Joint Meeting of the Board of Trustees and Investment Advisory Committee

May 17, 2017

ERS

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

Presented for Review and Approval

August 23, 2017

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

May 17, 2017
ERS Building – Board Room
200 E. 18th Street
Austin, Texas 78701

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
Porter Wilson, Executive Director
Catherine Terrell, Deputy Executive Director
Tom Tull, Chief Investment Officer
Sharmila Kassam, Deputy Chief Investment Officer
Paula A. Jones, Deputy Executive Director and General Counsel
Leighton Shantz, Investments
Shack Nail, Special Projects and Policy Advisor
Tony Chavez, Internal Auditor
Robin Hardaway, Director of Customer Benefits
Chuck Turner, Chief Information Officer
Kelley Davenport, Executive Office
Liz Geise, Benefits Communications
Jennifer Jones, Executive Office
Betty Martin, Investments
Pablo de la Sierra Perez, Investments
Dee Dee Sterns, Human Resources
Tanna Ridgway, Investments
Machelle Pharr, Chief Financial Officer
Keith Yawn, Executive Office
John Streun, Investments
Andrew Hodson, Investments
Christi Davis, Customer Benefits
Robert Sessa, Investments
Anthony Curtiss, Investments
Gabrielle Stokes, Director of Procurement and Contract Oversight
Carlos Chujoy, Investments
Mike Ewing, Office of General Counsel
Amanda Burleigh, Office of General Counsel

Kathryn Tesar, Director of Benefits Communication
Stuart Williams, Investments
Leah Erard, Executive Office
Beth Gilbert, Internal Audit
Jonathan Puckett, Internal Audit
Michael Shoop, Investments
Bailey Crowell, Executive Office
Tim Reynolds, Investments
John McCaffrey, Investments
Susie Ramirez, Executive Office
Bernie Hajovsky, Executive Office
Ricardo Lyra, Investments
Peter Ehret, Investments
Brannon Andrews,
Cheryl Scott Ryan,
Amy Cureton, Investments
Tony Cardona, Investments
Ken McDowell, Investments

VISITORS PRESENT
Michael McCormick, Aon Hewitt Investment Consultants
Bill Dally, Retired State Employees Association
Catherine Melvin, Texas Department of Public Safety
Merritt Brooks, BoardDocs
Joe Newton, Gabriel, Roeder, Smith & Co.
Ryan Falls, Gabriel, Roeder, Smith & Co.
Diana Kongevick, Public Employees Benefits Cooperative
Suzanne Martinez, LaSalle
Richard Kleinman, LaSalle
Tamra Yale, REED Group
Elaina Fowler, American Federation of State, County, and Municipal Employees Retirees
Antonio Lewis, American Federation of State, County, and Municipal Employees Retirees

Mr. Jim Hille, Chairman of the Investment Advisory Committee (IAC) 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 in the proposed agenda was filed with the Office of the Secretary of State at 12:49 p.m. on Monday, May 8, 2017, as required by Chapter 551, Texas Government Code, referred to as the Open Meetings law."

Mr. Craig Hester, Chairman of the Board of Trustees (Board) for ERS, also read the following statement:

> "A public notice of the Joint Meeting of the Board of Trustees and Investment Advisory Committee containing all items in the proposed agenda was filed with the Office of the Secretary of State at 12:48 a.m. on Monday, May 8, 2017, as required by Chapter 551, Texas Government Code, referred to as the Open Meetings law."

II. CONSIDERATION OF APPOINTMENT TO THE INVESTMENT ADVISORY COMMITTEE

Mr. Tom Tull, Chief Investment Officer, presented the Appointment to the Investment Advisory Committee.

Mr. Tull 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 (Board) and can have anywhere from five to nine members. At the time of the meeting, the IAC had six members. Mr. Tull introduced Mr. Gene Needles for consideration for appointment by the Board. Mr. Needles has served as President and Chief Executive Officer of American Beacon Advisors and as president of American Beacon Funds since 2009. American Beacon is a family of mutual funds and includes a list of 33 different products, as well as in excess of $54 billion in assets under management. Mr. Needles brings 24 years of experience in the investment realm. Mr. Tull presented the IAC skills assessment and highlighted how Mr. Needles would complement the existing expertise of the current membership.

Staff recommended that the Board of the Employees Retirement System of Texas (ERS) appoint Mr. Gene Needles to the IAC for a three-year term, effective May 17, 2017.

The Board of Trustees then took the following action:

> **MOTION** made by Mr. Brian Ragland, seconded by Ms. Jeanie Wyatt, and carried unanimously by the members present that the Board of Trustees of the Employees Retirement System of Texas appoint Mr. Gene Needles to the Investment Advisory Committee for a three-year term effective May 17, 2017 and ending May 31, 2020.

III. APPROVAL OF THE MINUTES TO THE FEBRUARY 22, 2017 JOINT MEETING OF THE BOARD OF TRUSTEES AND INVESTMENT ADVISORY COMMITTEE

Mr. Jim Hille, Investment Advisory Committee (IAC) Chair, opened the floor for a motion on the approval of the minutes from the February 22, 2017 Joint Meeting of the Board of Trustees and Investment Advisory Committee.

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 approve the minutes of the February 22, 2017 Joint Meeting 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 Ms. Ilesa Daniels, and carried unanimously by the members present that the Board of Trustees approve the minutes of the February 22, 2017 Joint Meeting of the Board of Trustees and Investment Advisory Committee.

IV. REVIEW OF INVESTMENT PERFORMANCE FOR FIRST CALENDAR QUARTER OF 2017

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

Ms. Kassam introduced the first quarter performance. She reminded the Board that staff and Aon attempt to limit the use of financial industry jargon whenever possible and encouraged them to stop the presentation if any part is unclear.

Mr. McCormick gave an overview of calendar and fiscal year performance. For the start of the year, nominal performance was strong. The return for the fiscal year-to-date was 5.4%, a slight relative underperformance compared to the benchmark return of 5.7%. Tracking error was 1.44%, slightly higher than recent and medium term results. A large contributor to underperformance was a pretty meaningful rise in Public Equity markets in a short period of time. The Private Equity component of the plan benchmarks to Public Equities plus a premium. With the type of Private Equity assets held and the delayed valuation of those assets, Private Equity will occasionally struggle relative to the Public benchmark. This is, at least in part, a timing issue and should catch up with more up-to-date information on the Private Equity portfolio. The rest of the plan outperformed.

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 60% internally managed, with 80% in return-seeking assets. The plan has about 74% percent liquidity, defined as Global Private Equity, Global Credit, Rates, and Cash.

Mr. McCormick presented cash flow information. Approximately $1 billion in investment returns were earned in the most recent quarter, and the Trust ended the period at approximately $26.3 billion. Over the one-year period, about $2.5 billion in investment returns were earned.

Mr. McCormick presented the asset allocation relative to the strategic and long-term allocations. Most asset classes are within policy limits with the exception of total Real Assets, which is still being built out and slightly below the long-term strategic policy target. Global Public Equities is slightly above that target, so that real asset positions will be funded with some Global Public Equities.

Mr. McCormick presented performance information, as well as contributors and detractors. There was a 3.9% return for the quarter and a 10% return for the trailing one-year period. Global Credit, Real Assets, Rates, and Absolute Return were all net contributors during the period, with the Private Equity component being the primary detractor. Mr. McCormick noted that periods of rapid appreciation of public assets will cause the private assets to detract slightly due to a benchmark that may not be completely applicable. Additionally, Global Private Equity was a bit of a detractor.

Mr. Alley, IAC member, asked whether the lag was due to the rolling, backward-looking numbers. Mr. McCormick responded that the lag was due to valuations for Private Equity assets not reflecting price appreciations as quickly as public markets do. There is at least a quarter lag in the valuations.

Ms. Caroline Cooley, IAC member, asked whether Private Equity was in line with the Private Equity benchmarks, as opposed to Public Equity benchmarks. Mr. McCormick responded that the Private Equity portfolio is in line with Private Equity benchmarks. Over longer periods of time, any discrepancies are expected to reconcile, as time periods have shown. Additionally, from a reporting perspective, reconciling data available when BNY Mellon cuts NAV versus data that's available by the time reports are issued already shows outdated information.

Mr. McCormick presented the risk profile for the total fund. He commented that staff, together with investment consultants, works to implement a portfolio to meet ERS' risk profile and produce returns commensurate with the benchmarks.

Mr. Craig Hester, Chairman of the Board, commented that it's important not to take excessive risks relative to the policy guidelines in order to generate returns. Mr. McCormick responded that the plan reduces volatility significantly. The plan is achieving a higher return at a lower level of risk, relative to the public benchmark. So diversification has been very successful for the trust over the 5- and 10-year periods. In recent years, that diversification hasn't been as helpful because of the rapid increase to public markets, but over the longer periods of time and in much more volatile environments, diversification has been very successful.

Mr. McCormick presented the performance and tracking error of the plan. Recently, tracking error has increased slightly, primarily driven by the difference between public and private assets. In nominal terms, the plan produced strong returns, but relative to the benchmark, it has experienced some difficulty. Still, over the 10-, 15-, 20-, 25-, 30-year and since inception periods, the plan experienced relative outperformance compared to that of the long-term public benchmark. Mr. McCormick noted that this illustrates that diversification has been beneficial, not only in dampening volatility, but also, in producing higher returns than the public benchmark and higher returns over the longer period relative to the total fund benchmark.

Mr. McCormick presented the rolling 12-month returns of the underlying asset classes over the trailing 10 years. He noted that from first quarter 2016 to first quarter 2017, in relation to its own historical performance, the plan went from median-type returns to 75th percentile returns. This illustrates how quickly return profiles can change. In high yield, credit spreads have tightened to produce 75th percentile returns as well. Private and Public Real Estate have gone from very high returns to the 25th percentile. In Fixed Income, rising interest rates late last year made it difficult for returns.

Mr. McCormick presented current investment ideas as part of quarterly new topics for the Board and IAC. In order to access alpha in the market, staff and investment consultants have discussed the idea of equity insurance premiums, implemented through the options market. There is a persistent premium for sellers of insurance in the equity markets, and staff is discussing ways to build investment strategies around that premium. Mr. McCormick noted that there is cyclicality to this strategy. At times when implied volatility is very low, as it is today, the approach may be less favorable than when it is high.

Chairman Hester asked how to benchmark an equity insurance/options program. Mr. McCormick responded that this type of strategy could be used for many different opportunities, and ERS could benchmark to whichever are the underlying exposures. The premium realized over time will be fairly transparent, as it is just the premium of the options.

Chairman Hester asked whether this would be implemented internally or externally. Ms. Kassam responded that staff is currently evaluating external managers to manage this strategy.

Mr. McCormick summarized the presentation, noting that recent performance relative to the benchmarks has been a bit difficult, primarily associated with private markets and the rapid rise in public. He commented that the asset allocation is in line with its long-term targets and that long-term investment results have been strong. Risk adjusted returns are very good relative to the benchmark, and very good relative to the long-term benchmark as well. Finally, diversification has been effective as is shown in the risk-adjusted results.

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

V. <u>REVIEW OF PENSION EXPERIENCE STUDY BACKGROUND AND PROCESS</u>

Ms. Jen Jones, Senior Program Specialist, Mr. Ryan Falls and Mr. Joe Newton, Gabriel Roeder Smith, presented an educational presentation on the pension experience study background and process.

Ms. Jones gave a brief overview of the pension experience study. She reminded the Board and IAC that the presentation was for educational purposes and that the preliminary results of the study would be presented at the July working session, with a final schedule for adoption in August.

Mr. Newton used an example of an individual employee savings for retirement and making assumptions to estimate how much he or she needed to save to illustrate how an actuarial valuation and the assumptions used works.

Mr. Newton noted the possibility that after a period of time, the individual’s account may be short of what was expected due to assumptions not holding true. This shortage is the unfunded liability, and there are a few options that can be taken to address this. The individual could increase his contributions to his account, try to increase the return on investments going forward, delay his retirement date, or wait and see if circumstances revert back closer to original assumptions. Mr. Newton then related this scenario to the Trust.

Mr. Newton highlighted that in contrast with an individual saving for retirement, the plan is covering more than one life cycle and source of revenue. For example, ERS includes many members; it has a plan sponsor, other employers, and different generations. By using a defined benefit approach, ERS can manage a lot of the risk that an individual cannot on his or her own. Still, there are risks that must be managed appropriately, both in likelihood of occurrence and possible outcomes. Decisions must be made with regards to which benefits to target, what assumptions to make, policy for contributions, and how the plan will react if experience deviates from the assumptions in the future.

Mr. Falls presented the specific assumptions and methods for the experience study and provided some context and background. The assumptions and expectations going forward have already been set. The primary purpose of the annual actuarial valuation for ERS, since there is a fixed contribution from the State, is to assess the level of the contribution relative to what is needed. Based on the benefits promised to beneficiaries and the funds in the Trust right now, GRS seeks to determine whether the contribution is sufficient to stay on the path going forward. Mr. Falls noted that this determination involves studying the inputs to the valuation.

Mr. Falls noted that experience studies are generally done on a regular basis. He noted that best practice is to perform an experience study at least every five years, and ERS is doing so every four. This is beneficial because many of the assumptions become stale towards the end of the five year interim period. While the Board will consult with and seek recommendations from an actuary, it is the Board and not the actuary that sets the assumptions and methods. With that said, if an actuary finds an assumption to be unreasonable, the actuarial valuation reports would be notated as such.

Mr. Falls further noted that assumptions do change through the experience study process. Expectations and best practices change over time. An example was when ERS adopted a cutting-edge mortality assumption in 2008 that assumes that life expectancy improves every year in the future. Since then, better tools have been developed to predict life expectancy improvements. These are the types of items taken into account when doing the actual experience study.

Mr. Falls presented the sources of benefit payments to beneficiaries. Most studies show that about 60% to 70% of all defined benefits are paid from accumulated investment earnings. The goal is to accumulate assets over the course of a working career so for each active member from which contributions are collected, enough investment earnings are accumulated to pay their benefits. Mr. Falls noted that although assumptions are independent from the ultimate cost of the plan, they are very important in monitoring the health of the plan.

Chairman Hester mentioned that the IRS and Social Security were proposing a change in mortality tables. He asked if the actuaries could comment on that and whether it would have any impact on the ERS study. Mr. Newton responded that the mortality tables published by the IRS are very general and may not always be a good fit to a population. He noted that ERS has the benefit of a large data set, which can be used to create a custom mortality table that will perfectly fit the population.

Mr. Falls gave further detail regarding the assumptions of the study. Demographic considerations include behaviors, occurrences, length of employment, and life expectancy. Economic considerations include inflation and investment return assumptions. These are generally forward looking, market-based assumptions and serve as the basis for recommendations. GRS recommends slightly conservative assumptions, increasing the likelihood that they will hold over the long term. Of all the actuarial valuation metrics, investment return has the largest impact. Life expectancy is the next important, with salary increases being a significant factor as well. Contribution levels are also an important consideration. Each of these assumptions needs to be reasonable according to actuarial standards.

Ms. Cydney Donnell, Board member, asked whether the presentation included the effect of all these factors, given that many are outside of staff's control. Mr. Newton responded that it was the net effect being presented, noting that staff has very little control over three of the four most impactful factors. Mr. Jim Hille, Chairman of the IAC, followed up with a question on the scale of the different factors relative to the others. Mr. Newton responded that investment returns are at least twice as impactful as the next highest factor, but that none act in isolation. They must be reasonable considering the impact each has on the other.

Mr. Falls presented further information regarding the methodology for the study. For economic assumptions, the first consideration is inflation, as it is the building block for all other economic assumptions. Investment return assumptions start with inflation and then model the expected real return on top of that. Salary growth starts with inflation and then considers state-specific salary increases over time relative to inflation.

Mr. Falls explained that GRS utilizes the capital market assumptions from eight large investment consulting firms, the Social Security Trustees Report, and the Horizon survey, a broad survey of investment consulting firms, for the inflation assumption. All of these sources generally agree within a fairly tight range of approximately 1.5% to 2.5%. On top of inflation, GRS expects lower investment returns going forward, resulting in a larger amount of benefits coming from contributions.

Mr. Falls presented the historical annual returns for the trust over the past 20 years. He explained that the investment return assumption was 8% over that period but that the 20-year average annualized is 6.9%. He then presented the distribution of investment return assumptions for peer retirement systems over the past 17 years. Relative to 127 peers, ERS' assumption is in the high upper percentiles of the distribution, which centers around 7% to 7.5%. He also illustrated that over time, the distribution has trended towards a lower return assumption to match more closely with the level of actual returns over the period.

Mr. Falls presented the proposed investment return assumption. The first consideration for this is the target asset allocation. As that is currently being studied as well, GRS will be looking at the proposed asset allocations. The final recommendation will be based on the final asset allocation that is ultimately chosen.

Mr. Falls presented the assumption for the level of wage increases over time. This figure is derived from the economic inflation plus wage inflation, which is Texas-specific pay increases above core inflation. It reflects general productivity, based on the economy of Texas and the growth in tax revenue. On top of that, there is an additional factor of salary that's merit and promotion-based.

Mr. Falls presented the assumption for life expectancy improvement over time. Relative to 40 years ago, a 65-year-old person is now living approximately six years longer. ERS was one of the first to adopt a generation mortality assumption. Since that time eight years ago, mortality prediction tools have improved and will be incorporated into the recommended assumptions.

Mr. Falls noted that, generally, the most important funding metric is the funding period. That is the date at which the pension is expected to be fully funded.

Mr. Falls presented the methods under review for the study. The asset smoothing method involves smoothing the differences between actual and expected returns over time to reduce volatility in year to year contributions. Since ERS receives a fixed contribution rate and benefits are set in statute, actual returns don't impact the operation of the fund in the same way as an actuarially funded plan where contributions change from year to year.

Ms. Jones added that ERS has been discussing the asset smoothing model with GRS over the past year. One of the challenges with the current method is the assumption by policymakers and stakeholders that losses will be fully recognized within a defined period, such as five years which is not true how the current method works for ERS. Changing smoothing methods would help clarify whether losses from a particularly bad year have been fully recognized.

Mr. Falls noted that one of the positives about the current method is that a big loss followed by a big gain results in immediate recognition of the difference. This is called direct offsetting. The problem comes when losses are very large, as they were in 2008, and the system doesn't recover fully. This results in a perpetual net-loss situation. For this reason, a hybrid approach may be the most appropriate option. It fixes loss recognition over a five-year period but allows direct offsetting immediately. This allows values to converge and stay closer to the market value, which is the desired outcome.

Ms. Caroline Cooley, IAC member, asked why the market value isn't just used. Mr. Newton responded that decisions are made due to the funding period, so it is important that short term fluctuations, whether positive or negative, don't affect long term decisions.

Mr. Fall presented the present value of the benefits. This is the liability assigned to all the benefits ERS is expected to pay. The method for allocating retirement benefit cost over time is the actuarial cost method. This method takes the present value of all the benefits in the plan and allocates a portion of it to past service (called the accrued liability), with the rest allocated to the future normal cost. Normal cost is next year's cost for current active members, so future normal cost is the portion of the liability that is assigned to all future service for active members.

Mr. Fall noted that there are two common actuarial cost methods, the individual entry age method and the ultimate entry age method. ERS uses the ultimate cost method for annual actuarial valuations. This method assigns a future normal cost as if everyone on the plan will be receiving the most recent tier of benefits. As opposed to the individual entry age, which would take a weighted average of everybody in the plan now, depending on if they were hired before 2009, between 2009 and 2013, or after 2013. Both methods fund towards the same present value benefits, but under the ultimate entry age method, the future normal cost is slightly lower and accrued liability slightly higher because everyone is receiving the benefits for Group 3.

Ms. Jones noted that at the February Board meeting, during the audit portion, Tony Chavez, the Director of Internal Audit, had led an actuarial audit for GRS, performed by Bolton Partners. One of the comments they made was about the actuarial cost method. Some actuaries do not particularly like ultimate entry age normal cost method. The reason that ERS adopted it in 2009 was (1) to address the differential in benefit groups and (2) to be consistent with TRS, who had also added a new group of benefits in 2005 and made a similar methodology change at that time.

Mr. Falls noted that one of the largest benefits to the ultimate entry age method is that it requires significantly less time to perform and results in the same outcome as the individual entry age method. This can be very beneficial during a tight legislative session when multiple revised analyses are needed very quickly. Mr. Newton recognized that due to the complexity of the math involved, the ultimate entry age can result in some odd results where a benefit cut will actually increase the unfunded liability. That disadvantage is a valid point. He noted, however, that the amount of money actually needed has nothing to do with either method, as both arrive at the same answer.

Mr. Falls presented the agenda of next steps. In July, GRS will present draft recommendations of the experience study for the Board to consider adopting. Assumptions will be based on everything presented today: economic assumptions, demographic assumptions, and methodologies. Once those are approved, they'll be in place for use in the August 31, 2017 actuarial valuation, as well as the decision-making process for the 2019 legislative session.

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

VI. REVIEW OF ERS' ASSET ALLOCATION STUDY

Mr. Tom Tull, Chief Investment Officer, Ms. Sharmila Kassam, Deputy Chief Investment Officer, and Mike McCormick, Aon Hewitt Investment Consulting (AHIC) presented the review of the ERS Asset Allocation Study.

Mr. Tull explained that the purpose of the presentation was to discuss refinements to the capital market assumptions and proposed asset allocations. He noted that assumptions for the High Yield and Absolute Return portfolios had changed. These changes came as the result of extensive meetings and discussions between staff, consultants, the Board, and IAC. The High Yield return assumption was increased due to a decrease in the expected level of defaults and reduced expectation from downgrades. The High Yield risk assumption was unchanged. Both the risk and return assumptions for the Absolute Return portfolio were increased to reflect a more realistic look at implementation of that portfolio within the trust by using median return and risk expectations. These revised assumptions result in a slightly increased total Trust return assumption and Sharpe ratio.

Ms. Cooley commented that the Absolute Return assumption is reasonable according to her experience and current market sentiment. She noted that typically, she has seen a 400 basis point spread over the LIBOR rate, and the revised assumption is consistent with that.

Ms. Sharmila Kassam introduced the revised asset allocation mixes, noting that the Risk Reducing mix received little interest at the last meeting of the Board and IAC. It was removed in favor of a new Maximum Return allocation that primarily seeks to achieve the return target from the previous 2013 Asset Allocation study. Ms. Kassam further described changes made to the existing mixes and noted that the liquidity profile had been added for each allocation. She expressed the importance of liquidity within the Trust and mentioned that in addition to today, further discussions on liquidity would occur at the next Asset Allocation working session.

Ms. Donnell asked if liquidity is being defined solely on the basis of time required to liquidate or whether the liquidation value relative to the market value is considered. Ms. Kassam responded that liquidation value will be considered as staff and consultants take a deeper dive into liquidity but that for the purposes of this presentation, liquidity is identified as the Global Equity, Global Credit, Rates, and Cash portfolios.

Mr. McCormick presented the proposed asset mixes in more detail. He noted that the difference in risk profiles amongst the various mixes is due less to movement from risk-reducing to return-seeking assets and more to movements toward less liquid assets. He explained that volatility is an important factor when measuring risk but that liquidity risk is also very important to consider and monitor.

Mr. Ken Mindell commented that the new maximum return asset allocation has an increased Sharpe ratio and mentioned that the movement of funds from Public Equity to Private Equity decreased the risk from a volatility perspective. As a side note, he also added that an increase in the allocation to the Absolute Return portfolio could significantly reduce the amount of volatility within the Trust.

Ms. Kassam elaborated that volatility is just one measure of risk, and that liquidity is also an important consideration. Chairman Hester added that the Trust distributes $2.1 billion to beneficiaries annually, reiterating the importance of liquidity within the program. Mr. McCormick added that the cash need from the investment program last year, the distributions minus contributions, was approximately $900 million.

Mr. McCormick further explained that for the Maximum Return scenario, due to the decreased liquidity, the Trust faces rebalancing risk. The analyses presented assume that portfolios are being rebalanced on a regular basis. So although the Maximum Return allocation does appear slightly superior from a return/volatility perspective, in a negative market environment, outcomes can be significantly affected if staff is unable to sell assets.

In order to quantify the value of this liquidity, Mr. McCormick plotted the return frontiers of the current and maximum return allocations. The difference between these two lines represents the liquidity premium. As a side note, Mr. McCormick also mentioned that in order to reach the 8% expected return needed to meet actuarial projections, more than 90% of the fund would need to be invested in return-seeking assets according to the Maximum Return mix. This would leave the fund with less than 50% invested in liquid assets.

Ms. Donnell inquired as to what determined the allocation percentages laid out in each of the scenarios being presented, most specifically into Private Equity. Mr. McCormick clarified that the different scenarios all represent the same current or Maximum Return allocations, just adjusted for the ratio of return-seeking to risk-reducing assets.

Ms. Cooley asked about the range of returns in Private Equity that can be attributed to manager selection. Mr. McCormick responded that particularly in Private Equity, manager selection within the asset class is very important.

Ms. Kassam added that manager selection is an important part of implementation, but that the presentation includes a more passive look at the asset class. She also noted the benefits of lower negotiated fees and co-investments to assist in clearing hurdle rates. Ms. Cooley clarified that the purpose of her question was to illustrate the amount of risk and volatility that may not be reflected in the standard deviation of the capital market assumptions for the Private Equity asset class.

Mr. McCormick presented the allocation required to have an 8% expected return over the short and long term periods in order to match the actuarial projections. He illustrated that the tradeoff for the increased return was significant illiquidity and nearly no allocation to risk reducing assets. Mr. McCormick then presented an analysis and stress testing of this illiquidity, which divided the different asset classes by liquidity profiles.

Mr. Mindell asked a question regarding the liquidity assumption for Private Equity and whether a 10-year lock-up period is appropriate for the asset class. Mr. McCormick responded that there are different market scenarios that can arise. Under good or normal market conditions, the lock up period may be shorter, but under other less conducive market environments, 10 or more years may be appropriate. He elaborated that you may be able to liquidate these assets, but in order to do so, the assets would need to be sold at a substantial discount to their value.

Ms. Donnell commented on the long term nature of Trust investments. She noted that another perspective is to examine the duration of time the Trust can continue to meet its distributions given a downturn in the market. Mr. Mindell added that he believes even under the worst-case, black skies scenario, liquidity would still be sufficient to meet distributions for at least a couple of years.

Ms. Cooley offered the alternative viewpoint that in such a scenario, the Trust would need to liquidate its public equities at the bottom of the market. Mr. Tull added that it is also important to have a certain level of liquid capital that can be deployed at the bottom of the market as markets have a tendency to overreact.

Mr. Doug Danzeiser, Vice-chair of the Board, asked what course of action was taken in 2008 during that black skies scenario and the outcome that came as a result. Mr. Tull responded that staff maintained the allocation at that time due to an overweight towards liquid Fixed Income assets. These insulated the Trust well on the downside relative to peers and allowed staff to take advantage of the market.

Ms. Kassam noted that this period was when staff began implementing many of the alternative investment programs. Because of the Trust's relatively strong position, staff was able to take advantage of private assets being sold at a discount. She further elaborated that in 2015, ERS consultants did a simulation of how the allocation at that time would have performed in the 2008 market. Because these programs have become stable and mature, particularly the Private Equity asset class, there are periods where they are net cash positive, contributing somewhat to overall liquidity.

Ms. Lenore Sullivan, IAC member, asked whether the estimated time in which liquid assets would last given the different scenarios were considering the falling price of assets or simply the distributions that are occurring over the periods. Mr. McCormick responded that the illustrations reflect both the falling prices and the distributions. The illustrations are developed using Monte Carlo simulations that test the levels of each liquidity bucket at different market levels.

Dr. Laura Starks, IAC member, asked if Asset Allocation frontiers could be developed with expected returns mapped against liquidity as opposed to volatility. Mr. McCormick responded that he will work with staff to develop such an illustration but noted that the expectation would be that the private assets would comprise a larger portion of the return-seeking portion of the portfolio while Private Equity and global credit would shrink, especially in black skies scenarios.

Mr. Bob Alley, IAC member, asked whether the Trust is getting the necessary return to compensate for the risk of moving from public to more private assets, especially with respect to the decreased supply of private opportunities as more funds are trending towards private market investments. Mr. McCormick responded that the answer is two pronged. First, as in Private Credit, although there is an increased demand, there is also an increased supply of opportunities due to changes in regulation. Second, this question underlies the importance of staff. Staff has the ability to assess the many factors that go into determining whether a market is overbought or oversold and finding values in those areas.

Chairman Hester highlighted the trend of funds moving towards private assets, not only in pension funds but in endowments, foundations, and everywhere else. With low bond yields and what some view as an overvalued Private Equity market, everyone is trying to find higher returns, and this creates a migration towards less liquid allocations. Chairman Hester noted that there is a limit to how much risk is acceptable given the added return and that the Trust must be careful not to lose all liquidity.

Ms. Kassam responded that the asset allocations were developed with ranges around the target allocations to allow for flexibility to invest appropriately as the market dictates. Mr. Tull added that staff will always prefer diversification with a variety of asset classes.

Ms. Wyatt asked whether the return assumptions were gross or net of fees and what the difference in fees is under the different allocations being presented. Mr. McCormick responded the returns are net of fees, but he did not have figures on hand for the fee differential between the different allocations. He mentioned that fees will be higher for mixes with higher allocations towards private asset classes but that he would get those exact numbers to the Board.

Mr. Mindell asked a question regarding the underlying assumptions for the black skies scenario. Mr. McCormick responded that the Black Skies scenario represents market conditions as if the decline from 2008 occurred without the recovery of 2009. Mr. Mindell noted that this situation, while possible, is highly improbable. Chairman Hille added that although this scenario is unlikely to occur, it is a good exercise to discuss the bounds of what is possible. He added that it is good to be aware of this possibility but not to fixate on remote scenarios that are unlikely to occur.

Mr. McCormick presented the likelihood of reaching the 8% actuarial return, as well as the risk of achieving a negative return, under the various proposed asset allocations. The Maximum Return mix has the highest likelihood of reaching the 8% return, while the various mixes don’t diverge much on the risk of a negative annualized return. Mr. McCormick emphasized that liquidity is a larger tradeoff than volatility between the allocations but to also recognize that due to the lagged nature of reporting for private asset classes, volatilities reported can often be dampened relative to those reported for public assets classes.

Mr. McCormick commented that the Trust is currently well diversified. Adding excess returns through additional diversification would be difficult at this time. Additional illiquidity can increase the expected return of the total plan, but it’s very important to review the tradeoff between added returns and the ability to pay beneficiaries. This tradeoff will be further discussed at the next working session.

Ms. Cooley asked a question regarding the use of leverage to capitalize on higher Sharpe ratio strategies to maximize return. Mr. McCormick responded that there is a range of reasonable outcomes for investment results. Small adjustments to volatility or return can have meaningful impacts on expected Sharpe ratio which is going to drive the mean variance outcome. For this reason, the use of leverage is not typically recommended for plans of ERS’ type. Mr. McCormick noted, however, that these are not bad considerations when examining where to allocate funds.

Mr. Mindell noted that he considers hedge funds to be more liquid than the quasi-liquid designation being presented. Therefore, leverage within the absolute return portfolio could have a significant impact on risk, return, and liquidity.

Mr. Tull responded that due to the lower risk profile appropriate for a pension plan, staff is less comfortable with the use of leverage than other public funds in the market. He further commented that when appropriate, hedge funds are utilized within other asset classes in the portfolio, but the allocations are strategic rather than a mandated allocation.

Ms. Wyatt asked in which asset classes ERS excels at managing funds and whether there is a way to include that into the asset allocation models. Mr. Tull highlighted that it has historically been the general strategy of staff to take a longer term, diversified, lower risk approach to managing the portfolio. Mr. Tull noted that staff has been able to add alpha in all asset classes and manages funds internally where they have that ability. Where this ability is not present, staff moves allocations towards external managers.

Ms. Kassam added that the updates to the existing Diversified and Enhanced Return mixes made since the last Board meeting were largely due to capitalizing on the strengths of internal staff. Deployment of capital towards opportunistic credit was an example of this move.

Ms. Kassam confirmed with the Board and IAC that the Diversified and Enhanced Return mixes were those which they were most comfortable moving forward for further review and discussion. Mr. Alley commented that these would be consistent with historical decisions. ERS moderates asset allocation over time to the comfort level of the Board and plan participants. For this reason, these two allocations are appropriate, especially with regards to the issue of liquidity.

Ms. Donnell commented that the Diversified and Enhanced Return mixes were more realistic in terms of implementation as well. The Maximum Return allocation requires drastic movements in capital which are either unrealistic or irresponsible to implement too quickly. Ms. Sullivan noted that there are ranges around these allocation targets as well. So these mixes will adjust as staff manages implementation in light of changes to market conditions.

Mr. Gene Needles, IAC member, commented on the difficulty in increasing Private Equity allocations, noting that valuations are very high. A lot of capital is being invested by Private Equity firms. He did mention that while this is currently the case, another consideration is that the opportunity set of Private Equity investments is growing as the number of public companies is shrinking.

Mr. Tull closed the presentation with a review of the Asset Allocation timeline. The next meeting will be a working session in July before a final presentation at the August board meeting.

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

VII. <u>FIXED INCOME PROGRAM</u>

a. Market Update Overview of the Fixed Income Program

Mr. Leighton Shantz, Director of Fixed Income, and Mr. Peter Ehret, Fixed Income Portfolio Manager, presented the Market Update and Program Overview of the Fixed Income Program.

Mr. Shantz gave a general overview of the Fixed Income program, noting that the Fixed Income program is comprised of two separate, distinct mandates: Rates and Credit. Rates is the liquid portion of the risk-reducing portfolio, and Credit is a return-seeking allocation that invests primarily in high-yield debt. The Credit portfolio seeks a sufficient return to satisfy the needs of the trust but, in comparison to other return-seeking allocations, it has a built in monetization process and self-liquidates.

The Fixed Income program was implemented in its current form in September of 2013. Mr. Shantz presented the cumulative return of both the Rates and Credit allocation from that time until March of 2017. He highlighted that the two different portfolios are vastly different asset groups with different risk and return profiles. Despite the different strategies, both portfolios have outperformed their respective benchmarks: Rates by a cumulative 80 basis points (bps) and Credit by a cumulative 253 bps through March 31st, 2017. These annualize out to 22 bps and 61 bps, respectively.

Mr. Shantz presented the risk taken to achieve these returns, expressed as a function of tracking error. Tracking error is a measurement of volatility relative to the benchmark, and Mr. Shantz noted that neither portfolio has ever exceeded the policy limit, indicating that the program is not taking on an undue amount of risk.

Mr. Shantz explained that 99% of the Rates return is explained by its benchmark, with an alpha of 2.29 bps per month and a beta of 0.96 on average from inception through March 2017. This indicates that Rates is highly correlated to its benchmark but delivered an excess return with a slightly lower level of interest rate risk. 95% of the Credit return is explained by its benchmark, with an alpha of 12.23 bps per month and a beta of 0.84 on average.

Mr. Shantz presented the rolling 12-month return dispersion for both the rates and credit portfolios. He noted the favorable positions of both relative to their respective benchmarks and highlighted the importance of asset allocation and diversification. Credit, a risk-seeking asset is in its top quartile of its rolling 12-month return, while Rates, a risk-reducing asset, is at the absolute bottom of the observed experience. Mr. Shantz noted that this is the goal of the interaction between the two portfolios. When risk is on, the risk reducers are not following.

Along with negative correlation, Mr. Shantz highlighted the range of returns for both Rates and Credit. Both mandates have a compressed range of returns with higher highs, higher lows, and higher averages relative to the benchmarks over the last 12 months. The only exception is a lower high in credit. A gap of 163 bps occurred in the Spring of 2016 when credit streaked higher. The portfolio did not have as many distressed securities, so the portfolio was unable to keep up with that run. However, the portfolio has a low 12-month return that is higher than the benchmark by over 200 basis points, suggesting strong risk adjusted performance.

Mr. Shantz presented the excess returns in dollar terms. He illustrated the dollar excess return over the life of the program, and as of the end of March 2017, these amounted to roughly $34 million for Rates and $23 million from Credit. Within Credit, $17 million comes from the internally managed portion of the portfolio and $6 million from externally managed funds. He noted that these current levels are down from the peak, which occurred in 2015, but that they are turning back up.

Mr. Shantz also noted a period when the performance of externally managed funds appeared to have suffered measurably. This is due to a timing issue. External credit is marked with a one month to one quarter delay that causes the reporting of their performance to lag with large, sudden moves in the market. Once the market stopped streaking up, the performance for externals caught back up. So what appeared to be underperformance was really only a timing issue.

To conclude, Mr. Shantz reviewed the policies and procedures for Fixed Income and noted that there were no suggested changes or violations.

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

b. Review of Securities Lending Program of the Fixed Income Program

Mr. Shantz presented an overview of the securities lending program. He explained that a securities lending program in general consists of an asset owner, such as the Trust, lending securities it owns to a borrower in exchange for more than 100 percent of the market value of the security in cash. The lender invests this cash and keeps the interest income with the exception of whatever is rebated back to the borrower.

Most securities lending programs are designed to maximize revenue, which means lending any asset where the rebate is less than the interest rate the cash collateral can earn. Collateral is sometimes invested in risky assets to increase the lender's revenue from the program.

The ERS securities lending program is different from the norm and is operated extremely conservatively. No collateral revenue is rebated back to the borrower, and the collateral is further only invested in overnight government repurchase agreements. Additionally, ERS is indemnified by its lending agent for both a failure to return securities, as well as losses in the collateral when invested in repurchase agreements. Staff seeks to maximize the risk-adjusted return of the program, not the absolute level of the programs revenue.

Mr. Shantz noted that due to the indemnification, the small amount of credit risk in the program is concentrated in the lending agent. Consequently, staff closely and actively monitors their credit default swap (CDS) spread. Because increases to its agent's credit risk do not increase the revenue stream of the program, staff will decrease the amount of lending when the lending agent's credit risk increases.

Mr. Shantz recalled that in the beginning of 2016, the lending agent's CDS spread increased rapidly to the point where the implied one-year default rate was in excess of 3%. At that time, staff suspended the program and recalled all outstanding securities. By April 2016, their CDS spread had compressed back to under a 2.5% implied one-year default rate. At this point, staff reinstated the program, but only for ETF securities due to the ease of "buying-in" such securities if needed. By the end of 2016, its agent's CDS spread declined back to a level where staff felt comfortable fully reinstating the program. At present, lending agents CDS spreads are roughly 100 basis points, implying less than a 2% default rate in the next year.

Mr. Shantz noted that due to the suspension of the program for much of 2016, revenue from the program is at an all-time low of $2.2 million for the fiscal year to date. In past years, the program would be roughly $500,000 higher by the end of March. Revenue by the end of the fiscal year is projected to be approximately $5 million. The peak lending season is approaching, and Q1 2017 revenues are in excess of comparable revenues for two years prior (one year prior, the program was suspended).

Mr. Shantz noted that moving forward, the program would employ a spread from the Fed Funds Open rather than an absolute cap.

Chairman Hester recalled that in 2008, securities lending programs in general ran into some issues with collateral invested in risky assets. He asked if the program is currently susceptible to the same risk and whether that has been mitigated at all. Mr. Shantz responded that prior to 2011, ERS ran a much more traditional securities lending program which maximized borrowing and generated annual revenues in the magnitude of $30 million. Traditional securities lending programs almost universally ran into trouble due to collateral pools that lacked enough liquidity when everyone rushed to cover all at once. At the present time, all collateral is invested in overnight government repurchase agreements, which automatically convert to cash each day and are backed by the federal government in addition to being indemnified by the borrower.

Ms. Donnell asked whether the return of the program is too small to warrant the time required to implement it. Mr. Shantz responded that the Board has the authority to determine whether to continue the program, but it is run very efficiently and is mostly automated. It requires a relatively small amount of staff's time, takes, very little risk, and as the Fed moves from a quantitative easing environment to a tightening one, revenue is expected to increase. Still, it produces roughly $5 million annually. Mr. Ehret added that the volatility of the underlying holdings is an asset. Therefore, not leasing out the securities is essentially under-utilizing that asset.

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

VIII. REAL ESTATE PROGRAM

a. Market Update Overview of the Real Estate Program

Mr. Bob Sessa, Director of Real Estate, Mr. Tony Cardona, Real Estate Analyst, Ms. Amy Cureton, Real Estate Portfolio Manager, and Rich Kleinman and Suzanne Martinez, LaSalle Investment Management, presented the Market Update and Program Overview of the Real Estate Program.

Mr. Sessa presented a summary of the program, noting that Real Estate is targeted at 10 percent of the Trust's total assets. 70% of this allocation is comprised of Private Real Estate investments with the remaining 30% in Global Real Estate Investment Trusts (REITs). The program's current weight is 9.5%. This is a function of a slight underweight in Private and a moderate underweight in listed securities. Mr. Sessa noted that it is difficult to be precise in terms of Private asset weighting, as valuations can depend greatly on timing. Additionally, there have been recent distributions which, along with the run in the Private Equity market, have resulted in an underweight. The portfolio is tactically underweight on REITs due to valuations, the rate environment, and other factors.

Mr. Cardona presented an overview of the listed global REITs. The total listed securities portfolio is $690 million, which is comprised of U.S. REITs at $370 million and international REITs at $320 million, or 54% and 46% of the portfolio, respectively. The geographic breakdown of the international REIT portfolio is comprised of Asia at 27%, continental Europe at 10%, the UK at 5%, and other, which is comprised of Mexico, Canada and Israel, at 4%.

Mr. Cardona noted that relative to the FTSE ERPA/NAREIT Developed Index the global listed REIT portfolio is underweight North America (U.S., Canada, and Mexico) by 140 basis points (bps), continental Europe by 40 bps, the UK by 20 bps, and Asia by 20 bps. The portfolio is overweight Israel by 20 basis points and cash by 190 bps. Mr. Sessa added that these portfolio weights are a snapshot as of March 31, 2017 and will change over time.

Mr. Cardona presented the listed Real Estate program's cumulative excess total return since inception. He highlighted that internally managed portfolios have outperformed while external manager performance has detracted from total program performance. Mr. Cardona noted that the program does not currently have an external manager.

Mr. Cardona presented the listed Real Estate portfolio's attribution as of March 31, 2017. Over the one-year period, staff outperformed the benchmark by 12 bps, mainly driven by country selection, with Japan being a notable contributor and the U.S. detracting. For the five-year period, staff also outperformed the benchmark by 12 basis points, with stock selection being a notable driver of attribution. Mr. Cardona noted that stock selection contributed to outperformance in the U.S. and Japan while in Hong Kong, it was a detractor.

Mr. Cardona commented on the timetable of various countries that have adopted the REIT structure. Developed, emerging, and frontier countries have adopted the structure. Mr. Cardona noted that the presentation on these countries is purely for informational purposes and does not necessarily indicate that staff invests or will invest in them.

Mr. Sessa highlighted that REITs continue to be securitized, which is a positive due to increased liquidity. This securitization also increases transparency, especially in emerging markets, where information flows asymmetrically.

Ms. Cooley asked whether the program is invested in any shopping malls or retail within the Public REITs portfolio. Mr. Cardona responded affirmatively, noting that the allocation is focused primarily on

Class A malls. There is optionality for Real Estate with department stores, which currently pay very little rent and, absent any co-tenancy issues, are less likely to emerge in Class A malls. Staff expects there to be value in the long term. In the short-term, the headlines are challenging, but these properties provide a great deal of free cash flow, and valuations, from an NAV perspective, are extremely attractive.

Mr. Sessa added that there are currently many value traps in the market. Some names appear very cheap on a historical basis, but there is also a secular change to consider. Staff seeks to avoid these traps and has largely been able to do so to date. Mr. Sessa noted, however, that these challenges continue, and there are still more to come.

Mr. Sessa presented statistics on the private Real Estate portfolio. He highlighted that the portfolio is comprised of 88% equity investments and 12% debt investments. Debt investments are those that actually lend money to Real Estate owners. The overall leverage is currently 45%, well below the 65% policy limit. Staff is conservative with the use of leverage, as it can present a large risk. It's a potential return enhancer but also risk driver, so staff monitors leverage levels very closely.

On capital calls and distributions, the program is at a steady state in the portfolio. Fiscal year-to-date, the program has received more money in distributions than paid in calls. Although, Mr. Sessa noted some timing issues that can affect that and that this balance will vary over time.

Mr. Sessa presented an illustration of the program performance, and noted that only 6 of 48 funds are underperforming original expectations to date. Four were the function of rapidly falling yields, and the other two were a function of foreign currency and manager selection.

Mr. Sessa presented target weights versus allocation. Staff believes better risk-adjusted returns are in the non-core space and expects to be overweight in that space for the foreseeable future. The target weight for core investments is 43%, while the current allocation is 30%. The non-core target weight is 57%, while the allocation there is 70% (based on current NAV plus uncommitted capital). Mr. Sessa noted that these targets may not be reached due to the way capital gets recycled but highlighted that staff does track and monitor the target weights versus allocations. Further, the targets have bands around the core and non-core weighting, and current allocations are still within the bands of the compliance.

Mr. Sessa presented future on-call commitments, which represent roughly $560 million, and highlighted that most of the capital will be deployed to non-core strategies. Staff is considering some core strategies if they are niche or alternative, but in general, there are not a lot of opportunities in the core space. In terms of geography, approximately 20% of capital will be deployed internationally, with the balance invested in the U.S. market.

Ms. Amy Cureton highlighted the composition of the portfolio based on ERS's NAV exposure from a roll-up of the underlying properties. She noted that the presentation included the current portfolio as of 12/31, which is the most recent date available for pulled data. Relative to the NP NCREIF property index, the benchmark for this portfolio, the largest overweight is to the residential sector at 14%. This sector is comprised of multi-family, student housing, senior housing, and manufactured housing, and the overweight allocation is intentional and strategic due to compelling fundamentals.

The largest underweights are to retail and office spaces. Retail is in flux and facing significant headwinds from changing consumer preferences, particularly e-commerce threats. The office space has historically underperformed the other sectors. Therefore, both of these underweights are expected to continue.

Mr. Sessa added that industrials were a significant overweight at approximately 20% last year at this time and that this overweight has been brought in due to the sector approaching overbought territory and protectionist rhetoric, which could negatively impact the sector. He also commented that the office sector only outperforms 20-30% of the time but that performance may suffer with an underweight as the market may be approaching one of those periods. However, because of the illiquid nature of private Real Estate investments, it is difficult to move nimbly between the different sectors. Ms. Cureton added that if needed, staff does have the capacity to be tactical with opportunities in office and retail, particularly with co-investment opportunities.

Mr. Ken Mindell asked whether any of these sectors included self-storage. Ms. Cureton responded that the portfolio has a fund of one program for self-storage. Staff has significant control over the composition of the program and is very selective. Generally, they target opportunities with non-institutional ownership and low-hanging fruit for value add opportunity. Those are hard to come by in today's market. Storage, like industrials, is in overbought territory, but staff continues to look for opportunities.

Mr. Sessa added that storage is in the “other” bucket and is still ramping up. There has been a lot of capital chasing self-storage, and staff has lost a few deals. Mr. Sessa mentioned that this is an area where staff could be more aggressive in pricing due to the nature of the market. These investments are typically small, $5-10 million in size, but there are a lot of easy ways to improve the asset. They typically have small, family ownership, and might be optimizing the asset for occupancy rather than net operating income. This can lead to missing out on rent growth and other opportunities.

Ms. Cureton presented various other aspects and considerations of the Private Real Estate portfolio. These included a geographic breakout, sustainability, amenities, and walkability. Sustainability is measured by LEED certification and walkability by the Walk Score. LEED certification is difficult to obtain, and it's based on a property's energy savings and sustainability features. The select portfolio today has approximately 12 percent exposure to LEED-certified properties, and this does compare favorably to Odyssey benchmark exposure. Mr. Sessa added that these measures are becoming a larger demand driver for tenants and can help to ensure that purchased buildings will not be inferior in seven or eight years when it’s time to sell.

Mr. Mindell asked whether LEED-certified or properties with enhanced amenities sell at a premium. Mr. Sessa responded that there is some debate over this issue but that the larger concern is the implications of not having the LEED certification. Without it, staff could miss an RFP process of being included for the potential to take up a tenant.

Ms. Cureton noted that LEED certification is very difficult to achieve on retrofitted properties. Because the portfolio has a mix of retrofits and new construction, the presentation doesn’t fully capture all of the energy saving initiatives that managers are undertaking. Mr. Sessa mentioned that many managers will not pay to get LEED status due to the cost and administrative efforts required, but they will still build and renovate properties to the same standards because of the resulting economic savings of having more efficient buildings.

Ms. Cureton returned to the just Walk Score, which measures the walkability of a property's location. The private portfolio stacks up very favorably in this regard. 42% of the select portfolio scored above 70, which is very walkable or better, and 27% of the portfolio has the highest walk score, which is a “Walker's Paradise”.

Mr. Sessa noted that in general, demand for mixed use, highly amenitized environments continues to grow, and these types of properties that have a faux urban environment have been extremely successful and desirable. For this reason, staff tracks and monitors these considerations when building the portfolio.

Mr. Sessa presented the performance of the portfolio relative to the expected returns at the time of underwriting. Overall, the portfolio is beating return expectations. Some non-core funds appear to be underperforming, but this is due to the J-curve impact. Staff expects to continue to outperform on a majority of funds.

Mr. Sessa presented a few notable accomplishments of the Real Estate program. Staff successfully negotiated approximately $65 million in savings since inception of the portfolio. The program has also started incorporating options into the REIT portfolio on a very selective basis. Mr. Sessa noted that the internal REIT portfolio has outperformed relative to the benchmark over the one, three, five-year, and since inception returns.

Mr. Sessa noted that the Real Estate program is in compliance, with the exception of a slight underweight in Asia. This is a function of difficulty finding good managers, resulting in a slower ramp up of that portion of the portfolio. Also, staff has been cautious regarding China and Hong Kong. Hong Kong continues to defy expectations with valuations, and they're linked with the U.S. in terms of interest rate policy and the expecting of rising rates. Staff expected a larger correction in those Real Estate markets, but those corrections haven't happened. Still, the program sees opportunities in the area, and will continue to seek strategies where value exists.

Mr. Sessa presented the program initiatives for the upcoming year. Staff will continue to commit capital to private Real Estate, targeting $525 million in commitments, and the program will be co-hosting the fifth annual emerging manager program in January with Oakstreet, ERS' manager of emerging Real Estate managers. Staff will also be selecting a new Real Estate consultant. The program is in the RFP process and expects to present a recommendation to the Board at the December Joint meeting.

Ms. Donnell acknowledged the difficulty obtaining alpha in the Real Estate space and congratulated the team on the outperformance. She also noted that Mr. Sessa had recently taken time to speak to her students at Texas A&M University and thanked him for doing so.

After confirming there were no further questions for internal staff, Mr. Sessa introduced Ms. Martinez and Mr. Kleinman of LaSalle, the manager of one of ERS' core, open-ended funds. Mr. Kleinman started with a brief macroeconomic overview, highlighting the changes to market environments since the U.S. Presidential Election in November 2016 and the possible opportunities that have resulted. Infrastructure spending, expectations of rising interest rates, and market uncertainties present challenges and opportunities for managers moving forward.

Mr. Kleinman then presented some more Real Estate specific considerations, both on the fundamentals and capital markets, which are affecting market activity. There has been strong rent growth recently, and while demand is expected to slow slightly in the next two to three years, LaSalle expects that vacancy rates will remain below their long-term average. Over the last two quarters, redemptions and distributions have accelerated while contribution queues have diminished, leading to net negative investor cash flows. This trend is expected to correct.

Mr. Kleinman commented on return expectations moving forward. Core Real Estate funds have seen double digit growth over the six years prior to 2016. This is a function of rapidly appreciating prices and is not typical for the expectations of a core fund. The expectation from core Real Estate is that the majority of the return will come from income. That is how it is generally underwritten and how managers typically want to invest. 2016 saw a shift back towards this structure. Appreciation is returning to its normal state of being a small portion of the total return, and the majority of the return is coming from income in the range of 4 to 5 percent.

Mr. Kleinman presented several possible strategies that LaSalle is recommending on both the core side and the value-add side. Generally the recommendation on core is to be underweight office. The ERS portfolio is consistent with this recommendation. Office does not typically behave as a core property type given the constantly changing tenancy. In multi-family, recommendations are moving towards buildings in urban markets, as opposed to suburban, which had been the traditional recommendation. In retail, due to our scale, the lockup, and e-commerce concerns, recommendations are focused on the best demographic areas for grocery-anchored retail. Industrial has been a star performer.

Mr. Kleinman noted the shifting preferences of aging populations. Millennials are moving out of apartments and beginning to purchase. Suburban multi-family properties in the best school districts where there are supply constraints may be a good way of taking advantage of this trend. Baby boomers are driving medical office demand, but specifically, due to changes in the health care environment, focusing in the right areas where people can afford health care presents an opportunity. Also, from a longer 10-yr time horizon, baby boomers may lead to a spike in senior housing.

Mr. Kleinman commented on the situation in the retail sector. He noted the challenges and opportunities LaSalle sees in the space and noted that one major opportunity is that warehouses have, conversely, benefitted from the rise in e-commerce. In retail, Mr. Kleinman commented that there have been binary results, where some retail works and some doesn't. The best malls are still doing well. They are retaining sales and providing an experience to shoppers that they don't get online. However, the malls that aren't offering a differentiated experience from online shopping and those filled with retailers that are selling relative commodities are really struggling.

Mr. Kleinman concluded with the global market and its impact on Real Estate domestically. Low foreign bond yields have created challenging opportunities for U.S. investors trying to compete in the higher yield environment. A lot of foreign capital is coming into the U.S. as they look at this arbitrage opportunity. LaSalle is monitoring these property capital markets with indicators that suggest value might be starting to quake. These include supply and demand imbalances, debt and equity imbalances, and pricing imbalances.

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

b. Consideration of Proposed Private Real Estate Annual Tactical Plan for Fiscal Year 2018

Mr. Bob Sessa, Director of Real Estate, and Mr. Ken McDowell, Real Portfolio Manager, presented the Proposed Private Real Estate Annual Tactical Plan for Fiscal Year 2018.

Mr. Sessa presented a brief overview of the tactical plan, a guideline that staff uses to deploy capital over the year. He noted that staff seeks to follow the guidelines but also continuously evaluates any changing market conditions and may diverge from the plan when prudent to do so. Mr. Sessa highlighted that commitments will be higher than in previous years, mainly due to a large inflow of distributions. He presented the pacing model based on different total Trust return assumptions. The base case assumption is the 8% actuarial return of the plan, but staff also runs scenario analysis based on plus or minus two percentage points. Mr. Sessa noted that overall markets and the real estate program weighting are constantly monitored and adjustments are made as needed throughout the year. Additionally, the tactical plan is recalibrated each year as well.

Mr. McDowell presented the allocation that occurred through fiscal year 2017. He noted that the program had a target allocation of zero, with a range of up to $250 million. Three investments were made in subsequent funds of managers with whom the program has existing investments. One more is anticipated by the end of the fiscal year. For fiscal year 2018, the target allocation is 225 million. Twenty million will be in a core fund, a re-up of an existing investment. The remainder will be in the non-core space.

Mr. McDowell presented the projected target commitments through fiscal year 2021. He noted that the projections are illustrative in nature and represent the program’s best estimates for the direction heading into the future. He emphasized that the pacing model, while very good, is imperfect, and that targets will change as conditions change in the market.

Mr. McDowell presented the projected invested, as opposed to committed, capital. At the end of 2017, staff anticipates 96%, or approximately 6.8% of the target allocation, to be invested and then to remain at 6.8% for the next year. Then, the invested capital should reach the target allocation of 7 percent for the next three years, December of 2019 through 2021.

Mr. McDowell presented the program’s near-term strategy. Staff will continue to invest in commingled funds or deals with small groups of investors with significant potential to drive the terms and conditions. The focus will be on niche property types, such as medical offices, self-storage, and manufactured housing. Co-investment of separate accounts will be another allocation that staff will likely explore when they become available, as well as long-term holds for selected investments that are already owned. From an international standpoint, the program will be very selective, especially in Asia, Latin America, and possibly in Europe.

Mr. Sessa added that staff has been investing in co-investments for about 18 months and continues to underwrite a handful of deals. This structure gives staff a lot more flexibility in terms of picking and choosing certain assets that might be a good fit for the portfolio.

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 that the Board of Trustees of the Employees Retirement System of Texas approve the ERS Private Real Estate Portfolio Tactical Plan for Fiscal Year 2018, as presented in Exhibit A, to be Appendix A of the ERS Real Estate Policies and Procedures.

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 of the Employees Retirement System of Texas approve the ERS Private Real Estate Portfolio Tactical Plan for Fiscal Year 2018, as presented in Exhibit A, to be Appendix A of the ERS Real Estate Policies and Procedures.