New Mexico
Public Employees Retirement Association
Investment Committee Meeting
Thursday, March 31, 2022

1. Call to Order

This meeting of the New Mexico PERA Investment Committee was held on the date cited above via Zoom Tele/video conferencing. Chair Steve Neel called the meeting to order at approximately 9:00am. Board members had a moment of silence for Ukraine.

2. Pledge of Allegiance

Claudia Armijo led the Pledge of Allegiance.

3. Roll Call

The meeting attendance met quorum with the following members present;

Committee Members

Steve Neel, Chair
Francis Page, Vice Chair
Claudia Armijo
Paula Fisher
Loretta Naranjo Lopez
Roberto Ramirez

Staff
Greg Trujillo, Executive Director
Trish Winter, Executive Assistant
Anna Williams, Deputy Director
Kristin Varela, Interim CIO
LeAnne Larranaga-Ruffy, Interim Deputy CIO
Misty Schoeppner, Acting General Counsel
Frank Mihail, Director, Risk Reduction & Mitigation
Sara Hume, Director, Beta & Risk
Kate Brassington, Investment Associate, Global Equity
Michael Killfoil, Investment Associate, Real Assets
Clayton Cleek, Investment Associate, Credit
Isaac Olaoye, Investment Accountant
Valerie Hayas, Investment Compliance & Data Manager
Justin Deubel, Investment Account Manager
Jovanna Archuleta, Investment Administrator
Karyn Lujan, Deferred Compensation Plan Manager
Jessica Trujillo, HR Manager

Geraldine Garduno, Assistant General Counsel
Ron Gallegos, CTO
Marlena Riggs, Financial/Budget Manager

Others in Attendance
Rose Dean, Wilshire
Steve DiGirolamo, Wilshire
Ali Kazemi, Wilshire
Francis Kelly, DWS Investment Management Americas
Mike Krems, Aksia
James Walsh, Albourne
Mark White, Albourne
Ryan Fitzgerald, Albourne
Justin Deierling, Albourne
Gar Chung, Journalist FIN News
McCyril Espanol, Journalist With Intelligence Pageant Media
Arlene Jacobius, Journalist Pensions & Investments
Rich Robben
Joseph Simon

4. Approval of Agenda

Francis Page moved to approve the agenda. Loretta Naranjo Lopez seconded the motion. The motion passed unanimously by a roll call vote as follows:

Steve Neel	Yes
Francis Page	Yes
Claudia Armijo	Yes
Paula Fisher	Yes
Loretta Naranjo Lopez	Yes
Roberto Ramirez	Yes

5. Approval of Consent Agenda: November 9, 2021, Investment Committee Minutes

Francis Page moved to approve the Consent Agenda. Claudia Armijo seconded the motion. The motion passed unanimously by a roll call vote as follows:

Steve Neel	Yes
Francis Page	Yes
Claudia Armijo	Yes
Paula Fisher	Yes
Loretta Naranjo Lopez	Yes
Roberto Ramirez	Yes

6. New Business
A. Performance & Market Review

1. Q4 2021 Market Review

Stephen DiGirolamo from Wilshire introduced the asset class performance for the calendar year 2021 and reported that the real estate was up 46.2% for the year and about 13% for the quarter. Commodities were up 27.1% for the year. Mr. DiGirolamo reported some volatility within the last three months. October and December were positive months. November was downbeat. Large companies outperformed small companies for the quarter. The best performing sectors for the quarter were I.T. and materials.

The developed markets also had positive returns and were up 11.8% for the year and 2.7% for the quarter. Supply chain issues were seen within developed markets, especially in Europe. The Omicron variant affected the markets, and Europe developed inflation pressures like the U.S. The emerging markets were down about 2.2% for the year and 1.2% for the quarter. China, the biggest in the market at 40%, was down about 21% for the year and 6% for the quarter. The cause of the drag in the quarter in China was real estate.

The core bonds were down about 1.5% for the year and flat for the quarter. The 10-year mark for the quarter was unchanged at about 1.5% for the three months. The 10-year mark was up about 50 basis points for the year.

A flattening of the Euro curve was observed during the quarter. Mr. DiGirolamo noted that most asset classes were positive for the fourth quarter and calendar year 2021.

2. Q4 2021 Total fund Performance Review

Rose Dean from Wilshire gave an overview of the PERA portfolio performance for 2021. She presented the scorecard that showed some of the essential metrics that the portfolio was expected to meet. The scorecard showed that the PERA portfolio exceeded the assumed rate of return across all periods except the 20 years. She indicated that the 20-year period included the impact of the 2008 great financial crisis and the 2000 dot com bubble, which was a significant drawdown for the year.

The performance over the longer-term period inception to date and the 30-year exceeded the assumed rate of return. In particular, the one-year return for the total Fund was over 16%, which significantly outperformed the assumed rate of return. In terms of portfolio allocation versus Board-approved allocation targets, the actual allocation was in line with the policy targets within the allowable range.

The four-year active risk was above the target of 1.5% and was outside the range of 1% to 2%.

Ms. Dean reported that the total fund market value ended 2021 at $18.4B, an increase of $550M from the previous quarter. Out of that change in the market value, investment gains were over $800M.

The PERA total fund earned 16.37% in 2021, outperforming the benchmark return of 13%. Diversification paid off in 2021, with the reference portfolio returning 9.6%.

The most significant returns in 2021 for the one year were global equities which returned over 26%, significantly outperforming the benchmark returns of 17.4%. Risk reduction and mitigation had a tougher year due to concerns over rising interest rates and a more inflationary environment.

The credit-oriented fixed income composite had a one-year return of 9.9%. It outperformed the benchmark, which returned under 1% with 93 basis points. Real assets had a good year on an absolute basis returning close to 21% for the year, but the relative return lagged the public benchmark return. The benchmark for the real assets composite returned over 28%.

For the total fund attribution for the one year, the outperformance of the PERA portfolio versus the index was 3.4%. The majority of the outperformance, which was about 3.16%, was driven by selection.

On an absolute basis, the portfolio did well in 2021, and the implementation generated great asset returns for the year.

PERA's portfolio returns were strong compared to their peers. For the one year ended December 2021, the portfolio's absolute return ranked in the top 38th percentile. Over the longer-term period, the returns are in the bottom quartile, settling at the 74th percentile for the ten years. This was driven by the fact that PERA's portfolio takes less risk than the peer's portfolio.

Chair Armijo thanked Mr. DiGirolamo and Ms. Dean for the presentation. She asked if the risk tolerance level approved by the Board had changed.

Ms. Dean stated that the figures presented were the standard deviation. She explained that the last decade had been a relatively low volatility environment that led to lower than expected portfolio volatility. Compared to other public plans that set forward-looking strategic asset allocation, PERA's risk level was slightly lower than the average level of beta risk.

Kristin Varela further explained that over the longer time horizons up until the 2008 great recession, PERA primarily relied on growth equity and negligible diversification to drive returns.

PERA started streamlining the portfolio construction process during the 2008 timeframe. The Board started thinking about risk balance holistically to decrease risk through concentration in equity to avoid another severe drawdown.

The Board has been trying to reduce equity exposure from where it was in 2008 at 70% down to the current 35%. The Board now understands the benefits of diversification and has been seeking returns and diversification benefits from other asset classes and opportunities.

Mr. Page noted that the plan might not see another year like 2021 with double-digit returns. He asked how the risk tolerance would affect PERA in the future.

Ms. Dean agreed with Mr. Page that the double-digit portfolio returns and the 30% equity returns were unlikely in the future. She stated that the past few years that have seen strong returns in the total Fund and the equity markets had provided the plan with some buffer. There is, therefore, a year-over-year balance where the plan takes gains in the good times and then leans on diversification during the bad times.

Ms. Dean emphasized that the Board should focus on real asset allocations that provide a buffer for future decisions since inflation might significantly affect future gains from equities and fixed income. She further stated that portfolios should be built to go through market cycles without solely depending on one asset class.

Ms. Varela added that the Board recognized that PERA's risk target was lower than its peers. The plan was to continue being intentional in risk balancing even in the future to continue providing a steady compounded return for members and minimize drawdowns. She felt that there should be more strategic conversations to evaluate the risk profile and the targeted risk-return. She believed it would be an educational process for the Board and a determination of timing and entry.

Mr. Neel commended Leanne Larranaga Ruffy for the 58% returns on private equity. He acknowledged that Ms. Ruffy had continually put up impressive numbers. He further requested Chair Armijo to join him in reviewing the 12/31 and 6/30 numbers for the Board and the public, adding that PERA’s peers had already done their reviews.

Ms. Varela recognized that the lag in quarterly reporting was longer than desired, but explained that it took time for Staff and Consultants to finalize and validate this reporting. Staff had therefore requested a quarterly lag presentation of results, to accommodate for this time requirement.

3. **<u>CYTD 2022 Preliminary Performance</u>**

Ms. Varela asserted that the public and the Board must always understand how the portfolio evolves in every period of market volatility. She reported that February 2022 preliminary results generated an NAV of $17.8 billion, a decrease in asset value as compared to the all-time high NAV of $18.4 billion at the end of calendar year 2021.

Even though last year saw a rallying market driven by growth exposure, this year has been a bit different. Uncertainties have been seen since January around the geopolitical risk between Russia and Ukraine. There was also an intense fear around the persistent inflation and the possibility of increased interest rates by the FED. All these components drove volatility higher.

Equity stocks dropped in January, and a notable decline in the NAV of about 2.5% was seen. More volatility was anticipated in February due to the confirmation of the ongoing geopolitical risk. February held steady with a NAV at approximately $17.8 billion.

February had flat returns, and even though it was a volatile month, PERA did not lose money. The policy benchmark was down 1.1%, reflecting sizable capital preservation. The reference portfolio, which measures the value of diversification and complexity, was also down 1.8%. Compared to the actuarial rate of return, strong absolute returns were seen across all periods. The returns exceeded the 7.25% actuarial rate of return except for the 7-year and 20-year periods.

Ms. Dean noted that the Fund exceeded policy benchmarks across all horizons, indicating the value of diversification and capital appreciation. From the reference portfolio, it was clear that diversification benefits were not seen over the last two years. However, with the new market volatility, a sizable outperformance was seen versus the reference portfolio. The manager skillset also outpaced the portfolio when measured against their specific peer set.

Staff estimated an $18billion NAV and a flat month for March. They also expected that the quarter would be a negative one and with slight underperformance on a relative basis.

Ms. Dean noted that balancing each economic regime against the market changes and geopolitical volatility will ensure the Fund has a steady return in the future.

4. <u>Wilshire Cyber Security Update</u>

Ms. Dean stated that the Board had been informed on March 4 about the ransomware attack on Wilshire. The firm activated its information security emergency process and worked with external experts to successfully restore its systems.

The investigation of the attack was ongoing. Ms. Dean assured the Board that no client information was compromised and that there was no impact on PERA. The firm is now working with cyber experts to install additional threat detectors and monitoring tools to enhance security.

Ms. Varela stated that Mr. Trujillo, Mr. Gallegos, and herself have been in communication with Wilshire. She reported that Wilshire serviced PERA in a consulting capacity only. The firm did not manage any capital for the plan, so no trading or capital risks were associated with the attack. There was also no data risk since PERA does not connect its internal systems to Wilshire.

Chair Neel requested regular updates from Wilshire.

B. <u>GeoPolitical Outlook</u>

Chair Neel introduced Frank Kelly, the founding and managing partner of Fulcrum Macro. He read out Mr. Kelly's detailed resume, highlighting how he started his career as President Reagan's writer, right through to his journey toward becoming a geopolitical strategist.

Mr. Kelly thanked Chair Neel and stated that he had been a senior political advisor to DWS for many years. He commended the portfolio managers for their work in the current volatile environment. He dived into the geopolitical issues between Russia and Ukraine and commented that the war might drag out.

Referring to the latest publish from Ukraine, he noted that Ukraine had been fighting ferociously. From a market perspective, Mr. Kelly urged the Committee to avoid paying attention to ceasefire news unless Vladimir Putin publicly endorsed some aspects of the negotiations.

Mr. Kelly mentioned that Russia was bringing more vital forces into Kyiv and that the frequency of air raids on Ukraine had increased. This indicated that negotiation progress news coming from Russia was unfounded. He also pointed out that the imposed sanctions would not be coming off anytime soon, meaning that significant corporates would not be returning to Russia soon.

Mr. Kelly stated that with the depletion of the Russian military, President Putin could deploy a Russia's Wagner Group of mercenaries comprised of ex-Russian soldiers who have been fighting in Syria, Libya, and Mali. He pointed out that these mercenaries do not follow the rule of law and will bring the worst into the war.

Mr. Kelly indicated general concerns about Russia using chemical and nuclear weapons. He was keen to point out that Russia was ready to use chemical and biological weapons. However, the U.S. defense forces believed that President Putin would not deploy them because the side effects might spill into Russia and NATO's Western Europe members.

Mr. Kelly indicated that the war negatively affected China in several ways;

1. The war might prompt China to attack Taiwan.
2. Taiwan has been empowered globally in its diplomatic relations.
3. The U.S. has increased its military support for Taiwan, making it harder for China in case they were to invade Taiwan.
4. The weaknesses of the Chinese military had been exposed. They do not have the troops and the ships to attack Taiwan.

Mr. Kelly noted that these and other issues present in China, including COVID, will not allow China to join the war, even if it is selling weapons to Russia. They would not risk getting sanctioned along with Russia. He urged the Committee to beef up cyber security because it was believed that the Russians were looking for information through any avenue and had ramped up cyber attacks.

Mr. Kelly gave an overview of the upcoming midterms at Congress and the Build Back Better Act. He stated that Democrats were looking to support the Act. Senator Joe Manson, in particular, had stated that the tax increases proposed by the Act would be used to pay off debt.

Mr. Kelly also mentioned that the CHIPS Act was in the range of $100 billion of government funding that will incentivize several sectors. The incentives encourage business owners to bring back their foreign business, especially those in China, into the country. He also indicated that there might be a rise in the regulators since President Biden cannot get much done. He stated that the Federal Trade Commission was also about to have a full complement of commissioners, with most Democrats. Mr. Kely further stated that M&A would change significantly.

Mr. Neel inquired about Russia's options for selling minerals, oil, and gas concerning pricing. Mr. Kelly mentioned that the Russian Foreign Minister was negotiating to sell oil at 50% off in India. Mr. Kelly believed that India's Prime Minister would not want to be sanctioned along with Russia, so he might try to cut some deals with the West.

Mr. Neel noted that Ukrainian education is considered one of the best, particularly in engineering and technology. He asked if there was an indication by American companies to "poach" Ukrainians. Mr. Kelly stated that the Colorado Governor was already doing that by welcoming Ukrainian refugees to his State. He added that the primary beneficiaries of the brain drain would be Poland, Romania, and Bulgaria since they were taking in so many Ukrainian refugees. Several tech companies had also begun setting up operations in the mentioned countries.

Ms. Fisher thanked Mr. Kelly for the insights. Ms. Armijo and Ms. Naranjo Lopez echoed her sentiments.

Mr. Kelly informed the Committee that he was available by phone and email to provide any more clarity. He also shared some more insights on how the geopolitical situation would affect other countries and the supply of raw materials. For instance, Mr. Kelly stated that Nigeria might now replace Ukraine and become the largest manufacturer of fertilizers in the world. Western finance is looking to capitalize on that opportunity.

C. BiAnnual Rotating Speciality Reporting

1. Q4 2021 Bonds Plus Portable Alpha Review

Ms. Larranaga-Ruffy thanked Mr. Neel for commending her on her work, adding that it was a collaborative team effort. She invited Frank Mihail to give the presentation.

Mr. Mihail stated that the program's goal was to beat any chosen benchmark by 4% through the use of hedge funds. He indicated that the plan deliberately chose bonds as a benchmark because bonds have a low volatility profile.

Mr. Mihail further reported that the hedge funds were intended to move separately from what the benchmark. He noted that if bonds are doing 0%, the hedge funds should do 4%.

He introduced James Walsh from Albourne to review the program. He pointed out that targeting bonds were a complicated strategy that only a handful of institutions were running the program across the nation. Most of those institutions had commended PERA on the program.

Mr. Walsh discussed the performance and the guidelines established for the portfolio. He stated that the portfolio was two-part and aimed at achieving two things: getting exposure to bonds (beta) and getting additional value by active management (alpha). The main focus of the portfolio was to gain a diversified pool of external managers to ensure that the alpha achieved would not be correlated to the underlying beta of the bond portfolio.

Mr. Walsh pointed out that the portfolio had significantly evolved over the past year, particularly between April and June 2020, when several managers were added.

Looking at performance, Mr. Walsh reported that the alpha engine had returned 8% in 2021, bringing the annual performance to 4.1%. The performance compares to the cost of finance for the portfolio of 0.6%, which is calculated as LIBOR. The LIBOR was 0.3% in 2020, plus 0.3% in 2021.

The bond part, the strategic allocation, returned a negative 1.5% last year. The bonds returned 2.7% since inception. Combining the two, the total portfolio return for 2021 was 5.7% since inception. It is now 6%. In 2021, that added $52 million worth of value to the overall PERA portfolio while using only 6% of the total portfolio risk budget.

Mr. Walsh stated that the portfolio guidelines were vital because they ensure that the portfolio is appropriately structured. He mentioned that the guidelines were split into three types:

1. Portfolio level guidelines – look at volatility and beta.
2. Liquidity guidelines – set out how quickly capital can be drawn from the portfolio.
3. Fund level guidelines – set the amount a particular should have and how the strategy should be allocated within the portfolio.

Mr. Walsh stated that the portfolio was currently within the bands apart from directional strategy. Another manager will be added to the directional strategy in a few days with the expectation that it will also fall within the band.

Mr. Walsh stated that volatility is one of the critical guidelines here. The target volatility is set at 4.5%. The current volatility lags slightly behind at 3.7%. Mr. Walsh noted that the lag might have been caused by the change in market volatility as the market moves into a more volatile period this year.

Another guideline Mr. Walsh discussed is beta. He stated that the critical beta is Beta to Barclays U.S. Agg since it is the benchmark for the bonds. Over the last 12 months, the Beta to Barclays U.S. Agg had been 0.01%, and the Beta to Equities was 0.06%. The since inception numbers were higher, indicating the significance of a spike in volatility seen in Q1 of 2020 due to the pandemic. It boosted the beta.

He also touched on systematic and idiosyncratic risks. He explained that the systematic risks were the common risks in the market like credit, F.X., and equity. The idiosyncratic risks were all the other risks that the managers took to get the alpha. While the managers focus on having less idiosyncratic risks, the portfolio currently has more and is slightly above that guideline.

The systematic risks of the portfolio are less than 50%. Mr. Walsh stated that since the common risks are unavoidable, the following steps should be identifying those systematic risks.

He added that working on adding directional exposure, as Mr. Mihail had indicated, would reduce some of the more concentrated risks seen, such as credit and equity, because they would be moving toward global macro growth, which tends to reduce risks over time.

Regarding alpha, Mr. Walsh stated that there should be a fair split between what the managers were generating and what the investors were getting. He pointed out that the investors' share is based on negotiations of performance fees that come with each investment. As such, the guideline for the portfolio was structured to have the investor retain at least 60% of the alpha. In

2021, 67% was retained by PERA, which was worth $53 million of actual alpha value added to PERA.

According to Mr. Walsh, the portfolio was not designed to provide liquidity for the plan. He, however, noted that sufficient liquidity should be maintained to allow for rebalancing since none of the guidelines would be of use if changes cannot be enacted in case a strategy becomes overweight. The guidelines have been structured to set out targets for 3, 6, 12, and 24 months of liquidity, indicating sufficient liquidity in the portfolio for rebalances.

In response to Chair Neel, Mr. Walsh clarified that his presentation covered only performance numbers for the calendar year 2021. Q1 of 2022 data was not included. He, however, reported that the portfolio performed positively in Q1 of 2022. The preliminary numbers showed that the portfolio was at about 60 basis points through mid-March. Even though it was a challenging quarter for bonds, more alpha has been generated.

Mr. Neel commended Mr. Walsh, Mr. Mihail, and the entire team for their excellent performance. He asked if all the numbers shown were just for 2021. Mr. Walsh confirmed that the numbers were from the portfolio's inception till 2021.

D. <u>Investment Committee Workplan</u>

Ms. Varela reported that the work plan formalizes next year's priorities. Staff had solidified quarterly information versus biannual rotating information. Mr. Walsh had discussed portable alpha this quarter. Ms. Larranaga-Ruffy will discuss illiquid assets next quarter. Educational items were left open to enable more educational topics and conversations in the future.

She noted that there were a few action items on the agenda. More will appear at the end of the year during the periodic review of IPS and the Investment Committee Charter. She further confirmed that there would be a summer Board retreat during which the strategic initiatives will be discussed.

Francis Page moved to approve the work plan agenda. Paula Fisher seconded the motion. The motion passed unanimously by a roll call vote as follows:

Steve Neel	Yes
Francis Page	Yes
Paula Fisher	Yes
Loretta Naranjo Lopez	Yes
Roberto Ramirez	Yes

E. <u>Annual Active Risk & Active Return Targets</u>

Ms. Varela stated that this was an annual process to review active drivers of the portfolio, particularly drivers of tracking error and adopt the targeted return and the risk targets for the year.

Ms. Dean overviewed the history of the review as presented in the slides. She noted that PERA had a current active risk framework that will be an annual adoption for both the active risk and active return. Ms. Dean reiterated that the current target was 1.5%, and the allowable range was 1% to 2%. The active return target was 1%, with an allowable range of 0% to 2%.

The active risk has two categories;

1. **Allocation/benchmark misfit.**

This is a deviation from the target allocation. It comprises liquid active risk and illiquid allocation. The illiquid side can have allocation deviations because capital does not get valued daily.

The benchmark misfit has no accurate investable benchmark, and the reporting of the performance of the illiquid investments is reported on a one quarter lag. All of these create additional deviation from the allocation target and the public markets benchmark used to discuss the performance of the illiquid investments.

2. **Selection**

The selection had active positioning by active managers away from the benchmark to beat the benchmark. The decision to employ active management and the type of active manager selected contributed to the selection impact.

Ms. Dean highlighted several reasons for taking active risks. She also mentioned the factors determining the amount of active risk taken and how active risk should be managed. (See presentation slide). Several benefits of active risk budgeting and the roles of the Board, the Committee, and staff in risk budgeting were also discussed.

Ms. Dean invited Ali Kazemi from Wilshire to review public markets' active risk versus the private markets' active risk.

Mr. Kazemi started by describing how to manage public markets' active risks. He stated that public markets are considered actionable in terms of the ability of staff to manage to track error contributions through allocations and selection. (See presentation).

Mr. Neel requested Mr. Kazemi discuss the interplay between active management, overlays, and the risk budget.

Mr. Kazemi stated that multiple ways could be used to implement overlays. He explained that overlays mitigate excess or unwanted risk in a portfolio. Some overlays allow for risk reduction without actively reducing physical allocations amongst active managers. The risk budget can then be targeted toward the idiosyncratic drivers of the alpha.

Ms. Dean clarified that the Board specifies the targeted allocation to equities in asset allocation. She explained, for example, that a multi-asset manager, who is allowed to invest in many assets such as equities and fixed, may not allocate the same amount of exposure to equities or fixed income as the target allocation. An overlay manager can remove this deviation from the target allocation by putting offsetting derivatives exposure in place. This can provide an isolation of the additional returns driven by the particular security selection decisions made by the active managers.

Ms. Varela pointed out that at this time last year, PERA was implementing both the alpha overlay and the beta overlay. The alpha overlay was then taken off as the focus shifted to holistic portfolio construction, as opposed to isolation of idiosyncratic alpha.

Ms. Varela noted that portfolio construction and risk management are decisions that go side by side. She added that overlays are highly effective tools that assist in managing risk. Some of these risks include implementation and liquidity. In cases of excessive comfort levels, the program is usually re-evaluated. She reiterated that alpha overlays had been discontinued, and Staff was currently focused on structural correction through physical asset reduction.

Ms. Varela further indicated that the beta overlay also served as a very effective tool for reducing risk. Since PERA's policy does not allow the holding of cash, the beta overlay is utilized to bring in exposure through liquid future-based exposure, and allows the fund to hold sufficient amounts of liquidity. The beta overlay is also used in beta replication. There is a beta replication in a portable alpha, with exposure that is efficient in physical capital utilization. No dollar-for-dollar exposure is required, and thus frees up capital for pure idiosyncratic alpha generators. The replication of this beta exposure in pportable alpha also ensures that the hedge fund return generation is not impacted by beta replication tracking error.

Mr. Page inquired how active risk management impacted the total fund risk. Mr. Kazemi stated that the active risk budget should not be a constraint in terms of strategic asset allocation decisions.

He indicated that a portfolio should reflect the Board's risk tolerance without active risk consideration driving that decision. He recommended using an actionable active risk budget to focus on what can be controlled. Focusing on what can be controlled eliminates the constraint of allocating more private assets. Allocating to private assets leads to tracking errors. In addition, a active risk budget could lead to a limitation in terms of the amount that can be allocated to private assets. Mr. Kazemi stated that Wilshire was keen on the tracking error budget not being a constraint on the overall absolute risk of the portfolio.

Ms. Varela indicated that beta is set in the Board's adoption of the strategic asset allocation driven by a targeted return profile and risk appetite. She pointed out that alpha should be diversifying and uncorrelated. Otherwise, it is just another function of beta. Ms. Varela added that if alpha is not diversifying and enhancing to the portfolio's risk profile, then it should be stripped out to eliminate the contributon from alternative beta exposures to PERA's active risk drivers.

Mr. Kazemi discussed the challenges associated with private markets' active risk as follows;

- Benchmarking – no consistent private markets benchmark addresses all issues. Public market proxies and lagging benchmarks were used to address the challenges to no avail. There were still significant variances in tracking error estimates for private markets. The risk would then have to be eliminated or mitigated.

Mr. Kazemi presented a slide that showed what the mix of public markets versus private markets was doing in the contribution to tracking error. The data was taken from Wilshire's risk dashboard. The chart showed that the contribution from illiquid assets ranged between 60% to 90%, with an average of about 75%. This was not unique to PERA. Other institutional portfolios with significant private markets had similar contributions from illiquid assets.

In formulating the active risk budget, Mr. Kazemi reported that Wilshire's recommendation was based on better ways to account for the contribution differential between liquid and illiquid allocations.

Ms. Dean stated that even though the liquid portion of the tracking error was smaller, it should not be overlooked. She pointed out that that small portion can still be actively managed so that the parts that are non-actionable are separated.

Mr. Kazemi further discussed active risk decomposition. He stated that the charts on Slide 11 of his presentation indicated that staff had the tools to allow them to focus on contributions to tracking error and manage the risks using Wilshire's ex-anti models.

Ms. Varela mentioned how staff had been able to identify breaches in 2021 and how they utilizing these tools to manage those risks.

From the presentation slides, Mr. Kazemi noted a consistent theme of a reduction of active risk-taking within the liquid portion of the portfolio. Mr. Kazemi discussed the portfolio's current position in terms of active weights compared to 2021. The 2021 active risk-taking was 47.8%, while it was down 40% in 2022. A slight increase was, however, seen in risk reduction.

An increase was seen in attribution and performance due to the excellent performance of the private markets. Private equity was a massive driver of tracking error contribution and was one of the reasons why the portfolio was currently outside the targets. Mr. Kazemi emphasized that the biggest driver of the current active risk budget and breaches came from the private market and not from increases in active risk-taking in the liquid portion.

The illiquid active risk increased due to the double-digit returns and active capital deployment. The 2021 active weight was 75.8%, while 2022 target is 73%. He added that they had tools to monitor how the weights manifest themselves in contribution to risk.

Ms. Varela noted that staff had not changed any planning for private investments from last year. The planning was affected by the double-digit returns from private markets.

Mr. Page asked if different criteria were used when evaluating managers in this area. Ms. Varela stated that no significant criteria had changed from last year. Staff continued with the five-stage manager selection process to find the best fit manager for the portfolio, especially for the private markets.

Ms. Varela indicated that the only thing that had changed was the allowance of tracking error. Last year, a significant portion of tracking error was projected to be eliminated by the the alpha overlay. Staff had believed that the alpha overlay would address the excess tracking error, but the results had proved otherwise.

Mr. Kazemi added that the information provided by Wilshire would help staff track the performance of managers and ensure that the managers are delivering sources of expected active risk.

Ms. Dean further stated that the Board had decided to pause the portable alpha increases at 5% last year. Staff was looking to maintain the portable alpha portfolio in its current state, so there would be no additional growth, outside of appreciation. She pointed out that the original intent had been 6%, an equivalent of about $1 billion in the program, but the Board had decided to limit it to $800 million.

Regarding risk parity, Ms. Varela reported that the portfolio's passive implementation strategies were tracking the benchmark and producing the anticipated risk-adjusted return. The strategies were also weathering through various economic regimes and were highly effective, producing returns at a fraction of the cost of active management.

Ms. Varela believed that passive implementation was still a viable option and that the prospective tracking error taken on by shifting into active was not a value play that would be pursued soon.

Ms. Dean noted that the marketplace had evolved, and PERA's approach to diversifying the portfolio had also evolved. She stated that the focus was on formulating a level of active risk target that is practical and is in line with the purpose of the strategic asset allocation and implications. She further discussed two options for the Board and Committee to consider for the current active risk framework. Option 1 was to maintain the current active risk target and framework. Option 2 proposed changing the active risk target and enhancing the framework. (See presentation).

Ms. Dean stated that Wilshire had recommended option 2, separating the actionable active risk and setting the target for actionalble active risk at 1.25%. This would be in line with other public plans with similar objectives and types of liquid assets. Private markets' active risk would be set at 2.25%. Combining the two would give a total fund active risk budget of 2.5%.

Wilshire also recommended maintaining the 1% active return target. Staff had significantly outperformed this target in recent quarters, and Wilshire believed that it is reasonable over the longer term.

Ms. Dean also discussed how risk breaches were monitored and cured and the takeaways from the overall presentation. (See presentation).

Ms. Varela clarified that the fund was not stressed for liquidity. She explained that asset allocation decisions differed from tracking errors and active risks. PERA is highly liquid with about 15% to 18% Tier I convertible liquidity.

She added that the Board had already adopted the 1.5% target in previous years, but option 2 required action from the Committee.

Francis Page moved to approve the Total Fund Active Risk Budget increase to 2.5% from 1.5%. Paula Fisher seconded the motion. The motion passed by a roll call vote of 4 to 5 as follows:

Steve Neel	Yes	
Francis Page	Yes	
Paula Fisher	Yes	
Loretta Naranjo Lopez		No
Roberto Ramirez	Yes	

Chair Neel explained that his 'Yes' vote was based on the rationale provided by the Wilshire team. He believed that PERA should never be in a position of forced selling of private market investment, as such would prompt selling at significant discounts. Mr. Page echoed Chair Neel's sentiments.

Ms. Varela stated that the adoption strengthened oversight from the Committee. In the next quarter, there will be pure attributions of active risks for the Committee further to govern actionable pieces of the active risk budget and further understand the non-actionable pieces.

F. Invoice Division Compliance Update

Item 6F be pushed to the next Investment Committee meeting.

7. Adjournment

With no further business to discuss, Chair Neel adjourned the meeting at approximately 11:48am.

Approved by:

Steve Neel, Investment Committee Chair

ATTEST:

Greg Trujillo, Executive Director