Joint Meeting of
The Board of Trustees
and
Investment Advisory Committee Minutes
May 20, 2020

ERS
EMPLOYEES RETIREMENT
SYSTEM OF TEXAS

Presented for Review and Approval

August 19, 2020

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

The May 20, 2020 meeting of the ERS Board of Trustees was held by video conference call as authorized under Section 551.127 of the Texas Government Code, in accordance with the governor's authorization concerning suspension of certain open meeting law requirements in response to the covid-19 (coronavirus) disaster. A quorum of members of the Board participated in the meeting remotely and will be visible and/or audible to the public.

TRUSTEES PRESENT
Ilesa Daniels, Chair
Craig Hester, Vice-Chair
Brian Barth, Member
James Kee, PhD, Member
Catherine Melvin, Member

INVESTMENT ADVISORY COMMITTEE (IAC) PRESENT
Bob Alley, Chair
Caroline Cooley, Member
Laurie Dotter, Member
James Hille, Member
Milton Hixson, Member
Ken Mindell, Member
Gene Needles, Vice-Chair
Didi Weinblatt, Member

ERS DIRECTORS PRESENT
Porter Wilson, Executive Director
Catherine Terrell, Deputy Executive Director
Paula A. Jones, Deputy Executive Director and General Counsel
Tony Chavez, Director of Internal Audit
Machelle Pharr, Chief Financial Officer
Gabrielle Schreiber, Director of Procurement and Contract Oversight
DeeDee Sterns, Human Resource Director
Tom Tull, Chief Investment Officer

ERS STAFF PRESENT
Nora Alvarado, Group Benefits
Carlos Chujoy, Investments
Kelley Davenport, Executive Office
Peter Ehret, Investments
Lanesia Jones, Investments
Tressie Landry, Internal Audit
Greg Magness, Internal Audit
Bruce Marton, Information Systems
Roger Nooner, Benefits Communications
Aris Oglesby, Investments
Susie Ramirez, Executive Office
Tanna Ridgway, Investments
Tom Roberts, Investments
Robert Sessa, Investments
Leighton Shantz, Investments
Pablo de la Sierra Perez, Investments
Ariana Whaley, Government Relations

VISITORS
Sam Austin, NEPC
Ryan Falls, Gabriel Roeder Smith and Company
Christy Fields, Meketa Investments Group
David Glickman, Meketa Investments Group
Asif Hussain, CBRE Caledon Group
Michael Malchenko, NEPC
Joe Newton, Gabriel Roeder Smith and Company

Call to Order

6. Call Meeting of the Board of Trustees to Order

Ms. Ilesa Daniels, Chair of the Board of Trustees (Board) for the Employees Retirement System of Texas (ERS), called to reconvene with the Investment Advisory Committee (IAC) to take up the following Joint Meeting of the Board of Trustees and Investment Advisory Committee agenda items.

A public notice of the ERS Board of Trustees containing all items on the proposed agenda was filed with the Office of the Secretary of State at 12:01 p.m. on Tuesday, May 12, 2020 as required by Chapter 551, Texas Government Code, referred to as "The Open Meetings Law."

7. Call Meeting of the Investment Advisory Committee to Order

Mr. Bob Alley, Chair of the IAC for ERS, called the meeting to order and read the following statement:

A public notice of the Joint Meeting of the ERS Board of Trustees and Investment Advisory Committee containing all items on the proposed agenda was filed with the Office of the Secretary of State at 12:01 p.m. on Tuesday, May 12, 2020 as required by Chapter 551, Texas Government Code, referred to as "The Open Meetings Law."

8. Review and Approval of the minutes to the March 11, 2020 Joint Meeting of the Board of Trustees and Investment Advisory Committee – (Action)

Mr. Bob Alley, IAC Chair, opened the floor for a motion on the approval of the minutes from the March 11, 2020 Joint Meeting of the Board of Trustees and Investment Advisory Committee, with amendments noted by Mr. James Kee.

The IAC then took the following action:

Motion made to move that the Investment Advisory Committee of the Employees Retirement System of Texas approve the minutes of the Joint Meeting of the Board and IAC held on March 11, 2020 with amendments noted by Mr. James Kee.

Motion by Ken Mindell, seconded by Caroline Cooley
Final Resolution: Motion Carries
Aye: Robert G. Alley, Gene Needles, Caroline Cooley, James R. Hille, Margaret "Didi" Weinblatt, Milton Hixson, Ken Mindell

The Board of Trustees then took the following action:

Motion made to move that the Board of Trustees of the Employees Retirement System of Texas approve the minutes of the Joint Meeting of the Board and IAC held on March 11, 2020 with amendments noted by Mr. James Kee.

Motion by Craig Hester, seconded by Brian Barth
Final Resolution: Motion Carries
Aye: Ilesa Daniels, James Kee, Craig Hester, Brian Barth, Catherine Melvin

There were no questions or further discussion.

9. Review and Consideration of Reappointment of Investment Advisory Committee Member -- (ACTION - BOT)

Mr. Tull, Chief Investment Officer, presented a recommendation to reappoint Mr. Gene Needles to the IAC for a three-year term ending May 31, 2023.

Mr. Tull explained that the IAC was established at the discretion of the Board and is currently made up of eight members. The IAC may have no more than nine members at any time. A quorum of the IAC meets quarterly with the Board and a considerable amount of members' time is spent reviewing investments for the Trust's Asset Class Investment Committees and related duties.

Mr. Tull highlighted Mr. Needles's investment expertise and noted these highlights are included in the slides. Mr. Tull noted that Mr. Needles's term is set to expire May 31, 2020. Mr. Needles has expressed a desire to continue serving on the IAC and the ERS staff recommends the Board reappoint Mr. Needles for another three year term expiring May 31, 2023.

The Board of Trustees then took the following action:

Motion made to move that the Board of Trustees of the Employees Retirement System of Texas to reappoint Mr. Gene Needles to the Investment Advisory Committee for a three-year term ending May 31, 2023.

Motion by Catherine Melvin, seconded by James Kee
Final Resolution: Motion Carries
Aye: Craig Hester, Brian Barth, Ilesa Daniels, James Kee, Catherine Melvin

There were no questions or further discussion on this item.

10. Review, Discussion, and Recommendation of Asset Allocation and Return Assumption (ACTION-IAC)

Mr. Tom Tull, Chief Investment Officer, Mr. Sam Austin and Mr. Michael Malchenko, of NEPC presented the review of ERS' Asset Allocation and Implementation.

Mr. Tull talked about the changes in the market that happened since the last Board meeting in March 2020. The economy is in a recession, working through a pandemic, and the market will likely experience a slow return to an economic recovery worldwide. The equity market declined by 34% from the high on Feb 19 to the low on March 23. He commented that due to massive stimulus programs, risk assets such as equities have now recovered from the lows. Interest rates remain low with the 10 year treasury yielding less than 1% compared to 1.92% at the end of last year. Mr. Tull explained that shortly after the March 2020 Board meeting oil prices dropped to a negative and now have rebounded to $32.00 a barrel.

Mr. Tull said that despite the market volatility, the Trust is well diversified and it was insulated from the downturn due to the Trust's current asset allocation. He stated that fiscal year to date the Trust is down an estimated 2.6%. The Trust receives $104.3 million each month in contributions from the State and from employees, and pays monthly retiree payments of $220.8 million. This results in a net non-investment outflow of approximately $1.4 billion per fiscal year.

Mr. Tull stated that since March 2020 the investment staff has deployed capital back into risk assets at lower levels. He then commented that the market continues to be driven by fear, emotions, and uncertainty, and that government policy responses and containment of COVID-19 remain the key for future trends. Mr. Tull ended by saying that ERS remains a long term investor and thanked the Board and IAC for providing the ERS investment staff with the tools and support to manage the Trust.

Mr. Tull then turned the presentation over to Mr. Austin.

Mr. Austin reminded the Board that one of the most important decisions the Board makes is the asset allocation of the Trust. He stated that the Board's decisions regarding asset allocation are responsible for 92% of the variability of returns of the Trust going forward. He emphasized that as numbers change quarter to quarter it's important to be cognizant of those changes, but understand that asset allocation decisions are the most important drivers of long term results.

Mr. Austin directed the Board's attention to the current asset allocation policy and ranges and stated that ERS is within the policy ranges. Mr. Austin then went over the return expectations and the projections of volatility for the different asset classes. Mr. Austin compared NEPC's capital market assumptions at three different points in time: in the fourth quarter of 2018, in the fourth quarter of 2019, and at March 31, 2020. Mr. Austin stated that the primary reason the expected return of the Trust portfolio was higher at March 31, 2020 was the decline in the valuation of risk assets in the portfolio, such as equities, due to the economic effects of COVID-19. These risk-seeking assets make up about 78% of ERS' portfolio. Mr. Austin noted that the S&P 500 dropped approximately 20% in the first quarter of 2020. Among large public pension funds greater than one billion dollars in assets, ERS' functional peer group, median net performance was -13% since December 31, 2019. As will be discussed in the first quarter 2020 performance report, ERS' portfolio did not fall as much as that of the peer group median.

Focusing on the change over time to the 10-year expected return for global equities, Mr. Austin said that the forecasted return for this asset class was 6.21% in the fourth quarter of 2019, down significantly from the 5- to 7-year expected return of 7.0% at the end of 2018 due to the rise in stock valuations during 2019. Largely because stocks became much less expensive from a valuation perspective in the first quarter of 2020, expected return for global equities rose from 6.21% to 7.72%. Mr. Austin stated that NEPC's projection of Private Equity 10-year expected returns rose from 8.11% at the end of 2019 to 9.69% as of March 31, 2020. Mr. Austin reminded the Board that during the first quarter of 2020, return expectations for risk reducing assets went down and that the 10-year expectation for inflation fell to 1.7% after a reduction in bond yields. Mr. Austin reminded the Board that the 10 year inflation expectation at the end of 2019 was 2.3%.

Mr. Austin then discussed how the expected return for the ERS portfolio over the 10-, 20- and 30-year time horizons changed based on the March 31, 2020 assumptions, versus those calculated in the fourth quarter of 2019. He asked the Board to focus on the 30-year expected return. He stated that as of the fourth quarter of 2018, the 30-year expected return for the ERS portfolio was 7.75%, compared to 7.14% using assumptions calculated as of the fourth quarter of 2019, and 7.40% based on first quarter 2020 capital market assumptions.

Mr. Austin then stated that the probability of the Trust's portfolio return being under the assumed rate of 7.5% over 30 years is 51.85%. The probability of ERS' 30-year expected return falling under 7.0% is 42.81%. Mr. Austin discussed a detailed analysis of an optimal portfolio that would give the most efficient mixes of asset classes to achieve the highest possible return at a given level of risk or a lower risk at a given level of return.

Ms. Cooley asked if NEPC has a sense of how sensitive the return assumptions are given the most recent increase in the market.

Mr. Austin answered that NEPC couldn't guess a specific amount by which expected returns may have changed due to the market rebound since March 31, 2020 as arriving at these calculations are a complicated process involving a number of variables. He stated that it takes several weeks to run the numbers with NEPC's entire asset allocation team adding their input to the capital market assumptions. He said it is a reasonable conclusion that as valuations go back up, expected returns for risk assets should come back down. He stated that NEPC will be calculating capital market assumptions on a quarterly basis going forward and noted that it is important to not get too fixated at any one point in time. He reminded the Board of the magnitude of change to the 30-year expected return of the ERS portfolio from 7.14% as of year-end 2019 to 7.40% one quarter later.

Mr. Kee asked if the 30-year efficient frontier data was based off of 30- years of historical data.

Mr. Austin said it is a calculation of the projected returns and risk of the portfolios going forward for 30 years to produce a set of optimal portfolios that offer the highest expected return for a defined level of risk.

Mr. Kee asked whether NEPC's historical data on the private markets is as robust as that for public markets or goes back as far as the data being used for public markets. Mr. Austin stated that the private market data is more limited and does not go as far back as public markets. Mr. Kee stated that it is always helpful to include the data limitations of the different asset classes, especially when talking about private asset class data.

Mr. Mindell stated that while viewing numbers at a market low, he was surprised at the small amount of change in the long term expected rates of return. He stated he felt it was somewhat dubious to look at the March 31 year end and he felt in 6 weeks the numbers may come back. He stated he felt the 7.14% on the 30 year expected return would be more normal. He said the Board needs to be cautious in evaluating the numbers while they are so low.

Mr. Austin said it's important to note that while NEPC is calculating numbers quarterly, no pension fund should be making long term decisions based on assumption changes from quarter to quarter, particularly in light of heightened volatility in the markets.

Ms. Cooley stated that being a plan with net outflows with shorter time frames really matters to the Board. She went on to say that the Board has historically used the blended information and considered the 30 year outlook, but has not made it the sole basis of the decision, knowing that the trajectory of returns matters, not the average returns over the 30 year period. She stated that the Board has been more focused on the 10 year return and not the 30 year return.

Mr. Austin then showed the Expected Return Comparison. In early 2019, when the decision was made to remain at 7.5% on the assumed return, the 30-year expected return was 7.75% and the expected 20-year return was 7.51%. Based on both of those numbers, the Board decided to keep the return rate assumption at 7.5%. He added that the probability of the 30-year return being under 7.5% at that time was 45.5% and that the probability of the 20-year return being under 7.5% was 50%. He stated that the liquidity risk is the main item to balance with return expectations of the Fund. Most scenarios attempting to generate higher returns in the Fund, require adding assets in the private market space. He stated that since private markets are less liquid than public markets, significantly higher private market exposure would likely limit the operational flexibility of ERS to meet the obligations and expenses of the Trust. Mr. Austin concluded that the two essential items the Board must weigh are how to combine assets in order to get the optimal return to the Fund within a given level of volatility without constraining the Fund which needs liquidity and flexibility to pay benefits.

Mr. Mindell stated that increasing the allocation to hedge funds, would maintain liquidity and could possibly improve the overall risk-adjusted return of the ERS portfolio other than by only adding private market exposure because their Sharpe ratios are better.

Mr. Austin went on to discuss several of the different mixes of asset classes that NEPC modeled to potentially increase returns of the portfolio besides private markets. Mr. Austin said NEPC concluded that ERS' current asset allocation is the appropriate asset allocation at this time. He stated that NEPC uses a number of asset allocation tools such as mean-variance optimization, scenario analysis, liquidity analysis, and active risk budget analysis to determine the best asset allocation. Mr. Austin went over a base case scenario analysis where over a five-year period asset returns are in line with NEPC's 2020 expectations assuming no unexpected shocks to volatility. He also showed an additional stagflation scenario that showed the economy not growing and inflation rising above current expectations. That particular scenario showed that equities and bonds lose their real value. Mr. Austin showed two other scenarios. He showed the recession scenario illustrating what happens if the economy stalls and investors lose confidence in the market, causing equity markets to fall and bond yields to fall. The last scenario was an example of an expansion scenario where the economy is growing strong, but seemingly at a sustainable level, bond yields are stable, and inflation manageable. In this scenario Mr. Austin showed equities and other high volatility asset classes perform quite well.

Mr. Austin then discussed the liquidity analysis that showed several portions of assets that could be liquidated within a week or month. Mr. Austin showed there were several mixes that gave different examples of different stress case scenarios. The liquidity analysis showed that ERS' investment programs can benefit from a portion of their assets in illiquid investments. Capital calls on illiquid investments can be the foundation for future outperformance and correlations can be low to publicly traded assets, however, investing in illiquid assets added another dimension of complexity to liquidity management. He explained that some concerns are having enough liquidity to manage future cash flows and, how the portfolio would fare in worst-case scenarios, such as when there is a need for the forced sale of distressed assets. Mr. Austin explained that the purpose of the stressed case scenarios is to look at the worst case and to be able to understand the portfolio's sensitivity. Another purpose is to visualize what risks are entailed in adding alternatives to try to reach for returns that would be difficult to achieve only using public markets.

Mr. Austin stated that the Board's selection of the existing asset allocation and diversification of the portfolio has been beneficial for ERS. Mr. Austin went on to say that while median large pension funds in ERS' peer group fell 13.2% during the first quarter, ERS would have been ranked in the first quartile for that period. Due to constraints ERS has, NEPC believes the asset allocation ERS currently has is the appropriate one at this time. He said that NEPC believes that significantly increasing private market exposure at this time would not be beneficial for the Trust.

Ms. Melvin stated that a lot of emails were received from members asking the Board not to consider any change in the rates at this time. She asked Mr. Austin to help explain how the Trust's past performance might impact future performance. Mr. Austin explained that US equity returns have been much higher than expected over the last ten years and that long-run averages, tracked for over 80 years, have been well over the returns in the market 10-, 20-, and 30-years out. Accordingly, the valuation of equities are unlikely to provide comparable rates of return relative to the past. He added that given the need to fund future benefit payments, ERS should be realistic about a target rate and not overestimate the number.

Mr. Hille stated the foundation of all returns is the risk free rate. Mr. Austin agreed, noting that the drop in interest rates has lowered expected returns of risk-reducing assets. While they are the foundational building block in calculating the expected return of risk-seeking assets, improvements in equity valuation metrics caused the increase in capital market assumptions for stocks.

Mr. Hester stated that much more money has moved to private markets and away from public markets and that for years pension funds have been under pressure to make returns. Mr. Hester said that the liquidity issue is extremely significant and a number of pension plans have these issues. Mr. Hester stated that the Board does not control the factors leading to the Trust's cash flow issue. The Board only controls the investment decisions related to the Trust. He reiterated that there are extreme amounts of pressure on the investment income stream. He added that employees already have a huge obligation to the Fund with the 9.5% payroll contribution -- a significant cost. The Fund has only had one year in the last 20 where the funding has actually approached the Trust's actuarially sound contribution needs. He concluded saying that it is difficult to think about stretching the return assumption or increasing the illiquid investments due to the negative cash flow and the constant need to liquidate assets to make annuity payments.

Mr. Austin said that many pension funds have added to private markets in a reach to add higher returns. The average assumed rate from several years ago of 8% has not been achievable. He added that trust funds cannot continue to add to private markets and expect to find deals as good as they have been in the past. He stated that with the impact on liquidity due to the Trust having a net cash outflow each month, NEPC does not recommend adding to the private markets exposure above the current levels.

Mr. Mindell commented that if ERS assumed realistic expected returns it will show the shortfall of the trust and it will show the State has not provided adequate funding and that artificial returns diminish that shortfall

Mr. Brian Barth said that the importance of liquidity needs to be emphasized in layman terms. The need for liquidity will show the potential impact of these scenario mixes including the potential risk to retirees getting their checks if the portfolio takes on too much risk and there is a market downturn. He noted that the members need to know that no matter what the Board chooses for the assumed rate return it has no bearing on the actual performance of the Fund.

Mr. Austin said that if liquid assets were to fall from 60% to 40% in a stressed scenario, the Trust would be forced to sell assets at the worst time. He said that ERS has been wise to set aside more than $4 billion in the intermediate treasury portfolio as a liquidity buffer, but ERS does not want to test that buffer in a prolonged economic downturn scenario. He explained that if an economic downturn continued for an extended time, it would put that large reservoir at risk, which could lead to ERS selling assets in a distressed situation where it might not get the price it would in a normal circumstance. Mr. Austin went on to say that some pension funds across the country encountered this problem in 2008, when they had to sell in a distressed environment. In NEPC's opinion, ERS is not in danger of failing to meet its obligations in the short term, but continued contribution shortfalls combined with an unrealistically high assumed rate of return can have a huge impact on the Trust in the future.

Mr. Kee stated that he was looking at the total value of public assets vs private assets. He added that it is difficult to come up with the proper mix of liquid to illiquid assets.

Mr. Hester said that the $4 billion ERS has invested short term is roughly 14% of the Fund. The Trust needs to have a liquid amount in order to cover cash shortfalls. He stated that the negative cash flow liquidity issue drives many of the Trust's asset allocation decisions.

Mr. Austin said that the optimal balance of liquidity and diversification has helped ERS be in the top quartile of performance during the turbulent first quarter of 2020 compared to public pension funds with assets greater than $1 billion.

Mr. Kee asked what Trust performance has been year to date.

Mr. Austin stated he will go over all of the numbers in detail when NEPC presents the first quarter performance report, but the Trust performed better in the first three months of the year than peers that are similar in size.

Ms. Cooley said that the stress tests shown with illiquid assets didn't look as scary, but doesn't show what illiquid assets could be sold at in a stressed market. Mr. Austin responded that part of the stress test is assuming that sales, exits, and distributions are significantly down and the price one would get would be the market price and that the ability to sell at all would be a concern in a distressed market.

Mr. Kee asked where the U.S. fits in terms of commitments to private equity. Mr. Tull said that the U.S. does lag in terms of commitments to private equity and other alternatives relative to the Europeans. He went on to say that European investors have been in this space for a while. Sovereign wealth funds that have been established over the last several years with both groups in prime competition for deal flows as they continue to accelerate their commitment to alternative assets.

Mr. Porter Wilson, ERS Executive Director, said that ERS' pension actuary, Gabriel Roeder Smith and Company can add an actuarial perspective to the discussion. He said that the Board members will benefit from IAC member opinions on the asset allocation mix and the nominal long term return assumption.

Mr. Mindell stated that two years ago ERS reduced the assumed rate to 7.50%. Now he feels that the assumed rate of return should come down to 7.25% or 7%. He also asked the Board to consider whether the decrease should be done incrementally.

Ms. Cooley said that she feels the current asset allocation is reasonable and the return assumption should be closer to 7%. She went on to comment to the Board that they should use the most realistic return assumption.

Mr. Needles commented that he agreed with lowering the return assumption to 7%.

Mr. Hille stated he believes the Board should not make any massive decisions at the moment and that based on the amount of uncertainty in the current market, he will not base his decisions on recent market changes. He stated his recommendation is to keep the current asset allocation.

Ms. Dotter commented that the Trust's 10-year history is in line with the market probability and reducing the target rate to 7.25% is something the IAC and Board should focus on. Ms. Dotter agreed that the asset allocation the Trust currently has is reasonable.

Mr. Tull stated that based on what he is hearing the IAC is comfortable with the current allocation. Mr. Mindell recommended that the Board adopt a 7% assumed rate of return.

Mr. Wilson said that the Board should hear the actuarial presentation before voting on the action.

Agenda Item 10 was left pending for action to be considered by the IAC following the presentation in Agenda Item 11 by ERS' independent actuary for the retirement system.

11. Review, Discussion and Consideration of the ERS Pension Experience Study, including Actuarial Assumptions and Methods, the Return Assumption and Asset Allocation (ACTION – BOT)

Investment Advisory Committee Chair Bob Alley, Chair introduced the agenda item and Ryan Falls and Joe Newton with ERS consulting pension actuaries from Gabriel Roeder Smith & Company.

Mr. Falls reported that the preliminary recommendations from the March board meeting would be presented as the final recommendations of the Pension Experience Study. He reminded the board that the assumptions are a critical component of the annual valuations. Mr. Falls reminded the members that it is important to keep in mind that the true cost of this plan is going to ultimately be the benefits that we pay with the actual investment returns we accumulate, not the assumptions. The experience study is an opportunity to review the current methods and assumptions to ensure they are appropriate as best practices, account for new information, and reflect new patterns that have emerged. The discussion continued on the impact to the funding trajectory of the plans. Mr. Falls touched on the NEPC projections discussed during the previous agenda item. He reiterated the importance of considering the financial health of a pension plan like ERS with negative cash flow and the volatility from investments, which can have a significant drag on the accumulation of assets used to pay benefits. He repeated the results of the Experience Study and the identified assumption changes recommended to the Board. The financial impact to the ERS plan from the proposed assumptions would increase the needed contributions to pay off unfunded liabilities. The unfunded liability would grow by about $2 billion for the ERS plan but he reiterated that ERS will still pay the same overall cost, or benefits for the plan.

Mr. Alley asked if there was any further discussion on the nominal rate of return assumption. Mr. Hixson added that after hearing from the actuaries and focusing on the 20 or 30 year timeframe, he feels better about the 7% rate than the 7.25% rate. There was further support expressed for the 7% by various members.

The IAC then took the following action:

Motion made to move that the Investment Advisory Committee of the Employees Retirement System of Texas recommend maintaining the current asset allocation and adopt a long term nominal return assumption of 7%.

Motion by Ken Mindell, seconded by Gene Needles
Final Resolution: Motion Carries
Aye: Ken D. Mindell, Gene Needles, Robert G. Alley, Caroline Cooley, Laurie Dotter, James R. Hille, Milton Hixson, Margaret "Didi" Weinblatt

The Board began the public comment period. Joan Barash (state retiree), Jerome Walt (state retiree), Betty Berg (state retiree), Logan Perks (state employee), Bill Hamilton (Retired State Employee Association) presented public testimony with regard to the assumed investment rate of return and its impact on the plan and cost of living adjustments for retirees.

Mr. Hester clarified that the ERS plan has never had a guaranteed cost of living adjustment feature and by law neither the Legislature nor ERS can increase benefits until the plan is adequately funded. Mr. Wilson agreed that the defined benefit plan provided does not include regular cost of living adjustments or 13th check but it maintains a benefit for life. Ms. Jones added that the board has a fiduciary responsibility to retirees, and actively contributing and non-contributing members. The law requires the Board to treat each group fairly. To award any sort of a benefit increase to retirees would be treating the retirees in a more favorable light than active employees whose contributions to the plan have gone up over the years. Mr. Mindell clarified that even if we decrease the return assumptions, it doesn't prevent us from actually making more than what is assumed.

Mr. Hester asked about the impact of the critical components including life expectancy and payroll growth. Mr. Falls responded that life expectancy and mortality assumptions continue to be in line with experience. ERS already has generational mortality assumptions meaning that life expectancy improves with each generation. Mr. Falls reminded the Board that payroll growth uses a building block approach that is based on inflation. The state has not provided salary increases as assumed in the annual valuations so the expectations were lowered. These lower across the board salary increases mean future benefits will be less than expected. On the flip side, contributions intended to pay off unfunded liabilities will also be lower. The lower benefits are offset by the lower contributions and will have little impact on the trajectory of the fund. Mr. Wilson added that there is risk in continuing to go to the Legislature and ask for funding based on assumptions that are unrealistic.

The Board of Trustees then took the following action:

Motion made to move that the Board of Trustees of the Employees Retirement System of Texas a adopt the Actuarial Valuation Assumptions for the 2020 Pension Experience Study based on recommendations from the system's independent consulting actuary as presented in Exhibit A attached to Agenda Item Number 11. Further move that the Board adopt a long-term nominal return assumption of 7%.

Motion by Craig Hester, seconded by Catherine Melvin
Final Resolution: Motion Carries
Aye: Craig Hester, Catherine Melvin, Brian Barth, James Kee
No: Ilesa Daniels

Mr. Hester commented on the board's fiduciary duty to all members and the importance for the Legislature, and the people of the State of Texas to realize that this unfunded liability is a liability of the State of Texas, which can impact the financing cost of the state as we go forward. Ms. Melvin expressed appreciation for the critical timing before the state budget appropriations process and the fiduciary duty to provide accurate information based on the best information available. Mr. Wilson concluded by thanking the members that participated in the new process for public testimony.

12. *Review of Investment Performance for 1st Quarter of 2020 and Risk Update

Mr. Tom Tull, Chief Investment Officer, Carlos Chujoy, Risk Officer, Mr. Sam Austin and Mr. Michael Malchenko, NEPC, presented the investment performance for the first calendar quarter of 2020.

Mr. Malchenko started the presentation stating that the first quarter of 2020 was disrupted by a global pandemic hitting the economy and causing unprecedented moves in the equity market. He stated that global equities ended the quarter down 22.4%. He said that the Federal Reserve and US government introduced unprecedented fiscal and monetary stimulus programs and that since March 31, 2020 global equities were up 11.6% from April 1 to May 19. Overall from January 1 through May 19, global equities are down 13.6%. He stated that treasury yields had dropped to historical lows during the first quarter of 2020.

Mr. Malchenko said that as of March 31, 2020 the Trust underperformed the policy benchmark by 0.5% and the market value of the Trust went down from $28.3 billion to $26.2 billion in the last calendar year, including an investment loss of $1.57 billion. Calendar year to date the Trust returned -9.9% due to the global pandemic and underperformed the policy benchmark by -0.3%, although ERS ranked in the 17th percentile performing better than 83% of its peers. He stated that the Trust is managed in a cost effective manner with 52% of the Trust managed internally and 48% managed externally. He went on to say that 22% of the Trust was allocated to risk reducing assets and 78% to return seeking assets, with 36% in illiquid assets and 64% in liquid assets.

Mr. Malchenko explained that the three, five, and 10-year returns outperformed the policy index. The long-term public index also outperformed ERS peers over those trailing time periods. The 10-year return for the fund was 6.5% and the total fund policy index was 6.3%, which gives a 0.2% outperformance. He then reiterated how choosing an asset allocation mix, such as ERS has done, that includes private markets and complex investment strategies can outperform the public markets in the long run.

Mr. Austin stated this is the first time in two years that the 10-year return is below the previous assumed rate of 7.5% and that until this last quarter's downdraft ERS had been exceeding that number. Mr. Austin stated that is why NEPC focuses on the long term performance as opposed to the short term performance.

Mr. Malchenko said that the fund outperformed the policy benchmark during the three year period ending March 31, 2020 and that the return of 4.22% outperformed the benchmark by 0.61%. On a risk adjusted basis, the Sharpe and Sortino Ratios over this period indicate active management benefited the plan. He also stated that during the five year period ending on March 31, 2020, the fund returned 4.3% and outperformed the policy benchmark by 0.07%. On a risk-adjusted basis, the Sharpe Ratio (0.50 vs 0.43) and Sortino ratio (0.54 vs. 0.52) indicate strong returns per unit of risk taken and returns per unit of downside risk experienced relative to the policy benchmark.

Mr. Malchenko then went over the total fund asset growth summary of performance in dollar amounts. He stated that fiscal year to date the Trust had a net investment change of -$2 billion bringing the ending market value down to $26.2 billion. He then discussed each asset class's current targets and long term targets. Mr. Malchenko stated that as of March 31, 2020 all asset classes were within investment policy ranges.

Mr. Malchenko said that some assets aren't valued in real time. Private Equity would be valued closer to the fourth quarter, lagging other results by about a quarter.

Mr. Tull commented that they have reached out to all alternatives and that the early consensus is that March could be about 15% to 20% lower. He stated that there is a lag and that staff is comfortable with what has transpired and is aware of the degree of losses the Trust expects to take.

Mr. Mindell asked Mr. Tull if he has seen any increase in capital calls. Mr. Tull said that he expected more cash calls earlier, but he found a number of private markets were much more proactive and inclined to withdraw sooner from banks, as well as applying for stimulus funds. Mr. Tull stated that staff is still cautious.

Mr. Hester asked what caused the - 7.3% on the long term public index. Mr. Tull said that the outperformance driver is the drawdown in the first quarter in public equities and that the total fund benefited from the asset allocation.

Mr. Tull stated that staff removed some risk in the six month period prior to the downturn.

Mr. Malchenko summarized the performance of the fund over the last 10 years and stated the fund outperformed the benchmark by 0.2%. He went on to say that the primary goal of exceeding the actuarial assumed rate of return was impeded by the global pandemic and subsequent draw down of risk assets in the first quarter of 2020. He reiterated that ERS is a long term investor and that ERS' long term investment strategy and asset allocation prioritizes asset diversity in order to maximize return and minimize risk.

Mr. Chujoy discussed the negatives that COVID -19 brought around the world. He discussed that with no vaccine in place, there are concerns about shortages of medical equipment, and that health care professionals and people working on the frontline were exhausted and getting sick. He went on to say that all of the unknowns led to unprecedented levels of uncertainty.

Mr. Chujoy said that the market experienced a very fast correction and sky high levels of risk and volatility. Mr. Chujoy spoke about the less liquid part of the Trust such as private equity, private real estate, hedge funds, and private credit. He stated that the staff did a great job engaging with their general partners. This interaction allowed staff to get a feel for how ERS' private investments had performed by addressing a variety of risks. It also allowed staff to get a better understanding of essential versus non-essential businesses. Mr. Chujoy stated that staff also tried to understand how the general partnerships were doing during this pandemic. They did so by discussing the various investment risks faced by the partners such as liquidity needs, restructuring, and financial distress conditions of the market.

In conclusion, Mr. Chujoy stated that the world is still going through a global pandemic of unprecedented proportions that caused major disruptions to the world economy. He went on to say that the US is in a technical recession with unemployment soaring. He stated that the FED and policy decision makers had approved large scale economic packages to provide economic stability and to avoid more sustained and long drawn out damage to the economy.

Lastly he stated that the diversified nature of ERS' portfolio allowed it to lessen the risk of a dramatic drawdown and that staff continues to perform ongoing risk assessments of the alternative assets.

Mr. Kee asked Mr. Chujoy if he sees any investments that are threatened by insolvency with COVID-19.

Mr. Tull answered that some will be constrained, but for the most part they're not in an early stage of insolvency.

There were no further discussion or questions at this time.

13. Real Estate Market Update and Program Overview

Mr. Robert Sessa, Director of Real Estate, presented a market update on the Real Estate Program.

Mr. Sessa said that the Real Estate Program is a combination of two groups of asset classes; Private Real Estate makes up 9% of the Fund and Global Real Estate Listed Securities (REITS) makes up 3%. He stated that the overall target weight is currently 12% and that the actual weight is at 11.5%.The portfolio is currently underweight with both of those target allocations.

Mr. Sessa said the REIT portfolio is under $700 million as of March 31, 2020. He stated that 54% of the portfolio is US based and that 46% of the portfolio is international. He then went over the performance of the combined internal public portfolio which has outperformed the benchmark since inception by 75 basis points annually. Mr. Sessa stated that the internally managed REIT portfolio has outperformed the benchmark by 174 basis points over the past year and that the portfolio drivers were stock selection in the U.S. and Australia. Mr. Sessa went on to say that for the five year period the portfolio outperformed the benchmark by about 60 basis points.

Mr. Sessa highlighted a few high level statistics of Private Real Estate. He stated that Private Real Estate is composed of 91% equity and the remaining 9% is debt real estate investors use to buy property. Mr. Sessa went on to say that as of December 31, 2019, the portfolio's net asset value was $2.3 billion. He commented that staff feels good about the overall leverage levels of just over 50% compared to the policy limit of 65% and that the portfolio is in line with all other policy guidelines. Mr. Sessa explained that for the fiscal year $557 million has been committed for 10 deals and there had been $317 million in capital calls and $226 million in distributions.

Mr. Sessa then went over the asset allocation versus the target allocation as of March 31, 2020 stating that staff continues to assess the core and non-core weights relative to targets. He then went on to show the property types by weight. He stated that the portfolio is overweight residential at 11% and underweight retail at 9% and office at 12%. Mr. Sessa discussed that the absolute exposure to hotels is about 6% which is about 4% overweight. He stated that hotels and retail properties are the two sectors that will be most impacted during this time.

Mr. Sessa said that self-storage property exposure is currently a little under 2% adding that it has been tough finding attractive deals due to pricing.

Mr. Hester asked what Mr. Sessa was hearing about occupancy rates for offices and student housing. Mr. Sessa stated that there has been much discussion about a secular long term change to how people work in the office and home, taking social distancing into account. He stated he thought it would be a temporary change to how things are operated, but he does not expect long term changes. He stated he was using China and prior catastrophes as a guide and that rent collections and student housing have been pretty strong for the ERS portfolio.

Mr. Sessa then discussed the geographic weights based on ERS' NAV (Net Asset Value) as of December 31, 2019. He stated that the U.S. represents just under 80% of the exposure with the target rate being 70% which is currently benefiting the portfolio due to currency rates. He went on to state that about 54% of the international exposure is in Asia.

Mr. Sessa went over the Impact of the pandemic on real estate stating that all property types have been impacted, with the exception of data and industrial centers. He added that those two property types have seen an increase in demand and leasing activity. Mr. Sessa commented that transactions have been halted or postponed affecting the price discovery. He stated that to see true valuations more clarity and transparency would need to take place in the market. Grocery sales via ecommerce, supply chain reconfiguration, and cloud computing adoption are accelerating trends. Mr. Sessa discussed that there may be more government intervention in real estate, such as affordable housing, rent holidays, or increasing rent control measures, due to people not being able to pay their rent.

Ms. Dotter asked whether anyone is discussing or focusing on lower leverages in order to access lower rates. Mr. Sessa said that managers have been focused on debt covenants and cash flow and not looking to refinance yet.

Mr. Sessa went over Fiscal Year 2020 accomplishments stating that both REIT and Real Estate portfolios have outperformed the benchmark for the one, three and five and since-inception periods. He went on to say that staff committed to their first prop tech fund. Staff has negotiated an estimated $130 million in savings and non-economic terms to improve corporate governance for the overall portfolio since inception. Mr. Sessa also discussed co-hosting of the Fifth Bi-Annual REEM conference (Real Estate Emerging Manager Conference). He ended the accomplishments by stating that the Portfolio is in compliance with the Real estate Guidelines, with one exception to one manager approaching 15% of the concentration limit. He stated that this was a unique situation due to one manager acquiring two other existing managers the portfolio held, causing an increase in concentration. He stated that staff is not overly concerned regarding this and that this should decrease as staff continues to allocate money to other managers.

Mr. Mindell asked Mr. Sessa to comment on the cross defaults of leverage exposure of the portfolio. Mr. Sessa responded that the portfolio does have some collateralized loans but it is very minimal because staff focuses on avoiding these and other managers have learned not to do this as well.

Mr. Sessa went on to discuss Fiscal Year 2021 initiatives stating that staff will be triaging the portfolio and committing new capital on a selective basis. He stated staff is targeting $300 million in commitments and will continue to improve upon the REIT investment process and performance. He stated staff is hoping to hire an analyst as well.

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

14. Review and Consideration of Proposed Real Estate Annual Tactical Plan for Fiscal Year 2021– (Action)

Mr. Robert Sessa, Director of Real Estate, presented the Proposed Real Estate Annual Tactical Plan for the Fiscal Year 2021 for review and consideration.

Mr. Sessa provided an overview of the proposed Fiscal Year 2021 Tactical Plan. The tactical plan is used as a guideline for investing. He went on to say that the current value of Private Real Estate is $2.3 billion and that it will be coming down. Mr. Sessa stated that the portfolio is currently 8.9% of the total Trust and that the target allocation is 9%. He commented that staff will be committing $300 million for the Fiscal Year 2021, with a range of $200 million to $600 million and stated that the wide range will give staff flexibility in regards to the uncertainty in the market.

Mr. Sessa then reviewed Fiscal Year 2020. He stated that there were 10 deals totaling $557 million in commitments. He went on to say that in March staff closed on one deal to a data center fund and are hoping to close on one other deal before the fiscal year ends.

Mr. Sessa went over the projected cash flows that staff is projecting. Mr. Sessa stated as the market continues to open up staff will begin getting more distributions back.

Mr. Sessa said that staff's near term strategy is to understand the world post pandemic and explore potential opportunities that arise, build relationships with strong partners and small groups of investors, explore long term holds for select investments, including core investments, and look for niche type funds or other strategies that will diversify the existing portfolio, such as medical office, self-storage, manufactured housing, and debt funds. Mr. Sessa said that staff will be very selective and will be looking at Asia and possibly Europe for investments.

Mr. Mindell asked what the target rate of return is.

Mr. Sessa answered saying that it depends on the strategy and how risky it is. Mr. Sessa stated that core will be in the in 5%-6% range and the non-core would be in the 9%-10% range.

The IAC then took the following action:

Motion made to move that the Investment Advisory Committee of the Employees Retirement System of Texas approve the Proposed Real Estate Program Tactical Plan for Fiscal Year 2021.

Motion by Laurie Dotter, seconded by Jim Hille
Final Resolution: Motion Carries
Aye: Robert G. Alley, Gene Needles, Caroline Cooley, James R. Hille, Margaret "Didi" Weinblatt, Milton Hixson, Laurie Dotter

Motion made to move that the Board of Trustees of the Employees Retirement System of Texas approve the Proposed Real Estate Program Tactical Plan for Fiscal Year 2021.

Motion by Craig Hester, seconded by Jim Kee
Final Resolution: Motion Carries
Aye: Craig Hester, Brian Barth, Ilesa Daniels, Jim Kee, Catherine Melvin

There were no questions or further discussion on this item.

15. Infrastructure Market Update and Program Overview

Mr. Pablo de la Sierra Perez, Director of Infrastructure, presented the Infrastructure Market Update and Program Overview.

Mr. de la Sierra Perez stated that the Infrastructure team consists of Ryan Wilkinson, Real Assets Portfolio Manager, Michael Miller, Real Assets Senior Associate, who joined last summer, and himself.

Mr. de la Sierra Perez gave a snapshot of the portfolio. He stated that, because of the usual reporting lag in private markets, the snapshot would not show the true impact of COVID-19. Mr. de la Sierra Perez went over various portfolio metrics mostly based on December 31, 2019 valuations rolled forward to March 31, 2020. He stated that since inception up until March 31, 2020 the Infrastructure Team has invested in 16 funds and 21 co-investments totaling about $1.8 billion in committed capital. Mr. de la Sierra Perez said that the Net Asset Value of the Fund is already slightly above $1 million dollars, representing about 3.9% of the total Trust value, with a total of $685 million of unfunded capital commitments.

Staff committed a total of $285 million in FY19 which was below the target commitment of $450 million. He also stated that consequently, they expected to end FY20 at or above the $450 million target. He stated that as of March 31, 2020 staff had committed a total of $165 million and expects to commit an additional $200-$350 million before the end of the Fiscal Year 2020.

Mr. de la Sierra Perez stated that the portfolio is made up of opportunistic, value add, and core strategies. The portfolio targets 25% in core assets, and these assets are currently estimated to make up 15% of the portfolio, at the lower end of the portfolio's target range. The rest of the portfolio is currently made up of 30% of opportunistic and 55% value add strategies. Mr. de la Sierra Perez then went over the geographic exposures of the portfolio and stated that an estimated 30% of the portfolio is invested in emerging markets and 70% is in developed economies. Mr. de la Sierra Perez stated that while it's too early to see how COVID-19 has impacted the portfolio, the early stages of the virus did have some impact on the portions of the portfolio exposed to foreign currencies. He stated there are multiple currencies in the portfolio with the majority of the assets being denominated in USD, which had strengthened relative to most other currencies during the COVID-19 crisis.

The portfolio does not have formal sector targets. Portfolio sectors consist of transportation, telecom, utilities, midstream, and shipping, with energy, power and utilities as the largest sector at 61%. The sectors most negatively impacted by the COVID-19 crisis and the Russia-Saudi Arabia oil price war appear to be transportation, such as toll roads, airports and midstream assets, while digital infrastructure appears to be one of the least affected sectors. Mr. de la Sierra Perez noted that another way staff is adding value to the portfolio is by adding development and construction risk to the portfolio. He stated that an estimated 67% of the portfolio is Greenfield assets (i.e. new construction assets) and 33% operating. Mr. de la Sierra Perez commented on the Portfolio's vintage diversification and stated that co-investments and direct investments are a very important part of the program and they made up 62% of the portfolio. Mr. de la Sierra Perez commented on portfolio economics and realized and projected fee savings.

Mr. de la Sierra Perez discussed market activity, adding that staff continued to see strong fundraising activity during 2019. Mr. de la Sierra Perez stated that in 2019 there was $98 billion raised by 88 funds compared to $94 billion by 95 funds in the past and that the average fund size is large compared to other private asset classes and it continues to increase. He stated that some market data shows the average infrastructure deal in 2019 was $192 million and that this average deal size has increased the last few years.

Mr. de la Sierra Perez went over the market update and outlook for the Infrastructure Program. He discussed that energy, power and utilities remain the largest sectors and that staff believes that will continue. He stated that digital infrastructure continues to grow. He commented that he continues to expect strong fundraising activity. He stated that in the infrastructure universe the type of assets infrastructure investors target continues to evolve and expand with results driven by innovation and technology. He noted that direct investments, co-investments and emerging markets are an increased focus of some of the most sophisticated pensions and sovereigns and other institutional investors. He stated that Infrastructure investment is broadly perceived as a driver and enabler of economic growth. Mr. de la Sierra Perez indicated that all these trends will likely be affected by COVID-19 and oil price crises.

He stated that he did not anticipate any bankruptcies in the portfolio in the near term and that liquidity in general appears to be better than it was 12 years ago during the Great Financial Crisis. He also indicated that this could change depending on the length and the severity of the recession.

Mr. de la Sierra Perez went over Fiscal Year 2021 goals of the Infrastructure Program. He stated that staff will continue to focus on the diversification of the portfolio and explore efficient ways to deploy capital, including through seed and anchor investments and partnerships with similarly situated investors. He stated that they will request an additional analyst position to the team as part of the ERS budget request for Fiscal Year 2021.

He went on to discuss the interactions staff has with consultants. Mr. de la Sierra Perez stated that staff has frequent calls and in person meetings with the consultants. He stated that staff had an annual onsite visit with the consultants in September 2019 and plans to do so in June again or as soon as possible. He stated that the consultant is asked to participate in asset class investment committee meetings when appropriate and that they prepare written memorandums for proposed deals. Mr. de la Sierra Perez stated that staff reviewed the Infrastructure Guidelines with the consultants and there were no proposed changes at this time.

Ms. Caroline Cooley asked Mr. de la Sierra Perez what digital infrastructure includes. Mr. de la Sierra Perez stated it includes cell towers, small cells, fiber optic networks, data centers, etc.

Mr. Hester asked Mr. de la Sierra Perez to elaborate on the liquidity risk improving. Mr. de la Sierra Perez responded that during the Great Financial Crisis the aggressive use of leverage triggered more bankruptcies in infrastructure assets than would have been expected in the asset class and that lessons learned led to more conservative use of leverage, which is showing in the current situation.

Mr. Hester asked what the current leverage ratio is in the portfolio. Mr. de la Sierra Perez said it is an average of about 50%.

Ms. Laurie Dotter commented that the IAC wants to ensure the overall Trust portfolio does not have too much overlap between Private Infrastructure and Real Estate with health care facilities and data centers. Mr. de la Sierra Perez said that there will be some overlap on various sectors at times, not only with Real Estate, but also with Private Equity and other private asset classes, but staff continues to monitor it and the areas Ms. Dotter referred to were very small in the Infrastructure Portfolio.

Mr. Kee asked about the portfolio's energy exposure. Mr. de la Sierra Perez stated that estimated on the same basis as the rest of this presentation, midstream would represent 17% of the portfolio's NAV. That exposure is well diversified within that 17% as it includes a combination of gathering and processing systems, transportation facilities, LNG projects, terminals, etc.

Mr. Tull commented that the total Trust has about 5% in energy. Mr. Tull stated that the sector reports are in the Board's materials and will be provided on a quarterly basis going forward.

There were no questions or further discussion on this item.

16. Review and Consideration of Proposed Infrastructure Annual Tactical Plan for Fiscal Year 2021 – (Action)

The ERS Private Infrastructure team proposes to invest in three to six investments with commitments totaling $400 million including co-investments and direct investments in FY21. He stated that staff continues to seek sector diversification, opportunistically seek core assets, and will continue establishing key relationships, including through seed investments and partnerships with other investors, and continues to focus on and seek co-investments and direct investments.

The IAC then took the following action:

Motion made to move that the Investment Advisory Committee of the Employees Retirement System of Texas approve the Proposed Infrastructure Program Tactical Plan for Fiscal Year 2021.

Motion by Gene Needles, seconded by Margaret "Didi" Weinblatt
Final Resolution: Motion Carries
Aye: Robert G. Alley, Gene Needles, Caroline Cooley, James R. Hille, Margaret "Didi" Weinblatt, Milton Hixson

The Board of Trustees then took the following action:

Motion made to move that the Board of Trustees of the Employees Retirement System of Texas approve the Proposed Infrastructure Program Tactical Plan for Fiscal Year 2021.

Motion by Jim Kee, seconded by Brian Barth
Final Resolution: Motion Carries
Aye: Craig Hester, Brian Barth, Ilesa Daniels, Jim Kee, Catherine Melvin

Mr. Hester then commented that staff should continue to be cautious and remember to never force money into an investment to meet any target allocations. He acknowledged that staff has never done so, but to just remain cautious and move slow.

Mr. Tull stated he agreed and commented that staff will never force money into any allocation to meet a target allocation.

There were no questions or further discussion on this item.

17 . *Fixed Income Market Update and Program Overview

Mr. Leighton Shantz, Director of Fixed Income, presented an update on the Fixed Income Program.

Mr. Shantz said that the Fixed Income portfolio is comprised of the risk-reducing Rates Portfolio which ended March valued at $4.5 billion and the return-seeking Credit Portfolio at $2.9 billion. The single largest component of the Credit Portfolio is its 70% allocation to Internal High Yield.

Mr. Shantz discussed the new personnel changes to the team, Mr. John Murphy, the Rates Portfolio manager, and Mr. Richard Inzunza, Director of the External Credit.

Mr. Shantz said that the Rates Portfolio ended the calendar year overweight relative to ERS' policy benchmark at roughly $5 billion and it returned 9% in the last year. The Portfolio earned 5% during the first calendar quarter of the year. Agency mortgage back securities earned a positive return, but detracted slightly from the benchmark. Mr. Shantz said that the Credit Portfolio lost over 10% in absolute terms over the last year, underperforming its benchmark by 340 basis points. Most of the underperformance occurred in the first quarter's sell-off when the Credit Portfolio lost 14.4% and eliminated what had been a positive return. He stated that it will take longer to earn back the relative performance lost.

Mr. Shantz said that the Credit Portfolio started the quarter valued at $2.8 billion, which was 1.5% underweight its benchmark weight. Staff invested over $600 million in March to get the Portfolio back to benchmark weight. He stated that staff had not expected the financial disruption, but that in the second half of the prior calendar year assets were taken out of the internal high yield because the market was viewed as fully valued. He explained that the staff sold the assets that were deemed to have fully appreciated and with limited upside, causing the Internal High Yield Portfolio to be smaller but relatively riskier.

Mr. Shantz stated that both portfolios are managed to a risk budget and have tracking error maximums. He explained that the tracking error was ±300 basis points for the Credit Portfolio and ±50 basis points for the Rates Portfolio. Staff is monitoring and managing the tracking error closely. He stated the 12-month *ex-post* tracking error for the Rates Portfolio has stayed under 30 basis points for its entire life and it is much easier to mandate to manage its risk. He went on to say that until March 2020 the Credit Portfolio had remained under 200 basis points and stayed within the risk limits. Mr. Shantz stated that the selloff in March was so severe that the Internal High Yield Portfolio's tracking error was 431 basis points, and the overall Credit Portfolio's tracking error surged to 124 basis points. He went on to say that 20% of the Credit Portfolio is marked at the end of the month and that portion of the Credit Portfolio's tracking error certainly had increased as well, and as a result he thought it likely that the Credit Portfolio's observed ex-post tracking error could likely exceed its stated risk budget for the subsequent three years.

Mr. Shantz stated that he wanted the Board to know that it is a measurement issue and not a change in how the portfolio is managed. He stated that because of the current situation the Board will see the elevated risk and even though the portfolio is still being managed in the same manner and that the staff is not taking on additional risk.

Mr. Mindell asked what the High Yield tracking error was currently. Mr. Shantz said that the one year tracking error for High Yield is 430 basis points.

Mr. Shantz presented the rolling 12-month return dispersions and explained that rolling 12-month returns for both the Rates and Credit Portfolios are ranked from highest to lowest, and compared with the respective benchmarks and each other. He highlighted the similarities of the portfolios to their benchmarks in terms of magnitude and range of returns. He further highlighted the differences between the Rates and Credit Portfolios. He commented that the Rates and Credit Portfolios have smaller return ranges than their benchmarks, being slightly higher than average returns, representing smaller betas, and a positive alpha, respectively. He stated that the highest rolling 12-month rate of return for the Rates Portfolio was 923 basis points and its lowest was -113 basis points. He went on to say that the average rate of return for the one year return was 240 basis points compared to the Credit Portfolio's average of approximately 500 basis points.

Mr. Mindell asked what the duration is for the Rates Portfolio. Mr. Shantz said it is about 3.8 modified duration years.

Mr. Mindell asked about the portfolio's flexibility range. Mr. Shantz stated that operationally it is ±10% of the benchmark. He emphasized that its primary mandate is to maintain liquidity so that the Trust is able to make benefit payments and remain liquid, which the portfolio has done.

Mr. Shantz went on to discuss the benchmark credit spread history which is the option adjusted spread of the Trust's credit benchmark to the underlying Treasury securities. Mr. Shantz explained that Credit is benchmarked against the Bloomberg Barclays, Cash Paying, 2% Issuer Capped, High Yield index. He went on to say that its spread got as wide as 11% in March before closing the quarter at 8.82%, and that the speed at which it happened was surprising. He stated that credit spreads have continued to come down and are currently at 7.5%. He commented that the market had healed unusually quickly.

Mr. Shantz stated that the Trust makes opportunistic allocations to external investments and they are marked with a lag so the performance includes timing differences. He stated this makes up about 20% of credit and that all have positive financial gains from the point of inception to their most recent mark. Mr. Shantz said that these are riskier than internally managed investments and that these are riskier than the Internal High Yield portfolio and do not lower overall Credit Portfolio risk even though they may appear that way as a result of their infrequent marking.

Mr. Ally asked Mr. Ehret to discuss the securities selection on the credit side. Mr. Ehret stated that the staff was not trying to force money into the market. He said that he expected a period of declining opportunity for High Yield throughout the year with yields and spreads coming down severely. Mr. Ehret said that in January the high yield market was yielding inside of 5% with a spread of 315 basis points and that the higher quality, double-B securities came down to 3.5% yields. At that point economically the outlook for 2020 looked pretty good. Due to COVID-19 the credit selection such as energy related allocations were left behind and impacted by oil producer pricing wars. He stated that credit risk has increased and staff is focusing more on diversification. March was a target rich environment and he believes the market will still continue to recover. Mr. Mindell asked about the Credit Portfolio's average duration. Mr. Ehret said it is about 4% and that High Yield was the biggest driver of the Credit Portfolio. He said that the staff had operated the fund quite well and noted that this has been one of the most difficult market environments throughout the staff's career. He stated that in a time like this what's most important is to not have to sell dislocated assets and stated that the staff has gotten rid of some assets and it made numbers look worse in the residual Portfolio, but prevented the staff from having to sell off assets for liquidity.

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

18. Fixed Income Program – Review of Securities Lending Program

Mr. Leighton Shantz, Director of Fixed Income, presented an update on the Securities Lending Program. Mr. Shantz explained that ERS runs an intrinsic value securities lending effort that aims to harvest the scarcity premium from lending securities. He highlighted that the goal of the program is to only lend securities that are in high demand that can be loaned for above average lending income of at least 100 basis points. In order to reduce risk, ERS tightly controls the cash collateral posted for margin to only overnight government repurchase agreements, which are securities that can be sold and then repurchased by the seller shortly afterwards at a slightly higher price eliminating gap and credit risk. Mr. Shantz explained that the lending agent's CDS spread was currently 118 basis points, implying less than a 2.25% one year probability of default. He stated that they are comfortable with the credit risk at this time. Fiscal year-to-date the program earned $1.9 million in revenue, which is at the bottom of observed ranges and may be the lowest year ever. He stated that the lendable assets that the Trust holds have not been as highly demanded. He further noted that two years ago the European authorities harmonized tax codes causing the seasonal lending demand to go away.

Mr. Shantz said the average lending balance was around $200 million for the fiscal year-to-date. He stated that the current environment has not been conducive to earning a high amount of revenue, but the staff continues to run the program in a proactive and risk adverse way. Cumulatively it has earned $46 million dollars in revenue to the Trust. He noted that this does add up over time. Mr. Shantz stated that there are no proposed changes to how the Program is being operated.

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

19. Reminder date for the next Joint meeting of the ERS Board of Trustees and Investment Advisory Committee, the next meeting of the Board of Trustees and the next meeting of the Audit Committee

The dates for the next meeting will be Wednesday, August 19, 2020. There will be a two-day workshop held on Tuesday – Wednesday, December 08-09, 2020.

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

20. Adjournment of the Joint Meeting of the Board of Trustees and Investment Advisory Committee

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