

**MINUTES OF THE  
TEXAS MUNICIPAL RETIREMENT SYSTEM  
Meeting of the Board of Trustees**

**February 15, 2018 – 1:30 p.m.**

On February 15, 2018, the Board of Trustees of the Texas Municipal Retirement System (TMRS) convened for a meeting at 1:30 p.m. at TMRS Headquarters, located at 1200 North IH 35 in Austin, Texas, with the following members present:

**Board of Trustees**

Jim Parrish, Chair  
Bill Philibert, Vice Chair  
Julie Oakley  
David Landis  
Jesus Garza

Absent: Jim Jeffers

**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 Member Services  
Scott Willrich, Director of Information Resources  
Rhonda Covarrubias, Director of Finance  
Jesse Pittman, Senior Project Manager  
Sandra Vice, Director of Internal Audit  
Leslie Ritter, Director of Human Resources  
Kristin Qualls, Director of Public Equity  
Chris Schelling, Director of Private Equity  
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

**Also in attendance:**

Eric Obermier, Assistant Director Information Resources  
Michelle Mellon-Werch, Assistant General Counsel  
Nick O'Keefe, Lead Investment Attorney

Madison Jechow, Assistant General Counsel  
Michael Schaff, Assistant General Counsel  
David Rodriguez, Senior Regional Manager – City Services  
Anthony Mills, Senior Regional Manager – City Services  
Melanie Thomas, Process and Content Management Specialist  
Cindy Morse, Investment Support Analyst  
Debbie Farahmandi, Investment Operations Specialist  
Susan Jacques, Performance Analyst  
Geldon Vllahu, Operations Analyst  
Susan Jaques, Performance Analyst  
Eddie Schultz, Assistant Director of Real Assets  
Carol Leung, Equities Investment Analyst  
Ryan Conner, Risk Management Analyst  
Melissa Jerkins, Quantitative Analyst  
Kurt Cressotti, Compliance Officer  
German Gaymer, Fixed Income Analyst  
Kenneth Notaro, Absolute Return Analyst  
Peter Teneriello, Private Equity Analyst  
Andi Focht-Williams, Senior Auditor  
Jennifer Andrews, Member Services Manager  
Peter Jeske, Project Specialist  
Paula Nguyen, Investments Accountant  
Natalie Garza, Communications Analyst  
Kenneth Oliver, Actuarial Analyst  
Pete Krnavek, Information Systems Manager  
Carol Leung, Investment Analyst II  
Paula Nguyen, Investments Accountant  
Bob Scott, City of Carrollton  
David Riggs, Texas State Association of Fire Fighters  
Greg Shipley, Combined Law Enforcement Associations of Texas  
George Kaufman, City of Garland  
Casey Srader, Government Finance Officers Association of Texas  
Mike Gilchrist, City of Arlington  
Roel “Roy” Rodriguez, City of McAllen  
Noelia Rodriguez  
Eddie Solis, Hilco Partners  
Michelle Kranes, Pension Review Board

Mr. Parrish called the meeting to order at 1:30 p.m. and Mr. Philibert gave the invocation.

Mr. Parrish introduced Mr. Jesus Garza, City Manager of the City of Kingsville, as the new member of the TMRS Board of Trustees. Mr. Garza briefly discussed his background and work history.

**1. Consider and Act on Resolution Honoring TMRS Board Member, Roy Rodriguez (formerly #10 on the Thursday, February 15, 2018 agenda)**

Mr. Parrish recognized Mr. Roy Rodriguez for his over twelve years of service to the System as well as his leadership and experience.

Mr. Rodriguez began the first of his two six-year terms on the Board in August 2005. Mr. Parrish highlighted the changes that occurred at the System during Mr. Rodriguez's tenure. Ms. Oakley noted she will miss Mr. Rodriguez's common sense approach and his ability to simplify difficult subjects. Mr. Philibert noted his appreciation for Mr. Rodriguez's candor which in turn helped free other Board members' voices.

Mr. Landis moved the Board adopt the Resolution for Roy Rodriguez. Ms. Oakley seconded the motion, which passed 5-0.

Mr. Parrish read the resolution commemorating Mr. Rodriguez's over twelve years of service on the TMRS Board of Trustees, and presented a copy of the resolution to Mr. Rodriguez. Mr. Rodriguez was instrumental in the changes and decisions made that will ensure that TMRS will continue to be a model public retirement system.

Mr. Rodriguez thanked everyone for the recognition and the opportunity to serve TMRS cities, members and retirees.

**2. Consider and Act on Adoption of the Minutes from the December 7-8, 2017 Meeting of the Board of Trustees (formerly #1 on the Thursday, February 15, 2018 agenda)**

Mr. Gavia stated that Staff had nothing to add to the minutes as presented.

Mr. Philibert moved that the Board adopt the minutes from the December 7-8, 2017 Meeting of the Board of Trustees. Mr. Landis seconded the motion, which passed 4-0 with Mr. Garza abstaining.

**3. Consider and Act on Ratification of Ordinances Adopting Updated Service Credit and/or Annuity Increases Effective January 1, 2018 (Received after December 2017 Board Meeting) (formerly #2 on the Thursday, February 15, 2018 agenda)**

Mr. Davis introduced the listing of Updated Service Credit and Annuity Increase ordinances received after the December 7, 2017 Board meeting. The ordinances highlighted on the listing were timely received by TMRS and the benefits have been implemented by staff. At the December 2017 meeting, the Board approved Updated Service Credits and Annuity Increase ordinances adopted and received prior to that meeting.

Mr. Philibert moved that the Board ratify those ordinances adopting Updated Service Credit and/or Annuity Increases that were not included on the listing presented at the December 7, 2017 Board meeting. Mr. Landis seconded the motion, which passed 4-0 with Mr. Garza abstaining.

**4. Consider and Act on TMRS Risk Assessment and Audit Plan for 2018 (formerly #3 on the Thursday, February 15, 2018 agenda)**

Ms. Vice presented the recommendation from the Internal Audit Committee on the TMRS Risk Assessment and Audit Plan for 2018. The Internal Audit Charter states that the Internal Auditor will communicate any substantial changes of the Audit Plan to the Board.

At the February 2017 Board meeting, the Board approved an audit plan that covered a period of two years (2017 to 2018). Approval was with the understanding that Internal Audit would review the audit plan at the end of 2017 to ensure the focus continues to be on the higher risk areas. The external review of internal audit activities that was completed in December of 2017 included a recommendation that audit plan align with the System's strategic objectives. To implement this recommendation, staff linked the proposed audits to the appropriate goal and objective in the recently adopted strategic plan.

The Risk Assessment conducted included surveying members of the senior management team and giving the Board the opportunity to provide input. Based on the risk assessment, the following changes are recommended to the Audit Plan for 2018: 1) replace the audit topic "annuity" with new audit topic "Member Services Manual Processes" and 2) add audit topic "financial-related topic" to provide hands-on audit experience to two students enrolled in a Masters of Professional Accounting auditing course at the University of Texas, Austin.

Mr. Landis provided his perspective on the Committee meeting and he briefly discussed the "readiness review" audit that was conducted. The department received the highest ratings and is performing in accordance with the IAA guidelines.

Mr. Landis moved that the Board approve the TMRS Risk Assessment and Audit Plan for 2018. Mr. Philibert seconded the motion, which passed 5-0.

Mr. Parrish and Ms. Oakley requested an explanation of the changes, which Ms. Vice provided. Ms. Oakley suggested that a report be presented to the Board that will give the status of all the engagements for the prior year.

**5. Consider and Act on Appointments to the Advisory Committee on Benefit Design (formerly #4 on the Thursday, February 15, 2018 agenda)**

Mr. Wattles noted this action is to appoint a representative to replace Mr. Greg Vick, who is the current Texas City Management Association (TMCA) representative on the Advisory Committee on Benefit Design (Committee). Mr. Vick will retire at the end of February, 2018.

For background purposes, Mr. Wattles provided an overview of the Committee charter changes that became effective January 1, 2018. The Group Class representation was reduced from ten members to seven, and only includes those organizations that have a statewide affiliation. The Individual Class was reduced from nine members to three members.

The TCMA has nominated as their new representative, Paulette Hartman, Assistant City Manager from the City of North Richland Hills. Ms. Hartman is the current alternate for the

TCMA. The TCMA Board intends to conduct a search for a new alternate and will make the nomination as soon as practicable.

Ms. Oakley requested clarification for the “at large” numbers of the Committee. Mr. Wattles confirmed that the Board also has the ability to appoint up to three at-large members, but it was not required. Mr. Parrish made a note of the need to appoint a replacement for Mr. Rodriguez, Vice Chair on the Committee.

Mr. Landis, Chair of the Committee indicated that the Committee met and considered the appointment.

Mr. Philibert moved that the Board appoint Paulette Hartman to a three-year term to expire on December 31, 2020 to represent the Texas City Management Association on the TMRS Advisory Committee on Benefit Design in the Group Class. Ms. Oakley seconded the motion, which passed 5-0.

**6. Review and Discussion of an Update on the Status of Goal 1, Objective C, TMRS Strategic Plan, “Develop and Promote Legislation and Rule Amendments to Clarify Certain Aspects of the TMRS Act” (formerly #5 on the Thursday, February 15, 2018 agenda)**

Mr. Wattles and Ms. Sweeney introduced the discussion of this item as an effort to inventory potential or suggested changes to the TMRS Act. The item that is in the current strategic plan is a holdover from the previous plan and has been ongoing since 2014. The purpose is to identify possible statutory or rule amendments that may be considered to improve TMRS’ plan design and operations.

Mr. Wattles provided a status update to the project. Staff has categorized the list of items into either plan design changes, operational changes or operational clarifications. The items on the list are being evaluated to determine if a statutory change would be necessary to accomplish the item, or whether the item could be accomplished by an administrative rule change, and the level of priority. A refined list will be brought to the Board at a future meeting.

Mr. Gavia noted that it used to be routine for a system to carry an Omnibus type bill. A more focused bill may be preferable depending upon what items the Board feels are critical to TMRS.

Mr. Parrish requested clarification on where benefit design changes would fit into this stratification and what categories of suggestions would be assigned to the Advisory Committee on Benefit Design. This assignment is up to the Board and will depend upon whether the Board wants to pursue certain design changes. The Board discussed a broad versus narrow focused bill. It was emphasized that the political landscape must be considered before a bill is filed.

**7. Review and Discussion of an Update on Advisory Committee on Benefit Design Meetings and Study Topics (formerly #6 on the Thursday, February 15, 2018 agenda)**

This agenda item is for the Board to determine what topics the Advisory Committee on Benefit Design should study in the interim in preparation for the 86<sup>th</sup> Legislative Session in 2019. The topics and schedule presented are intended to be a starting point for further discussion.

Mr. Wattles reviewed past interim study topics assigned and studied by the Advisory Committee. A preliminary list of six plan design study topics were listed for consideration, with the qualification that additional topics are likely once the inventory is compiled.

Mr. Landis noted that the Advisory Committee is a valuable asset which should be used and there was discussion on several items.

Ms. Oakley asked if there are any items from the University Park discussion that should be reviewed by the Advisory Committee that may potentially come before the Board. Mr. Gavia indicated that there could be items that would make it easier for similar plans to join TMRS.

The Board discussed the timeframe for assigning topics and when meetings should be held. Mr. Wattles indicated that it may be beneficial to for the Advisory Committee to meet to discuss how it communicates with its constituents and how TMRS can assist with that process.

**8. Review and Discussion of TMRS Pension Administration System (formerly #7 on the Thursday, February 15, 2018 agenda)**

Mr. Gavia introduced Ms. Munoz, Mr. Pittman and Mr. Willrich to discuss the TMRS Pension Administration System (PAS). During the budget cycle, Staff had requested to purchase a payroll reporting package and the Board requested detailed background information regarding the current PAS.

Mr. Pittman explained that the PAS is included in the Strategic Plan and he gave an overview of the system. The PAS is used for the Contribution System, NextGen MBS and the TMRSDirect project. Both the City Contribution System and NextGen MBS were developed by TMRS staff. The NextGen MBS was developed by TMRS staff with assistance from a software development firm. The TMRSDirect project affects the MyTMRS Member/Retiree Portal and the TMRS City Portal which were both developed by TMRS staff. Mr. Pittman reviewed the PAS creation timeline and noted the significant stages of development since 1995.

Ms. Munoz discussed the individual components of the PAS which include: the City Contribution System, MyTMRS Member/Retiree Portal, NextGen MBS City Plan Management, NextGen MBS Member/Retiree processing, and the TMRS City Portal. The City Contribution system was highlighted and the statistics involving annual processing were discussed. An overview was given of the member portal, access to information and future functionality. Ms. Munoz reviewed how NextGen MBS integrated City Plan Management and Member/Retirement processing.

Ms. Oakley requested that the TMRS procedure should be changed in regard to how retirement estimates are affected when a city has a Maximum Contribution Rate Limit issue.

Ms. Munoz concluded with a discussion of the TMRS City Portal and the features that are available.

Mr. Willrich discussed the technical platform and indicated that the platform being used is mainstream, current software with one exception, the City Contribution System. PAS updates and maintenance were reviewed and Mr. Willrich explained the challenges TMRS faces in this area. Challenges related to the City Contribution System were highlighted. The security of the outward facing portals was discussed and the actions taken by TMRS to decentralize domain knowledge through documentation, TMRS Wikis and business analysts.

Next steps were discussed which included developing options for dealing with the identified challenges, the PAS assessment (Strategic Plan Goal 2a) and obtaining Board feedback and guidance on options.

**9. TMRS Trustee Training: Fiduciary and Ethics Update (formerly #8 on the Thursday, February 15, 2018 agenda)**

Bob Klausner, the Board's Fiduciary Counsel, was introduced and he discussed his professional background. He began by stating that fiduciary duty is biblical in origin. "That which is not in the best interest to TMRS' members and beneficiaries, should not be done." The Board must exercise judgement; while acting in good faith for the System, Board Members are protected (i.e., granted immunity).

TMRS Board of Trustees is governed by the ethic laws of the State of Texas. Texas has a detailed statutory regime addressing conflicts of interest and financial disclosure which provides both civil and criminal penalties for violations. The best interest of the fund and its members must be placed ahead of personal interest. The questions that should be asked, "Am I doing what's right?" and "What is the best interest of the system?"

Sovereign immunity does protect the Board. Texas law provides sovereign immunity for the exercise of discretionary activities by the Board. It is unlikely the Board can be sued, but it is a possibility. The process the Board goes through to make a decision is very important. There may not be a right answer to any specific question. The process used to arrive at the decision is what protects the Board. Thoughtful review of the Investment Policy is critical to performing as a fiduciary. The duty to the cities is to adopt reasonable assumptions that take risk into account, such that benefits are reasonably funded. The Board needs to be cognizant of how it invests the System's funds as well understand investment strategies employed by the System so that decision making is based on informed prudence.

Benefit Administration is a complex area and the Board should not attempt to answer questions regarding Benefit Administration, but should refer benefit questions to staff. The Board has one employee, the Executive Director and they should work through the Executive Director, to address benefit administration questions

From a “best practices” perspective, TMRS has an extraordinary operation. As a Board, don’t stop being passionate about serving the System.

Ms. Oakley asked in regards to investments, what should the Board delegate? Mr. Klausner stated that the Board must set the investment policy. Beyond that, delegation is dependent on the Board’s comfort level. The Board has a CEO and that person is the Board’s proxy. As the Board’s proxy, he has to know what is going on at all levels of the organization.

**10. Executive Director Update – Actuarial Services and Employee Matters (formerly #9 on the Thursday, February 15, 2018 agenda)**

Ms. Hardy updated the Board on the Actuarial Services Department and noted how many significant changes have occurred since 2007. She introduced the new Actuarial Analyst, Kenneth Oliver.

The areas of responsibility were reviewed and Ms. Hardy highlighted the services that the Actuarial Service Department provides to the cities. The contribution rate statistics of the cities that occurred in 2017 were discussed. Out of 430 cities with a phase-in rate in 2017, only 91 paid the phase-in while the rest paid more than the minimum required.

Ms. Hardy listed the activities that will take place in 2018. A few of those items include the Request for Proposal (RFP) to be issued for Actuarial Consulting Services, Executive Workshops, the 2017 Actuarial Valuation, work relating to GASB 68 and GASB 75, Asset Allocation Study, GRS Dashboard rollout and interim legislative actuarial studies.

Mr. Gavia asked Ms. Hardy to briefly discuss the expected 2017 interest credit to the Benefit Accumulation Fund.

Shifting topics, Mr. Gavia gave a brief update to the Board regarding the Employee Engagement Survey and the Employee Engagement Taskforce (Taskforce). He noted that there were suggestions from the Taskforce that are currently in the process of being implemented and he discussed what those changes are. The Board was also updated on the Compensation Survey.

**11. Executive Session**

At 4:56 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. No action was taken during the Executive Session and all members of the Board that were present before the Executive Session were still present. The meeting was opened to the public again at 6:30 p.m.

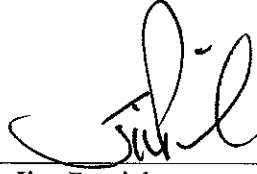


At 6:30 p.m. the meeting was recessed until 9:00 a.m. on Friday, February 16, 2018.



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David Gavia  
Executive Director



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Jim Parrish  
Chair, Board of Trustees

**MINUTES OF THE  
TEXAS MUNICIPAL RETIREMENT SYSTEM  
Meeting of the Board of Trustees**

**February 16, 2018 - 9:00 a.m.**

On February 16, 2018, the Board of Trustees of the Texas Municipal Retirement System (TMRS) reconvened for a meeting at 9:00 a.m. at TMRS Headquarters, located at 1200 North IH 35 in Austin, Texas, with the following members present:

**Board of Trustees**

Jim Parrish, Chair  
Bill Philibert, Vice Chair  
Julie Oakley  
David Landis  
Jesus Garza

Absent: Jim Jeffers

**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 Member Services  
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Kristin Qualls, Director of Public Equity  
Chris Schelling, Director of Private Equity  
Tom Masthay, Director of Real Assets  
Dimitry Shishkoff, Director of Risk Management  
Karen Jackson, Executive Assistant  
Robert Klausner, Klausner, Kaufman, Jensen & Levinson  
Marcia Beard, RVK  
Amy McDuffee, Mosaic Governance Advisors

**Also in attendance:**

Eric Obermier, Assistant Director Information Resources  
Michelle Mellon-Werch, Assistant General Counsel  
Nick O'Keefe, Lead Investment Attorney  
Madison Jechow, Assistant General Counsel  
Michael Schaff, Assistant General Counsel

David Rodriguez, Senior Regional Manager– City Services  
Anthony Mills, Senior Regional Manager– City Services  
Sean Thompson, Regional Manager – City Services  
Melanie Thomas, Process and Content Management Specialist  
Cindy Morse, Investment Support Analyst  
Debbie Farahmandi, Investment Operations Specialist  
Geldon Vllahu, Operations Analyst  
Susan Jaques, Performance Analyst  
Eddie Schultz, Assistant Director of Real Assets  
Candace Nolte, Assistant Finance Director  
Carol Leung, Equities Investment Analyst II  
Ryan Conner, Risk Management Analyst  
Melissa Jerkins, Quantitative Analyst  
Kurt Cressotti, Compliance Officer  
German Gaymer, Fixed Income Analyst  
Kevin Notaro, Absolute Return Analyst  
Kenneth Oliver, Actuarial Analyst  
Andi Focht-Williams, Senior Auditor  
Paula Nguyen, Investments Accountant  
Natalie Garza, Communications Analyst  
Paula Nguyen, Investments Accountant  
Bob Scott, City of Carrollton  
Greg Shipley, Combined Law Enforcement Associations of Texas  
George Kaufman, City of Garland  
Casey Srader, Government Finance Officers Association of Texas

Mr. Parrish called the meeting to order and the meeting was reconvened at 9:00 a.m.

**12. Investment Staff Quarterly Report/Asset Class Updates (formerly #13 on the Friday, February 16, 2018 agenda)**

Mr. Gavia congratulated Investment staff on the performance of the portfolio in 2017. Mr. Carlson reported that all the asset classes are now within target ranges for the first time since diversification began. For 2017, the net of fees performance was approximately 13.8%, which is about one-half percent above the benchmark. This outperformance added about \$135 million to the portfolio. The 5-Year Performance also outperformed the benchmark by almost 30 basis points. Private Equity will be added to the performance information going forward. These results are also based on the old benchmarks; the new benchmarks take effect on January 1, 2018.

Ms. Qualls reviewed the Core-Satellite strategies used within this portfolio. Satellite strategies (Active and Rules-Based Strategies with an active component) are expected to add excess return within established tracking error limits and to meet quality, diversification and liquidity guidelines. This portfolio is being used to fund the Private Equity portfolio and it is being systemically drawn down. The current allocation by manager for both passive and active strategies were discussed as well as the volatility in the equity market.

Mr. Gaymer gave an overview of the Core and Non-Core Fixed Income and stated it is also funding other asset classes. He stated that the underperformance compared to the benchmark is due to the portfolio not being fully allocated to match the benchmark.

The Real Estate portfolio was discussed and Mr. Masthay indicated the Non-Core versus Core diversification was performing very well.

The Real Return portfolio was reviewed and Mr. Masthay discussed the change in the benchmark approved by the Board. As the portfolio matures, he noted that performance should improve relative to the benchmark.

Mr. Notaro reviewed the Absolute Return portfolio and discussed the manager diversification. The strategy exposures for both the direct and fund-of-one portfolios were highlighted.

Mr. Schelling introduced the new Private Equity Analyst, Peter Teneriello. Mr. Schelling discussed the Private Equity benchmark and how this year's pacing plan will continue to fill out the portfolio. Mr. Schelling reviewed the portfolio diversification and explained committed versus called capital. With regard to the "J" curve, he explained that, traditionally, there are several years of negative returns early in a funds life; however, TMRS has already experienced a positive return.

Mr. Cressotti reviewed Compliance monitoring and he noted that Compliance is fully engaged in the new automated monitoring system. TMRS is fully compliant with regards to the Investment Policy Statement guidelines. Four hundred and fifty seven (457) monthly guideline compliance tests were conducted on 23 of TMRS' separately managed account portfolios through November 2017. State Street Bank's automated GX Compliance tests were conducted and Mr. Cressotti indicated manual testing was also performed to verify the results of the GX Compliance automated testing. There were no material violations of TMRS guidelines.

### **13. Annual Portfolio Risk Review**

Mr. Shishkoff and Ms. Jerkins presented the Annual Portfolio Risk Review. They started by observing that in previous annual reviews they had focused on the Risk Management Framework, which is integrated into the investment process and executed primarily by the Asset Class Teams. The focus of this year's review is to describe what the Risk Management Function does besides ensuring that an integrated framework exists. The roles and responsibilities of the Risk Management team were discussed along with each team member's key experiences. Mr. Shishkoff highlighted the allocation of the team's time over the last year and data management is by far the largest allocation. Other areas of allocation include risk analysis, risk reporting, performance analysis and research.

The development of the Risk Management Function was highlighted and several key milestones were noted. Mr. Shishkoff discussed the purchase of ORTEC Capital Markets

Simulation System and highlighted the capabilities and value of the system to Investment Staff. Risk Management held 82 meetings in 2017 and most were with vendors of our analytics systems.

Ms. Jerkins discussed the “Holdings-Based Risk System,” an independent and objective short term risk monitoring system. She gave an overview of the inputs and outputs from this system as well as the benefits.

(Mr. Landis left the meeting at 10:00 a.m.)

Ms. Jerkins discussed return attribution, specifically how to distinguish luck from skill by attributing performance to public market manager decisions. Due to data requirements, performance attribution is only utilized currently on public stock and bond portfolios.

The evolution of Data Management was discussed. The custodian cannot provide data in the form that the Risk team needs for portfolio analytics. This led to the initial creation of TMRS’ investment data warehouse. The different types of reports required by the Investment team were reviewed. Mr. Shishkoff discussed Investment data highlights, data usage needs and data management needs.

Going forward, Investment’s data needs are expected to continue to grow rapidly. Increases in market data availability and transparency of investment funds will increase the supply of data. Mr. Shishkoff discussed the framework components for this data management system and a conceptual organization of the investment data warehouse. He reviewed the resources supporting this system which include the Director of Risk Management, the Data Analyst and the IT Department Data Base Administrator.

Mr. Shishkoff briefly explained research performed by the team and emphasized how essential it is to achieving and maintaining best practice in Risk Management.

In summary, it was observed that data is the foundation for almost everything Risk Management does and that resources for measuring, monitoring, and communicating risk have been established and will continue to evolve based on data availability and research advancements and changes in the TMRS portfolio.

**14. Chief Investment Officer Management Update, Including Governance, Personnel, Manager Updates and Other Investment Related News or Matters**

Nothing was presented on this item.

**15. Call for Future Agenda Items**

Mr. Parrish asked there be a future agenda item to discuss what other systems are doing to increase access to Board meetings.

Mr. Parrish also asked that there be a future agenda item to discuss Board governance practices.

There being no further business, the meeting was adjourned at 10:28 a.m.



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David Gavia  
Executive Director



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Jim Parrish  
Chair, Board of Trustees