

**New Mexico
Public Employees Retirement Association
Investment Committee Meeting
December 13, 2022**

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 11:50am.

1. Roll call

The meeting attendance met quorum with the following members present;

Committee Members Present

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

Other Board Members Present

Loretta Naranjo Lopez

Staff

Greg Trujillo, Executive Director
Trish Winter, Executive Assistant
Anna Williams, Deputy Director
Michael Shackelford, CIO
Misty Schoepner, Deputy General Counsel
Karyn Lujan, SmartSave Plan Manager
Lynette Kennard, CFO
LeAnne Larranaga-Ruffy, Interim Deputy CIO
Geraldine Garduno, Assistant General Counsel
Loretta Lopez, Assistant General Counsel
Sara Hume, Investments
Ron Gallegos, CTO

Others present

David Lebovitz, JP Morgan
James Sakelaris, JP Morgan
Rose Dean, Wilshire
Ali Kazemi, Wilshire
Mike Krems, Aksia
James Walsh, Albourne
Mark White, Albourne
Heather Christopher, Albourne

2. Approval of Agenda

Francis Page moved to approve the agenda. Roberto Ramirez seconded. The motion passed with a unanimous roll call vote as follows;

Claudia Armijo	Yes	
Paula Fisher		No response
Steve Neel	Yes	
Francis Page	Yes	
Roberto Ramirez	Yes	

3. Approval of Consent Agenda (September 29, 2022 Minutes)

Francis Page moved to approve the Consent Agenda. Roberto Ramirez seconded. The motion passed with a unanimous roll call vote as follows;

Claudia Armijo	Yes	
Paula Fisher		No response
Steve Neel	Yes	
Francis Page	Yes	
Roberto Ramirez	Yes	

4. New Business

A. Information Item: Economy, Inflation, and Markets Overview

CIO Michael Shackleford introduced representatives from JP Morgan Asset Management, James Sakelaris, relationship manager, and David Lebovitz, global market strategist.

Mr. Sakelaris introduced David Lebovitz as a friend, a colleague, and a market strategist. Mr. Lebovitz has been featured on Bloomberg TV, CNBC, et cetera. He has also written several articles. Mr. Sakelaris introduced himself as a client advisor with JP Morgan Asset Management. He has been with the firm for over 32 years and has covered the New Mexico agencies and plans for the last 12 years.

Mr. Lebovitz kicked off his presentation with an outline of his discussion points: global growth, the risk of recession and its probability in 2023, inflation, and the macroeconomic backdrop for the Federal reserve. He will also discuss some chances and opportunities across the capital markets.

Mr. Lebovitz presented an economic indicator chart called the Purchasing Manager's Index (PMI). The chart considered both manufacturing and services. Mr. Lebovitz stated that the recession question is always about when not if. Looking around the world, the probability of recession over the next 12 months varies depending on where one looks. For example, Europe is already in a recession, or if it has yet to start in the fourth quarter, it will probably start in the first quarter of next year. The combination of higher interest rates, higher energy costs, and tighter financial conditions have made recession in that part of the world seem inevitable.

Mr. Lebovitz stated there is a general agreement that growth is slowing and will continue to slow in the United States over the next 12 months, particularly given what the Fed has done so far. However, the idea of a full-fledged recession has yet to be a foregone conclusion. The probability of a recession in the United States is 50-50. Looking at the emerging world and, in particular, China as it tries to move past COVID, there is an indication from their government that more stimulus is coming to the Chinese economy. According to Mr. Lebovitz, that stimulus has historically leaked into emerging markets.

The destiny of the emerging markets next year will depend on what will happen in the United States. Emerging markets might follow suit if the United States goes into recession. But if the United States avoids a recession, Asia and Latin America can avoid a period of economic contraction.

Mr. Lebovitz indicated that people should ask if there is a future recession and what it will look like. He stated that people have been suffering from recency bias over the past couple of months. They hear the word recession and immediately think of 2008 and 2020. Mr. Lebovitz believed those were outliers relative to what's been seen. He referenced a chart showing the magnitude of declines during recessions dating back to the early 1900s. He stated that the 2008 and the pandemic recession were more consistent with what was seen during the Great Depression or in the aftermath of World War II.

Mr. Lebovitz stated that if there is a recession next year, it might be average. In all other recessions from the early 1950s through the mid-1990s, real GDP fell by 2% to 3%. The recession lasted three or four quarters, and things were back on track. He further stated that when trying to gauge the magnitude of a recession at some point down the road, they check to see if there are apparent imbalances across the U.S. economy. He presented another chart showing the four most cyclical sectors of the U.S. economy. He said the four sectors have been responsible for all the economic booms and busts since World War II. The four sectors on the chart represented consumers on one side, with housing and autos, and businesses on the other, with investment spending and inventories.

Mr. Lebovitz said everything seemed pretty good after looking at the four sectors on the chart. Housing and investment were in line with long-run averages. Vehicle sales were sitting just below the long-run average, and the inventory line has been creeping up. The inventory line is closely monitored since many businesses have indicated too much inventory. Since the four sectors did not look too off-side, Mr. Lebovitz said if a recession were to happen next year, it would have the potential to be a repeat of 2008, 2020, or what was seen around the Great Depression and World War II.

He also indicated that inflation has remained extremely persistent against softer economic growth and the rising risk of recession. Inflation has peaked in the United States and Europe, and the main concern is its trajectory.

Mr. Lebovitz stated that in thinking about the path of inflation over the next 12 to 18 months, they focused on three things in particular;

- i. Focused on what happens in China and the impact on supply chains.
- ii. Concentrate on what happens with the labor market in the United States.
- iii. What goes on in housing.

With regard to China and supply chains, Mr. Lebovitz stated China is trying to move beyond COVID and abandoning part of its stringent zero COVID policy. There is still the risk of lockdowns and supply chain disruptions, which could limit the amount that consumer goods may fall over the next 12 months. On the other hand, supply chains are much healthier today than they were a year ago. So while it still has an impact, it has a different magnitude of effects seen over the past 12 months.

About the labor market, Mr. Lebovitz indicated that as the unemployment rate has fallen to a level of 3%, wage growth has accelerated to near its most robust pace in the better part of the past 40 years. There has been a mismatch between supply and demand. There's a massive demand for labor in the current environment, while supply has been limited. According to Mr. Lebovitz, several factors

might have caused the labor supply shortage. Part of it might have to do with demographics and an acceleration in retirements during the pandemic. Some of it had to do with lingering health concerns, and some with skills mismatch, where businesses can't find the right skill set for the jobs they are looking to fill. Therefore, the labor market is balancing the labor shortage with wage growth, which is currently robust. Mr. Lebovitz mentioned that wage growth is strongest in the lower-income portions of the population, such as leisure, hospitality, and restaurants.

This is what the Fed is focused on. The Fed is worried about a wage-price spiral that might take hold because lower-income individuals have a higher marginal propensity to consume. These individuals prefer to spend any additional dollar they get rather than saving it or investing it. That is why the Fed has moved more aggressively over the course of the year thus far.

Chair Neel pointed out that there is the element of unemployment and participation in labor. He requested Mr. Lebovitz discuss their view on labor market participation. Mr. Lebovitz mentioned that for ten years after 2008, many people had told him that the participation rate was too low. He added that the participation rate had gone an entire percentage point lower. He further stated that the bulk of the issue lies with the demographics. These include people who retired early, given the wealth effect created during the pandemic. Other people let themselves fall out of the labor force because they saved their stimulus checks and unemployment benefits, so they don't need to return to work. They are, therefore, not counted as part of the labor force.

Mr. Lebovitz explained that the different issues restraining the participation rate and the overall labor supply dovetail with some of the longer-term economic views. He stated that economic growth has two main drivers: increased labor force and productivity growth.

The labor force is growing very slowly in the United States. One could argue that legal immigration might be a potential solution here since it takes 18 years to create a worker organically. Mr. Lebovitz believed that this was an issue that would be dealt with for the foreseeable future.

The other solution would be to have some people return to the labor force. This will take some of the pressure off of wages. Mr. Lebovitz reiterated that participation is even lower today than it was for the ten years after the financial crisis.

Concerning housing, Mr. Lebovitz stated that big moves in home prices only show up in the official inflation statistics with a lag. So everything in the past 12 to 18 months is now just beginning to show in things like CPI.

He presented a chart showing the decomposition of the year-over-year change in consumer prices into various components. From the chart, it was seen that the contribution from the shelter had been steadily rising for the better part of the past year.

Looking ahead into 2023, Mr. Lebovitz indicated there was some concern that the housing component of inflation would limit the ability of the overall level of inflation to get down to where the Fed would like it to be. Some conservative calculations show that the core inflation finishes next year at around 3.5%, notably above the Fed's 2% target. He pointed out that what the Fed has done thus far has cooled off the housing market a bit over the year. The expectation is the Fed will realize that housing will limit the amount inflation can decline and, at some point, be willing to look through it rather than continuing to fight by hiking rates.

Mr. Lebovitz mentioned that the Fed still needs to finish hiking the rates. They have a meeting tomorrow where they're expected to hike by 50 basis points. He stated that the market prices had a 50 basis point hike. The Fed intends to continue with at least two 25 basis point hikes at the beginning of next year, bringing the federal funds rate close to 5% likely by March of 2023, then pause there.

Mr. Lebovitz believed the bar for the Fed to cut remains exceptionally high. He indicated what has driven several rallies in equities over the year thus far is the idea that the Fed will start reducing rates at the first sign of weakness in the economy. He believed the Fed wants to get rates as high as possible and keep them there for as long as possible. According to him, the Fed is more concerned with controlling inflation than propping up the economy.

Mr. Lebovitz further mentioned that a unique macro backdrop is created, characterized by slowing economic activity, persistent and sticky inflation, and a Fed that has tightened aggressively over the year and will continue tightening into early 2023. This has resulted in a series of risks and opportunities. One of the opportunities seen in the current environment is fixed income. Mr. Lebovitz stated that for the ten years following 2008, there has been no income in fixed income. People needed to buy it for protection rather than for yield. This has, however, changed. He presented a chart showing that people currently like fixed income, particularly on the shorter end of the curve, because one is getting paid 5%, taking on minimal risk.

Fixed income is therefore not only liked for the payment but also the protection. There is a preference for bonds over equities within a diversified portfolio in the current environment.

On income-producing assets, Mr. Lebovitz stated that one of the things that came out of their long-term capital market assumptions process was the idea that over time, the economy would go back to a slow growth, low inflation and low-interest rate environment that would make people think of diversifying the sources of income that their portfolio is generating. He stated that a variety of alternative assets, such as real estate, infrastructure, and other core tangible assets, can generate the same income as going into high-yield bonds or emerging market debt without adding more equity volatility and equity sensitivity to the overall portfolio.

Mr. Lebovitz believed that over the next couple of years, more investors would return to things like real estate and infrastructure and increase their allocations to these assets as they look for the uncorrelated income streams in an environment that resembles the aftermath of the financial crisis. He presented charts showing corporate profits and total returns and stated that with regard to equities, everyone was talking about the outlook for earnings next year. He referenced a diagram showing consensus analyst estimates for earnings for 2022, 2023, and 2024 and indicated that the 2022 number looked right in showing that revenues declined over the calendar year. The 2023 estimate was still too high, and Mr. Lebovitz stated that the big question in the equity market next year is how much earnings need to adjust and how much they could potentially fall.

He indicated that if a recession is avoided next year, earnings will be flat to slightly down. However, if there is a contraction in economic activity, earnings will fall by about 10 to 15%.

With regard to the dollar, Mr. Lebovitz said it has been on a tear over the course of the year thus far and has been a headwind for U.S. investors in non-U.S. investments. He mentioned that interest rates are higher in the U.S. than in other parts of the world because economic activity is more attractive in the U.S. This could end up supporting the dollar for the next several months. He further indicated that the dollar is too expensive and will need to weaken in the long run. This is informed by the fact that the U.S.

runs a chronic current account deficit. It is a net borrower of dollars from the rest of the world, which means that over extended periods, the dollar should be getting weaker instead of getting stronger.

Mr. Lebovitz said what has been a headwind for non-U.S. investments for the past decade could evolve into a tailwind from now on. He presented a chart showing that valuations in non-U.S. markets are favorable compared to those in the U.S. market. The dollar is powerful, while the other currencies are fragile. He further presented a chart showing estimates for earnings and stated that the rest of the world could generate earnings growth in excess of the U.S. over the coming years. International has been left for dead after a poor performance in the aftermath of the financial crisis, while the U.S. is becoming increasingly constructive on opportunities outside of the U.S. due to the weak currencies and the ability to generate earnings growth in the coming years.

Mr. Lebovitz stated that he is looking into 2023. Volatility is likely to persist. Volatility is average and should be expected, but equity markets are resilient. He mentioned that, on average, during the past 42 years, the stock market has fallen by 14% during the course of the year. But in 32 of those 42 years, or more than 75% of the time, the market finished the year in positive territory. As for 2022, it was not clear whether positive returns will be seen from U.S. equities at the end of the calendar year, but according to Mr. Lebovitz, equities markets move higher. Interest rates have moved away from zero, and this might create markets that generally function in the coming years.

He added that even though questions remain about the trajectory of inflation, monetary policy, and economic growth, there is more clarity on where the variables are headed in 2023. He mentioned that markets are forward-looking and that the time to step in and take more risk in portfolios is usually before the economic data begins to turn itself around.

Chair Neel requested more details on value versus growth, as shown on slide 15. He also asked Mr. Lebovitz to give his view on private equity. On value versus growth, Mr. Lebovitz stated that in the current environment, there are opportunities on both sides. He presented a chart showing relative valuations between the two investment styles and said that the value has looked favorable and close to growth for the past five years. Another chart showed operating leverage, which is the value received when revenue growth accelerates. According to the chart, for every 1% increase in revenues for the energy sector, earnings should increase by 9%.

Mr. Lebovitz indicated a liking for businesses with operating leverage, such as energy, materials, and consumer staples. These have historically been the more value-oriented sectors of the market. However, the selloff has been robust in growth over the year. He mentioned that owning businesses that generate earnings would be prudent because that will be key in an environment with higher interest rates, tighter policy, and slower economic activity.

He further stated that they like value stocks for the earnings growth they provide and want growth stocks for the value they seem to be starting to deliver. They keep an eye out for both sides and look for businesses and industries that look set to be able to generate profits in the next 12 months.

With regard to private equity, Mr. Lebovitz mentioned that public markets have been on a wild ride this year. Private markets have needed to adjust faster. Rates have been up a lot, and with all else equal, higher interest rates should mean lower multiples.

According to Mr. Lebovitz, there is a two to the three-quarter lag between what happens in the public markets and similar things in the private markets. But since the write-downs are coming into the

end of this year and the beginning of next year, private equity funds will revalue the assets in their portfolio and be revalued lower.

It needs to be clarified if they will go down to what was seen in the public markets, as this is dependable on the business, but the idea that they will maintain the current level of evaluation is a stretch. Mr. Lebovitz stated that the pressure on multiples had been reflected in the size and style of deals that are currently being done.

Mr. Lebovitz reiterated that private equity has begun to adjust its behavior and believed that the write-downs are coming here in the next several months. The billion-dollar deals that were common in 2021 have fallen by the wayside. Private equity investors are focusing on hitting singles and doubles. This has also been reflected in their approach in moving away from the traditional buyout and focusing more on platform creation and growth equity add-ons.

Mr. Shackelford requested Mr. Lebovitz give an idea of where JP Morgan stood regarding the stock market, the rally over the last several months, and the earnings expectations. He asked what the stock market would look like if earnings came down from where they are or if they stay flat to where they are in 2022.

Mr. Lebovitz said that the rallies seen over the past several weeks, as with all the other rallies in the year, have all been false starts. He mentioned that the market believes that the Fed will do a 180 at the first sign of weakness in the labor market, but that will not be the case. According to him, JP Morgan believes that since inflation is still at 7%, the Fed is done, and they will go higher rather than lower. The company is thus still hesitant to take on much risk given the overarching macroeconomic view.

Mr. Lebovitz reiterated that if there is a recession next year, earnings will fall by about 10 to 15%. JP Morgan has put the probability of a recession at 50-50. They are therefore tracking \$200 a share for earnings in 2022. A 10% decline would mean \$180 in operating profits for 2023.

He mentioned that inflation helps support profits by maintaining more robust revenue growth rates. Looking at earnings declines during a recession since 1950, the average has been about 30%. From the late 1960s to the early 1980s, it has been closer to 15%. This shows that a recession next year will lead to a decline in earnings, but not necessarily by 30%.

Mr. Lebovitz stated there might be volatility ahead and believed that the equity market could retest the lows during Q1 of 2023. However, markets are forward-looking, and the S&P 500 bottomed six months before the unemployment rate peaked, looking at recessions back to 1960.

He indicated that JP Morgan was more constructive on the outlook for equities during the second half of 2023. Next year could be challenging for the economy, mainly if there is a recession, but it might be okay for the capital markets. They also believe there might be modestly positive equity returns in the U.S.

B: Informational Item: Performance and Market Review.

1. Q3 2022 Market Review

Rose Dean, from Wilshire, stated that Mr. Lebovitz had covered most of the macroeconomic and market dynamics. She indicated it had been arduous three-quarters of the year. The first three quarters

before October and November recovery mean the equity markets and fixed income were down significantly for the period ending September 30. She added that pain had been felt across asset classes as correlations converged. The only asset class that escaped the market carnage was tangible assets.

2. Q3 2022 Total Fund Performance Review

Ms. Dean kicked off her report with the scorecards. She reminded the Committee that the scorecards are a way to look at some essential metrics the portfolio is expected to meet. It is also a governance measure for the Board and Committee to see if the portfolio is doing what it's supposed to be doing.

She reported that given the selloffs seen in the year, the portfolio still needed to meet the assumed rate of return of 7.25% except for inception to date period. This is driven heavily by the drastic market selloff during the first three quarters of 2022. At the end of 2021, the portfolio had significantly exceeded the assumed rate of return for all periods except the 20 years. This shows the significant impact 2022 has had on historical returns.

It is a short-term period that has had an enormous impact, and diversification didn't pay off in recent periods. Over the long term, however, the negative excess return gets smaller and smaller, which can be taken as a sign that diversification does pay off over a long time. Ms. Dean pointed out that strategic asset allocation should keep this in mind.

Concerning portfolio allocation versus Board approved allocation targets, Ms. Dean reported that the actual allocation is within the policy target range, with the real assets being slightly over the mark but still within the field. It is about 3% above the target. This is primarily driven by performance, not intentional tilts to overweight real assets. Real assets were the only positive returning asset class.

On the tracking error measure, Ms. Dean said the Board had approved the risk budget management in two separate ways. One is tracking the actionable tracking error, which is the liquid or the public markets asset classes. That target risk budget was set at 0.25% with a range of 1 to 2%. She reported that the four-year historical or ex-post tracking error is at about 0.94%, below the target.

The total fund tracking error, considering private or illiquid asset classes together, is much higher at 5%, where the target is 2.5%. Ms. Dean stated that this is why the Board had gone through the process of approving an actionable and total fund tracking error separately. She mentioned that little could be done to reduce the tracking error caused by the illiquid assets.

The total fund tracking error on a historical basis is, therefore, higher than where it should be. Ms. Dean stated that this includes the 2020 period when the pandemic started, and there was significant volatility in the market. She indicated the forward-looking tracking error figure comes down to about half of that, and there are no concerns about the portfolio tracking error.

On the portfolio liquidity metrics, Ms. Dean reported the portfolio complies with the liquidity requirements, which require over 10% of the portfolio to be in tier-one assets. This is being met with 15% tier-one support.

She further mentioned that the total fund performance scorecard showed two additional hurdles. The scorecard compared the total fund versus its benchmark return to see if the implementation and strategic allocation meet or exceed the total fund benchmark. Ms. Dean reported that over all periods, the excess return meets the target of the benchmark return or exceeds it. On a risk-adjusted basis, the portfolio delivered a superior sharp ratio than the peers' median.

The total fund market value at the end of the third quarter stood at \$15.7 billion. \$159 million is in distributions, and \$742 million is in investment depreciation. This decreased by about \$900 million from the previous quarter's market value.

The PERA total fund was down 4.5% in the third quarter of fiscal year-to-date and close to 12% calendar year-to-date through the third quarter. This brings a 10-year return down to about 6.5% annualized. The inception-to-date stands at about 8.5% annualized.

The portfolio outperformed the policy benchmark for all periods, and for the most recent period, the outperformance has been relatively significant, almost 8% for the one year. Much of this has to do with private markets valuations still needing to flow fully through the markets. Some of that adjustment is starting to happen. Its extent is case by case, but for the time being, PERA's outperformance is primarily driven by its private markets' asset allocation.

The Sharpe ratio measures whether the amount of risk in the portfolio is generating returns versus the index on a more efficient basis. This is an indicator that the portfolio's being implemented more efficiently. The portfolio's Sharpe ratio exceeds the sharpe ratio for the total fund benchmark for all periods.

Concerning the composite performance, Ms. Dean reported the total fund is down about 4.5% for the fiscal year. It exceeds the policy benchmark by 1.5%. Real assets drove the performance. The real assets composite returned negative 32 basis points, whereas the benchmark return was negative 6.9%. So there was a significant positive contribution to asset performance from the real assets composite.

The rest of the composite for the fiscal year was relatively on par with the benchmark, except for the multi-risk allocation. There was a 50 basis points outperformance on the multi-risk.

The one-year return for the portfolio is negative at 8.21%. It exceeds the policy benchmark by about 7.8%. Global equity return for the one year is negative at 11.6%, and the outperformance versus the policy benchmark is about 7.7%. This was a significant driver of the portfolio's outperformance. Real assets were a significant contributor as its outperformance versus the model was close to 13%.

Several factors contributed to the outperformance. Most of it came from selection, which is the private equity allocation within global equity. In the real assets, the private illiquid real estate and illiquid real assets contributed significantly to the outperformance. The credit-oriented fixed income was also a significant positive contributor to the total fund performance.

The scorecard showed the total fund historical tracking error over the past four years was around 5%. Taking into account the current policy portfolio holdings and the private market holdings, the forward-looking tracking error for the total fund is expected to be around 2.5%. The actionable tracking error is expected to be approximately 85 basis points on a forward-looking basis. These are all within the acceptable range set by PERA's risk budget.

Concerning the peer universe comparison, the PERA allocation is compared to public pensions of greater than \$1 billion in assets. These may be PERA's peers in terms of public pensions, but they have other objectives, return hurdles, and risk appetite. Ms. Dean pointed out peer universe comparisons are difficult because of many factors. One is that these are self-reported allocation data, and some asset classes need to be reported consistently across different funds.

She reported that a lot had stayed the same regarding where PERA stood in allocation compared to peers. PERA's total equity allocation tends to be on the very low end of its peers. Its alternative allocation also is relatively low. The multi-asset class allocation is on the high end, with a multi-asset allocation of 10%. Real assets tend to be on the higher end, which was helpful during the high inflationary period.

Ms. Dean mentioned that PERA's objectives have been to be well diversified and take advantage of the illiquidity premium reflected in the peer comparison.

Looking at PERA's return versus peers without considering the amount of risk being taken, the PERA portfolio ranked in the top 16 percentile for the one year that ended September 30. PERA ranked above the median for the four-year performance and less for the longer period. This was driven by the fact that PERA's portfolio takes less equity risk relative to its peers, and, in the past ten years, equity returns have been driven most of the portfolio returns.

On a risk-adjusted basis, the portfolio's efficiency ranked above the median for all periods going back ten years. For the 15 and 20-year periods, PERA was slightly below the median, but a more favorable result was seen in the peer comparison.

This shows how staff adds value by taking on implementation decisions and earning additional returns for the tracking error. Regarding information ratio comparison, which looks at the excess return versus the additional risk, PERA ranked highly across the Board for all periods. PERA is the top decile or quartile for most periods going back ten years and above the median for 15 and 20-year periods.

Mr. Davis pointed out that PERA usually takes less risk than other organizations. He asked if taking less risk in a down market would result in higher performance while a market upturn would result in lower performance. Ms. Dean responded in the affirmative. She indicated that taking less risk means having volatile assets. She noted that PERA was in the bottom 16th percentile regarding the absolute level of risk taken in one year. She stated that Mr. Davis's sentiments were correct because there's less equity risk, and in a market where there's an equity market drawdown, PERA's portfolio has proven superior in terms of absolute return.

Chair Neel requested Ms. Dean discuss the performance for the quarter briefly. Ms. Dean stated that performance this quarter was still driven by equities. The third quarter continued to be a difficult period for equities. PERA's equity portfolio returned negative 6.5%. So, while the relative performance was good, equity markets being down, both the risk reduction and global equities markets were significantly down.

The only portfolio that did not provide a positive boost was the real assets category. Unlike the one-year period, where there was a positive return of 6.7% for this quarter, the real assets were not providing a significant positive return. While the absolute level of risk is still lower every quarter, no benefit will be seen from the illiquid real assets that boosted the one-year return.

3. Q2 2022 Illiquid Asset Reporting

Interim Deputy CIO LeAnne Larranaga-Ruffly stated that this would be the June 30, 2022, illiquid asset performance report. She introduced Mike Killfoil, a PERA investment associate, and Mark White with Albourne to review illiquid real assets.

Mr. White kicked off the performance report of the illiquid real asset portfolio. He presented a slide showing the convergence over time of the portfolio relative to its benchmark. He also noted that there had been an evolution in the portfolio under previous administrations going back to 2008.

In terms of the percentage NAV and IRR, Mr. White stated the agricultural component of the portfolio, which consists of four holdings, has had an effectively flat performance since the beginning of its implementation. Energy, at 32% of the portfolio, has had a 5.3% performance, and infrastructure, at 53% of the portfolio, has had a 12.5% performance for a realized performance on an IRR basis of 7.3%. He referenced a slide showing how performance attribution was broken out based on the sub-strategies in real assets.

He noted that through the history of PERA's real asset reporting, there is a combination of illiquid and liquid real assets. He focused on the illiquid side of the portfolio. Mr. White reported that about the vintage years 2006 through 2014, large allocations of almost 25% of PERA's portfolio were focused on the energy sector. He reminded the Committee that the function of a real asset portfolio is inflation sensitivity and giving the portfolio a lower correlation to what is happening in the broader markets. So far, the portfolio has been successful in achieving this objective.

He drew the attention of the Committee to the allocations that took place from 2014 through 2020. He indicated that this is the evolution where the Board started focusing more on infrastructure than energy investments. He also presented a chart showing what PERA has been pursuing in terms of primary funds, club deals, and co-investments.

Mr. White mentioned that PERA's co-investment portfolio has been very successful, with 10.2% of NAV and a reported IRR of 13.3%, outperforming all other areas and other strategies across the real asset element.

Chair Neel noted that the natural alpha is negative. He asked what the co-investments were being benchmarked against. Mr. White stated that the direct alpha is represented against the strategy classifications of the assets. He explained that a primary fund would have 15 to 20 holdings, whereas a co-investment is a single investment. The negative direct alpha indicates that the co-investment was in an area, such as infrastructure, with a negative alpha to what was seen in a public market equivalent to that space.

On the quartiles of the respective managers and where they performed relative to their peer universes, Mr. White reported that two of the agriculture managers lagged significantly. Both strategies have a slight private equity approach to the agriculture sub-sector.

Across the energy spectrum, Mr. White mentioned that most of the allocations were made before 2014. It was common for institutions in the U.S. to focus heavily on energy at that time. A lot of the strategies are winding down. He stated that coming out of 2008; there were very low energy prices. The prices ramped up and peaked around 2014 and 2015, with the financial markets and the fracking that was taking place in the U.S., particularly New Mexico, which was a beneficiary of some of the energy reserves.

He indicated that the infrastructure portfolio had done well while the energy and agriculture portfolios had struggled. Since about 2014, the portfolio has taken a more diversified approach. The plan has been to get PERA back in line with what is considered a diversified portfolio in real assets. He

pointed out that the infrastructure allocations started around 2013 and progressed through 2019 during COVID. This attempted to rebalance the real assets portfolio to meet PERA's objectives.

Chair Neel noted that PERA had not committed anything to energy since 2017. He asked if that is what was anticipated going forward. Mr. White stated that that would depend on what the investment team wants the asset mix to be going forward. He mentioned that most pensions have started lightening up on their energy exposures and opting to move into transitional energy, which will link traditional fossil fuels and renewables.

Mr. White presented a slide showing the drawdowns concerning each of the strategies. He stated that most of the energy had very high drawdowns at 98%, except for the 2017 allocation, which was only 68% drawn.

Infrastructure managers have drawn less than 50% of their capital in the case of a few of the 2017 and more recent vintages. This is expected as infrastructure usually draws capital more slowly than traditional private equity and other asset classes.

Mr. White indicated that if managers do not put capital to work appropriately, it creates a deepening J curve. He added that except for the agriculture portfolio, there are no concerns now concerning the infrastructure managers.

Mr. White stated that PERA is fairly consistent regarding target allocations, with energy at 32%, infrastructure at 53%, and agriculture at 15%. This is the mix that is expected going forward.

About the vintage year, Mr. White mentioned that one of the things they try to avoid is over-allocating or under-allocating in a particular vintage year. They aim to have fairly smooth vintage years and to take advantage of the full economic cycle. Fairly even pacing allows the fund to take advantage of full market cycles, which is what the fund is trying to achieve.

Mr. White mentioned that one of the challenges with NMPERA was that it was a heavy energy portfolio. The infrastructure allocation had to be increased to the desired target, so energy had to be left behind. Mr. White believed that that would not be detrimental to PERA moving forward. He noted that 2019, the first year of COVID, had a very small allocation cycle. 2020, 2017, and 2016 show what is typically expected in a particular year. These are expected to smooth out going forward.

Mr. Page recognized the perfect performers and asked what was being done about the poor performers. Mr. White stated that the illiquid markets are expected to take advantage of the full cycle and start to smooth out over time. He reiterated that energy depended on when they entered the cycle, but relative to the entire energy portfolio, it slightly underperformed a similar energy mix for that period.

The only true disappointments were a couple of the energy managers that had poor performance because of excess leverage when the energy market rolled over. They may not recover as well because the market is entering into a very tough economic period, and the funds are near the end of their fund life. However, the two agricultural investments were more of a private equity approach to agriculture.

Mr. White further stated that funds with long-run runways should perform in line with the market conditions seen for the full market cycle.

Mr. Page also asked what was being done about those funds and if liquidation was being considered. Mr. Shackelford explained that most of the funds are closed in funds. They have a defined life, whether 7 or 10 years, so PERA is stuck with them. This means that if an investment was made in a 10-year fund in 2015, the pension is stuck in that investment till 2025. The manager may also have optional extensions so that a 10-year fund could be a 12-year one.

According to Mr. Shackelford, the pension is only stuck in that investment fund if it can convince all the other investors to come together and fire that manager. This is, however, highly unlikely. The pension will then have to decide whether to continue with that manager in one of their subsequent funds or strategy because one might have a good manager in a poor strategy.

He further stated that it was highly unlikely that PERA would invest in energy anymore. To the extent that it might, it will have to be in a fund where PERA will get the current cash flow as soon as the investment occurs.

He added that certain strategies like agriculture and energy are highly volatile. They are reliant on highly volatile commodity pricing. These are strategies that PERA will less likely be into, and real assets will more likely be into things like infrastructure, where there are a lot of contracted cash flows and where inflation protection is written into contracts to protect the fund from the downside markets.

Mr. Shackelford stated that the team is also looking at open-end funds, whereby if PERA gets into a fund with a manager that's underperformed, it can get out of it. Open-end funds are unlike mutual funds or equity index funds, where one can get out within 30 or 60 days. They take several quarters, like four or five, to get out of.

Mr. Page asked if there was a possibility of getting rid of them in a secondary market. Mr. Shackelford stated that there are secondary markets for such assets, but the problem is that they need to know what's in the support, so they'll underprice. He added that the best option would be to wait for the funds to wind down naturally and then decide whether to continue with that manager or strategy.

Mr. Page remarked that selling them at a discount in the secondary market would be better than the losses. Mr. Shackelford stated that the fund has already taken the loss even if they sell. Therefore, selling might lead to an additional loss. The investment team usually looks at such options and opts to stay in the fund and wait for it to wind down.

Mr. Page also inquired whether a post-mortem is usually done to determine why PERA got into such funds and what can be learned from such mistakes. Mr. Shackelford indicated that on an ongoing basis, all the investment associates look at the funds they are invested in to try and determine why the performance is what it is, what were the drivers for getting into the investment, and whether to continue with the strategy.

Mr. White stated that when there is an extension with the manager, the manager no longer charges the fees. It's just the value of the asset at that time. He indicated that when entering into a relationship with a manager at the beginning, a macro analysis is done to understand how the opportunity fits into the portfolio. Some managers work out while others do not.

He pointed out that riding these assets to their final value is generally the only alternative rather than a discount. However, the fees being charged for fund extensions are usually zero unless there's additional carry left on the table.

Chair Neel asked if an asset like a pipeline would be in infrastructure or energy. Mr. White stated that that is typically in an infrastructure portfolio. It used to be in what was referred to as a master limited partnership portfolio, but that asset class was eliminated due to changes in tax legislation.

Chair Neel also agreed with running out the portfolios but believed there is an opportunity cost. He indicated that there is the capital that PERA foregoes when redeploying in something it feels more compelled on. He also acknowledged that staff undertakes a process to determine if it is better to take on a secondary hit or to redeploy.

Mr. Killfoil mentioned that PERA is getting about \$0.50 to \$0.80 on the dollar.

Real Estate

Ms. Larranaga-Ruffy invited Ms. Heather Christopher with Albourne to review real estate. Ms. Christopher started by stating that real estate had some great news and was one of the bright sprouts in the portfolio. She mentioned that the market environment has been very good for real estate from the second half of 2021 through the second half of 2022.

Like private equity, real estate will not go to the extreme that the public real estate markets have done. Demand has outweighed supply for industrial and performance properties, but since interest rates have greatly increased in 2022, real estate values are expected to recede. Right now, they're about down 20% for the year. Public market real estate tends to have greater volatility, so private real estate is not expected anywhere in that neighborhood.

Ms. Christopher mentioned that there would be future corrections in pricing and returns, just like the rest of the real estate market will experience. She presented a graph showing that the spread between PERA's real estate portfolio's IRR and its Wilshire Global REIT benchmark has widened. She noted that this is good because the real estate IRR was 12.7% as of June 30, 2022, and it has increased 200 basis points year-over-year.

Another graph showed how much the portfolio has grown in deploying capital over time and the distributions of income and capital as received. Ms. Christopher reported that PERA's real estate portfolio had done very well during 2021 and the first half of 2022.

In terms of performance by style, vintage year, and vehicle type, PERA's contributed capital was \$1.8 billion. PERA received distributions of \$1 billion and has a remaining net asset value of \$1.4 billion. With a real estate IRR of 12.7%, the real estate portfolio is outperforming its public market equivalent, the Wilshire Global REIT, by 7.2% among the styles of risk and return.

38% of the portfolio based on net asset value is opportunistic and performs well, producing a net IRR of 14%. Value added is performing at 9.9% net IRR, and the 52% remaining of the portfolio core plus and core is performing well beyond expectations at 11.1% net IRR. Ms. Christopher mentioned that this is not normal. She stated that one fund is strongly outperforming and has helped the performance, but the other funds have been holding their own.

She further reported that one new commitment was made in 2022, which was Rockwood Multifamily Partners. The allocation to multifamily has been performing well, has good supply-demand dynamics, and is likely to weather a recession fairly well.

With regard to performance by vehicle, vehicles that have been investing for three or more years have returns of greater than 10%. Only one fund had a negative 12.8% return, Aermont **IV**. Ms. Christopher stated that the manager explained that the J curve is still in effect even though they're beyond the three years and still projecting a 10.6 net IRR and a 1.6 multiple. She also reported that the performance of the Stockbridge Niche Logistics Fund, which has been held for less than three years, has a 47% net IRR as of the second quarter of 2022.

Ms. Christopher mentioned that PERA's real estate portfolio is 80% funded. It is also well diversified across managers, with the largest manager representing no more than 19% of the portfolio. Most of the vintage years outside of 2017 do not exceed 20%, and the year 2017 was extraordinary because that's when the real estate REIT managers transitioned.

She further mentioned that the portfolio is primarily allocated to North America, which is by design, and progress has been made in reducing the opportunistic allocation to 38% and increasing the core and core plus allocations to 52%.

Chair Neel inquired about the reason for pivoting away from opportunistic. Mr. Killfoil stated that the return dispersion of the opportunistic funds is so wide that the core and open-ended product, that's the core plus, PERA, can get a much higher return compounded on a time-weighted return than in the opportunistic series. He indicated that he asked every manager to show their returns versus a core open-end product, and they still need to compete.

Credit

Ms. Larranaga-Ruffly invited Clayton Cleek, PERA's investment associate, and James Walsh, with Albourne, to review credit.

Mr. Walsh kicked off by stating that credit has sold hard quite hard this year. He mentioned that in the first three quarters of this year, high yield, measured by the Bloomberg Index, is down almost 17%. This is on the back of rising rate expectations and economic concerns.

According to the Wilshire numbers, for the first three quarters of the year, illiquid credit year-to-date is up 6.5%. The sister allocation on alternative credit was down 3.5%. Mr. Walsh indicated that there are several reasons why this is not surprising. One, in illiquid credit, particularly in the alternative credit portfolio, there's a shorter duration in the assets. This means that they're less sensitive to when interest rates go up.

Two, there's quite a bit of floating-rate debt. As interest rates go up, the underrate paid will also increase, which helps in performance. Three, managers will likely be more selective in what they're purchasing.

Four, there's still some price discovery going on, which means that the assets have yet to be repriced to the current environment, and that's because they're illiquid. Therefore, the expectation is that there will be some pullback in valuations in some of the more illiquid assets.

For the second quarter of this year, Mr. Walsh stated that there are three numbers to focus on. These are;

- i. IRR. The IRR for this portfolio is 9.2. This is the return that was achieved for the capital that was invested.

ii. PME, which is the return relative to a liquid benchmark. The alpha outperformance here was 2.1%. In response to a question from Chair Neel, Mr. Walsh stated that the benchmark is the high yield.

iii. TVPI – This is the total value versus the paid-ins. The value is 1.3 times. It indicates how much money the portfolio got in dollars versus the money that has been put in. Mr. Walsh noted that the performance numbers are very supported.

He further stated that the portfolio's quite bifurcated. Regarding the NAV, about 56% is in distress, and a little under 40% is in real estate credit. The IRR on the distresses is at 10.7%, and real estate is at 5.3%.

Chair Neel asked if real estate were the non-performing loans. Mr. Walsh stated that it is debt. It is where the managers have invested in real estate debt instead of equity.

Mr. Walsh also stated that the portfolio is 92% funded, meaning that 92% is the capital committed to the portfolio and has been called by the managers. The last time there were any new commitments to the portfolio in 2017 because some of the assets from the portfolio were transferred to alternative credit.

The decision was made that the assets should be put somewhere, which considers the assets' liquidity as opposed to the liquidity of the structure. So the liquidity of the structure was illiquid, but the underlying assets were liquid.

He also stated that looking at the portfolios together; the credit portfolio is underweight while the alternative credit portfolio is overweight. This means that as capital comes out of the alternative credit portfolio, it will be used to fund commitments and new investments into the credit portfolio.

Concerning the peer rankings of the funds in the portfolio, Mr. Walsh stated that seven funds are in the first quartile, two are in the second quartile, five are in the third quartile, and two are in the fourth quartile. So the balance of funds is in the first and second quartile.

Regarding regional exposure, over two-thirds of the portfolio is invested in U.S. assets, and the other third is in European assets. Mr. Walsh stated that this had been a good thing because the opportunities and the local returns have been greater in the United States, and also, the dollar has been strong. In the year to the end of the quarter, both the private and alternative credit portfolios added 187 basis points to the return of the PERA portfolio.

Chair Neel noted that there has been no commitment to the portfolio since 2017 and that there might be an opportunity to start committing shortly. He asked how the portfolio's private and alternative credit parts were being weighed.

In response, Mr. Clayton Cleek stated that both parts are being looked at. In terms of allocation for the alternative credit, Mr. Cleek noted that in the most recent strategic asset allocation, it was up to 7% of the total fund. He indicated that discussions are ongoing with managers about potentially reallocating there.

He added that there is a good manager lineup, and they see meaningful opportunities in the structure credit space, bank loan space, and potentially in the distressed space. Mr. Cleek indicated there are plans

to optimize the alternative credit portfolio via the current manager lineup and build a private credit portfolio. It went from 6% of the total fund to 8% and is at about 2.5% right now.

Mr. Cleek further indicated that this is a good time to build a private portfolio. He mentioned that there are also plans to build out a core-satellite private credit lending portfolio in private credit and get it up to the 8% target allocation taking a measured vintage risk and getting there in a few years.

Chair Neel noted that there are lots of opportunities. He, however, voiced concern about the seasoned nature of the portfolio and asked if the Board should be worried about it. Since most of the assets were seasoned, Mr. Cleek believed there was no reason to worry. He stated that the performance seen is the performance that will be realized.

He mentioned that the distributions being seen are expected from the portfolio and that most portfolios are de-risked. He reiterated that a different approach would be taken to build a core portfolio in private credit, adding that real estate has much distress. There will be room for these types of mandates within the new portfolio, but they will be in the more capital appreciation oriented smaller check size, satellite opportunities. The core portfolio will have much lower risk, middle-of-the-road direct lending opportunities.

Mr. Walsh concurred with Mr. Cleek, adding that a more mature portfolio should be expected in an environment like today. He indicated that the assets that are more likely to be riskier are somewhat newer in a portfolio. He reiterated that this is an interesting time to build out a portfolio because, this time, there will be no need to rush in and allocate.

According to Mr. Walsh, this isn't a cycle that will be tipped upwards by the Fed cutting interest rates and leading to a storm in asset prices. This is likely a much more drawn-out extended period as the economy moves through, possibly a recession, but not a big bounce back. That will give Mr. Cleek time to build out the portfolio.

Private Equity

Ms. Larranaga-Ruffly invited Kate Brassington and Mike Krems, with Aksia, to review private credit.

Mr. Krems started his presentation by stating that all the data is as of June 30, 2022. He indicated a one-quarter lag in all of the reporting seen in private equity. He presented a graph showing the IRR investment to date over time. He stated that the current investment to date IRR for the private equity program is 15.8%. This is 1% lower than a quarter ago and indicates what has happened recently in the private equity markets.

He reported that the longer-term performance had had double-digit IRRs consistently. The 3-year and 5-year IRRs have been 23.7 and 20.2%, respectively, while the 10-year has been 18.5%. The 1-year IRR is 5.4%, which is still better than the public equity markets. It was, however, a lower return that impacted the IRR overall.

Mr. Krems stated that the portfolio has consistently generated alpha. Alpha has ticked up recently even though absolute performance has been lower than in historical periods. On a relative basis versus the benchmark, the portfolio has continued to generate more alpha than in the past.

He also mentioned that this is a challenging market and that there are several key drivers that the Board needs to be aware of. For private equity return, some of the key drivers are:

- i. Market growth. There are many headwinds and less growth than many firms underwrote in their base case for investments. They will therefore have to find other ways to grow value.
- ii. Availability of debt and the cost of debt. Debt is still available in the market but is at a lower quantum than in previous years. The cost of debt has also gone up.

Mr. Krems stated that a benefit for private equity, in the long run, might be a resetting of prices. This is happening slowly. The prices are expected to keep ticking down in terms of multiples of earnings over the next several quarters as market comps adjust, not only to the public markets but to private markets and discounted cash flow models.

He reiterated that private equity is a more challenging time than in previous years, but there will be shifts in strategy. Strategies that do well in this environment are not focused on top-line growth exclusively but also have value driver capabilities in the middle part of the income statement, with costs and efficiencies matter for organizations.

In terms of cash flow, Mr. Krems reported that the program consumed cash over the past year. This was expected because the allocation to private equity has increased significantly in the past year. It was 9% at the beginning of the year. It went up to 12% at mid-year and now is at 17%.

As commitments increase and that capital gets called, the private equity program will use cash before ultimately generating larger distributions from that cash. Whenever there's a ramp-up in allocation, the program is expected to use some money for anywhere from two to four years before the distributions from the larger commitments start to kick in.

Concerning exposures, Mr. Krems reported that the portfolio is appropriately diversified in several ways. First, looking at geography, the portfolio has a market exposure of 64.9% to North America, 20.2 to Europe, and 9.8% to Asia. This is in line with the market weights of activity seen across the market. There are no excessive risk exposures for any geography, and no major geographical shifts are expected.

There is also broad diversification in industry. Mr. Krems indicated a heavier exposure of 22.9% to financials than the private equity market. It is slightly lighter in IT than some equivalent private equity programs at about 21.2%. A lot of private equity portfolios are very significantly weighted to IT. There's been a lot of software investment over the past 5 to 10 years. This was a benefit to the program over the past year, given that there have been many headwinds in software valuations.

Mr. Krems noted that the portfolio is lighter on consumer discretionary at 8.8% than many private equity portfolios. This is a good thing, as consumer discretionary is currently challenging. There have been many headwinds there as consumers change their behavior.

Healthcare is at 17.6%, while industrial is at 16.1%.

Regarding asset class segments, Mr. Krems stated that 64% of PERA's private equity exposure is in buyouts, while 25.5% is in venture capital. The balance is in the fund-to-funds, which are legacy relationships for the most part. Venture capital exposure includes growth equity. It has some characteristics of earlier-stage venture capital deals and some characteristics of later-stage companies that are revenue-producing already. They could be profitable if they were not reinvesting so much into the business.

Mr. Krems indicated that performance has been fairly consistent across the asset types. The IRR for buyouts has been 15.3%, and for venture capital, 17.8%, meaning that venture capital has done quite well.

He mentioned that there are several relationships with managers in the program that are relevant for the Board to have been insight on. The top five which are the most significant as a percentage of the total program are:

- i. Warburg Pincus - This is the largest relationship, representing 10.6% of the private equity program. It is diversified by strategy and does everything from venture capital to growth to buyout deals globally. This manager is labeled as venture capital in PERA's program.
- ii. Goldman Sachs – The manager is one particular strategy within Goldman, a Peters Hill division. Peters Hill invests in other investment firms and benefits from the growth of the alternative investment industry and private equity managers. The larger relationship with this manager at 9.6% is part of the reason that PERA has a significant financial exposure overall.
- iii. Jordan Company. This is a core mid-market manager, consisting of 7% of PERA's private equity program. This is a diversified exposure in the mid-market space, a core element of the program overall. The manager is returning to the market shortly, so there could be future investments with the manager.
- iv. Kelso – Has 6% of exposure. It is also a core mid-market exposure with complimentary asset exposure at the industrial level.
- v. Pine Bridge - Has 5.6% of exposure. This is a vehicle focused on emerging markets. From a geographical point of view, it is meant to complement PERA's exposures in more developed economies and ensure that global growth is represented in some proportion of the portfolio.

Chair Neel commended Ms. Brassington, Mr. Krems, and Ms. Larranaga-Ruffly for their work with the portfolio, noting that it is a high-quality portfolio.

He also noted that Warburg rolls up in both buyout and venture and asked if it was a companion commitment. Mr. Krems stated that many of the funds are labeled venture. The labels are applied at the time a commitment is made. When fund 12 was made, the view was that more buyout investments were being made. He added that it is difficult to label the funds because they do so many things. So whatever the label is, there will be a caveat that impacts the exposure.

Ms. Larranaga-Ruffly also mentioned that Warburg started in 1960 as a venture firm and then expanded from there.

Chair Neel also inquired about Pine Bridge and asked if it is an emerging managers' platform. Mr. Krems stated that Pine Bridge is a customized account. It is a fund of funds that also does co-investments to help average down the fees. Its greatest contribution to the portfolio from a diversification point of view is that it is focused on emerging markets around the globe, including Latin America, developing Asia, and elsewhere.

Mr. Krems added that these companies tend to skew smaller given the geographies, but they typically are buyout transactions in emerging markets in funds and individual deals through co-investments.

C. Information Item: Investment Policy Statement Review

Mr. Shackelford stated that the Committee reviews its policy statement and Charter this time of year. The investment policy statement was reviewed recently as part of the strategic asset allocation review changes, so there currently needs to be recommended changes to the statement.

D. Information Item: Investment Committee Charter Review

The Investment Committee Charter was also recently reviewed, so everything remained the same.

Mr. Page inquired if Chair Neel would make a continuation statement for next year's Committee. Chair Neel agreed to do a transition memo.

E. Information Item: Investment Division Compliance Update

1. Manager Selection Activity Report

Ms. Larranaga-Ruffly stated that in terms of the manager selection pipeline, several funds are in the illiquid pipeline, primarily for private equity. They are all follow-on investments, and Ms. Brassington works through the stages.

Two investments were approved. One is Chimayo, a co-investment vehicle with an established long-term partner. The commitment was for \$15 million and a guideline-based evergreen fund of one with no fee, no carry. If PERA chooses, this will be the sixth co-investment vehicle that PERA will have created since 2020. It provides co-invest capital alongside the current and future funds. There will be approximately \$200 million within co-investment vehicle funds in this manner.

The second one is Anton Infrastructure, an illiquid real asset fund focusing on infrastructure assets. It is a commitment of 100 million euros and a follow-on investment PERA committed to funding three.

Concerning liquids, there was an RFI for cash overlay services that were completed due to the expiration of Parametric's contract. Three respondents and the investment team decided to remain with Parametric due to their tenure of quality services, responsive custom overlay management, and excellent beta replication.

There are two funds in the pipeline for this strategy for bonds plus alpha.

All the investments discussed previously were listed in the Portfolio Fit and Review Team meetings. The two others noted were a manager replacement and a termination reallocation due to liquidity guidelines and rebalance proposals. These were within the credit portfolio and the Bonds plus portfolio.

2. Q3 2022 Cash Activity & Rebalance Update

Sara Hume, Director of Beta, presented the report on cash activity and rebalanced for Q3. She stated that in July, total benefits paid to members were \$136 million. Of that, \$63 million was sourced from investment activity. There were investments into liquid credit and cap calls into equity, real assets, real estate, and credit. \$74 million was received in distributions.

For August, the total benefits paid to members was \$117 million. Of that, \$36 million was sourced from investment activity. There were further investments into liquid credit, and capital calls into equity, real assets, real estate, and credit. \$51 million was received in distributions.

For September, total benefits paid to members were \$117 million. Of that, \$61 million was sourced from investment activity. There was cash movement into risk reduction, liquidity, and capital calls into equity, real assets, real estate, and credit. \$45 million was received in distributions.

In all instances, asset allocation and liquidity were in alignment with policy.

3. Q3 2022 Securities Lending Update

Frank Mihail reported a \$542 million out-on loan in Q3 2022. This generated 31 basis points of revenue.

Chair Neel stated that this is his last Investment Committee. He thanked all the staff members for their work and support and wished everyone a great holiday season.

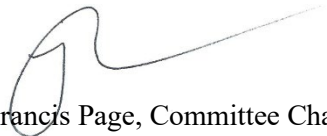
Mr. Page thanked Chair Neel for his leadership and services to the Board.

Ms. Fisher also thanked Chair Neel for his dedication and leadership on the Investment Committee.

5. Adjournment

With no other business to discuss, Chair Neel adjourned the meeting at approximately 1:35pm.

Approved by:



Francis Page, Committee Chair

ATTEST:



Greg Trujillo, Executive Director