Joint Meeting of the Board of Trustees and Investment Advisory Committee

August 23, 2017

ERS
EMPLOYEES RETIREMENT SYSTEM OF TEXAS

Presented for Review and Approval

March 7, 2018

Contents

JOINT MEETING OF THE
BOARD OF TRUSTEES AND
INVESTMENT ADVISORY COMMITTEE
EMPLOYEES RETIREMENT SYSTEM OF TEXAS
ERS Building – Board Room
200 E. 18th Street, Austin, Texas 78701
August 23, 2017 – 8:00 a.m.

TRUSTEES PRESENT
I. Craig Hester, Chair
Doug Danzeiser, Vice-chair
Ilesa Daniels, Member
Cydney Donnell, Member
Jeanie Wyatt, Member
Brian Ragland, Member

IAC PRESENT
James Hille, Chair
Caroline Cooley, Vice-chair
Bob Alley, Member
Ken Mindell, Member
Laura Starks, Member
Lenore Sullivan, Member
Gene Needles, Member

ERS STAFF PRESENT
Amanda Burleigh, Office of General Counsel
Amy Chamberlain, Executive Office
Andrew Hodson, Investments
Anthony Curtiss, Investments
Beth Gilbert, Internal Audit
Betty Martin, Investments
Carlos Chujoy, Investments
Catherine Terrell, Deputy Executive Director
Chris Tocci, Investments
David Lacy, Office of the General Counsel
Dee Dee Sterns, Director of Human Resources
Eddie Chan, Finance
Gabrielle Schreiber, Director of OPCO
Jennifer Chambers, Executive Office
Jennifer Jones, Executive Office
John McCaffrey, Investments
John Streun, Investments
Jonathan Puckett, Internal Audit
Juli Davila, Investments
Kathryn Tesar, Director of Benefits Communications
Keith Yawn, Director of Strategic Initiatives
Kelley Davenport, Executive Office
Ken Mindell, Member
Lauren Honza, Investments
Leah Erard, Executive Office
Leighton Shantz, Investments
Liz Geise, Benefits Communications
Machelle Pharr, Chief Financial Officer
Mari Queller, Finance
Megan Hunter, Benefit Contracts
Michael Shoop, Investments
Mike Ewing, Office of General Counsel
Nicholas Maffeo, Investments

Pablo de la Sierra Perez, Investments
Panayiotis Lambropoulos, Investments
Paula A. Jones, Deputy Executive Director and General Counsel
Peter Ehret, Investments
Porter Wilson, Executive Director
Ricardo Lyra, Investments
Robert Sessa, Investments
Robin Hardaway, Director of Customer Benefits
Shack Nail, Special Projects and Policy Advisor
Sharmila Kassam, Deputy Chief Investment Officer
Stuart Williams, Investments
Susie Ramirez, Executive Office
Tanna Ridgway, Investments
Tom Tull, Chief Investment Officer
Tony Chavez, Director of Internal Auditor
Travis Olson, Investments

VISITORS PRESENT
Amy Mashberg
Avery Saxe, Legislative Budget Board
Bill Hamilton, Retired State Employees Association
Bob May, Texas Pension Review Board
Bobby Wilkinson, Office of the Governor
Brady Vaughn, Senate Finance Committee
Catherine Melvin, Texas Department of Public Safety
Chris Paxton, Optum RX
Cristen Shelton, Optum RX
Daphine Jack, Texas State Employees Union
Deborah Ingersoll, TX State Troopers Association
Derek Vogel, Optum RX
Diana Spain
Doug Greco, Rep Gina Hinojosa
Dophalpt Barrar
Elaina Fowler, American Federation of State, County, and Municipal Employees Retirees
Ernest Simmons
Gene Schubeck
Hank Leithner
James Walsh, Albourne
Jerome S. Wald, Texas State Employees Union
Joe Newton, Gabriel, Roeder, Smith & Co.
John Hryhorchuk, Office of the Governor
Kathleen Stiegman, Retired
Kenny Herbold, Pension Review Board
Kristen Doyle, Aon Hewitt Investment Consultants
Ky Ash, K & L Gates
Lisa Kaufman for Texas Public Employees Association
Davis Kaufman for Texas Public Employees Association
Luther Elmore, American Federation of State, County, and Municipal Employees Retirees
Malika Te, Texas House Appropriations Committee
Mary Esther Escobedo, Texas State Employees Union
Mary Grace Bilby, Investments
Mary Mosley, Texas State Employees Union
Mary Schubeck
Mary Skerl
Maura Powers, American Federation of State, County, and Municipal Employees Retirees
Michael McCormick, Aon Hewitt Investment Consultants
Pam Scott, Retiree
Ryan Falls, Gabriel, Roeder, Smith & Co.
San Juanita Aguilar
Seth Hutchinson, Texas State Employees Union
Steve Voss, Aon Hewitt Investment Consultants

Stuart Greenfield, Retiree
Susan Bradley, Texas State Employees Union
Tathata Lohachitkul, Albourne
Tom Griebel, Retired State Employees Association
Trevor Simmons, Legislative Budget Board
Margaret “Didi” Weinblatt

Joint Meeting of the ERS Board of Trustees and Investment Advisory Committee

1.1 Call Meeting of the Board of Trustees to Order

Mr. Craig Hester, Chairman of the Board of Trustees for the Employees Retirement System of Texas (ERS), called the meeting to order and read the following statement:

> “Public notice of the ERS Board of Trustees meeting containing all items on the proposed agenda was filed with the Office of the Secretary of State at 2:41 p.m. on Monday, August 14, 2017, as required by Chapter 551 Texas Government Code referred to as the Open Meetings Law.”

2.1 Consideration of Appointment to the Investment Advisory Committee (ACTION)

Mr. Tom Tull, Chief Investment Officer, gave a brief background on the Investment Advisory Committee (IAC). He noted that the IAC is established at the discretion of the Board of Trustees (BOT) and can have five to nine members. At the time of the meeting, the IAC had seven members, and accordingly, staff recommended that the BOT of the Employees Retirement System of Texas (ERS) appoint Margaret "Didi" Weinblatt to the IAC for a three-year term, effective August 23, 2017, ending August 31, 2020.

Members of the ERS BOT and staff recently conducted an assessment of IAC member experience and determined that in addition to broad investment expertise, additional experience was needed in the area of fixed income and derivatives. Staff believes that Dr. Margaret “Didi” Weinblatt has a broad background that will serve the committee and agency well. Dr. Weinblatt brings 37 years of experience in the investment realm. Mr. Tull noted that Dr. Weinblatt has a primary expertise in equities and fixed income. Mr. Tull presented the IAC skills assessment with regard to Dr. Weinblatt.

The Board of Trustees then took the following action:

> **MOTION** made by Ms. Cydney Donnell, seconded by Ms. Ilesa Daniels, and carried unanimously by the members present that the Board of Trustees of the Employees Retirement System of Texas appoint Dr. Margaret "Didi" Weinblatt to the Investment Advisory Committee for a three-year term effective August 23, 2017, ending August 31, 2020.

2.2 Consideration of Reappointment of ERS Investment Advisory Committee members with terms expiring August 31, 2017 (ACTION)

Mr. Tom Tull, Chief Investment Officer, gave a brief background on expiring term of Mr. James (Jim) Hille, IAC member. He noted that the current term of Mr. Hille’s appointment expires August 31, 2017. Staff recommended a reappointment Mr. Hille for a three-year term ending August 31, 2020.

Ms. Donnell noted that Mr. Hille has served the Trust very well so far, and further commented this was a good reappointment.

The Board of Trustees then took the following action:

MOTION made by Ms. Cydney Donnell, seconded by Ms. Jeanie Wyatt, carried unanimously by the members present that the Board of Trustees of the Employees Retirement System of Texas reappoint Mr. James Hille to the Investment Advisory Committee for a three-year term ending August 31, 2020.

3.1 Call Meeting of the Investment Advisory Committee to Order

Mr. Jim Hille, Chairman of the IAC for the Employees Retirement System of Texas, called the meeting to order and read the following statement:

"Public notice of the Joint Meeting of the Board of Trustees and Investment Advisory Committee meeting containing all items on the proposed agenda was filed with the Office of the Secretary of State at 2:41 p.m. on Monday, August 14th, 2017 as required by Chapter 551 Texas Government Code referred to as the Open Meetings Law."

4.1 Approval of the minutes to the May 17, 2017 Joint Meeting of the Board of Trustees and Investment Advisory Committee and July 10, 2017 Working Session of the Board of Trustees and Investment Advisory Committee (ACTION)

Mr. Jim Hille, IAC Chair, opened the floor for a motion on the approval of the minutes from the May 17, 2017 Joint Meeting of the Board of Trustees and Investment Advisory Committee and July 10, 2017 Working Session of the Board of Trustees and Investment Advisory Committee. Mr. Hester recommended a few revisions to correct the May 17, 2017 Joint Meeting minutes.

The IAC then took the following action:

MOTION made by Ms. Caroline Cooley, seconded by Mr. Ken Mindell, and carried unanimously by the members present that the Investment Advisory Committee approve the minutes of the May 17, 2017 Joint Meeting of the Board of Trustees and Investment Advisory Committee, as amended, and July 10, 2017 Working Session of the Board of Trustees and Investment Advisory Committee.

The Board of Trustees then took the following action:

MOTION made by Ms. Cydney Donnell, seconded by Mr. Doug Danzeiser, and carried unanimously by the members present that the Board of Trustees approve the minutes the May 17, 2017 Joint Meeting of the Board of Trustees and Investment Advisory Committee, as amended.

MOTION made by Ms. Cydney Donnell, seconded by Mr. Doug Danzeiser, and carried unanimously by the members present that the Board of Trustees approve the minutes of the July 10, 2017 Working Session of the Board of Trustees and Investment Advisory Committee.

5.1 Review of the Investment Performance for Second Calendar Quarter 2017

Ms. Sharmila Kassam, Deputy Chief Investment Officer, Ms. Kristen Doyle, and Mr. Mike McCormick, Aon Hewitt Investment Consulting (AHIC), presented the investment performance for second calendar quarter of 2017.

Ms. Kassam introduced the second quarter performance. She reminded the Board to please ask questions and encouraged them to stop the presentation if any part is unclear.

Mr. McCormick gave an overview of calendar and fiscal year performance. He noted that fiscal year to date (FYTD) through June 30, performance has been very good. There were 50 basis points of enhanced return in relation to the benchmark for the fiscal year. The three year tracking error was 1.47%, which is well within the target range for the Trust. Large contributors to outperformance for the quarter were international equities and real estate. For the one year excess return, the real asset component was a big contributor and the absolute return component was meaningful as well.

Mr. McCormick noted that the profile of the plan is largely unchanged. Similar to previous quarters, the plan is in compliance with the policies as of the end of the period. Funds remain at approximately 61% internally managed, with 80% in return-seeking assets. The plan has about 74% in liquid assets as represented by Global Public Equity, Global Credit, Rates, and Cash.

Mr. McCormick presented cash flow information. Approximately $950 million in investment returns were earned in the most recent quarter, with $250 million in net outflows. Over the one-year period, about $3.3 billion in investment returns were earned. The Trust ended the period at approximately $26.97 billion. The plan generated approximately $10.8 billion over the last five years in investment earnings in light of $6 billion in net outflows over the same period.

Mr. McCormick presented the asset allocation relative to the strategic and long-term allocations. Most asset classes are within policy limits with a slight overweight to global equities, slight overweight to cash, and slightly underweight within the remaining asset classes.

Mr. McCormick presented performance information, as well as contributors and detractors. There was a 3.6% return for the quarter and a 12.4% return for the trailing one-year period. Global Public Equity, Private Equity, Real Assets, and Absolute Return were all net contributors during the quarter, with the Global Credit component being the slight detractor. Over the one-year period, Global Private Equity is a significant detractor. Mr. McCormick noted that periods of rapid appreciation of public assets will cause the lagged value of private assets to detract relative to a benchmark. He mentioned Global Private Equity should be looked over a longer period of time for a more applicable measure of performance.

Ms. Kristen Doyle commented on the absolute return for the one year period for the fiscal year-to-date number being different than some of ERS peers that typically are looking at fiscal year end of June. The 12.4% one year number is very competitive with ERS peers in terms of earnings with regard to the same trailing 12-month period.

Mr. McCormick presented the risk profile for the total fund. He outlined the returns of the Trust have outperformed the benchmark over both of the three and ten year periods at a slightly lower level of volatility. He commented that the diversification benefits of the Trust have been advantageous over three and ten year periods. He further commented that over most periods we would observe for the trust, the diversification has been very beneficial.

Mr. McCormick presented the performance and tracking error of the plan. There has been an increase in the amount of tracking error within the Trust. This increase has occurred primarily between October 2015 through the end of June 2016. The three year tracking error is basically in line with the benchmark, but slightly negative. The risk adjusted capture rate is slightly negative however as 2015 and 2016 roll off, with more good periods like 2017, he would expect the number to rise.

Mr. McCormick presented the change in asset allocation of the plan over time. He commented on additional asset exposures and that the fund is now just under $27 billion. Ms. Doyle commented that there has been a very consistent positive growth between 2016 to 2017. This is due to investment earnings of the program far outweighing the net cash outflows. The investment earnings have contributed to the plan almost reaching $27 billion as of the end of June. Mr. McCormick discussed to the long term investment results, which during the falling markets from 1999-2003, the fund had a lack of diversification, which led to losses greater than the benchmark. From 2003-2008, the fund increased its diversification and fell less than the benchmark and in the current day is highly diversified which increases the Sharpe ratio and volatility of the fund relative to the benchmark. Cydney Donnell, BOT member, asked about the years since inception with regard to the long term investments results, and Mr. McCormick confirmed it is around 31 years.

Mr. Craig Hester, Chairman of the BOT, commented that it's important to point out that the plan has done very well or compared favorably to the policy benchmark in terms of return, and the plan has been able to generate higher returns with less risk compared to the benchmark. He then congratulated staff for this accomplishment. Mr. McCormick responded that the plan’s real assets, absolute return portfolio and non-U.S. equities have had pretty consistent strong performance for a good period of time.

Ms. Kristen Doyle presented a research paper on a study which compares public funds to endowments and foundations (E&F). The purpose was to compare absolute performance and asset allocation. The main question of the study was whether or not public funds could compete with endowments. The findings confirmed that public funds can compete with returns above E&F. Over the past five years, public funds were able to outperform E&F by about 100 basis points. Ms. Doyle noted that E&F had a preference for hedge funds over private equity, and this contributed to the underperformance as public funds focused on private equity. She commented that public funds can compete going forward even in the challenging marketplace where there are diminishing returns in the public markets. Ms. Cydney Donnell asked if the average fund size was similar in the study between public funds, endowments, and foundations. After discussion between BOT, IAC, and AHIC the conclusion was the universe for this study ranges from $10 million in assets under management to over $50 billion in assets under management. Public funds tend to have a higher allocation to low risk fixed income, and this has dampened the volatility over the past few years. There are certain competitive advantages afforded to ERS given the circumstances of the fund, and staff should be looking at ways to capitalize upon those opportunities.

Ms. Kassam provided a summary on how the study is applicable to ERS. She commented on the governance structure as a definite area that the BOT and IAC have worked very tirelessly to develop then document in the investment policy to give staff the tactical capability to execute investment deals in a diligent yet timely way. Due to the fact that ERS manages around two thirds of the Trust in house, ERS has a competitive advantage of managing public market asset classes, particularly public equities, global credit, and rates. She noted this also leverages the ability to make the most use of ERS external relationships. The IAC has been unique resource of industry professionals from all different walks of the investment world that challenge and support staff with their expertise.

Ms. Kassam noted the BOT has also taken on and committed to learn areas of investments that they are not already familiar with. ERS takes into account that ERS is not the largest pension, which provides an opportunity to invest and access the small and mid-market of the investment area. ERS is able to maximize the best opportunities in terms of the size of ERS relative to public plan peers but being larger than most E&F. She noted this size also has given ERS an opportunity to manage those internal assets at approximately 12 basis points. ERS is aware and prudent with regard to short term horizons, but staff is conscious that we are long term investors and have the capability of using liquidity when ERS has the opportunity to generate better returns. She mentioned that the discussion on the implementation of the asset mix will continue with the asset allocation study agenda item to follow. Going forward there will be continued conversation about areas ERS is leveraging the competitive advantages.

Mr. McCormick summarized the presentation, noting that recent performance relative to the benchmarks has outperformed by 14 basis points during the trailing 12 months. The real asset component, the absolute return component, and non-U.S. equities all contributed to the value. The plan is in line with its long term and strategic policy. He commented that the end of the period global equity and cash were overweight while all other asset classes were slightly underweight relative to the policy. The Trust has meaningfully outperformed the Long Term Public Benchmark over most longer-term periods. Diversification has been effective, the Trust and the Total Fund Policy Benchmark has produced a return superior to the Long Term Public Benchmark at a meaningfully lower level of risk (volatility) over the trailing three and ten year period.

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

6.1 Consideration of Internal Investment Committee Charter (ACTION)

Ms. Sharmila Kassam, Deputy Chief Investment Officer, presented the investment committee charter for consideration and an action item. She provided a background on the Asset Class Internal Investment Committee, which is part of the BOT's investment delegation structure with ERS investment staff. The Internal Investment Committee is supported by ERS Asset Class staff, the Investment Consultant, and ERS Legal Services. The concept of the Investment Committee Charter was a product of an investment governance review conducted by ERS Internal Audit and the recommendation that staff develop for the BOT a comprehensive charter that formalized the operating procedures for Internal Investment Committees. The formal charter covers the following key provisions, overall objective of the committee, roles and responsibilities, voting members including veto power, number of votes required for approval, and attendance of non-voting members such as consultants, and legal.

Mr. Porter Wilson, Executive Director, commented that despite the fact that the charter has not yet been adopted, staff had begun implementing many of the items as part of standard operating procedures, including internal audit, legal, and consultants present in many of the internal investment committee meetings.

Mr. Craig Hester, Chairman of the BOT, thanked staff and asked if there was input from the IAC and trustees.

The Investment Advisory Committee then took the following action:

MOTION made by Ms. Laura T. Starks, seconded by Ms. Caroline Cooley, and carried unanimously by the members present that the Investment Advisory Committee adopt the Asset Class Internal Investment Committee Charter as presented on August 23, 2017.

The Board of Trustees then took the following action:

MOTION made by Mr. Brian Ragland, seconded by Ms. Ilesa Daniels, and carried unanimously by the members present that the Board of Trustees adopt the Internal Investment Committee Charter as presented on August 23, 2017.

The Board of Trustees and the IAC then opened the floor to public comment:

PUBLIC TESTIMONY

Mr. Stuart Greenfield (State of Texas Retiree), Ms. Susan Bradley (State Retiree), Ms. Kathleen Stiegman (State Retiree), Mr. Bill Hamilton (President of the Retired State Employees Association), Mr. Seth Hutchinson (Vice President of the Texas State Employees Union), Ms. Daphne Jack (State Retiree), Ms. Amy Mashberg (State Retiree), Ms. Mara Powers (President of AFSCME Texas Retirees), Ms. Pamela Scott (State Retiree), Mr. Jerome Wald (State Retiree), Ms. Mary Esther Escobedo (Texas State Employees Union), Ms. Diana Spain (State Retiree), presented public testimony with regards to the increase or decrease of the assumed rate of return on the ERS trust and the consequences to current employees and retirees. Testimony was presented with regard to performance of the trust, cost of living adjustments, changes to the unfunded liability, asset allocation, changes in benefits, funding status, active employee contributions, use of the rainy day fund, and delaying the vote for the change in the assumed rate of return.

Chairman Hester thanked everyone for their comments, and noted that these comments are not falling on deaf ears. He explained the BOT and IAC have a very difficult decision to make. He noted that he has not had one conversation with any trustee in the entire time that he had been a trustee in which anyone brought up the issue of political pressure impacting the decisions of the BOT. The BOT and IAC are independent and try to make the best decisions for the Trust.

Mr. Doug Danzeiser echoed Chairman Hester's comments, and thanked the witnesses who came to the meeting. He noted that the comments he heard in the meeting have been echoed in around 900 emails he has received personally from other plan participants. Ms. Cydney Donnell noted that the BOT needs to focus on both today's retirees and those in the future. She thanked the witnesses for their public testimony and also asked that they express their concerns to the Texas Legislature. She noted that state retirees have done a great service to the state and have never been properly compensated. She expressed concern that with a higher unfunded liability there is a chance for a credit downgrade for the state, which would have wide spanning consequences not only for the retirees, but for the whole state. Additionally, she noted that the decisions to be made have been part of a discussion for quite some time, and is not a new development.

Chairman Hester noted the trust is a tremendous asset for the State of Texas employees. He mentioned that the BOT is willing to work with the people at the capitol to solve the issue. Mr. Wilson pointed out the limited scope of control of the BOT with the investment strategy. The Legislature controls the substantial part of the retirement program, from the benefits to funding.

Ms. Caroline Cooley provided some context on the expected rate of return by noting that the BOT and IAC are not trying to randomly lower rates of return. The risk free rate of return today compared to the rate 30 years ago has changed significantly so a reduction in returns is a result of the current markets.

7.1 Consideration of the ERS' Asset Allocation and Implementation with Related Proposed Changes to ERS' Investment Policy (ACTION)

Mr. Tom Tull, Chief Investment Officer, and Ms. Sharmila Kassam, Deputy Chief Investment Officer, Mr. Steve Voss and Michael McCormick from Aon Hewitt presented the review and discussion of the asset allocation Study. The asset allocation study's purpose is to determine the strategy and related asset mix for staff to implement that provides the best risk-adjusted rate of return that meets the best interest of the trust and its beneficiaries. The primary goal of the study is to have an asset allocation study that provides the tools to align the plan's risk profile with its liabilities to determine an investment strategy and asset mix. The asset allocation study should give the fund the best opportunity to meet the demands of the trust and the responsibility that goes with fiduciary responsibility of the BOT, IAC and staff.

Mr. Tull described the Asset Allocation Study process timeline. The study process began back in August 2016. During this period to the present, ERS has looked at risk tolerance of the Board and the IAC, and the supporting analysis thereof, along with capital market assumptions. Staff has walked through the building blocks to determine capital market assumptions to determine the best estimated rates of return for different asset classes with input from multiple experts' insights and perspective. He noted that we have also gone through the asset mixes and subjected the proposed mixes to stress testing and liquidity analysis.

Mr. Tull provided an executive summary on the status of the current asset mix. Overall, the current portfolio is well diversified. History has shown that well diversified portfolios can improve the risk-adjusted characteristics of the fund. He highlighted four main points with regard to the study. Longer time horizons are expected to reward higher levels of risk. Shorter time horizons are not. The ERS plan is a long term investment strategy. The funded ratio is projected to trend lower over time. Adverse market experience can significantly impact the funded status of the plan over the projection period. ERS investment staff is not clairvoyant, thus the need for a well-diversified and long term investment strategy. Alternative asset class portfolios can and do improve the volatility risk and have reward characteristics but they do require similar long-term trends. He noted that ERS is 26% in alternatives, while our friends at Teacher Retirement System have over 40%. He then introduced Ms. Sharmila Kassam to review the asset mix and staff recommendation.

Ms. Kassam, Deputy Chief Investment Officer, provided background information on the Asset Allocation Study followed by recommended asset mix and implementation. Staff has been meeting and discussing the topics of asset allocation, implementation, and return assumptions and developing the most realistic and transparent way to navigate the decision making process. Ms. Kassam noted staff's appreciation to the IAC and the BOT for their input and help working through the study and providing recommendations as to the best way to approach the process. Staff's recommendation is to adopt the enhanced return, which is the more aggressive mix of the three options presented, which provides the ability for ERS to take the most advantage of opportunities expected in the markets. Ms. Kassam noted for the staff to be tactical, staff is proposing having an interim target towards the diversified strategy mix. See Exhibit A attached.

The enhanced return as a final target provides an average expected return of 7.2% over a 10-year period. The diversified strategy is an interim target for staff for the first one to two years so the benchmark and weightings would be established as of September 1, 2017. If this is approved, it would then reset at year three from this date towards the final target of the enhanced return. Staff would continue to have the tactical ability per the Investment Policy to have bands within these targets to make decisions based on opportunities. She noted that the BOT have been generous in making sure that staff has the flexibility to move within these bands. Ms. Kassam noted that staff's commitment is to make sure there is transparency and oversight provided to the board to know when staff is taking advantage of the bands.

Mr. Tull then presented information on the return mixes of the allocation scenarios. He highlighted that the enhanced rate of return does provide a higher return at a lower level of volatility than the other mixes over the ten-year and much longer-term time frames. He mentioned that structuring the portfolio towards the enhanced rate of return does reduce the overall volatility risk to the trust. It has better performance results during more stress periods of the market than the other strategies presented.

Ms. Kassam then discussed the asset liability projection results. The economic cost is a present value of the contributions plus the shortfall, in this case with a 7% discount. She noted that over the 30-year period, the trust will see a $1.4 billion economic savings using the recommended asset mix over the current policy target. Ms. Kassam referenced by not being able to control contributions, the goal is to try to maximize the best risk-adjusted returns over the long term to save the plan economic costs.

Chairman Craig Hester requested more of an explanation on the economic cost savings of $1.4 billion.

Ms. Kassam then noted that from a calculation standpoint, there is not a lot of cost savings in the short term, but it's the difference between the economic cost of the current policy target versus the staff recommended mix. These figures are discounted at a 7% rate. Mr. Michael McCormick noted that it would be a similar economic cost if the discount rate were 7% or 7.25%. Regardless of 7% or 7.25%, as time goes by, the difference in the funded status is going to become smaller because the actual experience return is going to represent more of the assets at that point. He noted the difference in the economic cost for the two would be small, but it represents contributions plus unfunded liability at the end of the period, and the present value of those values. Chairman Hester asked what happens to the economic cost if the rate was something higher. Mr. McCormick noted that the longer the period in question, the less it is going to affect the numbers because at some point, the economic cost whether the rate was 15% or 7% will be the same.

Ms. Kassam continued the discussion of liquidity under the different asset mixes. She noted in a recession-type scenario, which is somewhat of a realistic possibility, it is possible to lose some liquidity even in relatively liquid asset classes like public equities, rates and credit. She noted that the models AHIC has presented are conservative meaning they assume no staff intervention during the economic scenarios so in a recession-type scenario, the trust is challenged. The portfolios are challenged. She mentioned it is critical for the fund to be balanced in terms of liquidity to make beneficiary payments, but also to have the ability to take advantage of market opportunities because the values of the investments are lower in this scenario so that the fund can benefit over the long term. She reiterated that ERS has a long term investment horizon so liquidity must be balanced against such a long horizon.

Mr. Brian Ragland asked for clarification as to whether the expected return that the Board and IAC have been discussing is a ten year estimate. This was confirmed by Ms. Kassam and Mr. Tull. Mr. Ragland had concerns about the longer term returns for the enhanced portfolio. Mr. McCormick described stochastic results as being similar to Monte Carlo analysis and discussed the results over a 30 year period. He mentioned the expected results over the next thirty years would yield around 7.6% for the recommended asset mix. Mr. Ragland noted there is an additional amount of unpredictability with the longer term rate, and is it within the realm of reason. He noted that the one fact they know is whatever rate is decided upon will be incorrect. Mr. Steve Voss added that for this very reason this is why we undergo the asset allocation study every four to five years, and the experience studies are done periodically as well to look back on results to see what actually occurred. The fund can then attempt to look forward with simulations and other things using a building block approach based on where interest rates are to project forward.

Chairman Hester clarified that the 20 and 30 year numbers that are in reference that are higher, are partially due to compounding and partially not. Mr. Hester noted that over 10 years the plan has an expected rate of return, but when the projection changes to 20 or 30, some of the expected returns increase which results in a number greater than the 10 year projection. Mr. Voss clarified that with regard to fixed income, the level of inflation is expected to be higher with an increase in interest rates. Returns are projected to be rather modest over the next 10 years, but then generate higher yields in the 20 to 30 year period. Ms. Kassam asked that AHIC reflect on the 20 year number as well. Mr. McCormick pointed out that the 20 year number would be 7.4%. Chairman Hester asked if the diversified and enhanced, during the transition period, there would be a 50% probability of exceeding or achieving a 7% return. This was confirmed by Ms. Kassam and Mr. Voss. The 50 percentile probability applies to the 10, 20, and 30 year time horizon projections provided by AHIC. Mr. Jim Hille asked for confirmation that there was no reasonably well-diversified portfolio that achieved an 8% return over a 30-year period. Mr. Voss confirmed. Mr. Hille noted that the trustees have a responsibility to make sure that the portfolio is properly diversified and not 100% in fixed income or equities.

Ms. Paula Jones, Deputy Executive Director and General Counsel, commented that it is the BOT's fiduciary duty to pick an asset mix that they are comfortable with and they believe is prudent, not to pick an asset class to hit a particular number. Ms. Kassam echoed Ms. Jones comment and noted the decision for this agenda item is based on an asset mix. Mr. Ken Mindell noted that the calculations in discussion are increasing the risk-adjusted rate of return, which in his view is very prudent in terms of going forward. He commented that the decision would be moving the portfolio in the right direction with higher return, lower risk, and a better risk adjusted rate of return.

Mr. Tull commented that there were two motions that are up for consideration, the first being to adopt a decision approved from the asset allocation study agenda item, and second adopt the respective implementation of the proposal. Additionally, there is a motion to revise the investment policy to:

- require an asset allocation study every four years in order to conduct the study in conjunction with the actuarial experience study which will be concluded every four years pursuant to recent adoption of Senate Bill 301;
- revise the investment policy to reflect the changes made by SB 301 to require Board approval of any alternative investment over 0.6% of the trust;

- revise the investment policy to reflect the changes made by the recent adoption of HB 89 with regard to divestment of sanctions regime relating to a designated foreign terrorist organization, and companies that boycott Israel;
- revise the investment policy to incorporate internal investment committees for each asset class to include four voting members, one of which will be an IAC member;
- adopt changes to investment objectives and guidelines for TEGBP funds required by GASB Statement No. 74 and
- adopt an ERS interim Private Equity Tactical Plan along current pacing.

Chairman Hester requested confirmation from AHIC and from the IAC to see if everyone was comfortable with the asset mix. Mr. Voss commented that the trust would be improving the economic cost profile, which results in a $1.4 billion dollar improvement over 30 years. He noted that the new asset mix would improve the expected return from 7% to 7.2% over the shorter term of 10 years, lower the volatility, and yield a higher Sharpe ratio. He commented that the analysis looked at economic regimes and cycles, market shocks, the current portfolio performance and the new enhanced portfolio expected performance. In nearly all cases, the enhanced portfolio was superior. He further commented that AHIC is comfortable with, and it is implicit that they are comfortable with the asset mix and staff's recommendation for implementation, and they endorse the new asset mix.

Some concerns were expressed by Mr. Hille, Ms. Wyatt and Mr. Hester with regard to the infrastructure asset class. Ms. Wyatt specifically noted concerns regarding infrastructure allocation of 7% of the trust in the enhanced return mix. Ms. Wyatt expressed her doubts at arriving at the return assumptions regarding infrastructure in the enhanced return mix, and that the assumptions being used are not what the trust has actually experienced. Ms. Wyatt noted she is currently more comfortable with the diversified asset class mix [with infrastructure allocation at 6% of the trust] until there is more substantiation of ERS' success. Mr. Tull provided additional comments on infrastructure noting when ERS has introduced other asset classes that were at the time considered aggressive. One can go back long before in the '50s and the '60s when ERS decided to go into public equities rather than just fixed income. He commented that when he was brought onto the IAC, one of the big decisions back in the 1990s was to move into international pubic equities markets. It was a big decision to introduce international exposure into the ERS complex to get better competitive rates of return at better risk profiles. He noted that infrastructure is the same phenomena today. Despite the fact that infrastructure is a long lived asset, it tends to match the liability stream of ERS, it provides diversification, there is a cash yield component, and it is an asset that can provide absolute rates of return to the trust. This is in fact a relatively new asset class for US investors, but the Australians and Canadians have been involved with for years. He also noted that just because the trust has allocation targets, it does not mean they achieve those goals overnight. Infrastructure will be approached the same way as they have targeted other new asset classes. The fund will build staff and lay the groundwork so that when opportunities arise the fund may participate in the asset class. He further commented that staff is not going to force money into an asset class just for the sake of the allocation percentage. He clarified that these figures are guidelines, not absolute allocations, and the board may always revisit staff's approach to implementation.

Chairman Hester noted that the board gets to vote on the annual tactical plans of each asset class as well, which serves as a backstop. He noted that a few years ago Ms. Donnell mentioned that she did not want staff to force money into asset classes based on targets, and Mr. Hester commended staff for not doing so. He asked that staff continue that process in the future.

Ms. Kassam summarized the comments and noted the proposal is for the interim target during the period of one to two years so if the Board isn't pleased with the implementation or execution, then Staff can stop deployment. This recommended asset mix is designed to take advantage of modest changes that staff feels they can execute effectively. She noted that the BOT has established bands around the asset allocation targets during the last study so staff can be plus or minus 0-5% in private markets and plus or minus 0-10% in public markets.

Chairman Hester asked if the bands are for committed capital as well as invested. Ms. Kassam confirmed the bands and targets are only for invested capital; however, targets are reached by pacing committed capital so staff is conscious of how much it is deploying in capital commitments. She noted ~~the~~ staff's goal for infrastructure would be within two years to get to 4% invested. This was discussed in the February 22, 2017 Joint Meeting of the Board and IAC particularly within the 2017 Infrastructure Annual Tactical Plan. This allocation was based on current resources and time needed for prudent due diligence of investments. Ms Kassam noted that staff will ~~and be able to~~ strive for 7% by the end of the four-year time period, assuming opportunities exist; however these private market asset classes take time to invest and may be under the infrastructure asset allocation target.

Mr. Mindell made comments that he felt the proposed implementation was prudent. He noted that the asset allocations have never been constant, and that it is an evolutionary process. He hoped by year three or four that the BOT and IAC can revisit the allocation again and take the enhanced portfolio further.

Ms. Starks noted that in her conversations with larger international investors, some larger than ERS, that infrastructure is where returns are in the future.

Ms. Cooley noted that she felt staff was responsive to her concerns of stretched valuations in some asset classes and liquidity. She noted that staff was responsive and came back with an interim plan. She noted that she was okay given these two points.

Mr. Bob Alley commented that he felt the asset allocation process is really a fluid process. Over time the asset mix will change where the BOT and IAC see relative values along with staff. He noted that the phased implementation makes sense because it is an ongoing evolutionary process and makes sense from the standpoint of risk-adjusted returns.

Ms. Cooley asked with respect to infrastructure, if staff is unable to allocate as quickly as the target, where does the money go. Ms. Kassam noted the allocation would remain in public equities.

The Investment Advisory Committee then took the following action:

MOTION made by Mr. Ken Mindell, seconded by Ms. Caroline Cooley, and carried unanimously by the members present that the Investment Advisory Committee approve the Enhanced Return Portfolio for the policy target and the related implementation as described in this agenda item.

The Board of Trustees then took the following action:

MOTION made by Ms. Cydney Donnell, seconded by Mr. Brian Ragland, and carried 5 to 1 with the exception of one opposition vote of Ms. Jeanie Wyatt that the Board of Trustees approve the Enhanced Return Portfolio for the policy target and the related implementation as described in this agenda item.

The Investment Advisory Committee then took the following action:

MOTION made by Mr. Bob Alley, seconded by Mr. Ken Mindell, and carried unanimously by the members present that the Investment Advisory Committee recommend Board of Trustees of the Employees Retirement System of Texas approve the proposed revisions to the ERS Investment Policy and reflect those changes within the policy document pursuant to the intent as described in this agenda item.

The Board of Trustees then took the following action:
MOTION made by Ms. Cydney Donnell, seconded by Ms. Ilesa Daniels, and carried 5 to 1 with one opposing vote by Ms. Jeanie Wyatt that the Board of Trustees of the Employees Retirement System of Texas approve the proposed revisions to the ERS Investment Policy and reflect those changes within the policy document pursuant to the intent as described in this agenda item.

8.1 Consideration of ERS Pension Experience Study, Assumptions and Methods (ACTION)

Mr. Jim Hille, Chairman of the Investment Advisory Committee, introduced the agenda item. Speakers included Jennifer Jones from the ERS Executive Office as well as Ryan Falls and Joe Newton, ERS' independent consulting actuaries for pensions from Gabriel Roeder Smith (GRS). Board Chairman, Craig Hester asked the actuaries to identify potential consequences of delaying the board vote on the assumed rate of return to the next board meeting (scheduled for December 12, 2017) given that the study has already been completed. Mr. Falls replied that the actuaries needed to know the approved assumed rate of return in order to complete the analysis for the fiscal year 2017 valuations and comprehensive annual financial report (CAFR). If a new rate of return is not adopted at this meeting, the valuation would have to be based on the current 8.0% return, which is not a reasonable return assumption based on the data presented in previous board meetings. GRS would then have to qualify the valuation report and clearly state that the 8.0% return assumption is not reasonable. The actuaries would be obligated by their standards of practice to show results at an assumption they believe is reasonable.

Machelle Pharr, Chief Financial Officer for ERS, was called on to clarify the dates, processes, and reports related to publication of the CAFR, which Ms. Pharr stated was due to be submitted to the Comptroller in mid-November 2017. Ms. Pharr stated that if the actuaries gave a qualified report, it could impact the auditor's opinion on ERS' financial statements. Ms. Cydney Donnell stated that the fact that ERS' return assumption is currently too high is an open secret and that the legislature is better served by ERS adopting a more realistic return assumption. Mr. Doug Danzeiser then questioned the actuaries about why last year's CAFR was not qualified even though they already suspected that the 8.0% return assumption was likely too high. Mr. Newton responded that the complete analysis on the return assumption and the inflation assumption, including the work on the asset allocation study, had not yet been completed. Mr. Newton also clarified that even if GRS did support a particular return assumption, an independent auditor for the CAFR could still use information they have gathered, including work completed by GRS or AHIC, to disagree with the return assumption selected.

Mr. Porter Wilson, ERS Executive Director, then reminded the board that ERS had an additional, independent audit presented to the board in February 2017 that also concluded that an 8.0% return assumption was too high. Mr. Brian Ragland then asked GRS what was the highest return assumption that they would support as reasonable. Mr. Newton replied that 7.5% was the highest return assumption the actuaries would support based on Aon's additional analysis of 30-year returns. Mr. Newton clarified that since 7.5% is on the high end of what GRS can support, it may be necessary for them to revisit the assumption off-cycle from the next experience study if expectations on returns continue to trend down. Ms. Caroline Cooley asked the actuaries to provide the lowest assumption they would support; Mr. Newton stated that 7.0% was the lowest rate they would support, assuming the board did not want to add room for margin of error to increase the likelihood of meeting the return assumption.

Mr. Falls then presented the GRS experience study recommendations, which summarized the recommendations first presented to the board at the July 10, 2017 working session. None of the recommendations changed between the July 10th and August 23rd meetings. The summarized recommendations include the return assumption, inflation, wage growth, payroll growth and other methodological changes and demographic assumptions. Most of the recommendations would have a minor impact on the plans. Most of the economic assumptions are forward looking assumptions, whereas demographic assumptions such as termination and retirement rates tend to be based on historical trends. (A summary of the overall recommendations is listed at the end of the board motion recap.) Mr. Falls also presented additional information on estimated depletion dates for the various return assumption scenarios, which was requested by Ms. Cooley during the July 10th working session. Mr. Falls clarified that on a long term basis, pension funds are either on a path to being fully funded (if the fund has a finite funding period), or they are on a path to depletion if they have an infinite funding period. All ERS plans are expected to have an infinite funding period following the fiscal year 2017 valuations.

Chairman Hester then asked about inflation, its declining trend over the last few years, and how ERS can ensure that the inflation assumption is more accurate. Mr. Newton replied that he believes the prior actuary, who completed the last experience study, did not distinguish between price inflation and wage inflation and that under current actuarial standards there is much more emphasis on developing forward looking economic assumptions. He also stated that, because the ERS plans do not have a CPI-based adjustment, inflation does not have as much of an impact on the plan as the nominal return assumption.

Ms. Wyatt asked the actuaries if the recommendations were conservative, and Mr. Newton confirmed they were slightly conservative, meaning they had at or slightly above a 50% likelihood of being met. Mr. Ragland and Chairman Hester also raised questions about the time horizon on which the 7% and the 7.25% return assumption recommendations were based. While Aon's recommendations for the asset allocation were generally calculated on a 10-year horizon, most of the broader surveys that GRS reviewed were based on 20 or 30-year numbers. So GRS' recommendation was based on a 20-year horizon.

Mr. Danzeiser asked GRS to clarify what the impact to the plans would look like if there was no unfunded liability. GRS clarified that one-third of the contribution is for the unfunded liability. Mr. Danzeiser and Mr. Newton discussed what happens to the funds if they deplete and become pay-as-you-go, which means that the benefit payments would be funded only with new contributions and would not have the opportunity to benefit from investment earnings. Mr. Newton clarified that on the issue of fund depletion, it does not matter at what level the return assumption is set, what matters is what the funds actually earn. Where the return assumption matters is its ability to influence current decisions about funding and benefits to prevent depletion in the long term. Ms. Donnell then stated that the message to the legislature is whether they want to pay less now or more later.

Chairman Hester then clarified that this agenda item was an action item for the board only. Mr. Ragland made a motion to accept the actuary's recommendations with a 7.5% return assumption, seconded by Ms. Wyatt. Ms. Donnell stated that she was concerned that 7.5% was too high, although she would support such a motion. Chairman Hester agreed that he too thought 7.5% was too high, and suggested adding to the motion a review of the 7.5% return assumption in two years.~~suggested adding a return assumption review in two years to the motion approving the 7.5% return assumption.~~ The board also discussed the need to request additional funding and whether the legislature may pair any increases with benefit changes.

There being no further discussion, the Board then took the following action:

Move that the Board of Trustees of the Employees Retirement System of Texas adopt the actuarial valuation assumptions and methods for the 2017 Pension Experience Study based on recommendations from the system's independent consulting actuary. I further move that the Board adopt a nominal return assumption of 7.5% and approve a one-time reset of the trust to market value as of August 31, 2017.

Further move that the Board of Trustees review the investment return assumption in two years.

(Informational Only, Not Read as Part of Motion)
The assumptions and methods recommended by the actuary include:

1. Update post retirement mortality for non-disabled members to reflect recent specific ERS member population experience, including minor adjustment to LECO members and assuming mortality rates will continue to improve in the future using a generational approach, with ultimate rates on most recently published projection scale (U-MP).

2. Update post retirement mortality tables for disabled retirees to most recently published national tables (RP-2014 for disabled lives). Assume mortality rates will continue to improve in the future using a generational approach, with ultimate rates on most recently published projection scale (U-MP).

3. Simplify projection methods for member termination patterns, with minor adjustments in the overall rates consistent with experience and future expectations.

4. Simplify projection methods for member retirement patterns, with minor adjustments in the overall rates consistent with experience and future expectations.

5. Minor decreases to disability patterns.

6. Minor adjustments to service conversion at retirement assumptions:

Regular Class employees
(1.0 year if age + service >= 80; 0.5 if age + service < 80)
LECO employees
(1.0 year if CPO service >= 20; 0.5 if CPO service < 20)

7. Minor adjustment to spouse age difference – assume male members are two years older /female members are two years younger than spouse.

8. Minor adjustments to annuity payment options for disabled retirees – assume 50% of males and 25% of females choose 100% joint and survivor option.

9. Minor adjustments to annuity payment options for Death Benefit Plan elections – assume 85% of beneficiaries of male members choose the 100% joint and survivor option and 15% choose the 10-year certain and life option. For beneficiaries of a female member, assume 70% choose the 100% joint and survivor option and 30% choose 10-year certain and life option.

10. Minor adjustments to annuity payment options for LECO retirees – 40% of males will choose the 100% joint and survivor annuity option.

11. Withdrawal of Employee Contributions – Employees are assumed to choose the most valuable option available to them (deferred annuity or contribution withdrawals). Unchanged from current assumption.

12. Decrease the inflation rate from 3.50% to 2.50%

13. Regular Class employee salary scales – no change above inflation (salary scales will decrease by the same 1% reduction in inflation).

14. LECO employee salary scale - increase 0.50% to the current merit component (when combined with lower inflation, results in a nominal assumption 0.50% lower than current assumption from 5.00% to 4.50%). Extend step rates from 10 years of service to 19 years of service.

15. General Wage Inflation assumption of 0.50% above inflation (for a total of 3.00%).

16. No future cost of living adjustment or supplemental payments assumed. Unchanged from current assumption.

17. No change to current process for estimating payroll

18. Change the actuarial cost method from Ultimate Entry Age Normal Cost Method to Individual Entry Age Normal Cost Method.

19. Change the asset smoothing method to a closed five-year period with direct offsetting of gains and losses instead of an open 20% per year method.

MOTION by Mr. Brian Ragland, seconded by Ms. Jeanie Wyatt, carried with two opposing votes by Ms. Ilesa Daniels and Chairman Craig Hester that the Board of Trustees adopt the assumptions and methods as a result of the ERS Pension Experience study.

9.1 Market Update Overview of the Hedge Fund Program

Mr. Anthony Curtiss, Director of Hedge Funds, Panayiotis Lambropoulos, Portfolio Manager, Nick Maffeo, Portfolio Manager, presented the market update overview of the hedge fund program. Mr. Curtiss noted the team is looking to hire an analyst and have received an acceptance, which they hope to begin work in early September. He then introduced Albourne Partners, who has been the hedge fund consultant for ERS since the inception of the program. He commented that they have been instrumental in helping build out and shape the hedge fund portfolio, and help on a daily basis to cover and review the hedge fund aspects in the industry.

Mr. Curtiss presented an overview of the program, which includes the Absolute Return Portfolio, which is a risk-reducing hedge fund portfolio. It acts as a diversifier to the trust. The program strives to maintain a low correlation, low beta, and low volatility. The directional growth portfolio is a return-seeking hedge fund portfolio, which acts as a complement to the trust. It is directional by nature and has a tactical market beta. He noted that with regards to hedge funds, Staff has been able to put them in other asset classes in the past on an ongoing basis. Staff reviews various types of strategies and makes internal recommendations to other areas of the trust.

Mr. Curtiss then presented on performance metrics for the hedge fund program. He noted the benchmark under the absolute return portfolio is the 90-day T-bill plus 400 basis points. He highlighted that staff have been able to achieve attractive rates of return over a longer time frame. The Sortino ratio is a derivative of the Sharpe ratio that provides a similar risk adjusted return confirmation, so the higher the number, the better. Overall, staff have been able to achieve low drawdowns in the hedge fund portfolio. Looking at returns from a rolling time period perspective, the absolute return portfolio has been able to achieve a strong absolute return performance. When compared to the benchmark, the T-bill plus 400 basis points, there were periods of outperformance and underperformance, but over a long time frame, the portfolio has been able to outperform. Additionally, the absolute return portfolio has been able to outperform peer to peer fund benchmarks HFRI and HFRX.

Mr. Curtiss then presented an update on the ERS directional growth portfolio. He noted that this portfolio is one of the most successful portfolios in the hedge fund program. It has been able to outperform the benchmark over all time frames. He noted the ERS special situations portfolio has been challenged since its initial allocation in June of 2016. The particular manager within this portfolio is sector focused and it has been operating in a challenging space. He noted that for fiscal year returns, the portfolio has ebbed and flowed.

FY 2017 has been a challenging space for hedge funds, and returns have been low. Credit spreads are tight and volatility is low. The 90-day T-bill plus 400 basis points benchmark will become the more challenging benchmark for the hedge fund portfolio given the fact that rates are so low and could creep higher over time. 2015 and 2016 were challenging years in event driven strategies, and the ERS portfolio has been overweight to merger arbitrage. This has been deemphasized as of the fourth quarter of last year and then Q1 of this year. The biggest struggle for the hedge fund program for fiscal year to date has been equity long/short. The program had one particular manager that was underperforming as many long/short managers had trouble in 2016. This manager has been redeemed as of December 31 also. The absolute return portfolio is a risk-reducing portfolio, and acts as a diversifier for the trust. The annualized return since inception has been 5.57% versus 4.63%. The beta of the trust is .28. Current standard deviation of the portfolio has been 2.45%. The portfolio is below the minimum target, but Staff does not believe it is going to persist as volatility is extremely low and will go up over time. The correlation of the portfolio to the trust is around 0.6.

Mr. Hester asked if the objective of the T-Bill plus 4 is still a reasonable benchmark, and Mr. Curtiss confirmed. He noted it is a risk-reducing portfolio. It will creep up over time, and it has been challenging to find managers that offer high risk-adjusted returns at this time frame given where return expectations are. The maximum threshold is 0.4 and the portfolio never breached this mark, this reflects the low beta, low volatility to the trust. Mr. Curtiss showed the difference in the absoluter return portfolio when the trust was in periods of growth and contraction. He noted that the absolute return portfolio was up when the trust was down, and acts as a diversifier for the trust.

The team was mentioned in Pensions & Investments on December 12, 2016 for strong one-year performance as of September 30, 2016. The team was compared to 13 different public plans and 16 different internal hedge fund portfolios. The mean return by peers was 1.28%. The median return was 0.07%. ERS Hedge Team performance was over 6% during that same time frame. Around 66% of that return was from relative value and event-driven strategies.

Ms. Cooley asked Mr. Curtiss to define opportunistic. Mr. Curtiss noted the opportunistic piece was providing equity like returns, and the opportunistic bucket is one of the sleeves within the absolute return portfolio which can be locked for up to five years. The opportunistic sleeve is often comprised of niche like strategies.

The absolute return portfolio is 15% smaller than it was one year ago. The portfolio is primarily comprised of core positions, which are $80 million or above with less relationships. Overall equity exposure of the portfolio has been reduced at this point.

Mr. Curtiss mentioned the strategic overweight to merger arbitrage within event-driven has been reduced. The program's strategic underweight to global macro was addressed in Q3 of last year. Staff allocated to an Asian discretionary global macro manager. He noted that all investments as of May 31, 2017 are mature within the opportunistic bucket and returning capital.

Mr. Curtiss described relative value strategies, and how they take advantage of mispricing and arbitrage opportunities. These managers operate with low volatility, and they often have market neutral constructs. This part of the portfolio is meant to be a stable piece of the absolute return portfolio. He then described the event-driven portfolio, which focuses on corporate actions, such as spinoffs, divestitures, mergers, and distress filings. This part of the portfolio often carries a higher beta. There is less hedging involved in these structures and larger potential drawdown opportunities. He then described Equity long/short as the most common hedge fund strategy out there. These funds often trade either cash equities or options. He noted managers are further defined by either generalist or sector specialists. He then described Global macro as having the least amount of limitations on this strategy. These funds often take directional macro views based on macroeconomic data. They can trade equities, credit, commodities, and FX. In the opportunistic portfolio, managers are looking for dislocations, co-investment opportunities, things that are niche. Within this particular bucket, Staff and managers can allocate to credit, equities or hybrid-type securities.

Mr. Curtiss noted that the correlations of the strategies mentioned are relatively low. He mentioned the higher correlation between relative value and event driven should be lowered over time, due to the current overweight to a merger arbitrage. With the low correlation between fund managers, the portfolio has offered a level of diversification for the fund. He noted the geographic breakdowns within the absolute return portfolio, the mix of exposure, and the instruments traded.

Mr. Nick Maffeo presented on the fee structures of the program. He gave an overview of the fee savings for the hedge fund program. The estimated average management fee for the absolute return portfolio is 1.38%, with the estimated average incentive fee being 18.97%. Five of the 13 program managers have a hurdle rate, and Albourne has been contracted to perform all ongoing fee analysis.

Mr. Maffeo then discussed performance of the directional growth portfolio performance, which achieved about 55% return versus the benchmark which is around 30%. The annualized figures are around 15.1% versus 8.7% for the benchmark. He noted the portfolio began in April of 2014, and is benchmarked to the MSCI-ACWI World Daily Index. Since inception, the portfolio has achieved an annualized alpha of 5.87% to the benchmark, and has maintained a beta of 1.01, along with a correlation of 0.98. He noted that this fund has enhanced the broad equity exposure within the trust by providing a hedge fund type structure to complement ERS long-only managers. He highlighted a performance aspect of when the benchmark underperforms the portfolio fairs better, which is a testament to the manager's shorting capability.

Mr. Maffeo then discussed the special situations portfolio, and how the manager was funded with $100 million in June of 2016. It is a single manager, focused in healthcare, with a 130/30 structure. The manager is more fundamental, and the allocation of this portfolio will be rolled into the directional growth portfolio as of September 1. The reason for the transfer is the similar construct to the other short extension strategies that reside within the Directional Growth Portfolio. The portfolio will retain the same existing benchmark after the transition. The special situations portfolio has underperformed since inception, due to the focus on health care and biotech. This has been a challenging sector for a number of managers. Over the long term horizon, Staff expects this manager to outperform, due to their expertise in the healthcare sector. The manager is only paid an incentive fee on outperformance over the index, so they are only earning incentive compensation when they generate alpha to the index. He noted that staff feels this is a complement to the existing health care exposure within the trust.

Mr. Maffeo briefly summarized the current allocations that occurred over last fiscal year regarding the Absolute Return Portfolio. Staff has reduced long/short and event-driven (primarily to merger arbitrage exposure). There was an increase to global macro. The increase to global macro brought the strategic underweight to within the strategy bands noted in the ERS Hedge Fund Policies and Procedures.

Ms. Cooley asked about the exposure to emerging markets, with the allocation being 40%, the process by which beta flows through or is it hedged exposure within emerging markets. Mr. Curtiss noted about half of the exposure is hedged, and it is spread across several managers. There is a level of directionality through one of the program's macro managers that comprises more of the beta. He noted that overall it is very hedged and low beta. Mr. Maffeo discussed the guidelines within the investment policy. Staff is recommending a reduction in the maximum band from 40 to 30% for the opportunistic bucket. This reduction is a request to lower the band to the previously approved band from the prior fiscal year.

Mr. Craig Hester congratulated Staff on the performance over the last year in a difficult market environment and commended them for a good update.

Mr. James Walsh, of Albourne American provided an annual hedge fund update for the program and discussed strategy. He noted the return of the absolute return portfolio has been good. It has exceeded its tactical and strategic benchmarks since inception. It has been able to beat what is available in the markets. He confirmed the portfolio has been implemented in accordance with its policies, and the fees paid by the program have been negotiated well. With regard to strategy, returns of uncorrelated alpha-based strategies have been tough to achieve over recent years. This is due to central banks pulling huge amounts of capital into the markets for almost 10 years. This has compressed the ability of investors to generate alpha. The compressed returns have made it tougher to find good managers. He noted that the team has done well in this regard. Returns have started to improve this year, the Fed is tightening monetary policy, and growth outside the US is picking up. European grown is a positive sustainable path, and Japan is in its longest period of growth for nearly a decade. He noted it will be challenging going forward, and that the plan is in largely uncharted territory. He discussed further economics and noted the team is strategically allocating capital.

Ms. Ta Lohachitkul, Albourne American provided an annual hedge fund industry update and commentary around the trends within the sector. Hedge fund assets are expected to be maintained or increased within the industry. Returns have remained lackluster over the last several years; however the hedge fund industry is in good shape. Two main parties in the industry are the Alignment of Interest Association and the Hedge Fund Standards Board, which have both pushed for increased alignment between managers and investors. In recent years there has been a significant improvement with regards to transparency and governance within the hedge fund space. Increased regulation and investor pressure has led to improved compliance and valuation policies and procedures. She noted there have been significant improvements in regards to fee reporting and transparency. The trend is shifting towards paying fees for alpha instead of total returns. The traditional fee model of 2 and 20 is under tremendous pressure. The trend is for managers moving from an X and Y fee structure to an X or Y fee structure. The emphasis there is the difference between "and" versus "or." She noted other trends are adding hard hurdles such as a cash hurdle when calculating performance fees. She attributed the change in the fee structure to be a huge leap forward in terms of improving alignment of interests.

There were no further questions or discussion on the agenda item.

9.2 Proposed Revisions to the ERS Investment Policy Addendum X: Hedge Fund Policies and Procedures (ACTION)

Mr. Panayiotis Lambropoulos, Hedge Fund Portfolio Manager, then presented on public agenda item 9.2 to recommend revisions to the ERS investment policy Addendum X. Staff proposed a reduction in the optimum maximum range within the opportunistic portfolio from the current 40% maximum capital allocation to the previously approved 30%. The 30% will be based on both invested and committed capital. He noted the main reason for the proposal is the opportunistic allocation is not a clearly defined strategy like relative value or event-driven. As the name implies, its intent to be used opportunistically as a result of various dislocations, whether on an asset-specific or a sector-specific basis, staff feels the 30% will still provide ample bandwidth for tactical allocation opportunities. He noted because it's not a clearly defined strategy, it's difficult to benchmark.

Mr. Doug Danzeiser asked how the proposal came to light to reduce the rate available on this allocation. Mr. Lambropoulos noted that staff feels the 40% provided the bandwidth that was desired, but the opportunities in this category did not happen often. At a 30% maximum allocation, staff would still have plenty of room to take advantage of opportunities on a tactical basis. Additionally, because of some changes that have happened in the rest of the portfolio in the last 12 months due to redemptions or capital reallocations within the portfolio, staff will have more than ample opportunities to express our views and take advantage of opportunities in other parts of the portfolio.

Mr. Danzeiser noted that staff could just leave the allocation at 40% and not pursue anything above 30%, and questioned the pressure to change the numbers. Mr. Curtiss noted that previously, Robert Lee, the director of hedge funds, wanted to be fairly aggressive in the area. The overall opportunity set has not grown and sourcing of niche opportunities is difficult. An outsized Opportunistic allocation may not be prudent and is most likely not needed given the return objectives of the Absolute Return Portfolio. The intent is just to be honest with the Board and IAC regarding the allocation.

Ms. Caroline Cooley noted bringing up revisiting the allocation again along with further discussion on finding a reasonable benchmark. This should be discussed with Albourne over the course of the year. Ms. Cooley then called for a motion on the action item.

The Investment Advisory Committee then took the following action:
MOTION made by Mr. Bob Alley, seconded by Ms. Caroline Cooley, and carried unanimously by the members present that the Investment Advisory Committee recommend Board of Trustees of the Employees Retirement System of Texas approve the proposed revisions to the Hedge Fund Program Policies and Procedures as presented in Exhibit A.

The Board of Trustees then took the following action:

MOTION made by Mr. Doug Danzeiser, seconded by Ms. Cydney Donnell, and carried unanimously that the Board of Trustees of the Employees Retirement System of Texas approve the proposed revisions to the Hedge Fund Program Policies and Procedures as presented in Exhibit A.

9.3 Consideration of Proposed Hedge Fund Annual Tactical Plan for Fiscal Year 2018 (ACTION)

Mr. Panayiotis Lambropoulos, Hedge Fund Portfolio Manager, then presented on public agenda item 9.3 with regard to consideration of the proposed hedge fund annual tactical plans for Fiscal Year 2018. He noted that the main focus relies on the absolute return portfolio, which is a risk-seeking and risk-diversifying portfolio within the trust. Staff are also focused on a directional growth portfolio, which at the moment has one relationship in it, soon to be two. This is more of a return-seeking, return-generating portfolio. Staff will continue to take the opportunity to work with colleagues in the other parts of the trust and other assets classes on an opportunistic basis and propose hedge fund strategies and structures that might make sense in other parts of the portfolio. But overall, looking ahead, staff expect up to two new investments for this portfolio looking in Fiscal Year 2018.

Mr. Craig Hester asked if staff sees opportunities out there or if they are just trying to push to the target. Mr. Lambropoulos noted that staff is not driving to a target and is being judicious about its capital allocation process. Staff are working diligently and sourcing managers. Between the three team members, each one probably looks at hundreds of managers a year. The target is not going to drive the process.

The Investment Advisory Committee then took the following action:

MOTION made by Ms. Laura Starks, seconded by Ms. Lenore Sullivan, and carried unanimously by the members present that the Investment Advisory Committee recommend Board of Trustees of the Employees Retirement System of Texas approve the ERS Hedge Fund Program Annual Tactical Plan for Fiscal Year 2018 as presented in Exhibit A, to be added as an appendix of the ERS Hedge Fund Program Policies and Procedures.

The Board of Trustees then took the following action:

MOTION made by Ms. Cydney Donnell, seconded by Mr. Mr. Craig Hester, and carried unanimously that the Board of Trustees of the Employees Retirement System of Texas approve the ERS Hedge Fund Program Annual Tactical Plan for Fiscal Year 2018 as presented in Exhibit A, to be added as an appendix of the ERS Hedge Fund Program Policies and Procedures.

10.1 Election of Chair and Vice Chair of the ERS Investment Advisory Committee for Fiscal Years 2018 and 2019 (ACTION)

Mr. Tom Tull, Chief Investment Officer, gave a brief background on the election of Chair and Vice-Chair of the ERS IAC for Fiscal Years 2018-2019. On August 18, 2015, the IAC elected Mr. James Hille as chairman and Ms. Caroline Cooley as the vice-chair of the Committee to serve a two-year term ending August 31, 2017. Staff recommended that IAC members elect a chair and vice-chair from its members to fill the two-year term beginning September 1, 2017 and ending August 31, 2019. The recommendations would be for Caroline Cooley to serve as chair and Bob Alley as vice-chair.

The Investment Advisory Committee then took the following action:

MOTION made by Ms. Lenore Sullivan, seconded by Ms. Caroline Cooley, and carried unanimously by the members present that the Investment Advisory Committee recommend Board of Trustees of the Employees Retirement System of Texas elect Caroline Cooley to serve as chair and Bob Alley to serve as vice-chair of the Investment Advisory Committee for a two-year period beginning September 1, 2017 and ending August 31st, 2019.

11.1 Adjournment of the Joint Meeting of the Investment Advisory Committee and Recess of the Board of Trustees – Following a temporary recess, the Board of Trustees will reconvene to take up the remaining Board of Trustee agenda Items.

Mr. Craig Hester thanked the retirees and other public members that give testimony and the IAC and the Board of Trustees, the staff, Aon Hewitt Investment Consulting, Inc. (AHIC), Gabriel Roeder Smith (GRS). He thanked Staff as well.

Exhibit A – Asset Allocation – Staff Recommendation

Implementation Timeline	Today	1-2 Years	3-4 Years
Asset Class	**Current**	**Diversified**	**Enhanced Return**
Global Equity	45.0%	40.0%	37.0%
Private Equity	10.0%	12.0%	13.0%
Global Credit*	10.0%	11.0%	11.0%
Real Estate**	10.0%	11.0%	12.0%
Infrastructure	4.0%	6.0%	7.0%
Opportunistic Credit***	--	2.0%	3.0%
Total Return-Seeking Assets	**79.0%**	**82.0%**	**83.0%**
Rates	15.0%	12.0%	11.0%
Absolute Return	5.0%	5.0%	5.0%
Cash	1.0%	1.0%	1.0%
Total Risk-Reducing Assets	**21.0%**	**18.0%**	**17.0%**
Expected Return (Median)	7.0%	7.1%	7.2%
Expected Risk (Volatility)	12.0%	11.7%	11.6%
Sharpe Ratio (Measure of Risk-Adj. Return)	0.383	0.403	0.413
Liquid Assets****	74%	67%	63%

* **Diversified** (7% high yield and 4% EMD); **Enhanced Return** (7% high yield and 4% EMD)
** **Diversified** (8% private real estate and 3% listed); **Enhanced Return** (9% private real estate and 3% listed)
*** **Diversified** (1% private credit and 1% real estate debt); **Enhanced Return** (1.5% private credit and 1.5% real estate debt)
**** **Liquidity –** Global Equity, Global Credit, Rates, and Cash (noting that certain satellite illiquid investments in Global Credit and Real Estate includes REITs that are liquid)