What are the total AUM and total number of accounts for the firm and the strategy?
  - Is the firm registered with the SEC? What is the effective date of the registration? If the firm is not registered with the SEC, please provide an explanation?
  - Has the firm, or any of its employees, been involved in any litigation, or been the subject of any investigation or sanction by any state or federal regulatory agency or industry self-regulatory organization? If so, please explain the nature and outcome of the litigation, investigation, and/or sanction.
  - Does the firm claim GIPS compliance? If so, has the claim of GIPS compliance been verified, when, and by whom?
  - Does the firm utilize a third-party trading/portfolio management system? If so, provide the name of the system.
  - Does the firm have a dedicated compliance officer? If so, how long has the individual been in this role at the firm? What is this person's background in compliance?
  - Will you acknowledge, in writing, your role as a delegated fiduciary to the plan?
  - Will you accept legal venue in the client's county and state?
  - Do you have errors and omissions insurance? If so, what is the amount of coverage and by whom is it issued?
  - Does the firm have a formal disaster recovery plan? When was the plan last tested and what were the results?

3. Due Diligence Questionnaire: If the manager provides satisfactory answers to the above questions, we will send the manager our due diligence questionnaire. The due diligence questionnaire focuses on the investment management team, research process, manager's ownership structure, legal standing and investment strategy. The Research Group reviews the manager questionnaire and initiates a detailed analysis. Our questionnaire underlies our manager evaluation process and enables us to prepare adeptly for a manager meeting.
4. Manager Interview: After receiving the completed due diligence questionnaire, the Research Group and/or a consultant will interview the strategy's key decision makers. This allows the interviewer to crosscheck the information provided in the due diligence questionnaire and understand the firm's qualitative underpinnings. Often, we will interview the key decision makers on multiple occasions and venues. We will go on-site as necessary, and we also invite investment managers into our offices for interviews. Once these interviews are completed, the Research Group compiles an internal research report for our Investment Policy Committee.
5. Investment Policy Committee (IPC) Review: The IPC is responsible for approving and formally providing AndCo's firm-wide and client-specific manager recommendations. The IPC rates strategies and allocates resources based on information and requests generated from both the Research Group and the Consulting Group. The IPC's voting membership is comprised of AndCo's senior leadership team (CEO, COO and Executive Director of Consulting) and supported by the Chief Compliance Officer (CCO). The CCO helps to represent the interests of the firm from a risk perspective but is not a voting member. The centralization of formal investment recommendations with the IPC, as well as its ability to direct the firm's resources, allows AndCo to leverage its deep team of experienced professionals and advance the quality and creativity of our recommendations and decisions.
6. Ongoing Review: If the manager is approved, the research analyst or consultant that sponsored the manager will cover the manager going forward. Each manager is required to provide quarterly compliance updates to AndCo, and the AndCo Investment Policy Committee reviews the approved manager list on a quarterly basis to identify exceptions that might require further due diligence.

The consultant is completely independent from the investment management community and receives no compensation for reviewing or including any managers in the search process, nor does the consultant receive any compensation from any investment manager or investment products. From the group of best of breed managers, the research group selects a small subset of finalist candidates to present to the System. In terms of System review, all candidates are initially reviewed by the System's investment committee. The investment committee works with the consultant to identify two to three finalists that will make final presentations to the System's board of trustees. After the final presentations are made, a mandate is awarded pending final legal review of the contract documents associated with the investment.

While the investment consultant may make recommendations regarding investment strategies, the ultimate decision to select a specific strategy for inclusion in the System's portfolio resides with the Board. Once a decision is made by the Board, legal counsel reviews and assists the Board in the execution of necessary agreements. In addition, if the selection is a separately managed account, the investment consultant will draft an addendum to the IPS for approval by the Board, and signature by the investment manager, that outlines specific objectives, constraints and benchmarks for the portfolio under the discretionary authority of the investment manager.

The ongoing monitoring of investment managers and strategies is also done collaboratively with the Board and the investment consultant on an ongoing basis and through monthly Board meetings the investment consultant attends. The investment consultant prepares summary

monthly performance reports and more comprehensive quarterly investment reviews for presentation to, and discussion with, the Board during these monthly meetings. All performance calculations supplied by the consultant to the board meet the guidelines of the CFA institute. Given the lack of private investments, the reports present time weighted rates of return as directed by the CFA Institute. The Consultant does supply dollar weighted returns to the System and System actuary upon request.

The investment consultant's reports highlight portfolio and investment manager performance and risk relative to the various performance measurement standards established in the IPS. The criteria established in the IPS tracks managers on both a qualitative and quantitative basis. Strategies that repeatedly fail to meet certain standards will be placed on a watchlist or terminated. The criteria are not designed to remove the decision process from the Board, but rather are intended to add objectivity and enhanced scrutiny on managers who are underperforming the criteria contained in the IPS. While the investment consultant may make recommendations regarding the continued retention or termination of an investment strategy in the System's portfolio, the ultimate decision to retain or terminate an investment strategy (within the bindings of the strategy's agreement) resides with the Board.

AndCo works with the System to make ongoing quantitative and qualitative assessments of managers to gauge their success and failure. Putting a manager on watch or recommending termination is determined by the severity of the quantitative and/or qualitative issues. The factors considered include but are not limited to the following:

Quantitative factors: Our qualitative analysis focus on the returns and associated risks taken by the investment manager.

- Annualized, calendar year and market cycle return vs. appropriate industry benchmarks and peer groups.
- Modern Portfolio Theory statistics: Alpha, Batting Average, Beta, Correlation Coefficient, Downside/Upside Market Capture Ratio, Down/Up Market Return, Downside Risk, Information Ratio, Max Drawdown, Number of Negative/Positive Periods, R-Squared, Sharpe Ratio, Standard Deviation, Tracking Error, etc.
- Portfolio Characteristics: Price/Earnings Ratio, Price/Book Ratio, Price/Cash Flow Ratio, Dividend Yield, Earnings Growth Rate, etc.
- Portfolio turnover
- Portfolio concentration/number of holdings
- Sector/country allocations
- Holdings and returns-based style analysis
- Holdings-based attribution

Qualitative factors: Our qualitative analysis focus on the stability of the investment manager's organization and staff, adherence to their stated investment philosophy and process, asset/client turnover, and the quality of client service.

- Professional turnover
- Investment policy statement compliance issues
- Regulatory or legal issues

- Significant loss or gain of clients, including asset outflows/inflows
- Change in firm ownership
- Change in investment process
- Style drift from mandate
- Fee structure change
- Poor client service
- Loss of client confidence

AndCo feels that the manager selection process in place at TESRS is robust and is in line with industry best practices. AndCo employs a similar search and selection across its national public fund client base. In addition, AndCo feels that the System is in line with the process best practices laid out by the GFOA for selecting third party investment professionals for pension fund assets.

AndCo recommends that the System maintain its investment process for investment manager search and selection which relies on its investment consultant, investment committee, and board in selecting new investment managers for use within the pension fund's investment portfolio.

Appendix A

Plan Sponsor TF Asset Allocation  
 Total Retirement System  
 As of August 31, 2019

Plan Sponsor TF Asset Allocation vs. All Public Plans-Total Fund



Timeframe: Plan fiscal year-end 2019

Source: Investment Metrics PARis. Provided for illustrative purposes only.