# Joint Meeting of The Board of Trustees And Investment Advisory Committee Minutes March 11, 2020

ERS
Employees Retirement System of Texas

May 20, 2020

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

**TRS Building – Board Room**
**1000 Red River Street, Austin, Texas 78701**
**March 11, 2020 – 8:00 am**

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

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

**IAC ABSENT**
James Hille, Member

**ERS DIRECTORS PRESENT**
Porter Wilson, Executive Director
Catherine Terrell, Deputy Executive Director
Paula A. Jones, Deputy Executive Director and General Counsel
William Nail, Special Projects & Policy Advisor
Machelle Pharr, Chief Financial Officer
Tony Chavez, Director of Internal Audit
Gabrielle Schreiber, Director of Procurement and Contract Oversight
Dee Dee Sterns, Director of Human Resources
Kathryn Tesar, Director of Benefits Communications
Tom Tull, Chief Investment Officer
Diane Kongevick, Director of Group Benefits

**ERS STAFF PRESENT**
Jason Avants, Information Systems
Georgina Bouton, Group Benefits
Amanda Burleigh, Office of General Counsel
Jennifer Chamber, Executive Office
Eddie Chan, Finance
Carlos Chujoy, Investments
Michael Clements, Investments
Anthony Curtiss, Investments
Kelley Davenport, Executive Office
Juli Davila, Investments
Christi Davis, Customer Benefits
Pablo De La Sierra Perez, Investments

Leah Erard, Executive Office
Bernie Hajovsky, Executive Office
Andrew Hodson, Investments
Lauren Honza, Investments
Aaron Ismail, Internal Audit
Lanesia Jones, Investments
Tressie Landry, Internal Audit
Nancy Lippa, Office of General Counsel
Ricky Lyra, Investments
Nicholas Maffeo, Investments
Greg Magness, Internal Audit
Betty Martin, Investments
Aris Oglesby, Investments
Jonathan Puckett, Internal Audit
Susie Ramirez, Executive Office
Tim Reynolds, Investments
Tanna Ridgway, Investments
Cheryl Scott Ryan, Office of General Counsel
Robert Sessa, Investments
Leighton Shantz, Investments
John Streun, Investments
Mary Jane Wardlow, Executive Office
Ariana Whaley, Government Relations
Stuart Williams, Investments
Keith Yawn, Executive Office

**VISITORS PRESENT**
Sam Austin, NEPC
Adrienne Cabrera, Office of Texas Governor
John Claisse, Albourne Partners
Michael Clayton, State Auditor's Office
Ryan Falls, Gabriel Roeder Smith and Company
Bill Hamilton, RSBA
Ta Lohachitkul, Albourne Partners
Joe Newton, Gabriel Roeder Smith and Company
Kelley Ngaide, State Auditor's Office
Rick Villarreal, Community First Health
Tom Nun, Great-West Financial
Ann Bishop, Texas Public Employees Association
Mike Foster, Empower Retirement

## Call to Order the Joint Meeting of the ERS Board of Trustees and Investment Advisory Committee

***7. 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 8:37 a.m. on Tuesday, March 3, 2020 as required by Chapter 551, Texas Government Code, referred to as "The Open Meetings Law."

***8. 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 8:37 a.m. on Tuesday, March 3, 2020 as required by Chapter 551, Texas Government Code, referred to as "The Open Meetings Law."

***9. Review and Approval of the minutes to the December 11, 2019 Joint Meeting of the Board of Trustees and Investment Advisory Committee – (Action)***

Ms. Ilesa Daniels, BOT Chair, opened the floor for a **Motion** on the approval of the minutes from the December 11, 2019 Joint Meeting of the Board of Trustees and Investment Advisory Committee.

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 December 11, 2019.

**Motion** by Ken Mindell, seconded by Laurie L. Dotter
Final Resolution: Motion Carries
Aye: Robert G. Alley, Gene Needles, Caroline Cooley, 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 **amend** and approve the minutes of the Joint Meeting of the Board and IAC held on December 11, 2019 to reflect Dr. Kee's request to include private and non-private assets that are not marked to market in the risk return measures. Dr. Kee thought it would be helpful to see the risk return measures with and without the non-public assets to add clarity and to include the evaluation of the publically traded vs. privately traded assets.

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

Mr. Robert G. Alley, IAC Chair, opened the floor for a **Motion** to approve the minutes as amended rom the December 11, 2019 Joint Meeting of the Board of Trustees and Investment Advisory Committee.

The IAC then took the following action:

**Motion** made to move that the Investment Advisory Committee of the Employees Retirement System of Texas approve and amend the minutes from the December 11, 2019 Joint Meeting of the Board of Trustees and Investment Advisory Committee.

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

There were no questions or further discussion.

## ***10. Review and Consideration of New Appointment to the Investment Advisory Committee (ACTION)***

Mr. Tull explained that the IAC was established at the discretion of the Board and is made up of no less than five and no more than nine members. A quorum of the IAC meets quarterly with the Board and a considerable amount of members' time are spent reviewing investments for the Trust's Asset Class Investment Committees.

Mr. Tull explained that staff had identified Mr. Milton Hixson as a new candidate for the committee, noting that he had previously served as a member of the IAC and also as a member of the ERS Board. He highlighted Mr. Hixson's investment expertise and many years in the industry. Mr. Tull noted that Mr. Hixson's term, if approved, would begin March 1, 2020 and expire March 1, 2023.

Mr. Hester, Vice-Chair, opened the floor for a Motion on the approval of the IAC reappointment.

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 appointment of Mr. Milton Hixson to the Investment Advisory Committee for a three-year term ending December 31, 2022.

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

## ***11. Review of ERS's Asset Allocation and Implementation***

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

Mr. Tull started with opening remarks summarizing that the market is facing the uncertain effects of COVID-19 on people, places, and businesses. Mr. Tull stated that the market has faced similar events in the past with different levels of cause and effects. He then discussed price wars resulting in an oil price decline from $65.00 a barrel on Jan 9, 2020 to $33.50 as of the date of the board meeting. All of these effects, Mr. Tull stated, have caused a drop in world market prices. Mr. Tull discussed that the S&P 500 has decreased around 19% as well as the 10 year treasury going from 1.92% as of the end of last year, to 0.70% now. He also noted that the 30 year Treasury was currently yielding 1.18% compared to 2.39%; reflecting a move to safety by investors. The market has seen a lot of volatility. Mr. Tull sees the market being driven by fear, emotion, and uncertainty and expects it to take time to establish the lows and provide more stability.

Mr. Tull commented he believes we will see a global demand shock that will likely produce a technical recession or economic slowdown. He reminded the Board that the duration of severity of any decline in any economic growth will be tied to the success of decisive governmental policy responses on both the monetary and fiscal side.

Mr. Tull reiterated that the Trust is well positioned and diversified to take advantage of the current environment, having more than $5 billion in liquid assets. He stated that the ERS' investment division is selectively adding to portfolio positions as the market goes through volatile times.

Mr. Tull stated that back in 2008 during the great financial crisis (GFC), the Trust had about 61%in equities and today the Trust holds about 37% in equities. He further added that the S&P is down about 5.2% fiscal year to date. By comparison the Trust is only down 0.5 % fiscal year to date.

Mr. Tull assured the Board that ERS is a long-term and diversified investor and that he appreciates the Board and IAC for supporting ERS during good times and bad. He stated that most importantly, ERS never loses sight of the fact that this is all for the benefit of retirees and beneficiaries.

Mr. Sam Austin, NEPC, walked the board though the asset allocation assumptions, capital market assumptions and the implications for the Trust's asset allocations. Mr. Austin said that asset allocation strategically accounts for 92% of the Trust's return. The primary driver is to ensure that payee benefits go forward. The asset allocation that he focused on reflected major changes in market psychology, changes of expectations for interest rates, and major changes in risk assets.

Mr. Austin presented the forecast for the 2020 intermediate 10-year forecast. He stated that comparisons to the five and seven year intermediate forecast presented in 2019 are found in the Board's appendix.

Mr. Austin stated that the most important thing is that return expectations for almost all asset classes decreased within the last year and volatility assumptions for almost every asset class increased. The combination of the total of the two resulted in a lower risk adjusted return expectation.

Mr. Austin explained the volatility assumptions have gone up for almost every asset class except the fixed income, rates, and absolute return portfolios. The cash volatility remained the same. Mr. Austin explained that NEPC and other consultants arrive at these assumptions by having a building block approach based on expectations for inflation and cash returns. Mr. Austin reflected in the third quarter of 2018 that the expectation was that the Federal Reserve (Fed) would be raising rates methodically, but with the significant down draft in the last quarter of 2018 the Fed decided to lower rates as opposed to raising them. This is the basis of many of the asset class return expectations decreasing.

Mr. Hester stated he expected Mr. Austin to say that most of the revisions were due to a strong year of returns for 2019. Mr. Austin stated that the unexpected 2019 return was certainly another driver for higher unexpected returns as well as other years.

Mr. Hester asked if expectations will go back up in view of today's market situation. Mr. Austin replied that all the assumptions are based on a snapshot in time. He explained that if run continuously in a down draft market like today, expectations would likely increase. Ms. Caroline Cooley noted that the move in interest rates swamp the move in the equity markets. She further noted that the move in the 30 Year treasury and the 10 Year treasury rates decreasing would really be a driver.

Mr. Austin was in agreement with Ms. Cooley and commented that the dramatic fall of interest rates have affected the results.

Mr. Austin then went on to show the summary of expected return and probability of returns with the current asset allocation reaching 7.5% as the assumed rate. He showed that the probability over 10 years of the return being under 7.5% has risen from 57% in 2019 to 65% in 2020. The probability of a 30 year return being less than 7.5% is about 56.5% based on the current set of assumptions. The probability of being over 7.5% was over 44%. The probability of a 30 year return over 7.5% was over 54%. Mr. Austin stated he also ran the numbers based on a 7% benchmark. He stated the probability of the 30 year return being over 7% is slightly over 50%. Mr. Austin highlighted the dramatic down draft from the 30 year expected return of 7.75% using last year's assumptions versus 7.14% using the current set of assumptions.

Mr. Austin then discussed asset mix scenarios. He stated that NEPC modeled the portfolio based on ERS' specific make up of sub asset classes. Mr. Austin stated that NEPC spent a great deal of time with ERS' CIO and investment employees to understand the breakdown of the exact composition of sub asset classes to understand and arrive at numbers particular to ERS' policy targets.

Mr. Tull added if we wanted to stay at the current rate or slightly less the equity allocation percentage would have to decrease from 37% to approximately 33%. He stated that there were several asset mix scenarios that were run to see what asset mixes would get us to 7.5%, but all would have negative implications for portfolio liquidity, making it riskier to ensure that assets are available to make annuity payments.

Mr. Mindell asked if there was a way to get there by controlling the risk on the downside. Mr. Austin stated there are ways, but it would require a more formal asset allocation study.

Mr. Alley questioned if some of these scenarios had more volatility and added the need for more critical decision making at the appropriate time, therefore causing the risk factors to go up.

Mr. Austin stated yes that is correct.

Mr. Tull added that all scenarios would have a cost and risk implications.

Ms. Caroline Cooley asked if there was one strategy that held the risk the same, without stretching the volatility or liquidity risk. Is there a portfolio that gives us the highest returns with the same risk?

Mr. Austin replied that it could be explored, but as discussed, each and every asset class already has higher expected volatility built into the forecast. Ms. Cooley agreed.

Mr. Tull added that the presentation given is an educational presentation and that any questions or ideas the Board or IAC has can be addressed more at the May board meeting.

Mr. Hester stated that it is important to recognize the dramatically different interest rate environment. He commented that neither ERS, the IAC, nor the Board can manufacture an interest rate. We all must deal with what the market has provided. Mr. Hester stated he hopes constituents understand what ERS and the Board have to deal with while focusing on the asset side of the balance sheet.

Mr. Hester directed the Board's attention to the negative cash flow of the fund. The Trust continues to pay out more than it receives, both in funding and investment returns, due in large part to insufficient funding.

Mr. Hester said this is not because of what the organization has done, but what the market conditions have given the Trust. He then stated that the Board can have discussions on how to fund/plan, but he does not feel like taking higher risk is the right answer. He commented that if the data returned shows the Trust has to lower the risk assumption, then that is what needs to happen.

Mr. Hester explained the Board cannot put more on the backs of employees already paying 9.5%, on top of the 7.45% for Social Security and Medicare, which adds up to almost 20% of state employee's salary. He stated that employees' income have been flat for the last 20 years and the Board needs to address this in a logical fashion.

Ms. Cooley and several Board members verbally agreed.

Mr. Austin continued and stated he has a comparison of lower cash rates which are down 60 basis points from the 2019 versus the 2020 assumptions. He stated that each asset class has a different set of building blocks, but most start with a cash return. Mr. Austin showed an example of a building block methodology, showing the reduction in overall return for several assets classes.

Mr. Austin then discussed negative rates that many European markets are beginning to experience. Mr. Austin discussed that this could become a reality in the US. He then discussed the different asset classes and how the building blocks methodology are applied to each of them.

Mr. Austin mentioned there are implications in terms of contribution rates and that persistent contribution shortfalls are the primary driver behind negative cash flows. Cash flow in the plan is currently at a negative $1.4 billion payout per year. He explained that this constrains the Trust's ability to add to private markets and still maintain a prudent level of liquidity. An informal liquidity analysis was prepared by NEPC and Mr. Austin stated that, if need be, NEPC can do a more robust analysis for the May meeting using ERS-specific assumptions instead of industry average assumptions for private market capital calls and distributions.

Mr. Austin gave examples of assumptions in a base case scenario. In NEPC's example a Base Case scenario showed with benefit payments and expenses averaging $1.4 billion per year and contributions to the Trust being $2.9 billion per year. The Trust then showed an expected return of 6%.

Mr. Austin gave another example of assumptions that were performed by NEPC for a Stressed Case scenario with returns being flat or down over the next four of the next five years. These assumptions also included changes in assumptions with capital calls and distributions. The Stressed Case Scenario assumes that capital calls are doubled in year two and distributions are halved in years two and three.

Mr. Mindell made a comment that normally in a time of stress that private equity capital calls did not double at all and that they were really flat. He commented that no one was willing to sell or buy historically during these times. He felt that the scenario shown by NEPC was a draconian set of assumptions and that historically that does not happen.

Mr. Austin stated these are certainly not the exact circumstances anyone foresees. Mr. Austin explained that he believes that in the GFC downturn, capital calls may have increased more so with real estate than with private equity. Mr. Austin stated no one certainly knows what in reality will happen, but ERS should want to know what the implications are under the worst case of scenarios.

Mr. Austin then returned to the Stressed Case pointing out that liquidity goes down to 29.4% in this extreme scenario, with total Trust assets falling by almost half. This is obviously an outcome the Trust wants to avoid. As the reservoir of liquid assets in intermediate treasuries is drawn down under the Stressed Case scenario, and private market assets are increased in an attempt to maintain higher returns, portfolio prudence and ERS' ability to make benefit payments would be compromised under these extreme circumstances. Mr. Austin suggests it's important to regularly examine Base Case, Stressed Case, and Favorable Case liquidity scenarios consistent with good governance. Still, the negative cash flow situation should be discussed as the primary impediment to ERS' financial flexibility.

Mr. Austin stated that in summary, NEPC's Base Case scenario shows that the fund may benefit from maintaining a diversified allocation to illiquid assets, but should exercise caution with significantly increasing future illiquid commitments that are unsustainable in a stressed environment. Mr. Austin stated that NEPC's capital market assumptions as of year end 2019 project a lower expected return of 7.14% over 30 years with ERS' current asset allocation policy targets.

Mr. Alley stated that the assumption's 30 year numbers are better than the 10 or the 20 year Assumptions, but pension funding can erode away in early years. Mr. Alley then asked if it is possible for the Trust to catch up in later years with better rates of return.

Mr. Austin said that NEPC's assumption on inflation is 2.5%, and that some market based assumptions are lower at 2.25-2.3%. Mr. Austin said that NEPC's inflation assumptions do not only rely on market based expectations. He stated NEPC also incorporates inflation projections by the IMF (International Monetary Fund) and other respected econometric models. Also, NEPC uses geometric projections to estimate the longer term path of inflation over 10 and 30 years. Mr. Austin said that current market psychology may be overly confident that historically low inflation is going to continue far into the future. The path of inflation rates over the next 30 years affects the assumed return.

Mr. Hester asked if NEPC if capital market returns would be lower if ERS lowered the inflation rate to 2%.

Mr. Austin responded that all things being equal, yes it would.

Mr. Hester made a comment that even after the financial crisis, 12 years later with record unemployment wages growing, inflation continues to fall showing what we are dealing with here. He stated, having an aging population, declining productivity, and with technology, inflation is impacted. He went on to say it is very difficult to see what will move the inflation needle. Mr. Hester stated he wondered if a 2.5% assumed inflation rate is too high.

Mr. Austin stated that deflation is a risk and the Board's need to make a decision shows how important it is to have skilled employees to implement the asset allocation.

Ms. Cooley stated that the consensus shows that the Board and IAC are sensitive to liquidity constraints.

Mr. Brian Barth stated if the Board starts to consider changes, the Board needs to fully understand the impact these changes will have.

Mr. Austin stated a formal Asset Allocation Study will take some weeks to complete and can be presented to the Board at the May Board Meeting.

Mr. Alley asked what the cycles were for allocation studies and if ERS will expedite asset allocation studies.

Mr. Tull added that the objective set in 2017 was to revisit these studies in Calendar Year 2020 or Calendar Year 2021. Mr. Tull stated that ERS goal based on the current asset allocation is to go from 26% alternatives to 34%, and that currently the Trust is at about 28%. Mr. Tull added that Infrastructure has been challenged in deploying capital. He adds that in Public Equity the Trust is currently overweight and that Real Estate is another area we are deploying capital. Mr. Tull says that with Hedge Funds (Absolute Return) the Trust is rebuilding its commitment to 5%, from 3.6%.

Mr. Tull stated that he would like to figure out what the Board is comfortable with as far as liquidity is concerned. Mr. Tull expressed that NEPC can provide additional information that the Board wants to see.

Mr. Mindell suggested a focus on reducing downside risk and suggested using hedge funds. He stated that hedge funds have lower downside risk than private or public equity. He asked Mr. Tull about the plan on reducing hedge fund allocations.

Mr. Tull stated that the Hedge Fund allocation is working out well for the Trust right now, providing diversification and helping to insulate the Trust from some of the market volatility. Future considerations would look at more directional opportunities that could complement returns, without taking on too much risk in the process.

Mr. Hester stated that everyone struggles with what to do with asset allocation and assumptions. He added that at a minimum the annual cost of this plan has to be funded until we can get back to the normal economic environment to keep the plan moving forward.

Mr. Tull agreed and stated the growing hole of the Trust is because of funding and every year the net cash out increases.

Mr. Tull thanked the Board for their support.

There were no further questions or comments at this time.

***12. Review of Pension Experience Study Process and Preliminary Results***

Ariana Whaley, ERS Pension Policy Analyst, Government Relations, introduced Ryan Falls and Joe Newton, the ERS pension consulting actuaries from Gabriel, Roeder Smith and Company (GRS), to discuss the preliminary findings of the Pension Experience Study.

Mr. Falls reminded the board that each year they present the annual pension actuarial valuation – the health checkup of the retirement fund. It is used to determine how sufficient the current contribution rates are in comparison to what is needed. That valuation is built on a set of assumptions. The Experience Study is intended to analyze experience and determine the data points used to assess and recommend a reasonable assumption to the board. The Experience Study process looks at everybody that should receive a benefit from ERS, takes that data and uses the assumptions, methods and procedures to project the cost of what those benefits will be to each of those members.

Mr. Falls went on to describe the range of assumptions including once someone is hired, the plan establishes expectations for how long they will work and how much their pay will increase over time. Once retired, the model must assume how long they live and how many checks will be paid. Beyond those individual members, there needs to be assumptions on the amount of investment earnings that will be accumulated and what future contributions are expected to help pay those benefits. While actual experience will determine the expenses of the plan, assumptions are based on the best information available to make decisions and set budgets today.

Mr. Newton interjected to say that while assumptions change, like the investment return assumption and the estimated unfunded liability with it, the ultimate unfunded liability or plan costs from actual experience will not. Dr. Kee added that this goes along with a previous comment by Mr. Hester stating that step one is to accept the current reality. The unfunded liability isn't a research problem, the odds of finding some lever with risk in an adjusted way that would bail this out is zero. Mr. Hester added that if the system were to look back on a 20 and 30 year basis, earnings were about 8% in investment returns and compared to where the returns are today. This information indicates there are other issues that have gotten the plan into this position. Mr. Newton agreed, but added once cash flow from monthly benefits paid is part of the issue, the geometric return over time can be misleading.

Mr. Falls said that GRS considers changes including best practices, behaviors, economic conditions and forecasts as part of the Experience Study process. The Government Finance Officers Association recommends experience studies be done very five years but best practice is shortening that consistent with ERS statute to require at least every four years. Actuaries use standards of practice in order to develop recommendations and perform the actuarial valuations. Standards range from setting assumptions on the economic side and demographic side to how to measure pension obligations and conduct annual actuarial valuations. On the demographic side, the process looks at plan history and determines how long ERS members are working and living. However on the economic side, it is a process of forward-looking expectations working with experts on where the economy is headed and how that might impact the plan over time. The incorporation of professional judgment and the professional judgment of other experts help to avoid introducing any sort of intentional bias into the assumptions.

Mr. Falls described the relative impact that each individual assumption would have on the trajectory of the fund, or the funding period to pay off the unfunded liability. Mr. Newton added that this is showing the magnitude of a change. The largest impact would be a change in the investment return assumptions, followed by life expectancy which determines the number of check each retiree will receive over a lifetime. Payroll growth and individual salary increases factors drive the value of the benefits and the contributions received. Responding to a question related to payroll growth assumptions from Mr. Hester, Mr. Falls noted that in the past eight years payroll has increased 2.36% compared to the assumed 3%. The retirement behavior, termination behavior, and active disability and mortality of the membership assumptions are important but don't substantially move the overall trajectory.

Mr. Falls summarized the preliminary findings of the experience study. The most notable are the economic assumptions moving forward, including the investment return assumption, payroll growth and individual salary increases. In addition to the decreased inflation assumption, future salary increases are expected to decrease slightly based on economic forecasts. A minor finding is a change in the termination, or leaving state employment, and retirement patterns for the law enforcement group. The preliminary findings confirmed there is no need to recommend changes to the mortality assumptions selected during the 2017 experience study and the retirement patterns for regular state employees. The full, detailed report will be made available for the May board meeting.

Mr. Falls described the inflation assumption which is not directly used in the actuarial valuation, but is the building block that impacts the development of the investment return assumption, salary increases, and overall payroll growth. He defined several sources of measurement for inflation but all data points to a lower inflation rate than the current 2.50%. While showing the building block approach to the economic assumptions, Mr. Newton explained that individual salary increases are generally expected to be higher earlier in a career in comparison to the long service career employees that generally do not receive additional promotions as they get closer to retirement. GRS recommends lowering the inflation assumption from 2.5% to 2.3% to better align with the various data sources provided.

Mr. Falls transitioned to the investment return by describing the process to select the assumption. He emphasized that there is not a single correct answer but a range of reasonable assumptions that consider the ERS target asset allocation and capital market expectations. Since benefit payments are fixed, if the Board were to lower the investment return expectations then the plan would need to receive increased contributions moving forward. GRS heavily relies on NEPC's projections for future economic measurements but GRS also performs an independent survey of several investment consultants. The National Association of State Retirement Administrators surveyed 130 of the largest pension systems and reported the distribution of nominal investment return assumptions for pension plans across the country. The median is 7.25%. While there are still a few plans with an 8% assumption, those plans with a return assumption lower than 7% has been increasing. Responding to Dr. Kee's question, Mr. Newton explained that the relationship between funded ratio and the investment return assumption is not that those with lower assumptions have lower funded ratios. GRS is noticing that plans that reacted quickly to lower the assumption are now seeing funded ratios increase.

Mr. Falls explained pension funding must consider not only the compounded or geometric returns but the negative cash flow resulting from fixed annual benefits. The ERS Pension Trust Fund pays over $1 billion in net cash flow each year on top of a volatile market. He pointed out that while there are many paths to get a 7.5% compounded return over 20 years, the resulting funded ratio paths are very different. In these various paths, there would be different reactions or decision points that would cause different trajectories. The combined investment forecast and financing of a retirement system with substantial negative cash flow must be considered to determine what a reasonable assumption is moving forward. GRS pointed out that NEPC projections fall in line with 2019 GRS survey adjusted for 2020. Mr. Newton pointed out that the NEPC projections are a snapshot in time that depend on when the projections are done. However, a pension plan should pick an assumption that can be maintained for several years for improved stability in discussions with the legislature. Mr. Hester agreed that the assumptions must be realistic. The next year is extremely critical to set the plan on the right path and the Board should not pick an assumption that would have to be lowered again in three years. Responding to a question, Mr. Falls explained that there is generally interest in having an assumption that is close to other system peers in Texas. However, that approach may or may not be appropriate based on the different liquidity needs, funded statuses, asset allocations and membership profiles of each plan. Mr. Hester added that the funding is a major driver in the ERS pension plan's funding status. Even if the system were to take on a tremendous amount of additional risk by changing the asset mix, that alone would not impact this current unfunded liability and contribution deficit sufficiently. Mr. Newton reminded the board that assumptions are meant to be a starting point for a budget decision today but the discussion of adaptability is more important as a funding mechanism moving forward.

Mr. Falls summarized that payroll assumptions will decrease 20 basis points from the inflation change and then slightly further since the economic forecasts and salary growth of state employees and law enforcement and custodial officers was less than previously assumed. Mr. Newton explained that he is noticing these similar salary patterns across his various pension plan clients. Early service average salaries are growing faster than the overall due to employers increasing salaries to recruit new employees. When an employer is paying a new entrant more, the budget constraints from the plan sponsor mean that longer service employees aren't getting raises, leading to a lower growth in average salary. GRS recommends an assumption change for this 3.0% to 2.7% to match the actual salary growth driven by a low inflation rate during this time period.

Mr. Falls concluded that this presentation was intended to set up the topics for conversation and then come back in May with a final set of recommendations. GRS will review the impact of these changes to the plans' funding status but wanted the conversation to be around the correct assumption set and not focused on the impact to the balance sheet. After final recommendations are adopted by the Board, GRS will use the new assumption set, the first full actuarial valuation using these assumptions would be as of August 31, 2020 which will be presented in December 2020. This will allow ERS to use the most relevant data in discussions with the legislature.

***13. Review and Discussion of the ERS Investment Compliance Program***

Mr. Aaron Ismail, ERS Investment Compliance Officer, presented a review of the ERS Investment Compliance Program and the results of the Annual Compliance Review project.

Mr. Ismail provided background on the Investment Compliance Program at ERS, noting that this is the second time he has presented an annual review of the program. Mr. Ismail explained that he was tasked with building on the existing compliance program and developing it further. Mr. Ismail highlighted that this presentation should serve as a reminder of why compliance is important to the IAC, the board, and the organization as a whole.

Mr. Ismail discussed the purpose and mission of the Investment Compliance program. The purpose is to ensure compliance with applicable laws, regulations, ERS policies, and investment guidelines. Mr. Ismail also noted other benefits that can come from an investment compliance program, such as gathering additional information from testing, uncovering information that could be used for better decision making, increasing transparency just through enhanced governance, and improving efficiencies through streamlining operations and policies and procedures.

Mr. Ismail presented some of the key elements of the investment compliance program. He stated that the reason we have these controls is because a weak program could potentially create risks for ERS including investment risk, increased regulatory restrictions, loss of investment opportunities and reputational risk. With reputational risk in particular, Mr. Ismail said that we should be aware of how a situation is perceived in the public arena.

Mr. Ismail said that ERS creates a strong culture of compliance with the assistance of a model of risk governance developed by the Institute of Internal Auditors called the Three Lines of Defense. He went through each line of defense and discussed how they play a role in the investment compliance program and managing risk. He noted that the slide showed the independence of the investment compliance function, as well as a line of communication to the Executive Office and the Board to raise material compliance issues.

Mr. Ismail discussed the Annual Compliance Review. The Annual Compliance Review provides an overview of ERS's compliance infrastructure, and also highlights key developments to the program during the year. Based on the Annual Review, Mr. Ismail believes that ERS's compliance policies and procedures are adequately effective in preventing, detecting, and curing violations. Mr. Ismail also described the process to evolve a compliance program and how the annual review fits into the cycle of continuous improvement.

Mr. Hester asked if Mr. Ismail monitors the hot button issues that the SEC is focused on every year and notifies investment employees of enforcement actions that might be relevant to them. Mr. Ismail said that was a goal of the program to incorporate some of these key issues and ensure that they are addressed.

Mr. Ismail then discussed accomplishments of the program and a roadmap for the current year. He highlighted improving internal compliance rules, development of the investment asset class guidelines, and coordination with NEPC on the evaluation of investment procedures report required by Senate Bill 322.

Mr. Ismail made recommendations for the compliance program. Specifically, he noted that he plans to continue to enhance the code of ethics and insider trading policy. In addition, he plans to improve the asset class Investment Guidelines for consistency and clarity. Mr. Ismail concluded that the program is strong, and the program continues to develop and strengthen foundations. The next step will be expanding the capability of the compliance program to address areas they see as high risk.

Mr. Hester said that the whole culture of compliance and this compliance program, is something they feel very strongly about.

Ms. Melvin commended Mr. Ismail on the format of the Annual Review Report to showcase the robust nature of a compliance program. She asked if Mr. Ismail feels that he is adequately resourced to carry out the program effectively. Mr. Ismail stated that he was and that he has access to Executive Office, the CIO, and employees.

Dr. Kee asked how long it takes to approve personal transactions. Mr. Ismail answered that it is generally done within a few hours. Dr. Kee then asked if the information that goes to the Board or the public must go through a compliance review. Mr. Ismail stated that there is no required compliance review for communications.

***<u>14. Review and Discussion of Eligibility and Compliance for Calendar Year 2020 of the Investment Advisory Committee</u>***

Mr. Aaron Ismail, Investment Compliance Officer, presented a review and discussion of Eligibility and Compliance for Calendar Year 2020 of the Investment Advisory Committee.

Mr. Ismail began with a reminder that the IAC assists the board in carrying out its fiduciary duties with regard to investment of the trust. They work with employees and investment consultants to review investment strategies and related policies of ERS and they also serve as members of the asset class specific investment committees to review and approve investment recommendations in each of the ERS asset classes.

Mr. Ismail stated that pursuant to Texas Government Code 815.5092, the board shall review the eligibility of IAC members at least annually. He then discussed the criteria for that status including reviewing potential conflicts of interest and measuring IAC attendance at scheduled meetings.

Mr. Ismail explained that each IAC member completes a compliance affirmation affirming eligibility and compliance with the Texas Government Code and ERS investment policy. Employees also summarize their experience, which helps the CIO and executive director designate the IAC members to specific asset class committees.

Mr. Ismail thanked the IAC for the work that they do to help support the investment program. In conclusion, Mr. Ismail affirmed that currently all IAC members have met the annual requirement and are eligible for continued service.

Ms. Cooley has a separate question regarding the ability for people to work offsite from remote locations and if the CIO had plans to address that.

Mr. Tull answered that, ERS was very early in restricting travel in terms of countries like Hong Kong and China. In addition, virtually all travel has reverted more to conference calls and the like by investments. In addition, the investment group has had the opportunity to test IT resources in terms of working offsite, including the use of VDI and VPN.

Mr. Wilson noted that ERS had tested the ability to work remotely recently when they lost power to the entire building for the entire day.

***15. Review of the Investment Performance for Fourth Calendar Quarter of 2019 and Risk Update***

Mr. Tom Tull, Chief Investment Officer, Mr. Carlos Chujoy, Risk Officer, and Mr. Sam Austin, NEPC, presented investment performance for the fourth quarter ending 2019 and risk update.

Mr. Austin discussed investment performance for the quarter ending December 2019 and highlighted the importance of evaluating the long term performance of the Trust, since quarterly performance varies.

Mr. Austin explained that the Trust returned 14.4% versus the policy benchmark return of 16.6% over the same period. Tracking error had risen recently and is now at the higher end of its range at 1.67% over a three year period. Risk adjusted returns for the Trust have been more stable and compares well with peers over time. Over the quarter and the year, Private Equity was the largest detractor from performance. He added that over the previous quarter Private Equity was the largest contributor to performance, illustrating how returns fluctuate quarter over quarter. The market value of the Trust was up to $29.4 billion, about a $2.5 billion increase over the previous calendar year. Investment gains totaled roughly $867 million. He noted that the actuarial accrued liability had increased approximately $800 million since August 2018. He highlighted that retirement payments continue to exceed contributions. The funded ratio of the Trust increased slightly by 0.3% to 70.5% compared to Fiscal Year 2018. The allocation between risk reducing and return seeking has been stable and now sits at 77% in return seeking versus 23% in risk reducing. He noted that liquidity has fallen from 71% in the quarter ending September 2019 to 69%. He highlighted that the variance between contributions to payments was the primary culprit of the change.

Mr. Tull noted that the market was performing extremely well during that period compared to the volatility seen at the beginning of the current calendar year. He further noted that approximately $850 million was taken out of equities during the period for payments and placed into the Rates Portfolio for the short term.

Mr. Hester asked if the allocation to Rates was done to help make benefit payments. Mr. Tull agreed and explained that it was also done to take some risk off the equity side of portfolio.

Mr. Austin added that the exposure to public equity beta was the largest driver of volatility in the Trust and noted that the ERS team has done a good job at managing the opportunity to take risk off when appropriate.

Mr. Hester noted the difference between the Trust's market value and accrued liability. He further noted public discussions over the years pertaining to converting the Trust from a defined benefit plan to a defined contribution plan. He asked if his understanding was correct that it would not change the plan's accrued liability.

Mr. Austin agreed and noted that converting the Plan to a different type of plan would not change the Trust's existing liability.

Mr. Alley asked if converting the Plan could make the liability worse because contributions would be lower than what had been committed to be paid.

Mr. Austin explained that it could and noted that NEPC feels that a conversion to a defined contribution plan would not solve the current plan's problems.

Mr. Mindell noted that the conversion would require the Plan to come up with the roughly $10 billion deficit.

Mr. Austin explained that the deficit would still need to be funded.

Mr. Hester added that it would be helpful to have NEPC's opinion on the advantages and disadvantages for the May and August meetings. He added that it would be valuable information to the Board and IAC to have when evaluating all the options available.

Mr. Austin noted that NEPC has done a fair amount of work on it and would be happy to share that information with employees, the Board, and IAC.

Mr. Austin discussed a request by Mr. Mindell about the 10-year projected risk free return. He explained that the number did come down from 2.5% on treasuries to 1.9%. He added that there were a lot of factors considered in the estimate and highlighted that the change closely matches the reduction in the expected return of the Trust from 7.75% to 7.14%.

Mr. Austin noted the 7.9% 10-year return for the Trust exceeded the policy benchmark return of 7.7% and equaled the long term benchmark, which uses a proxy risk reducing and return seeking assets. When comparing to a peer universe of 69 public funds with greater than $1 billion in assets, the 10-year return was 8.1%, putting the Trust in the fifty-seventh percentile. Over the 5-year period, the Trust's 7.1% return exceeds the policy benchmark's return of 6.9% and places the Trust in the forty-first percentile of peers. Over the three year period, the Trust returned 9.3% exceeding the policy benchmark return of 8.8% and placing the Trust in the top third of peers. Over the last year, the 14.4% return exceeded the current assumed rate of 7.5% and positions the Trust in the ninety-third percentile of the peer universe, which has a median return of 17%.

Mr. Hester asked what caused the shortfall compared to the policy benchmark's 16.6% return.

Mr. Austin explained that the detraction from the Private Equity Portfolio and exposure to energy markets was perhaps the biggest driver.

Mr. Tull explained that relative to peers the Private Equity Program has less exposure to venture capital, which has been a banner asset class over the period. Venture capital exposure currently sits at about $100 million. He noted that while there were not any write-offs, a few energy deals on the private side were workouts and did affect performance.

Mr. Hester noted that the Private Equity Portfolio returned 3% while the benchmark returned 16% and asked if the variance was due to venture capital exposure.

Mr. Tull agreed that the limited exposure to venture capital by the Trust relative to peers did have a major influence on the lower rates of return by the Private Equity Portfolio.

Ms. Cooley added that last year would have generally been a good year for equity and further added that 16% for private equity did not seem high considering what public equity returned.

Mr. Mindell asked what were ERS' barriers to getting into venture capital.

Mr. Tull explained that it was mainly people power and noted previous leadership of the asset class was not as informed, or had the relationships needed with venture capital managers, which is what is really needed in the venture capital space. The current team is developing expertise. He noted that the team is now looking at opportunities. Previous venture exposure was captured in the secondaries market.

Mr. Hester asked how much exposure the Trust has to shale producers considering the drop in energy prices.

Mr. Tull explained that he does not know specifically and would come back with a specific number.

Mr. Austin noted that the Trust has consistently been in the top quartile of risk adjusted returns which shows the effectiveness of active management from the team. The sharpe ratio was in the ninth percentile against peers and the sortino ratio was in the twentieth percentile. Asset allocation remains within ranges with no significant changes. Global credit was down from 10.3% of the Trust to 9.6%, and public equity was up to 39% compared to 38% in the last quarter. He highlighted the imbalance between contributions and withdrawals noting the Trust sits at about a 3.5% to 4% negative cash flow rate.

Mr. Austin explained that the private equity program was the greatest detractor for the quarter and the year, detracting 30 basis points (bps) for the three month period and 2.0% for the year. He added that private equity was the highest contributor in the previous quarter. Public equity detracted 0.3% over the quarter.

Mr. Austin explained that the Trust has beat the 7.5% assumed return six out of the last 10 years. He further noted that consistency is important because a shortfall in one year requires a larger return the following year to recover. He noted that the five-year and 10-year returns over the period have been in line with peer averages.

Mr. Tull added that the private equity program returned 11.34% versus the index return of 10.41% for the five-year period ending in February.

Mr. Austin summarized that returns have exceeded the policy benchmark over the decade. Over the one-year period the underweight to hedge funds, rates, and private real estate contributed 30 bps to total fund returns. Over the same period, real estate was a solid contributor to the Trust, adding 0.4% vs the policy benchmark.

Mr. Chujoy provided a quarterly update on risk and noted that a lot has transpired since the fourth quarter of 2019. During the quarter there was more positive news than negative. Tailwinds included the US-China Phase 1 trade agreement, Brexit resolution, and US corporations having strong earnings, which helped reduce volatility. Headwinds included declining global growth concerns and high market valuations.

Mr. Chujoy discussed cross asset class risk and noted that market participants priced future price volatility very low.

Mr. Chujoy discussed the market heat map noting it shows a mixed picture overall. Weakness in economic output and inventories were a reflection of global growth concerns. Valuations were at elevated levels. Elsewhere, the Federal Reserve held an accommodative stance which helped support economic activity and overall financial assets. He noted that the positive backdrop allowed the Trust to deliver a strong showing with low volatility. He further noted that the Public Equity Program benefited with a very strong 26% return. He added that the Public Real Estate Program also benefited, returning over 23%.

Mr. Chujoy explained that the RMAR team monitors portfolio sensitivity to the policy benchmark and tracking error to the Trust. He illustrated the influence illiquid assets have on the overall Trust. He noted the Trust has a beta of 0.8, which insulates the portfolio during drawdowns. Liquid assets are highly compliant to their underlying policy benchmarks. He explained how an incremental dollar added to the asset classes affect Trust risk as well as tracking error. Illiquid asset classes such as private equity, private real estate, and private infrastructure would help increase tracking error to the Trust.

Mr. Chujoy discussed one of the stress tests the RMAR team creates for the Trust and noted public equity's large influence to risk and return. He noted that if markets increase or decrease by 1% it would have roughly half the effect on the Trust. He then discussed the stress test when compared to historical events such as SARS and Ebola.

Mr. Chujoy discussed the coronavirus noting that it is highly contagious and has triggered a global pandemic. The virus has been highly disruptive to both factories and retail. There are a growing number of lockdowns, such as Italy, and now in parts of the USA. Global supplies such as transportation and logistics have also been negatively affected by the pandemic. As China data has improved the China Central Bank is now encouraging people to go back to work. He added that there is currently no cure but there are many healthcare companies conducting trials. He commented that there will not be a vaccine for the next six to twelve months.

Mr. Hester asked if the Trust is removing or adding risk in the current market environment.

Mr. Tull explained that the team has been placing risk back on very carefully and selectively. On the risk side, the team is cautiously implementing futures. He noted that the weakness in oil makes the situation more complex and difficult to assess. He reaffirmed that the team is very selective and are not in a hurry to put risk back on.

Dr. Kee asked how much of the private investments are in the energy sector in general.

Mr. Tull explained that the energy exposure for the Total trust was about 7%.

Mr. Tull added that energy exposure had been reduced. Energy is an area the team is watching very closely.

Mr. Hester noted research indicating if $30 oil remained for 12 months dividends will not be safe. Mr. Tull agreed and noted a recent dividend cut in the industry.

Mr. Wilson said that an investment sector report is regularly provided to the Board that provides sector weights at the Trust and asset class level.

***16. Global Public Equity Market Update and Program Overview***

Mr. John Streun, Director of Public Equity, Lauren Honza, Portfolio Manager of External Advisor Program, and Michael Clements, Chief Trader, presented the Global Public Equity Program Market Update and Program Overview.

Mr. Streun went over the agenda with the Board stating that he will cover Investment Objectives and 2019 Performance, Notable Structural Changes, Global Public Equity Team Update, Structure and Repositioning, External Advisor Update, Trading Update, 2020 Outlook, and 2020 Initiatives for Global Public Equity.

Mr. Streun explained that the investment objective is to outperform the Global Public Equity benchmark, which is the ACWI IMI (All Country World Investable Market Index). He stated the team aims to do this over a longer time period of five years, while maintaining the active risk budget. He noted the investment strategy has not changed. The goal is to produce excess returns through combining lower risk, lower cost internal strategies, with higher risk, external strategies.

Mr. Streun explained that the reorganization of the internal research team has changed. In September 2019 the Global Public Equity Team changed their research from global sector analysts feeding into multiple portfolios to research analysts contributing research ideas to one specific portfolio. Mr. Streun stated this was done in an effort to improve focus, communication, and better align portfolio managers and analyst teams. To carry this out the Asia Portfolio and Europe Portfolio merged to the EAFE Portfolio. The Midcap Portfolio and Smallcap Portfolio were merged into a Smidcap Portfolio.

Mr. Streun discussed the makeup of the Public Equity team. Mr. Tim Reynolds is head of the International Investing Program and Mr. Andrew Hodson is head of the domestic Investing Program. Mr. Streun stated that Lauren Honza has been added to the senior team and is in charge of the External Advisor Team. Mr. Streun discussed personnel turnover of the team, consisting of two members retiring, and one analyst going to work for a venture capital firm. New analysts that joined the team are TJ Quatato (EAFE Team), Derek Sadowsky (Large-Cap Active Team), and Ian Smith (Emerging Market Team).

Mr. Streun went over the Asset Class Performance Highlights of Calendar Year 2019. He highlighted that the asset class had a strong absolute return of 26.18%. He added, in the first two months of this calendar year, it was down 9%, while outperforming by 37 basis points. He further explained most portfolios managed to beat their benchmarks.

Mr. Streun discussed a few detractors of the portfolio. One was being overweight in U.S. Largecap over the last year, being underweight in cash, and the biggest detractor being the Directional Growth Fund (The Directional Growth Fund is a group of hedge funds managed by ER's Hedge Fund Team) reported with a one month lag. Mr. Streun explained that in December 2018 it was down 7% and that month it went on the 2019 return. December 2019 was a positive month up over 3% and that month did not go on the 2019 return, causing a lag of about 67 basis points.

Mr. Streun presented the Global Portfolio Structure-Dollar Allocation. He pointed out that the portfolio is very well diversified with a lot of different strategy styles. Mr. Streun stated that 68% of the overall asset class is managed internally and 52% of the overall asset class is in U.S. equities with the remainder in International Stocks. He went on to say the portfolio has increased in cyclicality. The portfolio has been taking advantage of more opportunities on the international side by investing in more emerging markets.

Mr. Streun went over active/risk and tracking error describing that we are well under our target given the low levels of market volatility. He added that forecast risk levels remained the same within policy limits.

He then discussed portfolio position values, pointing out that the Internal Index and Large-Cap Active Portfolios were merged. Also the Large-Cap Active and the S&P 500 Internal Index Portfolio were merged. He stated that the Fisher portfolio, was defunded and that most assets went to the new EAFE Value portfolio.

Ms. Lauren Honza then went over the External Advisor Program. Ms. Honza stated that 68% percent of Global Public Equities are managed internally and 32% of assets are externally advised. She stated that 14 strategies are funded with the majority of these strategies being international.

Ms. Honza stated that the fund performance and strategy of the 2019 overview are available in the board documents.

Ms. Honza showed that ten strategies were approved for placement in the Select Pool in December 2018. She continued by saying five of those strategies were funded in February 2019 with approximately $400 million divided across the funds. Ms. Honza commented that all five funds are performing within expectations.

Ms. Honza stated that a new Fund of Fund Structure was approved in October 2019 with Legato Capital Management. She explained the fund focuses on emerging markets with $150 million invested into these strategies looking for an excess return of 150-300 basis points over the benchmark. She commented that all managers were performing well.

Ms. Honza stated that on January 24, 2020 a new proposal was launched in an effort to refresh the Select Pool with Large-Cap International managers. She stated it is in phase I of the process and they hope to complete the selection in late fall of 2020.

Mr. Hester asked what the Global Public Equity Team's thoughts were with the international exposure correlations being much tighter.

Mr. Streun agreed that over the last 10 years the US has outperformed international stocks from an economic standpoint and market standpoint due to the technology sector. Mr. Streun expressed the team felt there are some great companies on the international side that are offering good value at current prices.

Mr. Ken Mindell asked if the team has an idea what the blended management fee is on the external management. Ms. Honza answered that blended fees would be close to 50-60 basis points and that some international small cap managers were on the higher end around 75-90 basis points.

Mr. Streun added that fees were recently negotiated with a manager that were around 30 basis points. Mr. Streun said he believed the blended management fee is around 40-50 basis points.

Ms. Honza stated the team has instituted an incentive fee policy, with several mandates, that had not been in place in the past and is working well.

Mr. Alley asked if there are hurdle rates for external managers, and Ms. Honza stated there is a benchmark and very low asset management fees. Mr. Streun added that incentive fees all have hurdle rates. Mr. Mindell asked if there were high watermarks in place. Mr. Streun responded that one of the external managers, Allianz, has a high watermark.

Mr. Michael Clements then went on to discuss the Trading Update. Mr. Clements discussed the Global Public Equity Program's commission rates. He stated that on a year over year basis there is a million dollar less in commissions for Calendar Year 2019 as teams were becoming comfortable with the new transitions.

Mr. Clements stated that the average "all-in" blended commission rate paid by U.S. Institutions to brokers on domestic shares was 2.4 cents per share, down from 2.6 cents per share in 2018. This average rate takes into account commissions on single stock, program, and direct-market-access electronic trades.

Mr. Clements showed ERS's average commission was 2.2 cents per share, up from 2.1 cents per share in 2018.

International portfolios are the bulk of ERS's paid commissions.

Mr. Clements stated Calendar Year 2019 institutional peers' "all-in" blended rates are lower than ERS's rate as a result of MIIFD. He added that more institutional peers are paying out of pocket for research as opposed to paying out of execution costs. MIIFD is a European regulatory requirement that requires European institutions with European clients to pay for research out of pocket or a separate commission bucket to show what is actually being paid for research versus execution making things more transparent.

Dr. Kee added that MIFIID was put in place to keep managers from pushing a lot of the research cost out of the expense ratio. He asked Mr. Clements if that was that correct. Mr. Clements explained that this was also done to ensure that intuitional peers' clients are all getting a more uniform payment for their product. ERS's profit and loss comes straight out of ERS's benefit. Mr. Clements further explained that before MIIFID a mutual fund may have had another client paying more than the other.

Mr. Tull stated that the indication is that the U.S. Securities Exchange Commission may implement this in the U.S. in a few years. He added that ERS is doing the research and homework now in anticipation of this regulation.

Mr. Streun then moved on to the ERS Global Public Equity Outlook of 2020. Mr. Streun stated that a lot had changed in the last month. At the start of the year the team had confidence the market was going to be okay and rebound, with the trade agreement with China completed in the fourth quarter. Mr. Streun added that now with COVID-19 we are in a period of contraction and uncertainty until the duration and effects of the pandemic are determined.

Mr. Streun stated that the market is seeing a lot of monetary and fiscal stimulus. He went on to say that the Federal Reserve has cut rates and he is anticipating further cuts.

Mr. Streun stated the portfolio is at lofty valuation levels. He showed that at the start of the year the market was selling at 19 or 20 times forward earnings and that the market has not seen these levels since the early 2000s.

Mr. Streun stated, entering the year, earnings expectations were around 10% earnings growth. Now we are seeing those expectations being cut.

Mr. Streun explained that international markets, being less expensive than US markets, is another reason to believe there is less downside in the international market.

Mr. Streun indicated the initiatives for 2020 are to work on the Select Pool buildout. He also stated the team is working closely with NEPC on an external advisor scorecard to better gauge external manager performances. Hopefully within the next 6 months. He stated that over the next year the team will become more active in evaluating target tracking error. Mr. Streun discussed that the team will assess external advisor fees. He commented that some of our managers have incentive fee structures and that it has worked out well. He stated that the team may integrate this with new managers and existing relationships. The Global Public Equity Team is building out and there are a couple of openings for which they are in the process of interviewing applicants.

Mr. Mindell encouraged using incentive fees and to use high watermarks so that performance is not paid for twice. Mr. Streun agreed and stated that was a good thought.

Mr. Hester asked if the Global Public Equity Team expects commission fees to be eliminated due to technology on the institutional side of the business. Mr. Clements stated he does not believe it will be eliminated as there are still execution costs.

Mr. Clements stated that with the SEC having other things to deal with at the moment, MIIFD has not been decided on, but when it does come to the US there will be major ramifications to the effect in the U.S.

There were no other questions or comments at this time.

***<u>17. Opportunistic Credit Program-Market Update and Consideration of Proposed Opportunistic Credit Tactical Plan for Fiscal Year 2020-(ACTION)</u>***

Mr. Nicholas Maffeo, Hedge Funds Portfolio Manager, Dr. John Claisse, and Ms. Ta Lohachitkul, Albourne Partners, presented the market update and proposed annual tactical plan for the Opportunistic Credit Program.

Mr. Maffeo provided an overview of the Opportunistic Credit Program noting that the allocation was approved at the May 2019 Meeting and there were currently no investments within the portfolio. He added that the philosophy for the program remains the same. The purpose of the portfolio is to capture opportunities that do not fit naturally in other parts of the Trust. Opportunities can exist due to structural issues, such as banks no longer lending and market dislocations. The portfolio is designed to take advantage of various forms of illiquidity premium across private credit. The strategies include private lending, stressed/distressed, structured product and real assets. The primary focus will be on yield-seeking credit-oriented investments.

Mr. Maffeo noted that the allocation has a flexible mandate which allows the team to identify unique and niche opportunities across the credit spectrum. It offers a differentiated approach that allows ERS to invest and generate unique sources of return. He added that the portfolio offers a diverse spectrum of strategies, which can span across traditional asset classes such as income producing, asset backed, and distressed. The portfolio offers access to private market opportunities, which can potentially be more attractive relative to public markets given the current credit cycle.

Mr. Maffeo explained the investment approach noting that it is a non-traditional portfolio construction mandate and the team will only consider compelling opportunities relative to current Trust allocations. There are no minimum exposure ranges so the team is not forced to allocate capital. He noted that in most cases capital will be committed and drawn over a specific period of time. The team believes it is a more efficient use of capital and can mitigate risk, such as a lag in fees or the j-curve effect. Depending on the strategy, cash distributions from the investment may be made over the life of the allocation, effectively de-risking the initial investment. Some private lending strategies offer periodic cash yield that could reach 10% annualized.

Mr. Maffeo discussed the investment focus noting that on an aggregate basis the portfolio would target returns of at least 6.5% on a net basis. He noted that the S&P Levered Loan index +150 bps benchmark will be applied once the program is fully allocated. To protect from downside risk the team will look at structures that are self-liquidating, senior secured, cash flow consistent, and deals with covenants and collateral.

Mr. Maffeo discussed target ranges and reiterated that there are no minimum ranges. Geographically, the portfolio will have a tilt towards North America, which will predominantly be in the United States. The initial focus will be a core-satellite approach anchored on a multi-strategy and multi-asset manager. The ideal manager will be able to move tactically between investment strategy classes. The structure can be comingled or a fund of one, depending on the manager. Niche strategies will serve as the satellites for the portfolio that will be smaller in size.

Mr. Maffeo summarized by explaining that the idea behind the portfolio is to complement other asset class exposures and not serve as an overflow vehicle. Ideas can be sourced from other investment teams and the Hedge Fund team will coordinate with other asset class leadership. The primary focus will be cash flow with a secondary focus on price appreciation. Investments may provide equity “kickers”, which provide additional upside from the companies they lend to, or have a characteristic that resembles equity holdings.

Mr. Mindell asked if public or private emerging market debt would be considered. Mr. Maffeo replied that it could be considered and added that if the market dislocation continues, a multi-strategy manager may not perceive it as a core investment but more of an opportunistic investment. He explained that emerging market exposure could be considered later in the portfolio’s life as the portfolio matures.

Mr. Mindell commented that there were a considerable amount of emerging market corporate private debt investment opportunities.

Mr. Maffeo responded that emerging market debt would not be a core strategy but could be something that a multi-strategy manager could use.

Dr. Claisse, from Albourne, explained that the Albourne team has advised investors on private credit for almost 20 years and they cover roughly 400 funds. Private Credit consists of roughly $800 billion in assets split between North America and Europe. He discussed the new categorization of strategies which split the universe into Real Assets & Esoteric Credit, Distressed, Structured Products, and Private Lending. He further discussed how previous categories roll up into the new strategy taxonomy.

Dr. Claisse provided an update to the asset class guidelines noting that in the very early stages allocations may be out of range but will be reduced as the portfolio becomes diversified.

Ms. Lohachitkul highlighted how Albourne differentiates between the borrower, leverage, protection, and return driver verticals. Private lending tends to be large cap, sponsored backed club deals, and syndications. Leverage ranges from 4x to 7x. Protection ranges between senior debt and unsecured. Return drivers reflect levels of cash, and merger and acquisition activity in the space. She noted that private lending investment duration is one to four years with investment returns from 5% to 15%. Since senior debt is part of the strategy, targeted returns are on the lower end of the universe.

Mr. Hester asked if senior secured would be the focus of the Opportunistic Credit Program.

Mr. Maffeo agreed and added that the focus will be on senior secured with yield over price appreciation.

Mr. Hester asked if fees would only be paid on called capital. Mr. Maffeo confirmed and noted that the trend is going in that direction but there are some managers that still charge on committed capital. He noted that the team is biased toward managers that charge fees on called capital.

Ms. Cooley asked how much leverage is expected in a senior secured fund. Mr. Maffeo replied that based on conversations with managers, leverage would be less than 1x on average.

Ms. Lohachitkul explained the strategy outlook and noted that distressed strategies perform well at the bottom of the economic cycle, while senior secured performs well at the top of the cycle due to capital preservation considerations. She noted that the economy was at the top of the cycle at the beginning of the year but since the market dislocation Albourne believes that the economy is now trending downward and may be at the bottom of the cycle.

Ms. Lohachitkul discussed Albourne's current perspective on private credit strategies noting strategies that they least favor. She highlighted that mezzanine products are least favorable over the next 12 months as mergers & acquisitions activity slow. She further highlighted that corporate structured is also least favorable over the next 12 months while specialty finance looks attractive due to its illiquidity premium. Non-control corporate is given a favorable rating considering the stress that is likely to develop given the current environment.

Mr. Maffeo concluded by highlighting the goals of the Opportunistic Credit Program tactical plan over the next 12 months. The team expects 0 to 3 investments totaling 1% or $300 million of the Trust. Sourcing will focus on a multi-strategy anchor investment that will include a commingled or fund-of-one structure.

Ms. Cooley commented that the team had done a lot of work since the previous presentation and highlighted that she believed the presentation was very good.

Mr. Robert G. Alley, IAC Chair, opened the floor for a **Motion** to Approve the Opportunistic Credit Program Tactical Plan for Fiscal Year 2020.

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 Opportunistic Credit Program Tactical Plan for Fiscal Year 2020.

**Motion** by Bob Alley, seconded by Laurie L. Dotter
Final Resolution: Motion Carries
Aye: Robert G. Alley, Gene Needles, Caroline Cooley, 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 Opportunistic Credit Program Tactical Plan for Fiscal Year 2020.

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

There were no questions or further discussion on this item.

*18. Review, Discussion, and Consideration of Contract Award Recommendation for Global Custody Services- (ACTION-Board Only Vote)*

Ms. Schreiber explained that ERS is currently contracted with the Bank of New York Mellon to provide global custody services. A Request for Proposal (RFP) was requested on July 8, 2019. Proposals were received from BNY Mellon, the Northern Trust Company, JP Morgan Chase Bank, and State Street Bank and Trust Company.

Ms. Schreiber highlighted that based on the evaluation process she recommended that the Board award the global custody services contract to BNY Mellon.

The RFP process includes three phases. The initial phase is the preliminary review phase, which follows a pass/fail criteria based on responsiveness, compliance with the RFP, and certain vendor performance checks required by the Texas Comptroller of Public Accounts. OPCO verifies that respondents pass minimum requirements. All respondents passed the preliminary review phase.

Ms. Schreiber discussed the proposal review phase noting that it consists of a review of qualifications and services and price proposal. She noted that qualifications and services consists of 70% of the total score and evaluates firm qualifications, staff qualifications, core services, other required services, transition-planning and implementation services, and technology requirements. Price proposal made up 30% of the score. Pass/fail items in the phase consisted of contractibility, legal requirements and regulatory compliance, financial stability, and SOC-2 requirements.

Ms. Schreiber explained that based on the review, BNY Mellon and Northern Trust were recommended as finalists. In the finalist review phase qualifications and services represented 70% of the total score with price proposal representing 30%. She added that in this phase the team reviews new or clarified information that was gathered. Additionally, video due diligence conferences were conducted with the respondents as well as onsite information technology and operational visits. Best and final offers on price were also requested in the finalist review phase with reference checks, contractibility, and legal compliance as pass/fail items.

Ms. Schreiber explained that the RFP evaluation team met with the Executive Office to discuss the findings where a best-value determination was made.

Ms. Martin pointed out that the four major players in custody services responded to the RFP. She added that the differences came down to nuances and pricing.

Mr. Chan noted that the major nuances between the respondents were the online portal report. BNY Mellon's portal has more flexibility and customization for the reports ERS needs. He highlighted that BNY Mellon also submitted more competitive pricing than Northern Trust.

Ms. Schreiber said that the Board has a detailed scoring sheet within their materials as well as more information on pricing.

Mr. Hester asked if there were any significant differences in terms of the technology behind both finalist platforms.

Mr. Chan explained that BNY Mellon has more flexibility. He further explained that BNY Mellon allows the team to summarize multiple datasets within the platform rather than manipulating the data in a spreadsheet.

Dr. Kee asked where BNY Mellon fell short compared to the others.

Ms. Schreiber highlighted that while some categories were close, BNY Mellon scored higher in all qualification services.

Ms. Ilesa Daniels, Board Chair, opened the floor for a **Motion** to Approve the Global Custody Services contract to BNYM.

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 Global Custody Services contract to BNYM.

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

There were no questions or further discussion on this item.

*19. Review and Discussion of ERS' Investment Practices and Performance Relating to Senate Bill 322*

Mr. Aaron Ismail, Investment Compliance Officer, and Mr. Sam Austin, NEPC, presented the Review and Discussion of ERS' Investment Practices and Performance Relating to Senate Bill 322.

Mr. Aaron Ismail started the presentation introducing NEPC's report pursuant to Texas Government Code 802.109 which became effective with adoption of SB 322. Mr. Ismail stated that ERS was required to select an independent firm to evaluate the appropriateness, adequacy, and effectiveness of the ERS's investment practices and performance, and to make recommendations for improving the investment program. Senate Bill 322 was introduced in the 86th Session of the Texas Legislature, leading to the adoption of Texas Government Code 802.109 in May 2019. The new law requires Texas public retirement systems with at least $100 million in assets to complete an Investment Practice and Performance evaluation every 3 years by an independent firm. The first evaluation Report is due to the Pension Review Board (PRB) 31 days after Board approval, but no later than May.

Mr. Austin went over the PRB guidelines of the report which are:

1.) Identify and review existing investment policies, procedures, and practices.

2.) Compare the existing policies and procedures to the industry best practices.

3). Assess whether the board, internal staff, and external consultants are adhering to the established policies.

4.) Identify the strength and weaknesses of the current policies, procedures, and practices, and make recommendations and improvement.

5). Include a detailed description of the criteria considered and methodology used to perform the evaluation, including an explanation of any metrics used and associated calculations.

Mr. Austin then reviewed the timeline for the Evaluation Report that NEPC started in October 2019 designing a plan and requesting documents from ERS. In November 2019, NEPC reviewed ERS' documents and engaged with a third party vendor to create an independent Trade Cost Analysis. In December of 2019 NEPC started the initial analysis and NEPC had their first onsite visit to ERS. In January 2020 NEPC gathered comparative data on ERS peers and NEPC had a second visit with multiple members of ERS. In February 2020, NEPC synthesized data into the initial drafts and then submitted the final draft to ERS employees.

Mr. Austin stated that NEPC found ERS's policies, procedures, and practices to be appropriate, adequate, and effective when compared to industry prevailing practices. Mr. Austin noted that NEPC made one recommendation they felt was central to the future health of the Trust. He stated that NEPC recommends that ERS and its stakeholders develop a comprehensive plan to mitigate the consistent negative cash flow impact to the Trust, resulting from underfunding of the Annual Required Contribution from the plan sponsor. He stated he is aware that ERS does not control the contribution level.

Mr. Austin stated there are other non-critical recommendation areas that ERS and its stakeholders may want to consider. Mr. Austin recommended an informal annual review of capital market assumptions. NEPC also recommends that more flexible procurement options be explored to allow ERS additional operational flexibility when there is a need to quickly replace an investment manager or to take prompt advantage of an opportunistic investment. NEPC also recommends that ERS employees regularly review a more formal process of projecting and reporting on liquidity risk. NEPC also suggested a more granular analysis that future trade cost analysis should not be limited to the current tracking of explicit commissions, but should also include estimates of market impact, fees, and other implicit costs of trading.

NEPC recommended that an internal review of whether the cost of buying research with hard dollars is lower than the current practice of bundling the cost of research with commissions. NEPC also recommended that a comparison of Standard Operating Procedures (SOPs) be conducted across asset classes with an objective to create a standard format that is more consistent across all asset classes. Lastly, NEPC recommended that the next annual review of the Investment Policy include several revisions that could be considered to improve clarity, efficiency, and accountability within the document.

In summary, Mr. Austin stated that he was delighted to work with ERS employees and with Aaron Ismail who coordinated the effort. He stated that NEPC had easy access to the staff and documents they needed. Mr. Austin commented that the discussion on contributions will require parties outside of the ERS Board, IAC, and employees, but is essential to the best performance of the Trust. He pointed out that the analysis and recommendations are intended for resources that can be used going forward and that adoption of the recommendations is at ERS' discretion.

Mr. Hester asked Mr. Tull if projections and reporting is done on liquidity risk every 6 months.

Mr. Tull answered that with the Rates portfolio (currently over 15% of Trust assets) as the primary source of liquidity and with monthly monitoring by the fixed income group and the internal risk group, RMAR, ERS Investments has not officially reported liquidity risk to the Board. This will be rectified going forward on an annual basis or more frequently as desired by the Board.

Mr. Hester commented he is aware the reports did not include scenario stress testing, but he feels that is also something we should continue doing going forward.

Mr. Porter Wilson, ERS' Executive Director, commented that he testified in front of the Texas Senate Finance Committee with the focus of the hearing on investment governance fees. Senate Finance Chair Jane Nelson expressed the Committee's intent to address ERS's funding issues during the next legislative session.

There were no further questions or comments.

*20. Review, Discussion and Consideration of Contract Award Recommendation for Private Equity Consulting Services-(ACTION-Board Only Vote)*

Ms. Gabrielle Schreiber, Director of Procurement and Contract Oversight, started the presentation stating that ERS is currently contracted with Mercer Alternatives Limited to provide private equity consulting services.

Ms. Schreiber stated that ERS issued an RFP (Request for Proposals) on August 29, 2019. She continued to say that as a result of the RFP six entities submitted responses. The six were: Albourne, Meketa, NEPC, Step Stone, Torrey Cove, and Wilshire Associates Incorporated. Ms. Schreiber went on to say that based on the evaluation process, staff is recommending that the Board award the private equity consulting services contract to Torrey Cove.

Ms. Schreiber discussed the preliminary review phase process. She stated the proposal was evaluated on the following criteria: Responsiveness, Compliance with RFP, and Vendor Performance Checks required by the Texas Comptroller of Public Accounts. Ms. Schreiber communicated that respondents met the preliminary review phase.

Ms. Schreiber then went to discuss the proposal phase. She said that in this phase all of the responses were evaluated by an ERS team of subject matter experts to check the qualifications and services of each respondent in the following services: firm qualifications, staff qualifications, methodology and soundness of approach, and optional services. She stated that within this proposal qualifications and services made up 75% and price proposal made up 25% of the total score.

Mr. Ricardo Lyra, Director of Private Equity, said that the consulting firm serves as an extended version of the ERS team. He explained they would help with brainstorming and strategizing in what would be included in the overall portfolio. He went on to say, from a strategy standpoint, there would be an annual meeting and monthly meetings to consider where the market is, the status of the current pipeline, and where to deploy money.

Dr. Kee asked if any of the firms had any conflicts of interest. Mr. Lyra stated that was considered when evaluating the proposals and none of the finalist had any conflicts.

Ms. Schreiber continued stating that during the proposal review phase other items considered were contractibility, legal requirements, and financial stability.

Ms. Schreiber stated during the finalists review phase based on the pass/fail items, scoring of price proposals and qualifications and services requirements, three respondents were recommended. The recommended finalists were Albourne, Meketa, and Torrey Cove.

She explained that during the finalist review phase video conference interviews and operations site visits were done. During this phase new and clarified information was viewed such as past performance, contractibility, legal requirements, and regulatory compliance.

Ms. Schreiber stated that based on those evaluations employees met with the Executive Office and reviewed RFP evaluation team findings. A best-value determination was then made.

Mr. Tom Tull, Chief Investment Officer, stated that Torrey Cove provided a more robust portfolio of services related to the asset class. He continued saying that Torrey Cove has been in the business for quite some time, has a lot of co-investing experience, and provides considerable resources.

Ms. Schreiber stated that employees recommend that the Board award the private equity consulting services contract to Torrey Cove. She told the Board that evaluation scoresheets and additional information on pricing had been provided to the Board. Mr. Hester asked what other deciding items besides co-investing experience, brought the employees to that decision.

Mr. Tull answered that it was the extensive portfolio experience for the asset class.

Mr. Lyra added that Private Equity is a core part of Torrey Cove's culture. He said has been their main focus over 25 years and that they proved to be the most dynamic team. Mr. Lyra stated that all three firms that were finalists were well respected teams, but Torrey Cove proved to be the best team for the job.

Mr. Lyra stated that Torrey Cove does represent other larger institutions, such as Oregon. He continued to say that they have a large impressive network. He reiterated that they have been around 25 years and the team ERS' Private Equity Team will work with is well respected.

Mr. Hester asked if for some reason ERS did not come to terms with Torrey Cove what the backup will be.

Ms. Schreiber said that we do have backups in place. She stated that the score is close enough that it would take further discussion to decide, but it would be one of the finalists.

Mr. Alley asked how Torrey Cove looks on the international side as far as offices.

Mr. Lyra stated that currently they are based in the US, but have team members that travel abroad to Asia and Europe. He stated Torrey Cove just went through a joint venture with Axia who has offices abroad and plans to expand their presence in Europe and Asia.

**Motion** made to move that the Board of Trustees of the Employees Retirement System of Texas approve the negotiation and execute a contract with Torrey Cove.

**Motion** by Mr. Brian Barth, seconded by Mr. Craig Hester
Final Resolution: Motion Carries
Aye: Craig Hester, Brian Barth, Ilesa Daniels, Jim Kee

There were no questions or further discussion.

***21. 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 date for the next meeting is Wednesday, May 20, 2020, and the following meeting is scheduled for Wednesday, August 19, 2020. There will be a two-day workshop held on Tuesday – Wednesday, December 8-9, 2020.

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

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

The meeting was adjourned at 12:30 p.m.