Joint Meeting of the Investment Advisory Committee and Board of Trustees

December 3, 2015 -

ERS

Employees Retirement System of Texas

Presented for Review and Approval
February 23, 2016

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JOINT MEETING OF THE
BOARD OF TRUSTEES AND
INVESTMENT ADVISORY COMMITTEE
EMPLOYEES RETIREMENT SYSTEM OF TEXAS

December 3, 2015
ERS Auditorium
200 E. 18th Street
Austin, Texas 78701

COMMITTEE MEMBERS PRESENT
James Hille, Chair
Caroline Cooley, Vice-Chair
Robert Alley, Member
Monty Jones, Member
Ken Mindell, Member
Laura Starks, Member
Lenore Sullivan, Member
Vernon Torgerson, Member

TRUSTEES PRESENT
I. Craig Hester, Chair
Doug Danzeiser, Vice-Chair
Cydney Donnell, Member
Brian Ragland, Member

TRUSTEES MEMBERS ABSENT
Ilesa Daniels, Member
Frederick E. (Shad) Rowe, Jr., Member

ERS STAFF PRESENT
Porter Wilson, Executive Director
Tom Tull, Chief Investment Officer
Catherine Terrell, Deputy Executive Director
Paula Jones, General Counsel and Chief Compliance Officer
William Nail, Special Project and Policy Advisor
Tony Chavez, Director of Internal Audit
Brannon Andrews, Legal
Ben Bowman, Investments
Kelley Davenport, Executive Office
Christi Davis, Customer Benefits
Pablo de la Sierra Perez, Investments
Leah Erard, Governmental Affairs
Wesley Gipson, Investments
Bernie Hajovsky, Enterprise Planning Office
Andrew Hodson, Investments
Lauren Honza, Investments
Jen Jones, Executive Office
Christina Juarez, Benefits Communication
Sharmila Kassam, Investments
Debbie Leatham, Finance
Robert Lee, Investments
Karen Norman, Internal Audit
Betty Martin, Investments
Machelle Pharr, Finance
Tim Reynolds, Investments

Tanna Ridgway, Investments
Cheryl Scott Ryan, Legal
Leighton Shantz, Investments
Robert Sessa, Investments
John Streun, Investments
Chris Tocci, Investments
Mary Jane Wardlow, Governmental Affairs
Karla West, Investments
Keith Yawn, Office of Management Support
Serena Zetina, Benefits Communication

ALSO PRESENT
Paul Ballard, Texas Trust
Bryan Burnham, Texas Pension Review Board
Billy Charlton, Altius Associates
Andrew Clark, Office of the Speaker Joe Straus
Bill Dally, Retiree
Kristen Doyle, Aon Hewitt
Davis Duane, AHM
Ryan Falls, Gabriel Roeder Smith & Company
Katy Fallon, Legislative Budget Board
Carolyn Hansard, TRS
Bill Hamilton, Retired State Employees Association
Tom Heiner, BNY Mellon
John Ide, JP Morgan Stanley
Casey Jones, White Oak
Jennifer Jones, Sunset Committee
Brian King, Texas Tech University
Andrew Knapp, JP Morgan Stanley
John Kuhl, Cox Castle
Robert May, Texas Pension Review Board
Mike McCormick, Aon Hewitt
Jennifer Modica, Minnesota Life
Emily Morganti, Legislative Budget Board
Danielle Nair, Sunset Committee
Joe Newton, Gabriel Roeder Smith & Company
Dan Sachnowitz, Texas Treasury Safekeeping Trust Company
Malika Te, HAC
Steve Voss, Aon Hewitt
Skylar Wilk, Sunset Committee

Mr. Jim Hille, Chair of the Investment Advisory Committee for the Employees Retirement System of Texas (ERS), called the meeting to order and read the following statement:

> “A public notice of the Joint Meeting of the Board of Trustees and Investment Advisory Committee containing all items on the proposed agenda was filed with the Office of the Secretary of State at 1:33 pm on Monday, November 23, 2015 as required by Chapter 551, Texas Government Code, referred to as ‘The Open Meetings Law.’”

Mr. Craig Hester announced that new member, Ms. Ilesa Daniels was not able to be present for the December 3 & 4, 2015 meetings of the Board of Trustees and Investment Advisory Committee due to her mother passing away. Mr. Hester further stated he would entertain any motions from members of the Board.

MOTION made by Mr. Brian Ragland, seconded by Ms. Cydney Donnell and carried unanimously by the present members of the Board of Trustees of the Employees Retirement System of Texas to excuse the absence of Ms. Ilesa Daniels from the December 3 and 4, 2015 meetings of the Board of Trustees and Investment Advisory Committee.

I. ENERGY OUTLOOK PRESENTATION BY DR. MICHAEL WEBBER

Dr. Michael Webber from the University of Texas presented an in-depth look at the present and future of the global energy market, according to his findings.

II. REVIEW AND APPROVAL OF THE MINUTES TO THE AUGUST 18, 2015 JOINT MEETING OF THE BOARD OF TRUSTEES AND INVESTMENT ADVISORY COMMITTEE

The Investment Advisory Committee then took the following action:

MOTION made by Mr. Jim Hille, seconded by Ms. Caroline Cooley and carried unanimously by the members present that the Investment Advisory Committee approve the minutes of the August 18, 2015 Joint Meeting of the Board of Trustees and Investment Advisory Committee.

The Board of Trustees then took the following action:

MOTION made by Mr. Doug Danzeiser, seconded by Ms. Cydney Donnell, and carried unanimously by the members present that the Board of Trustees approve the minutes of the August 18, 2015 Joint Meeting of the Board of Trustees and Investment Advisory Committee.

III. REVIEW AND DISCUSSION OF ERS RETIREMENT PLANS AND ACTUARIAL VALUATION REPORTS FOR FUNDING AS OF AUGUST 31, 2015

Actuarial Valuation Reports for funding as of August 31, 2015 – Section 815.206 of the Texas Government Code requires an actuary, as designated by the Board of Trustees to perform annual valuations of the assets and liabilities of the Employees Retirement System of Texas' retirement funds. The System's consulting actuary for retirement benefits, Gabriel Roeder Smith & Company (GRS), has completed the actuarial valuation of the assets and liabilities of:

- The Employees Retirement System Fund (ERS);
- The Law Enforcement and Custodial Officers Supplemental Retirement Fund (LECOSRF); and
- The Judicial Retirement System Plan Two (JRS2).

Ms. Jennifer Jones, Retirement Policy Researcher in Governmental Affairs division introduced Mr. Ryan Falls and Mr. Joe Newton, Consulting Actuaries from GRS to present an update on the ERS retirement plans and actuarial valuation reports as of August 31, 2015. Ms. Jones reported ERS is anticipating an estimated $554 million in additional revenue from the state, agency and member (employee) contributions this biennium. Approximately $262 million are state and agency contributions.

Mr. Falls addressed the board and reported that based on the increase in revenues that were dedicated to the retirement system from the state, agency and employee contributions ERS is on a path to fully funding liabilities. Due to this past year in the market less than 1% return was received which resulted in about a $2 billion shortfall in assets from where the ERS plan was expected to be at this point. Based on the smoothing method, it's expected to make that up over the long term with an average smoothed value return is 8%. Going forward, based on actuarial value of assets, ERS is projected to eliminate the unfunded liability by the year 2048 which is essentially 33-years from now. On a market value basis it is a little bit further out (in the year 2074) because of the $2 billion shortfall.

Mr. Falls reported that GRS gathered census data as of the date of active members, retired members, and financial information to gauge in the sufficiency of the current contribution rate coming out of the session and then will look at some of the accounting and different metrics of the last report and monitor how it has changed over time.

An update was provided to the board on the impact of the legislative session and House Bill 9 which became effective September 1, 2015. Mr. Falls stated the changes increased member contribution rates to 9.5% and eliminates a 90-day wait. Currently members of the retirement system had to wait 90-days before they were considered a member of the retirement system. Mr. Falls noted the members who had to wait the 90-days also were neither accruing benefits nor contributing to the system. He reported that we're in a position now where the contribution rate is larger than the benefits that are accruing and the value of those benefits is a benefit in a long term having the additional payroll and added contributions during the first 3 months for each member's career.

Mr. Falls reported House Bill 1 (General Appropriations Act) increased the state contribution to 9.5% of payroll for both years of the biennium while maintaining a 0.50% agency contribution. The across-the-board pay increases were generally less than assumed. Contribution rate increases and plan changes are expected to be sufficient to eventually eliminate the unfunded liability. The original analysis completed during session indicated full funding was expected by the year 2047, assuming 8% on actuarial (smooth) returns. Mr. Falls stated the commitment of these contribution increases has no impact on the funded ratio and the unfunded accrued liability, but it changes the revenue stream to the plan and therefore the plan's long-term trajectory.

The actuarial (or smoothed) value reflects portions of the unrecognized gains and losses over time were 6.1%. That is less than the 8%, which creates a loss on the unfunded liability. Losses on the market value during the current year in addition to outstanding unrecognized losses from prior valuation were $1.9 billion for ERS in 2015 versus $0.4 billion in 2014.

In a question asked by Mr. Monty Jones on how many years would ERS fall short before having to address the 8% return assumption, Mr. Newton clarified the return assumption is a prospective, forward-looking assumption. Mr. Falls mentioned that by maintaining current funded status, the average return would need to be around 7.85%; if the return is 7.0%, the ERS plan trust would deplete in approximately 50 years. Ms. Jones replied that in the next fiscal year ERS will be doing an experience study and the return assumption is a critical component of that. ERS will be re-examining all of the assumptions during that process (which will coincide with the asset allocation study).

Mr. Falls proceeded to give the board a snapshot of what the market has been over the last ten years. Eight percent has been the return assumption during the last ten years, which had a significant market dip in 2008 and 2009. The 10-year average return over this period is 6.2%. Mr. Newton stated in the last five years the fund has done over 9%, much of that coming out of the financial crisis. Mr. Falls informed the board that because there is an average of 6.2% over the last ten years, ERS is slightly short of where we expected to be.

Mr. Falls noted that as of today, the actuarial value is over $25 billion and the market value is a couple of billion dollars less. There is an $8 billion unfunded liability or a funded ratio to 76.3%. Mr. Falls reported that even though the trajectory of the retirement system has changed significantly with the increase in revenue going forward, several of the key metrics (unfunded liability and funded ratio) haven't changed much. It's the funding period change (from infinite in 2014 to 33 years in 2015) that shows the positive impact of the legislative changes.

The actuarially sound contribution rate is a statutory threshold that requires the plan to be able to pay off any unfunded liabilities within a 31-year period. This standard is primarily used whenever benefit enhancements are considered. Based on the 2015 valuation, the ERS plan requires a total contribution of 19.62% in fiscal year 2016 to meet the ASC rate; the actual contribution rate of 19.50% is 0.12% less than the ASC rate.

Mr. Falls reported briefly on the LECOSRF and JRS2 plan results. Compared to the 2014 valuation results, for 2015 LECOSRF had a small decrease in funded ratio while JRS2 had a small increase in funded ratio. However, current statutory rates were not sufficient to sustain either of these plans and both plans will deplete without further steps, such as increased contributions. The dollar amounts associated with these plans are significantly smaller than what is needed for the ERS main plan.

ERS adopted GASB 67 for plan year ending August 31, 2014. GASB 68 measures will be included in Texas State CAFR reporting for fiscal year ending August 31, 2015. The state has elected to utilize a one year reporting delay for GASB 68, so the state's 2015 CAFR will reflect the ERS plan net pension liability as of as of August 31, 2014.

The discount rate used in determining the Total Pension Liability is a blend of two rates: the long-term expected rate of return on pension plan investments (8.00% based on current investment policy), and the yield or index rate for a 20-year, tax-exempt general obligation municipal bond (3.79% as of August 31, 2015). For the ERS main plan, the resulting blended rate was 6.07% for 2014 (6.86% for 2015). The ERS plan was just slightly short of the asset amount needed to be able to use its long-term assumption of 8.0%. Mr. Falls stated that the new GASB calculations are very sensitive to market fluctuations, so year-to-year volatility in this calculation is expected.

In summary, the contribution rate increases and the elimination of the 90-day wait from the 2015 legislative session are sufficient to sustain the ERS plan. For LECROSRF and JRS2 current statutory rates are not sufficient to sustain the systems. Without an increase of contributions over the current schedule, or a reduction of benefits, the funded status of LECOSRF and JRS2 will continue to decline.

There were no questions or further discussion, and no action was required on this item.

IV. REVIEW AND DISCUSSION OF INVESTMENT PERFORMANCE OF THE SYSTEM'S ASSETS:

A. Fiscal Year 2015 Investment Performance – Ms. Betty Martin, CPA, ERS Director of Investment Services, and Mr. Tom Heiner from BNY Mellon presented the 2015 fiscal year investment performance.

Ms. Martin explained that annually ERS' custodian, Bank of New York Mellon Asset Servicing (BNY), who is the official book of record, provides fiscal year-end performance reviews to the Board and IAC. The Board of Trustees (Board) of the Employees Retirement System of Texas (ERS) regularly reviews the performance of the Fund.

Mr. Heiner began an overview of the total fund return. The total fund performance was in excess of the policy benchmark by 147 basis points (bps) for fiscal year 2015. The Fund returned 0.44% compared with the policy benchmark return of a negative 1.03%. The Fund also outperformed the benchmark over the three-year period by 51 bps, the five-year period by 36 bps, and ten-year period by 46 bps.

The return-seeking component had a return of -0.22% for fiscal year 2015 and 9.94% over the three-year period. Global equity posted a return of negative 1.14% for the year and exceeded its benchmark by 515 bps. Over the three-year period it beat its benchmark by 210 bps. The directional growth portfolio had a very strong return for fiscal year 2015 with a return of 20.24%. Private equity posted a return of 11.03% for the period.

Global credit outperformed its benchmark by 156 bps for fiscal year 2015. Real assets posted a return of 6.22% for fiscal year 2015 with public real estate showing a loss of 5.58%. However, private real estate generated a positive return of 14.09%. Private infrastructure is within real assets and it had a return of 0.32% for the fiscal year. Mr. Heiner reminded the Board that public infrastructure was defunded during the fiscal year, therefore did not post returns.

The rates portfolio returned 2.06% for the fiscal year, exceeding its benchmark by 16 bps. Cash and absolute return also posted positive returns for fiscal year 2015 with absolute returns passing its benchmark by 83 bps for the year and 216 bps over the three-year period. Overall, looking at risk reduction we see that risk reduction assets produced a return of 2.52% for the year.

The Trust ended the fiscal year with a market value of $25.1 billion. The total rate of return net of fees for fiscal year 2015 was 0.44% compared to the total fund policy benchmark of -1.03%, for an outperformance of 147 bps. Excess performance in this fiscal year added $376 million to the market value of the Trust relative to ERS' benchmark.

Mr. Heiner briefly described the internal and external management performance. Both internal and external public equity outperformed their benchmarks, by 285 bps and 275 bps, respectively. Most of the asset classes are overweight their allocation target.

There were no questions or further discussion, and no action was required on this item.

B. Third Calendar Quarter of 2015 Investment Performance – Mr. Tom Tull, CFA, ERS Chief Investment Officer, along with Ms. Kristen Doyle and Mr. Steve Voss, consultants from Aon Hewitt, presented the investment performance of the third calendar quarter of 2015.

Mr. Tull presented the new dashboard template, a combined effort from staff and Aon that will be used to clearly present key metrics quarterly to the Board and IAC in a consistent manner. He also detailed that staff, at the request of the Board and IAC, has reviewed benchmarking at the Trust level to incorporate a long-term, static Public Market Benchmark (Long-Term Public Benchmark). The purpose of the long-term Public Benchmark is to review decisions made at the current asset allocation, particularly the inclusion of private market investments. This benchmark is calculated using the target weightings from the policy asset allocation of return seeking (79%) and risk reducing assets (21%). The return seeking portion will be benchmarked to MSCI ACWI IMI and the risk reducing portion will be benchmarked to Barclays Intermediate Treasury Index.

Mr. Voss began by detailing the information on the dashboard. Some of the metrics displayed on the dashboard were performance of the Trust and compliance with the ERS *Investment Policy*.

Ms. Doyle continued the presentation of the Fund performance. The fund was down nearly $1 billion and the main driver was $1.2 billion in assets distributed by the Fund. She spoke about asset allocation and that ERS continues to close-in on long-term allocation targets.

Over the three-month period the main contributor to outperformance was private equity and over the one-year period the main contributor to outperformance is global equity. The total fund outperformance for the one-year period is 157 bps. The total Fund over both the five- and the ten-year period is slightly outperforming the policy benchmark at a slightly lower level of risk relative to the policy.

Mr. Hille congratulated the ERS investment staff for outperforming the benchmark. He also questioned if the benchmark was too easy to outperform. Mr. Tull replied that peer studies have been conducted, which show how difficult it is to outperform the benchmarks and those articles can be provided to the Board for reference.

Ms. Doyle discussed the performance of the asset classes. The global public equity portfolio was down about 9.5% for the quarter and over the year-to-date period, down about 5.6%. Domestic equity had a strong positive outperformance over the one-year period, up 65 bps relative to its benchmark. Almost the entire portfolio contributed to that outperformance with the exception of the large cap and mid cap portfolios. Credit also outperformed and was up almost 2% from its relative benchmark.

Real assets had a strong performance. Public Real Estate had a negative performance, but private real estate produced an internal rate of return of 13% since inception. Private Infrastructure is still deploying capital and the IRR is 8%. The Rates asset class performed in line with the Barclays Intermediate Treasury index. She concluded with comments on the absolute return portfolio which exceeded its performance relative to the absolute return benchmark of T-bills plus 4%. The portfolio outperformed the broad hedge fund universe, which for the quarter was down about 3.5% collectively and year-to-date down about 1%.

There were no questions or further discussion, and no action was required on this item.

V. REVIEW AND DISCUSSION OF ANNUAL ANALYSIS OF PORTFOLIO LIQUIDITY AS OF SEPTEMBER 30, 2015

Mr. Ben Bowman, CFA, ERS Head of External Fixed Income Advisors, Mr. Bob Sessa, ERS Director of Real Estate, and Mr. Wesley Gipson, ERS Director of Private Equity, presented the review and discussion of the annual analysis of portfolio liquidity as of September 30, 2015.

Mr. Bowman reviewed the Trust liquidity. He reminded the Board and IAC of previous discussions about strategies to increase liquidity in the Trust. Staff established a 15% target allocation to the Rates portfolio to simplify the process of evaluating liquidity. The portfolio is comprised of the most historically liquid and least volatile assets, primarily U.S. Treasuries and Agency MBS, which offer low volatility during times of economic stress. As of September 30, 2015, the Rates portfolio accounted for $4.4 billion or 17.7% of the Trust.

The Rates portfolio provides a source of liquidity to meet capital calls in ERS' private markets program and to cover the Trust's net benefit payments and operating expenses. Having an allocation set aside specifically for liquidity purposes allows the Fund to be more tactical and to take advantage of market dislocations when they do occur.

In staff's opinion, the most appropriate measure of available liquidity is the absolute size of the Rates portfolio. There is an opportunity cost of maintaining such a highly-liquid, low-yielding portfolio, but its existence allows portfolio managers to seek out higher yielding assets where the compensation for "selling liquidity" can generate significant returns that exceed the foregone yield from the Rates allocation. Thus, the proper sizing of the Rates portfolio is an important consideration.

ERS is a mature plan that has distributed over $1 billion per year more in benefit payments than it receives in contributions. With this allocation to Rates, the Trust has greater confidence that it can sustain benefit payments, make investment commitments, and re-balance toward displaced assets at opportune times. Over half the Trust can be liquid in three days and 71.5% is liquid within 90 days, assuming that private markets were totally illiquid.

Because the Rates portfolio is the primary source of liquidity, a coverage ratio was developed to show the capacity of Rates to meet a large, hypothetical capital call across all Private Market programs. To calculate the coverage ratio, staff examined the historical private markets program to find the largest quarterly call as a percentage of uncalled capital. The largest call was $204 million or 11.3% of the $1.8 billion uncalled balance in the fourth quarter of 2011. Applying this percentage to the current uncalled commitment of $3.7 billion, results in a largest potential quarterly call of $409 million. As of September 30, 2015, the $4.4 billion Rates portfolio would be able to cover this call by 10.6 times. ERS' U.S. Treasury holdings (a subset of the Rates portfolio) could cover that call by 8.0 times.

Mr. Bowman discussed the liquidity in the Absolute Return portfolio. Securities can be classified into security levels 1 (most liquid) through 3 (least liquid). The Hedge Fund program first deployed capital in fiscal year 2011, so currently most initial lockups have lapsed. 15% of the Absolute Return Portfolio is comprised of the illiquid Level 3 securities. 60% of the portfolio could be redeemed within three months.

Ms. Cydney Donnell asked for clarification of liquidating the Absolute Return portfolio and if there would be redemption fees. Mr. Robert Lee, ERS Director of Hedge Funds, explained that this report addressed only the amount of liquidity that can legally be called without any fees. He continued that the Hedge Fund team invests conservatively with fund managers that have limitations on pulling liquidity in down market conditions.

Staff considers ERS' liquidity needs in performing cash flows to and from the Trust as well as funding private market commitments. Given the 10.6 coverage multiple from the Rates portfolio, staff believes the Trust has sufficient liquidity to fund maximum capital calls from private markets in addition to meeting its obligations for annuity payments and other costs. Additionally, while capital calls are a temporary demand on liquidity during the early stages of the private markets portfolios, the net impact will be mitigated as the J-curve accelerates.

Mr. Gipson presented a chart which explained the cash flow of the Private Equity portfolio and its impact on liquidity. Mr. Gipson stated that the Private Equity program had $5.8 billion in total commitments year-to-date. $3.3 billion has been called leaving the uncalled amount at $2.8 billion, which includes recallable distributions. Using the historical 4.1% median net cash call as a guide, a potential of $98.5 million per quarter is the estimated quarterly called.

Ms. Lenore Sullivan asked if there has ever been 100% called. Mr. Gipson replied that in the ERS Private Equity program it has never happened, but the high range of called capital is about 70% to 80% and about 50% in secondaries. Mr. Mindell explained that in economic downturns when everything is illiquid the payouts are deferred for a couple of years. He also reiterated the importance of liquidity covering the distributions of the benefits to retirees in a down market.

Mr. Sessa explained the liquidity of the Private Real Estate portfolio. He explained that the program invests in open-ended funds, which are typically strategically held. At the beginning of the establishment of the program, open-ended funds helped mitigate the J-curve and add value. The third quarter of calendar year 2015 is notable as distributions were higher than capital calls resulting in negative net calls, or positive cash flow for the quarter. The portfolio has $2.6 billion committed with $1.8 billion called as of September 30, 2015. So, $800 million is the remaining commitment amount available to be called by the general partners from ERS. Applying the historical quarterly median of 6.88%, the estimated future quarterly cash called would be $55 million ($800 million uncalled x 6.88% = $55 million)

There were no questions or further discussion, and no action was required on this item.

VI. INVESTMENT EDUCATION: LIQUIDITY IN THE TEXAS ERS PRIVATE EQUITY PORTFOLIO

Mr. Wesley Gipson, ERS Director of Private Equity, and Mr. Billy Charlton of Altius Associates presented a detailed look at liquidity in the Private Equity portfolio. At the August 19, 2008 Joint Meeting of the Board of Trustees (Board) and Investment Advisory Committee (IAC), the Board approved a target allocation of 8% for private equity and then the allocation was increased to 10% of the total Trust on February 26, 2013. The portfolio has reached its target allocation of 10%, but a considerable amount of capital remains uncalled. This created concern that if all the uncalled capital was called at one time, the Trust may not have enough liquid assets to meet the call.

Mr. Billy Charlton provided historical evidence of the rate of capital calls, private equity fund manager behavior, and experiences from the Global Financial Crisis, as well as examined the probability of large capital calls for the ERS' Private Equity portfolio.

He explained issues in Private Equity that prevent large capital calls. The way the funds are invested and the opening and closing of deals assists in the prevention of large capital calls. Additionally, there are often legal limitations that limit the amount of capital called in a year.

Mr. Charlton explained that the first year of a fund is often when most of the capital is called. Distributions are relative to the fund size and inverse to the capital called. He also compared ERS' fund size, capital called, and committed capital to similar Private Equity funds.

He also explained the impact of economic downturns on Private Equity funds. The portfolios may be put on hold, which would affect the timing of the next fund. He said private companies usually hold on to their equity in negative markets.

Mr. Charlton concluded the presentation by summarizing key issues of deploying capital in Private Equity. He reiterated that legal structure prevents large amount of capital called at once. He readdressed that general partners have historically called less capital in down markets and how that would affect ERS.

There were no questions or further discussion, and no action was required on this item.

VII. <u>ANNUAL REVIEW AND CONSIDERATION OF ERS' INVESTMENT POLICY</u>

Mr. Tom Tull, CFA, ERS Chief Investment Officer, presented the annual review and consideration of the ERS Investment Policy. In accordance with Section 2.3 of the ERS *Investment Policy*, staff will annually review the policy and recommend changes as needed with the IAC and Board.

He outlined the four proposed changes to the ERS *Investment Policy*. The first proposed revision to the policy is the addition of clarifying language regarding broker/dealer agents registering with the Texas State Securities Board. Based on the trading relationship, certain brokers may have agents properly exempted from registering with the Texas State Securities Board. This proposed change will avoid those properly exempted agents from having to register because of ERS' *Investment Policy* when the Texas State Securities Board does not require registration. Staff has also confirmed our understanding of all relevant broker exemptions with the Texas State Securities Board.

Mr. Tull discussed the changes to the co-investment program of private equity and private real estate under proposed revisions two and three. For private equity, the combined net asset value and uncalled commitments of limited partner investments and co-investments with any single general partner: (i) cannot exceed 20% of the total private equity allocation, and (ii) may not exceed 25% of any particular co-mingled partnership together with its affiliated special purpose co-investment vehicles in which ERS owns an interest. And no individual co-investment, including follow-on investments in the same company, may be greater than $100 million in size without Board approval.

The standard approval by the Private Equity Investment Committee is by a majority vote rather than unanimous approval. As a result, "unanimous" has been deleted to be consistent with how approval provisions are stated throughout the Private Equity Policies and Procedures. All co-investments are still required to be vetted with the same due diligence expected of other private equity investments and meet the requirements of the Private Equity Policies and Procedures.

Regarding Private Real Estate, the Real Estate team may elect to invest in co-investments that are not with general partners in Real Estate Funds and Separate Accounts that ERS is invested. Any such co-investment will be vetted with the same due diligence expected of other private real estate investments and meet the requirements of these Policies and Procedures.

He added that ERS is looking at the flexibility of co-investments without relationships with partners as providing an opportunistic venue, providing more flexibility for us to take advantage when these opportunities exist.

Mr. Hille questioned the amount of due diligence performed on a new manager with a co-investment. Mr. Tull emphasized that the due diligence of potential co-investments is as thorough as the due diligence performed on all investments. The revisions to the policy would make ERS able to be tactical and to take advantage of co-investment opportunities that a new manager's already established partners might not be able to re-invest in. Further questions by Ms. Caroline Cooley and Mr. Ken Mindell were addressed by Mr. Gipson and Mr. Sessa.

Mr. Tull explained the proposed revision number four, which clarified the Active Risk Budget tracking error. The proposed revision adds language to the Active Risk Budget that is needed to reflect that tracking error is not applied to private market investments. Private market investments, such as hedge funds or private equity investments, are not intended to be measured for tracking error against a benchmark for purposes of the tracking error budgets that are designed for the public market portfolios. The final revision is clarification in terms of eliminating the alternatives from the tracking error estimates.

It's really very difficult to compute tracking error for alternatives in the first place, so this makes a lot more sense.

After discussion the Board and IAC declined the motion to approve proposed revisions two and three, regarding changes to the co-investment policies in Private Equity and Private Real Estate. Staff will reevaluate the current proposed revisions and present new proposed changes to the Board and IAC at the February Joint Meeting.

The Investment Advisory Committee then took the following action:

> **MOTION** made by Ms. Lenore Sullivan, seconded by Mr. Vernon Torgerson and carried unanimously by the members present that the Investment Advisory Committee approve proposed revisions one and four to the ERS investment policy as presented in the agenda item.

The Board of Trustees then took the following action:

> **MOTION** made by Ms. Cydney Donnell, seconded by Mr. Brian Ragland, and carried unanimously by the members present that the Board of Trustees approve proposed revisions one and four to the ERS investment policy as presented in the agenda item.

IIX. DISCUSSION AND TRAINING REGARDING ETHICS AND FIDUCIARY RESPONSIBILITY

Ms. Paula Jones, ERS General Counsel, introduced Mr. Tim Sorrells, Attorney and Counselor at Law, along with Ms. Amy Wells and Mr. John Kuhl, partners at Cox, Castle, and Nicholson, who presented the ethics and fiduciary responsibility training.

Annual ethics training is required for the Board of Trustees, Investment Advisory Committee and ERS Investments staff as established in the ERS *Investment Policy*. Mr. Sorrells presented general education on fiduciary duties, best practices and the practical application for ERS.

There were no questions or further discussion, and no action was required on this item.

IX. REVIEW AND DISCUSSION OF THE RISK MANAGEMENT AND APPLIED RESEARCH PROGRAM

Ms. Sharmila Kassam, Deputy Chief Investment Officer (CIO), Mr. Carlos Chujoy, CFA, Risk Management Portfolio Manager and Mr. Stuart Williams, CFA, Portfolio Manager presented the review and discussion of the Risk Committee and the Risk Management and Applied Research (RMAR) team.

Ms. Kassam introduced the overview of the risk program. The purpose of risk monitoring and risk management is to identify risk, which are uncertainties that could make a difference to Trust Fund performance, and then to measure, monitor and manage those risks. The Trust uses a Risk Committee and the RMAR team to consider relevant information and recommend actions to avoid negative outcomes and enhance positive outcomes.

The Risk Committee is comprised of the following voting members: Tom Tull, CIO; Carlos Chujoy, RMAR Portfolio Manager; Sharmila Kassam, Deputy CIO; John Streun, Director of Public Equities; Leighton Shantz, Director of Fixed Income; and Robert Lee, Director of Hedge Funds. Further, non-voting members from senior investment staff will attend the Risk Committee as needed. The Committee looks both within and across the asset classes to develop a comprehensive view of total Trust risk and to make informed recommendations.

Mr. Chujoy described the risk initiatives in fiscal year 2015. They continue to address risk at a Plan-wide level during the Monthly risk committee meetings. The RMAR team expanded analytical capabilities of the group and developed a platform for equity futures among other initiatives. RMAR has continued to work with the Risk Committee to review and address plan-wide investment risk. Their efforts have included reporting, dashboard development and ad hoc reporting and analysis. RMAR has also enhanced and expanded the analytical and derivative capabilities of the team by providing continued assistance to the Global Public Equities External Advisor Program. Enhancement of the derivatives program has included a basic platform for equity futures and research efforts in equity derivative strategies.

Mr. Chujoy discussed the response of exogenous/systemic risk analysis and decisions made during the Risk Committee meetings. Over this past twelve months, the Risk Committee in addition to its monthly monitoring of the Trust also focused on the impact of major exogenous factors including changes in currency, volatility in Europe and China, low energy rates and the uncertainty of the interest rate policy of the Federal Reserve. Additionally, the Trust's exposure to Volkswagen was raised to the Risk Committee for information.

Mr. Williams described the tactical asset allocation (TAA) model RMAR uses to make recommendations. The purpose of this model is to provide information to make risk-adjusted decisions on a short term basis. The RMAR team has been in the process of refining the TAA model, which has been used for approximately two years. The current use for the TAA model is working with the CIO regarding broad asset allocation tactical moves between return seeking and risk reduction as well as intra-asset class moves in the Global Public Equity asset class. There are five general factor categories of the TAA model: value, momentum, cash flow, quality, and sentiment. The RMAR team works closely with the CIO to report risk findings based upon the TAA model, which influence investment activity of the Trust.

Mr. Mindell asked about the accuracy of the model. Mr. Williams said it is over 70% accurate and back tested since 1995.

Mr. Chujoy concluded the presentation by outlining the fiscal year 2016 initiatives. Progress continues in the development and execution of the ERS investment risk monitoring and risk management process. Although, the Risk Committee, supported by the RMAR team, is currently well equipped to monitor and analyze major risks to the Trust, every effort is being made to maintain best practices while improving internal capabilities.

There were no questions or further discussion, and no action was required on this item.

X. CHIEF INVESTMENT OFFICER'S REPORT

Mr. Tom Tull, Chief Investment Officer presented the Chief Investment Officer's report. He began his report with the objective and philosophy of the Investments Division. The purpose is to position the Trust for the future for the sole benefit of its members and retirees. The objective is to establish investment policies, objectives, and strategies for the purpose of earning a competitive risk-adjusted rate of return at a reasonable cost.

He described proposed investment challenges for fiscal year 2016. Energy performance continues to be weak and interest rates are expected to increase. Geopolitical risk continues to negatively impact volatility in the market. He also discussed potential investment opportunities in China and tactical portfolio adjustments.

Mr. Tull presented the major initiatives of the Investments division. Staff will continue to advance the derivatives program and improve technology for the program. ERS strives to save costs to the Trust funds through negotiations and seeking the best economic terms. Staff continues to work on developing investment products for the Texa$aver fund.

He discussed the state of the fund and asset allocation. Transitions to new asset classes are complete, Private Real Estate and Private Equity are now at their targeted allocation. The transition to the new asset allocation guidelines is essentially complete except for Credit and Infrastructure. Credit is on track to reach 10% of the Trust in 2017. Infrastructure will require more time for completion due to the infancy of the overall asset class and market opportunities. ERS staff continues to seek capital pooling arrangements with similarly minded investors with the objective of gaining scale and economics.

Mr. Tull reported savings from the fiscal year. During the fiscal year there have been several tactical asset allocation opportunities, which created a net profit of over $48 million. An overweight in Japan with an ETF led to a $23.9 million profit. Options in fixed income and equities enhanced trade execution and profited $1.5 million. And the US futures underweight in the US created a net profit of $23 million. ERS investment staff and legal staff were also able to save the Fund $47.7 million through fee negotiations and terms.

Mr. Tull concluded the presentation by encouraging input from the Board and IAC to continue to improve upon the Investments program.

There were no questions or further discussion, and no action was required on this item.

XI. ADJOURNMENT OF THE INVESTMENT ADVISORY COMMITTEE AND RECESS OF THE BOARD OF TRUSTEES

The December 3, 2015 Joint Meeting of the ERS Board of Trustees and Investment Advisory Committee adjourned at 4:53 pm.