

**MINUTES OF THE
TEXAS MUNICIPAL RETIREMENT SYSTEM**

Meeting of the Board of Trustees

September 26, 2019 – 10:00 a.m.

On September 26, 2019, the Board of Trustees of the Texas Municipal Retirement System (TMRS) convened for a meeting at 10:00 a.m. at TMRS Headquarters, located at 1200 North IH 35 in Austin, Texas, with the following members present:

Board of Trustees

Bill Philibert, Chair

David Landis, Vice Chair

Julie Oakley (arrived at 1:27 p.m.)

Jim Jeffers

Jesús Garza

Absent: Jim Parrish

Present also were:

David Gavia, Executive Director

Eric Davis, Deputy Executive Director

TJ Carlson, Chief Investment Officer

Christine Sweeney, General Counsel

Dan Wattles, Director of Governmental Relations

Leslee Hardy, Director of Actuarial Services

Debbie Munoz, Director of Member Services

Scott Willrich, Director of Information Resources

Leslie Ritter, Director of Human Resources

Rhonda Covarrubias, Director of Finance

Bill Wallace, Director of Communications

Kristin Qualls, Director of Public Equity

Marc Leavitt, Director of Absolute Return Strategies

Tom Masthay, Director of Real Assets

Jesse Pittman, Senior Project Manager

Dimitry Shishkoff, Director of Risk Management

Chris Schelling, Director of Private Equity

Karen Jackson, Executive Assistant

Robert Klausner, Klausner, Kaufman, Jensen & Levinson

Marcia Beard, RVK

Spencer Hunter, RVK

Amy McDuffee, Mosaic Governance Advisors

Mark Randall, GRS Retirement Consulting

Joe Newton, GRS Retirement Consulting

Jeff Mills, LRWL, Inc.
Brian Borton, StepStone Group, LP
Spencer Edge, Albourne America
Dan Cummings, EFL Associates
Gary Hudepohl, Hudepohl & Associates
Michael Kennedy, Korn Ferry

Also in attendance:

Madison Jechow, Assistant General Counsel
Nick O'Keefe, Lead Investment Attorney
Kelsey Baldwin, Investment Attorney
Tish Root, Legal Assistant
Trisha Solis, Business Process Analyst
Anthony Mills, Senior Regional Manager – City Services
David Rodriguez, Senior Regional Manager – City Services
Melanie Thomas, Process and Content Management Specialist
Natalie Garza, Communications Analyst
Eddie Schultz, Investment Manager
Yvonne Huang, Real Assets Analyst
Cindy Morse, Investment Support Analyst
Debbie West, Investment Operations Specialist
Geldon Vllahu, Investment Operations Analyst
Ryan Conner, Risk Management Analyst
Melissa Jerkins, Quantitative Analyst
Kurt Cressotti, Compliance Officer
Jacob Bowland, Fixed Income Analyst
Kevin Notaro, Absolute Return Analyst
Celisse Cobos, Real Assets Analyst
Frank Atkins, Public Equity Analyst
Peter Jeske, Operations Analyst
Kenneth Oliver, Actuarial Analyst
Amanda Lopez, Speaker's Office
Daniel Warden, Pension Review Board
George Kauffman, City of Garland Retiree
David Riggs, Texas State Association of Fire Fighters
Bob Scott, City of Carrollton
Keith Dagen, Government Finance Officers Association of Texas
Scott Leeton, Combined Law Enforcement Association of Texas
Greg Shipley, Combined Law Enforcement Association of Texas
Kathleen Depweg, City of Arlington
Ron Lewis, Ron Lewis and Associates
Mariah Miller, Pension Review Board
Ben Warden, Pension Review Board

Mr. Philibert called the meeting to order at 10:00 a.m. and Jim Jeffers gave the invocation.

1. Receive Presentations and Consider and Act on Selection of Search Firm for Executive Director Position

Ms. McDuffee presented the results of the Request for Information (RFI) for the selection of a search firm for the Executive Director position. On July 17, 2019, TMRS issued a RFI for executive recruitment services, seeking a firm to assist the Board in filling the position of Executive Director upon the retirement of Mr. Gavia. Consistent with Board direction, the RFI was distributed to four qualified and respected firms that have a national presence and reputation in this arena. The proposals were reviewed and evaluated by the Board's external governance team, Amy McDuffee and Saba Hashmi from Mosaic Governance Advisors, LLC, and TMRS General Counsel, Christine Sweeney. Three firms submitted a proposal determined to be in compliance with the RFI requirements. All three were selected to present to the Board as finalist candidates. The three finalists, listed in alphabetical order were: EFL Associates, Hudepohl & Associates, Inc., and Korn Ferry.

Ms. McDuffee noted a typo on page 8 of the Executive Summary, the amount should have been listed as \$65,000 not the \$35,000 shown.

Mr. Dan Cummings from EFL Associates was introduced and he began with an overview of EFL Associates. He felt the firm had done more public pension executive searches than any other search firm. He noted the team that would work on the search and discussed their participation in national pension organizations. He reviewed statistics regarding searches performed by EFL. The work plan considerations were highlighted and Mr. Cummings indicated the necessity of meeting with the Search Committee and Senior Staff leadership as appropriate. The comprehensive position profile, advertising/posting plan, comprehensive vetting process, written candidate profiles and logistic considerations, including transparency of candidate communications, were reviewed. Mr. Cummings pointed out the longevity of the team and their activities together and discussed searches that are currently underway in Michigan and Delaware.

Mr. Landis asked if the proposal team has worked together on similar searches. Mr. Cummings responded yes and gave examples of their experience. Mr. Landis asked who was on the team for the Deputy Executive Director search. Basically, it will be the same team that conducted the Deputy Executive Director search with the exception of Mary Hobson. Ms. Hobson is expected to retire at the end of 2019.

Mr. Philibert asked if the process would change for internal candidates versus external candidates. The answer was negative. Internal candidates go through the same vetting process. Mr. Philibert also asked about challenges related to a search. Mr. Cummings discussed internal candidates and the effect that can have.

Mr. Cummings noted that, since TMRS is a well-respected plan, that makes this a compelling position. Mr. Jeffers asked what EFL's approach to candidate vetting is. Mr. Cummings answered about the situational questions asked in the detailed reference interviews. Mr. Garza asked Mr. Cummings to discuss how TMRS differs from other agencies. Mr. Cummings answered the complexity of the System is unique, so the challenge of the position may not be what someone is looking for. Mr. Landis asked, with all the searches going on,

how EFL would exhaust all potential avenues in this search. Mr. Cummings discussed the creation and maintenance of relationships. Mr. Garza asked Mr. Cumming's opinion of this opportunity. He answered that it is an excellent opportunity.

Mr. Gary Hudepohl from Hudepohl & Associates, Inc. was introduced. He believes the Board's focus on policy, the strong strategic plan and TMRS' good name at the Legislature will attract strong candidates. Mr. Hudepohl will be the lead on the search and added that this position would be attractive in the market. His firm specializes in public pension plan searches with over eighteen years of experience. Mr. Hudepohl highlighted the searches his firm has performed in Texas and the statistics regarding searches the firm has performed as well as those of his colleague. He shared retention rate statistics with strong retention rates. The key factor in a successful search is the relationship between the lead consultant and the Board. He discussed conflicts the firm has and its capacity to fulfill the search, noting they currently have only one active search. The key roles of the two principals recommended for the search were reviewed. Mr. Philibert asked what would keep conflict from entering the picture if they accepted other searches. Mr. Hudepohl explained their ethics in accepting or not accepting "competitive searches".

The suggested approach and search process were discussed and that they are familiar with Texas Open Meetings Act. Mr. Garza asked how Hudepohl would "sell" TMRS. Mr. Hudepohl answered: 1) strong policy and governance model, 2) strong financial position, 3) stability of fund, and 4) location. He discussed sourcing and vetting of candidates and stated that background checks would be performed before a candidate is brought to the Board. Mr. Jeffers asked about the secrets to their vetting process. Mr. Hudepohl explained their use and requests for references, their use of proprietary key competencies for success, job changes, motivation, accomplishments, failures, organizational fit, and relationship management. All of these factors will give Mr. Hudepohl an indication of the potential for success; but track record is a good indicator for success. Once candidates are selected, the Board will be presented with complete data on each candidate. The candidates will be rated, but not ranked by Hudepohl. Mr. Hudepohl will sit in on the interviews. They will do a media check that is reviewed by three separate people and they will do a preliminary and secondary check. Mr. Philibert asked if the process changes for internal candidates. The answer was negative. He pointed out that if there is an internal candidate, Hudepohl will manage the expectation for an open search. Mr. Hudepohl asked the Board if they are open to non-traditional candidates in a search as this can be a very rich market for candidates.

Mr. Hudepohl concluded with what differentiates Hudepohl & Associates, Inc. from other firms: 1) experience, 2) capacity, the timing is good for the firm, 3) experience in Texas, 4) track record, 5) hands-on service with high touch, 6) they do not have conflicts, and 7) usage based fee model.

Mr. Michael Kennedy from Korn Ferry was introduced. Korn Ferry's public pension plan focus began about 12 years ago and the firm has worked in Texas. Mr. Kennedy has also served as a trustee on a public pension fund which gives him a unique perspective when recruiting. The team would be comprised of Mr. Kennedy, who will lead the day-to-day execution of this project, and he will be assisted by Ms. Katherine Baker from their New

York office. What sets Korn Ferry apart is: 1) trustee experience, 2) experience in Austin, and 3) a diverse approach which enables them to cast a broad net when recruiting candidates. Dr. Karen Huang, Ph.D. is the third team member and manages the search assessment tool.

Mr. Kennedy discussed the potential target universe for sourcing candidates. He highlighted areas such as public pension funds, consulting firms and other areas as well as the unique factor each of these areas may bring. Mr. Landis asked how candidates are sourced from each of these sectors. Mr. Kennedy noted posting on pension specific web sites and relying on relationships to bring in potential candidates.

Mr. Kennedy discussed the process of focusing on constant communication, face-to-face communications. He reviewed interviewing the Board and the stakeholders, development of the position description, posting the position, feedback from the marketplace (quickly) regarding buzz on the position, then begin reviewing candidates. Mr. Kennedy will sit in on the interviews and will assist to debrief the Board and candidates to get feedback. He indicated that the finalist candidates receive "homework" so that the Board will get a sense of how the candidate thinks and communicates. The Board will receive a Korn Ferry formatted resume on each candidate that includes how Korn Ferry feels the candidate will fit in to TMRS. Mr. Kennedy next reviewed the Executive Assessment of every candidate and how it focuses on competencies, experience, traits and drivers. This model begins with a TMRS benchmark developed from TMRS answers and then overlays how each candidate fits in.

Mr. Garza asked how Mr. Kennedy would attract potential candidates. Mr. Kennedy feels this will be a great draw in the market because of the good reputation of the System as well as the location. Mr. Philibert asked how the process changes for internal candidates. Mr. Kennedy discussed treating them with respect and the use of the KF4D process (Korn Ferry's assessment tool) to help them improve if not selected. Mr. Jeffers asked about past performance as an indicator and how that is used. Mr. Kennedy explained how their conversations will pull out strengths, weaknesses, leadership styles, accomplishments, use of references, and verification of educational qualifications.

This item was tabled at this point. The meeting was recessed at 11:57 a.m. The meeting resumed at 1:00 p.m.

2. Review and Discussion of Preliminary Experience Study Results (formerly #5 on the Thursday, September 26, 2019 agenda)

Ms. Hardy and Mark Randall and Joe Newton of GRS introduced the second part of a three study series. The TMRS Act provides that at least once every five years the consulting actuary will make a general study of the mortality and service experience of the members and annuitants of the retirement system, and on the basis of this study, recommend for adoption by the Board tables and rates that are required. Current Board policy is to conduct an actuarial experience investigation study every four years. During the summer/fall of 2019, the system's consulting actuary, GRS, has conducted an experience investigation study for the period ending December 31, 2018.

This is the preliminary results of the four-year experience investigation. Recognizing that actuarial assumptions are not static and should be reviewed periodically, the purpose of an experience study is to compare actual plan experience to expected plan experience over the study period and determine if a change is warranted. Over time, the true cost of plan benefits will be borne out in actual plan experience. Mr. Newton indicated that this was a fairly uneventful experience study.

Assumptions should not be static and they should occasionally be changed to reflect the current environment. With regard to the funding process, effort should be given to narrow the range of possible outcomes and provide a sustainable path to eventual outcomes. Mr. Newton reviewed the environmental differences from 2015 to the present.

Mr. Randall reviewed Actuarial Standard Of Practice (ASOP) 27 in regard to the investment return assumption. The investment return assumption reflects the anticipated returns on the plan's current and, if appropriate for the measurement, future assets. The NASRA survey was highlighted and it indicated the continuing decrease in investment return assumptions. Mr. Randall discussed the reasonableness of the assumptions. Each assumption must stand on its own; but also, the combined effect of the assumptions selected must have no significant bias. He explained "arithmetic" (mean) return versus the "geometric" (median) return and how GRS leans toward the geometric return. Mr. Newton graphically plotted the TMRS assumption versus both the mean and median expectations and he noted that TMRS is within the range, but toward the top portion of that range. Time horizons were discussed and the ranges are from approximately 6.20% to 6.80%. If Alternative Portfolio 3 is selected from the Asset Allocation Study, the range shifts up to about 6.95%, putting the 6.75% assumption well within the range. GRS is not recommending a change at this time.

Ms. Oakley joined the meeting at 1:27 p.m.

The post retirement mortality assumption was reviewed and Mr. Newton indicated that because TMRS has enough experience to provide full credibility to an analysis based on its own experience, GRS has created a custom table specifically from TMRS experience. The new table shows very little difference for males. However, females have shown a divergence from the norm, so a blend of TMRS and Employee Retirement System (ERS) data was used to address this anomaly. GRS' recommendation is to use the 2019 Municipal Retirees of Texas Mortality Table and change the improvement assumption to "Scale UMP" for future mortality improvement (approximately 1% per year).

No change is recommended in the Annuity Purchase Rates (APRs) at this time. With regard to Payroll Growth Assumption, GRS recommends lowering this assumption from 3% to 2.75% for various reasons, including the new property tax limitations and the maturing of the TMRS active population.

Updated Service Credit (USC) is a benefit unique to TMRS and attempts to adjust a cash balance benefit design toward a final pay approach. Due to the asymmetry of benefit/liability growth of USC, GRS is recommending the addition of a load into the USC calculation equal to 0.1% per year into the future for each year the calculation is occurring.

Supplemental Death Benefit (SDB) has been funded based on a retiree benefit of \$2,500 (1/3 of the actual retiree benefit of \$7,500) in order to draw down the asset balance that was building in the SDB fund. The new accounting rules make it harder to apply the credit to retiree premiums and it would be cleaner if the credit is applied to active employee premiums. The recommendation is to fund 100% of retiree premiums and allow a credit towards active employee premiums equal to 2% of the trust balance.

With regard to amortization periods, GRS recommends, beginning with the 2020 valuation, 1) lower the amortization period for future increases in UAAL from 25 to 20 years; 2) change the amortization for overfunded plans from a 25-year open amortization period to one that aims to keep current overfunded status intact; and 3) lower the amortization period for ad hoc benefit enhancements from 15 to 12 years.

Mr. Newton reviewed the changes as a whole and showed the distribution of expected impacts on cities. 88% of the cities will see an increase in rates of less than 0.50%.

The complete 2019 Actuarial Experience Study is available for the Board to review. The proposed changes to actuarial assumptions, if approved, will be used in the December 31, 2019 valuation and changes to amortization periods for new bases will not take effect until the 2020 valuation and benefit increases effective January 1, 2021 and after.

Final recommendations will be proposed and Board approval requested at the October Board meeting.

3. Consider and Act on Consent Agenda (formerly #2 on the Thursday, September 26, 2019 agenda)

Staff had nothing to add to the consent agenda as presented. There were no changes suggested by the Board.

Mr. Jeffers moved that the Board adopt the consent agenda as presented. Mr. Garza seconded the motion, which passed 5-0.

1. Receive Presentations and Consider and Act on Selection of Search Firm for Executive Director Position (continued discussion of agenda item #1)

Ms. McDuffee reviewed the process for the Executive Recruitment Firm Search and reviewed the criteria by which each of the firms were evaluated. There were seven criteria including fees/expenses and client references. The ranking summary was presented.

The Board then discussed the attributes of the firms and their presentations, including the proposed teams and their approaches to performing a search tailored to TMRS' needs.

After discussion, Mr. Jeffers moved that the Board (i) select Hudepohl & Associates, Inc. (Hudepohl), to provide executive recruitment services for the TMRS Executive Director position; and (ii) authorize the Chairman and Vice Chairman to negotiate, execute, acknowledge and deliver an agreement with Hudepohl, on such terms and conditions as are satisfactory to TMRS, such satisfactory terms and conditions to be conclusively evidenced by

the execution thereof by the Chairman or Vice Chairman. Mr. Landis seconded the motion; the motion passed 5-0.

4. Consider and Act on Board Officer Positions, Including Roles, Terms and Other Matters, Including Related Amendments to Board Bylaws and Other Governance Documents (formerly item #3 on the Thursday, September 26, 2019 agenda)

Ms. McDuffee lead this continued governance discussion with the Board regarding the Board officer positions. She recapped the discussions from the the July and August Board meetings. The Board and the Board's consultant discussed the current formal and informal policies and practices regarding the election of Board officers, the term length of officer positions, and the roles and responsibilities of the offices of Chairman and Vice Chairman.

At the August meeting, the Board reached a consensus on some items and agreed that further discussions were needed regarding Board officer positions. At the August meeting, the Board identified a model with a one-year term. The role of the Board Chair and Vice Chair in Board Committees still needed to be resolved with respect to the Legislative Committee and Advisory Committee on Benefit Design.

The August meeting consensus model included: 1) one-year term; 2) no term limit, 3) no preference for rotation of Board Chair; and 4) preference, but not a requirement, that the Vice Chair becomes the Chair. Ms. McDuffee discussed the adjustments that are needed to the TMRS Bylaws of the Board of Trustees (Bylaws) to accomplish the proposed changes.

Mr. Philibert felt the Chair and Vice Chair should chair the Legislative and Advisory Committees respectively. Ms. Oakley and Mr. Garza noted their views that the Chair and Vice Chair did not have to be the chair of the Committees, but should be members of the Committees. The consensus was that the Board Chair will be a member of the Legislative Committee and the Vice Chair will be a member of the Advisory Committee.

Ms. McDuffee asked about the other proposed edits to the Bylaws. With regard to responsibilities of the Chair, there were no suggested changes. Regarding the Vice Chair, discussion centered on the apparent expansion of the role of the Vice Chair in absence of the Chair. The Board felt this was a given.

Mr. Garza felt the role of a general Board member should be refreshed and clarification should be made regarding succession planning for the Executive Director role. Should this be the responsibility of the Chair or the whole Board? Ms. Sweeney pointed out that a review of the entire Bylaws is on the work plan for all the Board's policies.

Ms. Oakley asked, specific to the proposed language for Bylaws Section 1.3.1(h), why the Internal Audit Committee is the only individual committee called out and requested the language be revised to address the oversight of all Board Committees.

Due to the expected turnover on the Board, Mr. Garza suggested completing the review of the Bylaws by the end of the year. Ms. Sweeney noted the Bylaws were a priority.

Mr. Philibert commented that there should be continuity when considering the Board officers.

5. Consider and Act on Alternative Board Processes for Approval and/or Delegation of Investment Manager Selections and Terminations (formerly #4 on the Thursday, September 26, 2019 agenda)

Ms. Beard with RVK, Ms. McDuffee with Mosaic Governance Advisors, LLC, and Mr. Klausner with Klausner, Kaufman, Jenson & Levinson, continued the discussion from the August Board meeting regarding the processes for TMRS' selection, management, and termination of investment managers. Mr. Klausner began by stating that this presentation is a starting point from which to build forward and the goal is to encourage questions. All of the terms in the Investment Policy Statement (IPS) that require definition will be provided. A full review of the IPS will begin in October and it is anticipated that further refined proposed changes to the IPS regarding the Model selected by the Board, if any, will be presented at that time.

Ms. McDuffee recapped the August meeting discussion. She presented the two models requested by the Board at the end of the August meeting. At this meeting, the consultants will continue the discussion of the two models, now referred to as Model A (a hybrid between Option 2 and Option 4) and Model B (Option 4). Additionally, the consultants have provided some "sample text" of possible changes to the IPS to consider for each Model. It is important to note, however, that, at this time, the "sample text" is only intended to facilitate additional discussion around some of the specifics of each Model.

This process links back to the investment beliefs that are owned by the Board. The Board has taken a comprehensive approach to evaluating its options and their implications with the help of its independent investment and governance consultants, and fiduciary counsel.

Both Models offer different degrees of delegated authority to the Executive Director. The final decision on the exercise of delegated authority under either Model presented rests solely with the Executive Director, including a decision to reject a recommendation from investment staff and consultants.

Model A, the Hybrid, was reviewed. For public markets, actively managed mandates up to 1.50% of market value of assets, factor based mandates up to 3.00% of market value assets, and passive mandates at the discretion of staff, could be approved by the Executive Director. These transactions would be reported at the next Board meeting. Items above those collars would be brought to the Board. For Private markets, mandates up to 0.75% of market value of assets could be approved by the Executive Director. The Board would, through the consent agenda, acknowledge they had received the applicable transactions report. All transactions above the "collars" would be brought to the Board. Ms. Beard walked the Board through a graphic representation of this model.

Ms. Oakley and Mr. Jeffers felt the vote acknowledging receipt of the appropriate documentation provides positive affirmation that the Board is monitoring that the requirements of the IPS had been met.

Ms. Beard briefly reviewed the changes that would be needed in the IPS. The reporting package was also reviewed, highlighting the new documents the Board would be seeing. It was noted implementation would begin January 1, 2020, if approved by the Board.

Model B was next reviewed and Ms. Beard stated that the collars would be the same for public and private markets. The atypical investments would still come to the Board. The difference in this model is that a vote acknowledging receipt of the transaction documentation regarding Staff's actions would not be taken, but the reporting packages would be very similar. Ms. Beard reviewed the checks and balances that are built into the investment process.

Ms. McDuffee asked if there were questions from the Board or if there was direction from the Board. Ms. Oakley stated her preference for Model A because she felt the acknowledgement vote on private market investments provides the affirmation needed while providing the nimbleness needed by staff.

Ms. Oakley moved that the Board move forward with Model A. Mr. Jeffers seconded the motion; which passed 5-0.

6. Consider and Act on Asset Allocation

Mr. Carlson, Ms. Beard and Mr. Hunter from RVK presented the Asset Allocation Study. The selection of the asset allocation is a major determinant of both the longer-term rates of return and the volatility of asset values. The Asset Allocation Study is conducted every three years to either confirm or modify the Strategic Target Allocation given the potential significant economic or market changes, or due to changes in the Board's long-term goals and objectives. The Strategic Target Allocation: 1) must deliver a representation of the Board's long term objective with its implied Risk Tolerance; 2) provide sufficient confidence for the Board to "stay the course" given extreme market moves; and 3) is a benchmark against which to measure performance.

Ms. Beard reviewed RVK's Asset Allocation inputs (i.e., asset class assumptions) and Assumptions versus Longest Historical time frames. She also discussed Annual Volatility of Return Assumptions and Standard Deviation. Creating a diversified portfolio of asset classes helps enable the investor to achieve a higher rate of return while minimizing volatility of the portfolio. Diversification exists because the returns of different asset classes do not always move in the same direction, at the same time, or with the same magnitude. Varied investment environments cause some asset classes to rise in value while other fall, and correlation is the measure that quantifies the degree to which asset classes do not move in tandem. Ms. Beard discussed Correlation and the Correlation Matrix and she noted its key relationship to building a diversified portfolio.

An efficient allocations chart was discussed, as well as the constraints that are placed on the asset class portfolios by level of risk. The various measures on the chart including arithmetic return (mean), compound return (median), and expected return/risk ratio were defined as well

as illustrating the tradeoff between return and risk. Ms. Beard reviewed the Efficient Frontier graph and noted that it also illustrates the relationship between risk and return.

Ms. Beard indicated that no change in the portfolio is strictly required to maintain the current 6.75% discount rate, however, portfolio # 3 would be expected to provide a slightly better expected return, at a slightly reduced level of expected risk, when compared to the current portfolio. In recognition of the time it will take to make the transition, an interim target of 8% to Private Equity was discussed. The intent of the interim target is merely to highlight the slightly improved risk, return and actuarial statistics for the plan, on the way to the full 10% target. Mr. Carlson explained how that 8% could be achieved in the near term.

Ms. Oakley moved that the Board approve the recommendation to adopt the efficient allocation portfolio #3 as the new Strategic Target Allocation with its commensurate level of expected risk. Mr. Landis seconded the motion; which passed 5-0.

7. Consider and Act on Private Equity Manager Search Recommendation(s)

Mr. Schelling, Mr. Teneriello, and Mr. Borton of StepStone Group (StepStone) presented the manager recommendation for Private Equity. Mr. Schelling noted the proposed \$50 million recommendation for FTV VI, L.P. (FTV VI) is a re-up with an existing manager. Mr. Schelling reviewed the due diligence process and discussed the portfolio construction.

FTV VI is a growth equity firm that targets investments across enterprise technology and services, financial services, and payments and transaction processing sectors. Mr. Teneriello discussed the reasons to invest and he noted the terms are relatively the same as the previous fund.

Mr. Borton indicated that StepStone supported this manager recommendation and stated they are a best in class manager. FTV VI has an attractive sector-focused growth equity strategy, a flexible investment approach with deal structuring focus and a strong senior team.

Ms. Oakley asked why only invest \$50 million. Mr. Schelling responded that the team is still constrained by the current Investment Pacing Plan.

Mr. Garza moved that the Board approve the following:

- (i) Authorize the following allocation(s), each as proposed and in accordance with the TMRS Investment Policy Statement, with an initial investment allocation up to the amount set out below and at fees no greater than presented in the TMRS Staff Memo to Board, each individually contingent on favorable background checks, if required below, and successful negotiation of the investment agreements:

Name of Investment Manager, Investment Fund, or Fund Strategy	Asset Class Strategy	Initial Investment Allocation	Background Check Required (Yes or No)
FTV VI, L.P. ("FTV VI")	Growth Equity	\$50 million	Yes

- (ii) Approve and incorporate by reference for all purposes the Board Standard Investment Authorizations for each such investment allocation.

Mr. Jeffers seconded the motion; which passed 5-0.

8. Consider and Act on Absolute Return Manager Search Recommendation(s)

Mr. Leavitt, Mr. Notaro and Mr. Edge from Albourne America (Albourne) presented the manager recommendations for Absolute Return Strategies (ARS). The proposed recommendation is for three managers totaling \$375 million.

Mr. Leavitt reviewed the due diligence process and portfolio construction for ARS and highlighted the position sizing in the portfolio statistics. The selection of the three managers have been identified as complementary funds that, as part of the overall portfolio, will help to potentially achieve the long term return target of Libor +4%, within its defined risk constraints.

Alpstone Global Macro Fund, LP (Alpstone) is a discretionary global macro manager with highly structured investment process that employs proprietary methods to distill the global opportunity set before ultimately making a discretionary investment decision. The investment team worked together at BlueCrest and accumulated a solid eight-year track record. Mr. Notaro noted that the portfolio is organized into three main trading strategies: Fundamental Macro, Tactical/Momentum, and Relative Value.

Diameter Capital Partners, LP (Diameter) pursues strategies that include performing credit, single name shorts vulnerable to fundamental or technical breakdowns, structured credit and stressed and distressed debt and equities of "credit like" companies in which the Fund has debt exposure.

The final manager recommendation, Infinity Q Volatility Alpha Fund, LP (Infinity Q), seeks to provide positive absolute returns with minimal correlation to the equity and credit markets. Mr. Leavitt indicated the Fund allocates to three broad categories: Long Volatility, Vega Neutral (Relative Value), and Short Volatility. This approach creates a non-directional portfolio that seeks to have positive carry while generating outperformance in down markets.

Mr. Edge stated that Albourne supports the three proposed manager recommendations and indicated that the three recommended funds can provide both diversification and return potential to the overall portfolio. The main criteria for assessment include, but are not limited to: experience of team, depth and availability of resources, strength of operational

structure, organizational quality, research and investment process, implementation effectiveness, risk profile and management characteristics, and return expectations.

Ms. Oakley asked Albourne about their rating assessments. Mr. Edge indicated that their rating assessments have two components, a letter rating and a numerical conviction rating.

Mr. Jeffers made a motion for the Board to approve the following:

- (i) Authorize the following allocation(s), each as proposed and in accordance with the TMRS Investment Policy Statement, with an initial investment allocation up to the amount set out below and at fees no greater than presented in the TMRS Staff Memo to Board, each individually contingent on favorable background checks, if required below, and successful negotiation of the investment agreements:

Name of Investment Manager, Investment Fund, or Fund Strategy	Asset Class Strategy	Initial Investment Allocation	Background Check Required (Yes or No)
Alpstone Global Macro Fund LP ("Alpstone")	Macro	\$125M	Yes
Diameter Capital Partners, LP ("Diameter")	Credit	\$125M	Yes
Infinity Q Volatility Alpha Fund, LP ("Infinity Q")	Volatility Arbitrage	\$125M	Yes

- (ii) Approve and incorporate by reference for all purposes the Board Standard Investment Authorizations for each such investment allocation.

Mr. Garza seconded the motion; which passed 5-0.

9. Executive Session

At 5:20 p.m., the Board entered into Executive Session, pursuant to Texas Government Code §§551.071 and 551.074 to consult with Legal Counsel to receive legal advice, and to discuss personnel matters. The meeting was opened to the public again at 5:30 p.m. No action was taken during the Executive Session and all members of the Board that were present before the Executive Session were still present.

At 5:30 p.m. the meeting was recessed until 8:30 a.m. on Friday, September 27, 2019.



David Gavia
Executive Director



Bill Philibert
Chair, Board of Trustees

**MINUTES OF THE
TEXAS MUNICIPAL RETIREMENT SYSTEM**

Meeting of the Board of Trustees

September 27, 2019 - 8:30 a.m.

On September 27, 2019, the Board of Trustees of the Texas Municipal Retirement System (TMRS) reconvened for a meeting at 8:30 a.m. at TMRS Headquarters, located at 1200 North IH 35 in Austin, Texas, with the following members present:

Board of Trustees

Bill Philibert, Chair
David Landis, Vice Chair
Julie Oakley
Jim Jeffers
Jesús Garza

Absent: Jim Parrish

Present also were:

David Gavia, Executive Director
Eric Davis, Deputy Executive Director
TJ Carlson, Chief Investment Officer
Christine Sweeney, General Counsel
Dan Wattles, Director of Governmental Relations
Leslee Hardy, Director of Actuarial Services
Debbie Munoz, Director of Member Services
Scott Willrich, Director of Information Resources
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Bill Wallace, Director of Communications
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Kristin Qualls, Director of Public Equity
Marc Leavitt, Director of Absolute Return Strategies
Tom Masthay, Director of Real Assets
Jason Weiner, Director of Fixed Income
Dimitry Shishkoff, Director of Risk Management
Karen Jackson, Executive Assistant
Robert Klausner, Klausner, Kaufman, Jensen & Levinson
Marcia Beard, RVK
Amy McDuffee, Mosaic Governance Advisors
Spencer Edge, Albourne America
Jeff Mills, LRWL, Inc.

Kyle Piepmeier, LRWL, Inc.

Also in attendance:

Michelle Mellon-Werch, Assistant General Counsel
Madison Jechow, Assistant General Counsel
Nick O'Keefe, Lead Investment Attorney
Kelsey Baldwin, Investment Attorney
Tish Root, Legal Assistant
Eric Obermier, Assistant Director Information Resources
Trisha Solis, Business Process Analyst
David Rodriquez, Senior Regional Manager – City Services
Melanie Thomas, Process and Content Management Specialist
Natalie Garza, Communications Analyst
Eddie Schultz, Investment Manager
Yvonne Huang, Real Assets Analyst
Cindy Morse, Investment Support Analyst
Debbie West, Investment Operations Specialist
Geldon Vilahu, Investment Operations Analyst
Kevin Notaro, Absolute Return Analyst
Frank Atkins, Public Equity Analyst
Andi Focht-Williams, Senior Auditor
Peter Jeske, Operations Analyst
Paula Nguyen, Investment Accountant
Kenneth Oliver, Actuarial Analyst
Pete Krnavek, Information Systems Manager
George Kauffman, City of Garland Retiree
David Riggs, Texas State Association of Fire Fighters
Keith Dagen, Government Finance Officers Association of Texas
Bob Scott, City of Carrollton.
Scott Leeton, Combined Law Enforcement Association of Texas
Greg Shipley, Combined Law Enforcement Association of Texas
Kathleen Depweg, City of Arlington

Mr. Philibert called the meeting to order and the meeting was reconvened at 8:30 a.m.

10. Review and Discussion of 2020 Board Calendar/Work Plan, including Board Meeting Dates and Locations (formerly #12 on the Friday, September 27, 2019 agenda)

Ms. McDuffee began discussion of the proposed 2020 Board Work Plan. This is a schematic of what actions are suggested/required for the various meetings and times required per item. A draft was provided to the Board for the general Board meetings as well as Committee meetings.

Based on possible changes with regard to approval of investment manager searches, these have been removed from the work plan, even though there may be need for future Board action.

The plan does include required/requested trainings/updates and regular presentations.

Ms. McDuffee next reviewed the groups of governance policies to be reviewed and that would need to be brought back to the Board. These were grouped by priority to attain review of the sixteen different topics over the eighteen month period. Several of these policies may take more than two reviews to achieve a completed policy.

Mr. Philibert inquired as to whether the Work Plan might be too aggressive. Ms. McDuffee stated that she would work with Mr. Gavia to review and suggest further refinements to the Board for its consideration at its October meeting.

11. Review and Discussion of Pension Administration System Assessment Update (formerly #10 on the Friday, September 27, 2019 agenda)

Jeff Mills and Kyle Piepmeier from LRWL, Inc. (LRWL) presented an update on the Pension Administration System Assessment (PASA) project. Mr. Mills reviewed the project objectives and he noted the four reports that were delivered through the assessment. The first report was the Current Environment Report derived from meetings with staff. The second report was the Gaps and Improvements Report which presented a Strengths, Weaknesses, Opportunities and Threat (SWOT) Analysis and identified gaps. The Solutions Report provided a cost benefit comparison of three solution options. And the fourth report was LRWL's Recommendation and Roadmap Report.

Mr. Mills reviewed the Summary of Findings. TMRS has built and maintained a solid foundation with NextGen based on a modern toolset. Regarding Technology Infrastructure/Security, there were no critical security findings that required immediate attention. There were no issues found related to the Information Resources Department's organization and it was noted that Information Resources is able to maintain adequate support of TMRS.

Project Governance was reviewed and Mr. Mills noted a formal project governance structure was created in 2019 and it is led by an Executive Project Steering Committee. TMRS uses Waterfall software development methodology, but it is beginning to transition to Agile development methodology.

Mr. Mills highlighted the results of the SWOT Analysis. He discussed the Gap Analysis that was performed during LRWL's review of PASA and the twenty-four business cases processed. There were sixty-six gaps identified during the review and these were prioritized based on relative ease of implementation versus relative benefit. There were also 62 findings that were not gaps, but were areas for potential improvement. These gaps and findings were then grouped into four categories for use in planning to move forward.

There were three options to move forward: 1) retain and upgrade; 2) replace with full custom solution, and 3) replace with a Customizable Off-the-Shelf solution (COTS), and other areas for improvement. In the scoring process, the retain and upgrade option scored highest and had the lowest projected cost to implement.

Mr. Mills discussed their recommendations and a roadmap to achieve successful modernization. First recommendation is to retain and upgrade the current solution. Second recommendation is to replace the City Contribution System with a COTS. The third recommendation is to implement a commercially available Customer Relationship Management (CRM) solution and the fourth recommendation is to evaluate the introduction of a mobile application.

These recommendations should be treated as a single modernization program. Mr. Mills reviewed external versus internal aspects of the modernization program and discussed the suggested steps that should be taken in preparation for the pension modernization program.

Mr. Mills pointed out that Member Services should own this project, not Information Resources. The project should clearly define requirements to close gaps, implement new technologies, and set measurable goals. He reviewed the key milestones on the proposed roadmap and schematically reviewed the timeline as well as a preliminary budget for the project.

Mr. Mills concluded by reviewing the suggested next steps for proceeding with the project.

Mr. Landis asked why Member Services should own the project? Mr. Mills answered that the business need should drive the project, in this case, Member Services.

Mr. Garza asked for projected budget estimates by year and the projections for staffing requirements.

Ms. Munoz reviewed the PASA the recommendations and stated that TMRS fundamentally concurs with the recommendations made by LRWL and the proposed implementation roadmap.

Mr. Willrich discussed Budget considerations. Staff intends to seek Board approval to secure resources required to successfully execute the program. An estimated five-year budget was presented and the next steps were reviewed. Quarterly updates would be provided to the Board on the progress made.

The Technology Committee thanked the team for all of their efforts and for the level of collaboration.

12. Absolute Return Annual Asset Class Review (formerly #11 on the Friday, September 27, 2019)

Mr. Leavitt, Mr. Notaro and Mr. Edge from Albourne presented the annual review of the Absolute Return Strategies (ARS). Mr. Leavitt began by stating that the annual review process holds TMRS staff accountable for its portfolio management process in order to preempt manager specific, strategic, or other potential problems. The review process includes an annual due diligence questionnaire, compliance, operations, risk management and performance. The annual review also includes an onsite due diligence visit to the managers' offices. The accomplishments and the distinct steps taken to mature the portfolio

were discussed. Mr. Leavitt reviewed a history of transactions, including the transition from a fund-of-fund approach to a direct portfolio approach. The capital approved versus the capital invested was also highlighted.

All manager relationships and one consultant relationship assessed are in satisfactory standings. Albourne is considered an “extension of staff“ with regard to performing operational due diligence on investment managers. The focal point of what staff does is to meet with current managers as well as new managers and strategies. There have been over 200 total manager meetings as of August 23, 2019 year to date. From a compliance perspective, TMRS is in compliance across all measurements.

The ARS objectives are to decrease total portfolio risk, potentially increase portfolio returns, provide performance with low correlation to traditional asset classes and attractive risk-adjusted returns over the long-term, seek to generate positive returns regardless of traditional market benchmark returns and to seek to capture Alpha (a manager’s rate of return in excess of that which can be explained by its systematic risk). Mr Leavitt discussed the role of beta and alpha components in the portfolio and their sensitivity to market volatility.

Performance was discussed over different time frames due to this asset class not being fully invested nor fully diversified when the direct portfolio was launched. Premium over Libor has trended up the last four years with average three-year rolling returns compressed post crisis when considering prevailing Libor rates. Volatility remains low while stocks and bonds are near highs.

Mr. Notaro reviewed the risk ranges implied by the Investment Policy Statement (IPS) Asset Class Guidelines. He reviewed portfolio construction from both risk sizing and geographic exposure perspectives as well as portfolio exposures from a strategy perspective. Sizing of managers is based on both qualitative and quantitative factors along with risk/reward profiles. The importance of building an uncorrelated and diversified portfolio was discussed and the importance of limiting losses.

Mr. Edge gave an overview of the current economic cycle. Markets continue their historical lack-luster growth. The ARS portfolio is diversified, yet maintains adequate levels of risk. The building blocks of the ARS portfolio are less susceptible to the economic cycle and will overall benefit from aspects such as rising short term rates.

The outlook for ARS has not changed much. Staff has focused on the implementation and execution of the strategic decision to build out a Direct Absolute Return Program. The portfolio is constructed to see attractive risk-adjusted returns over the long-term while providing performance that has low correlation to traditional asset classes. Global markets tend to be cyclical and diverse, with bouts of volatility disruptions. This poses both opportunities and risks for ARS’ overall investment portfolio and prospects going forward. A return of volatility should be positive for the ARS portfolio.

13. Internal Audit Committee Update

Ms. Focht-Williams updated the Board on the results of the Internal Audit Committee meeting held on Monday, September 23rd. She reviewed the results of *Status of Prior Audit Recommendations*, Report No. TMRS 19-4 and noted that the volume of items has dropped from over 100 to fewer than a dozen.

The results of the *Confidential Report on the Status of Prior Information Resources Audit Recommendations*, Report No. TMRS 19-5C was discussed. Due to its confidential nature, it was only included in the Resource Center of Diligent Board Books.

The Internal Audit Department's proposed 2020 Budget was briefly reviewed. Ms. Focht-Williams updated the Board on feedback received regarding the recently completed CLA Financial and SOC audit as well as the Internal Audit's current plan update.

14. Chief Investment Officer Management Update, Including Governance, Personnel, Manager Updates, Fee Structures and Other Investment Related Matters

Mr. Carlson noted that the Public Equity analyst position has been filled and introduced Frank Atkins.

He also discussed the estimated investment rate of return to date.

15. Executive Director and Staff Reports, Including Reports from Administration, Actuarial Services, Communications, Finance, Governmental Relations, Human Resources, Information Resources, Internal Audit, Legal, Member Services, and Project Management

Mr. Gavia discussed upcoming TMRS sponsored events. An Executive Workshop will be held in Austin at the Texas Municipal League on October 17th. The TMRS Annual Conference is being held in San Antonio on November 3-5, 2019.

16. Executive Director Update – Information Resources Department

Prior to the Executive Director Update, Ms. Oakley asked how to adjust the Investment Pacing Plan with the new Investment Delegation of Model A which was discussed earlier in the meeting. Mr. Carlson reviewed how the pacing plans are developed by each asset class.

The Board was updated on the current Information Resources strategy. Mr. Willrich listed the three components to the strategy and they include: 1) anticipate, assess and improve; 2) mission fulfillment, and 3) be secure, reliable and available. The key aspects on each of these areas of focus were discussed.

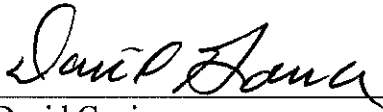
The guiding principles on which these three strategies are developed were discussed. The guiding principles include defense in depth security, cloud first, buy before build, agility/speed to delivery, build to enhance internal capabilities, and resilience of operations.

Mr. Willrich highlighted other projects handled by Information Resources and they include: PASA, TMRS Direct, My TMRS Security Enhancement, Business Continuity/Disaster Recover, E-Records Program, Privacy Program Improvements, and Public Cloud Strategy.

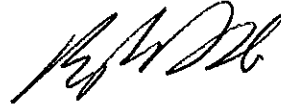
17. Call for Future Agenda Items

Mr. Philibert requested a review of Environmental, Social and Governance (ESG) Investing.

There being no further business, Ms. Oakley made a motion to adjourn the meeting; Mr. Landis seconded the motion; which passed 5-0. The meeting was adjourned at 10:43 a.m.



David Gavia
Executive Director



Bill Philibert
Chair, Board of Trustees