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PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BOARD OF ADMINISTRATION

INVESTMENT COMMITTEE

OPEN SESSION

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9:45 A.M.

JAMES F. PETERS, CSR
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APPEARANCES

COMMITTEE MEMBERS:

David Miller, Chairperson

Rob Feckner, Vice Chairperson

Fiona Ma, represented by Frank Ruffino

Lisa Middleton

Eraina Ortega

Jose Luis Pacheco

Ramon Rubalcava

Theresa Taylor

Mullissa Willette

Betty Yee

STAFF:

Marcie Frost, Chief Executive Officer

Nicole Musicco, Chief Investment Officer

Matt Jacobs, General Counsel

James Andrus, Interim Managing Investment Director

Dan Bienvenue, Deputy Chief Investment Officer

Sarah Corr, Managing Investment Director

Amy Deming, Investment Director

Sterling Gunn, Managing Investment Director

Michael Krimm, Investment Director

Simiso Nzima, Managing Investment Director

APPEARANCES CONTINUED

STAFF:

Christina Ortega, Committee Secretary

Christine Reese, Investment Director

Jake Tuttle, Investment Director

Lou Zahorak, Investment Director

ALSO PRESENT:

Tim Behrens, California State Retirees

J.J. Jelincic

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PROCEEDINGS

CHAIRPERSON MILLER: Good morning. I would like to welcome everybody and call to order the Investment Committee open session. And our first order of business is the call to order and roll call.

COMMITTEE SECRETARY ORTEGA: David Miller?

CHAIRPERSON MILLER: I'm here.

COMMITTEE SECRETARY ORTEGA: Rob Feckner?

VICE CHAIRPERSON FECKNER: Good morning.

COMMITTEE SECRETARY ORTEGA: Frank Ruffino for Fiona Ma?

ACTING COMMITTEE MEMBER RUFFINO: Present.

COMMITTEE SECRETARY ORTEGA: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Present.

COMMITTEE SECRETARY ORTEGA: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Here.

COMMITTEE SECRETARY ORTEGA: Jose Luis Pacheco?

COMMITTEE MEMBER PACHECO: Present.

COMMITTEE SECRETARY ORTEGA: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Present.

COMMITTEE SECRETARY ORTEGA: Theresa Taylor?

CHAIRPERSON MILLER: She's in the back. She'll be out shortly.

COMMITTEE SECRETARY ORTEGA: Mullissa Willette?

COMMITTEE MEMBER WILLETTE: Present.

COMMITTEE SECRETARY ORTEGA: Betty Yee?

COMMITTEE MEMBER YEE: Here.

CHAIRPERSON MILLER: Okay. Thank you.

That brings us to Item 2, our executive report from our Chief Investment Officer Nicole Musicco.

And we have here remotely, so as you can see.

Welcome, Nicole. I'll hand it over to you.

CHIEF INVESTMENT OFFICER MUSICCO: Thank you very much. Good morning, Chair Miller and members of the Investment Committee. It goes without saying I'm very disappointed at not being in the room with you today and I really appreciate the accommodations that have been made. I'll do my best to demonstrate my energy virtually here as I share with you my journey through what's now I think the 76th day that I've been at CalPERS.

It's fair to the say the timing of my first few months has been interesting. We are in the midst of experiencing a once-in-generation change in the macro environment after an era of capital superabundance and 40 years of decreasing interest rates. The most consequential has been the change in geopolitics and a decrease in globalization, which has triggered inflation and tremendous volatility.

Then you layer in the pandemic where we've lock down entire nations and experience a hundred percent remote work for an extended period of time. While we are certainly feeling those shocks in 2022, it's been a brutal year for equities and treasuries as we battle through inflation, geopolitics, and supply chain shocks.

So as a result, what you will hear from us today really does center around how do we build innovation and resiliency into our portfolio during these very volatile times.

But first let me set the stage for today, with just a quick recap on performance. Just a few short months ago, the PERF was closing up the calendar year with a NAV of approximately 500 billion and fiscal year-to-date returns of almost six percent. And then the wild volatility ride really kicked in sending shocks across all asset classes.

For example, what we've seen in our equities portfolio, higher inflation, and rising interest rates have impacted profitability and future earnings growth. And higher interest rates have pulled down the net from the value of equities, driving equities down.

Similarly for fixed income, higher inflation pushed treasury yields higher. Greater uncertainty is wide in spreads and we're all -- and we are seeing this globally, not just in the (inaudible)

And in private markets, not immune to these market forces, they are somewhat less vulnerable in the short term, albeit exposed to higher financing costs. Real assets, however, will offer some inflation protection.

The impact of this volatility, as you saw in the March 31 results, had the PERF down -- PERF NAV down four percent to 479 billion with fiscal year-to-date returns of two percent. Unfortunately, though as of early June, PERF NAV is hovering around 450 billion, which is approximately a 10 percent decline from the beginning of year in line with broader markets declines.

Last week alone, we all saw the S&P down approximately five percent, which was the second worst week since the beginning of the calendar year. And overall, markets have been experiencing higher correlations between equities and bond segments, so diversification just hasn't played out as is generally expected. As a result, we will need to be prepared for continued market volatility and even further drawdowns in the short and he immediate term.

So where do we go from here? What we hope to be able to convey to you today is the following. We have navigated volatile markets like this before. The current strategic asset allocation is still the right choice to deliver the pension promise to our two million members and we will continue to evolve our strategy as appropriate, looking to mitigate risk and take advantage of market dislocation.

My commitment to you is to be open and transparent on what's going on in our portfolio and across our team. And my goal is to better understand where we can improve our engagement and transparency with the Board overall to further strengthen our partnership.

And we do have a full agenda today. After the consent items, we'll have a couple action items for your consideration. First will be -- first will be the strategic asset allocations of the supplemental income plans. Then you will see a second reading, revisions to some of our Investment policies. We'll take a deeper dive into market dynamics and portfolio implications to set the stage. And then I will share observations from the first 70-day listening tour.

So with that, I conclude my first Executive report. Thank you very much for the opportunity.

CHAIRPERSON MILLER: Thank you.

I don't seem to have any questions from the Board, so we'll -- it bring us to our action consent items, 3a and 3b, Investment Committee timed agenda and open session meeting minutes. What's the pleasure of the Committee?

COMMITTEE MEMBER PACHECO: (Hand raised.)
CHAIRPERSON MILLER: Moved by Mr. Pacheco.
VICE CHAIRPERSON FECKNER: Second.
CHAIRPERSON MILLER: Second by Mr. Feckner.
So I'll call for the question.
All in favor?
(Ayes.)
CHAIRPERSON MILLER: No nays. No abstentions.
Motion carries.
That moves us to our information consent items. I don't see any requests to pull anything.
So hearing none, we move to action agenda items.
And we'll start with our asset liability management of our affiliate funds and supplemental income plans. So, Mr. Gunn and Ms. Reese are coming up.
Dan
DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Thank you, Mr. Chair. So as you say, this is an action item. It supports the strategic asset allocation for the supplemental income plans and Christine Reese will be presenting this item. So with that, I'll turn it over to Christine.
(Thereupon a slide presentation.)
INVESTMENT DIRECTOR REESE: Good morning, Mr. Chair and members of the Committee. Christine Reese,

CalPERS team member. Before I get started with the presentation, I want to just take a moment and thank all of my colleagues who have worked on this initiative. It is -- it was a very large team of colleagues, both internally to CalPERS and externally that have worked on this to bring this forward to recommendation.

And do you have that clicker?

Okay. So I'll just talk --

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INVESTMENT DIRECTOR REESE: The supplemental income plans, which are defined contribution savings vehicles for individuals has a suite of age-based target date funds. This action agenda item is a strategic asset allocation review and recommendation for those target date funds -- for the target day fund glide path. Excuse me.

The glide path sets the allocation and derisking path for the 11 target date funds we have in the program. The analysis and review were developed in partnership with RVK, a consultant with expertise in defined contribution plans, and glide path analysis and design. And the primary objective of analyzing the glide path is to select an asset allocation that minimizes income shortfall in retirement and maximizes income replacement while trying to minimize costs.

Can we go to the next page, please.

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INVESTMENT DIRECTOR REESE: Thank you.

The current glide path gets close to this objectives -- this objective, but a few changes are recommended to incrementally improve the estimated retirement outcomes.

So the presentation has three sections. I will begin with a structural and investment overview the supplemental income plans, which I will refer to as the SIP. Then I will review the general design and benefits of a glide path. And lastly, I will review the SIP's current glide path and the strategic asset allocation recommendation.

So if we could move to slide 4.

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INVESTMENT DIRECTOR REESE: Thank you. So the SIP has two plans within it. The first is the Public Employees Deferred Compensation Fund, which is a 457 Plan. This plan has two options, a pre-tax retirement savings, or for employers who sign up, it has an after-tax savings which is a Roth program. This plan has over 800 employers and more than 32,000 participants and is above 2 million in assets.

The Supplemental Contributions Program, which is the second one in the SIP is an after-tax retirement savings with earnings tax deferred, which is a little bit different than a Roth, where earnings are tax free, so it's a slightly different type of program. It's open to different kinds of participants as well. This program has more than 6,000 participants and about 125 million in assets.

At the bottom of this graphic, it shows the supplemental plan income funds. And every participant across both of these plans can invest in the investment fund lineup, which comprise target date funds, core funds, and a self-managed account, which I will explain further on the next page.

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INVESTMENT DIRECTOR REESE: So within the investment fund lineup, we have the three categories. The lineup is intended to provide options for participants based on how involved they would like to be and how comfortable they are managing their own asset allocation and diversification. The 11 target date funds offered are age-based funds wherein the asset allocation is set, rebalances quarterly, and derisked over time by CalPERS.

The six core funds that are available are broad market funds that participants can select to manage their own allocation. And lastly, there's a self-managed account, which is a brokerage window that offers mutual funds and certificates of deposit. Participants can select this option if they would like to have investments beyond what is available in our investment lineup.

Can we move to the next slide, please.

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INVESTMENT DIRECTOR REESE: Thank you.

When we look at how participants invest in the lineup, we see that almost 70 percent of participants are 100 percent invested in the target date funds. And the target date funds currently represent 75 percent of current contributions, and 54 percent of overall balances. This is up from 2018 when the target date fund contributions were 67 represent and represented 46 percent of balances.

So for the core funds, while contributions and percentages of balances are decreasing, they still have a role to play for participants that, as stated earlier, may want to manage their asset allocation or as supplemental investments if somebody is in a target date fund and they would like to have an additional allocation to one or more funds, core funds, they can do that.

The self-managed account has typically seen a usage of about two percent. And that has remained constant and is in line with industry averages.

So next, we'll talk about the glide path design on the next slide.

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INVESTMENT DIRECTOR REESE: Thank you.

So this chart shows two glide paths and I'll spend a moment just walking through the graphic. Okay. So the chart shows two glide paths. On the vertical axis, we show the percentage of risky assets in the allocation. And across the horizontal axis, we have the years two -- the number of years before and after retirement.

The retirement date is indicated by the dashed line. So for each of these sample glide paths, there are three sections. On the left is the plateau, which is a high allocation to riskier assets, which stays constant over time. The second section is the derisking part of the glide path, which brings down that allocation to riskier assets over time. And then the third part is the landing phase, which is where the glide path lands. And at that point, the allocation has no further changes.

So these two glide paths, the one -- the top glide path is the glide through, and what that means is that the derisking doesn't stop at the retirement date. It actually goes through into retirement and continues to derisk, which means that at retirement it's a bit riskier than the bottom glide path, which is considered a to glide path. So the to glide paths ends exactly at retirement and is much lower risk at that point.

The SIP Program has a through glide path, and that's supported by both participant demographics as well as kind of industry information that participants are not taking distributions until later in their retirement. So they -- they're not taking distributions immediately after retirement. And we'll get a little bit more into the distribution analysis further in the presentation.

Okay. On the next page --

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INVESTMENT DIRECTOR REESE: -- we show the benefits of a glide path, which in summary is that participants have a professionally managed asset allocation throughout their career. And the funds in which we have in the program are each -- each individual fund is diversified in and of itself, in that they're very broad market funds. And the diversification, the risk-adjusted allocation are all very beneficial to participants. And we've seen -- as we've seen, there's been a large take-up in the -- in the target date funds as well. So -- so our participants are seeing value there as well.

If we move to the next page --

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INVESTMENT DIRECTOR REESE: -- we'll just go through the process of building the glide path, which includes on the left projecting the balance accumulation. So this part involves taking a look at our capital market assumptions, which for this analysis are the same as we used for the Public Employee Retirement Fund and all of the other affiliate fund.

And then looking at plan demographics, so we actually provide to RVK a detailed data -- detailed data about our participants in our program. And that information is sourced both from CalPERS in terms of salary, pension, formulas, et cetera, as well as from our third-party administrator, Voya who supplies information about distribution patterns of our participants, how many people remain in the program after retirement and those types of data.

So after the balance accumulation is projected, the next part is to project the income adequacy. And that is based on two types of demographics, some are U.S. -- three types actually, some are U.S. demographics and California demographics for the income replacement goal, and household life expectancies. And then plan demographics, we can see -- we can see whether individuals have Social Security or not, and as well as the pension, as well as annual plan distributions, which we supply as well.

The third component is to take all of that information, run it through the optimization program process repeating 7,000 times and ranking the asset allocations. So the objective of that optimization is to minimize the shortfall risk while maximizing income in retirement. And then through this entire process, there's -- you know, it's a feedback loop as we go through this process with RVK.

So next, we'll review the SIP glide path design and recommendations.

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INVESTMENT DIRECTOR REESE: So we're moving on from generic glide path description to our actual -- our actual analysis of our glide path and then the recommendation. So when we look at this slide, this shows the demographic inputs and assumptions that went into the study. The projection period if you -- if we had a full career person is estimated to start at age 21 and end at 62.

So we do see participants in our program in the 21 -- age 21 cohort. And age 62 is aligned with retirement -- the two percent at 62 formula, which the majority of our participants in the SIP have. Now, there are other pension formulas and they are more beneficial than the two percent at 62. So this is a conservative way to approach the analysis.

The assumption is two members, two-member households. And the annual contribution rates being 1.9 to 3.2 percent. The 1.9 percent is what we see for the younger aged cohorts, and 3.2 percent on average for the older -- the older folks getting closer to retirement.

And the income replacement goal is 83 percent of pre-retirement income would be needed to support that person in retirement similarly to pre-retirement.

And we've again assumed the pension formula two percent at 62 and we've assumed no Social Security coverage. Now, some people in the plan do have Social Security coverage but the majority do not. And so we didn't want to overestimate that for the participants that don't have access to it.

So on the next page --

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INVESTMENT DIRECTOR REESE: Actually, the next couple of pages go through the distribution analysis. One looks at participants that are greater than 60 years of age and then the second page looks at distribution analysis across the age cohorts. I'm not going to go through this in detail, but we went through this distribution analysis to show -- really to get a feeling of when participants are taking distributions? Are they taking distributions as soon as they retire or are they waiting. And what we find is that they're waiting. And so the through glide path is supportive of that withdrawal behavior in terms of they can -- they still have time to derisk till that seven years after retirement.

Okay. Moving on to what our glide looks like.

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INVESTMENT DIRECTOR REESE: Just a moment. Okay. The -- the top part of the chart shows the four asset classes. And then along the -- it shows the allocation on the vertical axis and on the horizontal axis, it shows the target -- each of the target date funds. So you have 2065 on the right -- I'm sorry left, and then the income fund on the right.

As you can see, the allocation has a higher allocation to risk assets, which is the blue for global equity tea. And it maintains those asset allocations in the plateau period up until the 2040 fund. At the 2040 fund, about 20 years away from retirement, the glide path starts derisking and bringing the equity allocation down and replacing it with fixed income, as well as some cash and real assets.

As we get to retirement, which is -- we get to the landing point, sorry, the allocation to global equities is at a 32 percent level with fixed income at 55.

And those remain constant throughout the rest of the person's retirement.

All right. If we look at the results --

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INVESTMENT DIRECTOR REESE: -- of the recommended glide path for what we would consider a median participant, the -- all of the -- I should -- I'm sorry, not all -- most of the indicators are improved. The return is lightly improved and the expected volatility goes up slightly as well. So that's the one spot that didn't -- that doesn't show an improvement. The ending balance for the full career person is still in this kind of same 281,000 range. It didn't change much, but did improve.

And I would just like to call out here that this is for someone hypothetically that starts with the program at age 21, retires at 62. So our current demographics we look at as well. And what we're seeing is we have approximately about a 22 year public employment career. And so Social Security is assumed for the first portion of the person's career and then not for the second part.

And then the ending balance for the full career person is more like 45,000. And the SIP replacement that -- replacement of income that the SIP represents is about 6.6 percent.

So with this glide path, the replacement income is 70.9 percent, so slightly improved, but not getting to that 83 percent. Additionally -- sorry, there's two 83s. The 83 is the replacement rate. There is also an 83 percent chance that an individual participant will completely drawdown their SIP balances in retirement. And the years before drawdown are 11. And that's improved from 10 the last time we did the analysis.

The next number is 3.2 percent, and that is that if participants additionally contributed 3.2 percent above what they already are contributing, they could bring down that 83 percent chance of shortfall down to 50 percent. So savings is obviously a big component of all of these plans.

On the next page --

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INVESTMENT DIRECTOR REESE: -- we just look at the actual shifts. And I'm going to focus on the bottom table. And as you can see, the actual asset allocation shift across all of the asset classes and funds ranges from a two percent shift to a five percent shift. So really just some improvements around the edges. And what that says is that our current glide path is -- is a pretty good match, but these improvements in the -- in the asset allocation will improve it incrementally.

I would also like to point out that the 2065 fund on the left is not opened yet. We will be opening it as part of this implementation. That's why it says no shift. And then on the right, the 2015 fund, which is in 2022, seven years past the retirement date, has now landed at its final allocation. And those participants will be moved into the income fund, which has the same allocation. So the 2015 fund will close, the 2065 fund will open, and we will remain with the 11 funds.

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INVESTMENT DIRECTOR REESE: So that brings us to the recommendation, which is to adopt the updated glide path for the supplemental income plans. And if adopted, we would move into implementation. We've already started some planning, but we'll continue our planning. We'll actually work with the program team to launch an employer and participant communication campaign to let them know about the changes.

We'll be updating the Investment Policy and -- as well as all of our reports internally that reflect the glide path and asset allocation. As I mentioned, we'll be sunsetting the 2015 fund and opening the 2065. And the effective date for all of this will be October 1st of this year.

So that concludes my presentation and I'm happy to take any questions.

CHAIRPERSON MILLER: Okay. Thank you.

I'm not seeing any requests to speak, but that could be operator error on my part, so I'm going to check with my colleagues and see -- okay, Mr. Rubalcava.

Okay. Let me hit the button and see if this will...

There it is. Okay. There we go. Got you on.

Oh, there you go.

COMMITTEE MEMBER RUBALCAVA: Thank you.

I didn't think I was going to be the only one with questions, so I figured I might as well -- I wanted to thank -- thank you, Christine. I want to compliment you on the good work. And I saw the -- the consultant letter also supports the recommendation. I noticed -- my question coming in and reading -- anyway, you addressed it, which is -- on slides 10 and 12 that in the -- in determining the income replacement, you do look into Social Security and their CalPERS pension, so that's very --

INVESTMENT DIRECTOR REESE: Exactly. We wanted to take --

COMMITTEE MEMBER RUBALCAVA: -- admirable.

INVESTMENT DIRECTOR REESE: -- a conservative approach.

COMMITTEE MEMBER RUBALCAVA: So that's good. So I want to thank you for that.

INVESTMENT DIRECTOR REESE: You're welcome.

COMMITTEE MEMBER RUBALCAVA: Mr. Miller, if there's no other questions, I would move to approve the recommendations.

CHAIRPERSON MILLER: Yeah. Well, again, before we go to that, I just want to thank you for the presentation. The fact that it was so understandable, clear, it covered, everything I mean, great work by you and the team, and appreciate it. And at this point, I'll entertain a motion. I think Mr. Rubalcava made the motion.

COMMITTEE MEMBER PACHECO: Hand.

COMMITTEE MEMBER TAYLOR: Second.

CHAIRPERSON MILLER: Question, Mr. Pacheco. Let's cover your question first.

COMMITTEE MEMBER PACHECO: Thank you very much for the presentation. Yes, the presentation was excellent. I really enjoyed it. I just wanted to ask about the communication aspect with the employers and the participants, so after October 1st, will we -- we'll be setting up a circular letter, is that -- is that how we'll communicate it or is it going to be communicated in other -- in other forms?

INVESTMENT DIRECTOR REESE: Yes, other forms and earlier. So we will actually start the communication campaign in advance of the actual shift.

COMMITTEE MEMBER PACHECO: Um-hmm.

INVESTMENT DIRECTOR REESE: And we will be working with our third-party administrator Voya, who handles the participant communication campaign. And we send out kind of the -- the official kind of brochures that have all of that information. And then our program team will be working with the employers. I'm not exactly sure. It's more than a circular letter. I think we definitely kind of target the employers that are in the program, but that's not to say there won't be a circular letter at some point, but we would definitely do something in addition to that.

COMMITTEE MEMBER PACHECO: Would we also, in addition to that, be presenting this information at the Employer Forum, I believe, is CalPERS Employer -- in November as well?

INVESTMENT DIRECTOR REESE: I'm not certain, but I can check with the program team and make that suggestion

COMMITTEE MEMBER PACHECO: Very good. Thank you.

INVESTMENT DIRECTOR REESE: You're welcome.

CHAIRPERSON MILLER: Okay. I also want to check and see if we have any requests to speak from the public on this item.

COMMITTEE SECRETARY ORTEGA: (Shakes head.)

CHAIRPERSON MILLER: Okay. With that, I've got a motion and I've got a second from Ms. Taylor. And so with that, if there's not further discussion, I'll call for the question.

Is this an electric vote or --

VICE CHAIRPERSON FECKNER: It's a voice.

CHAIRPERSON MILLER: Voice vote. Okay. So all in favor of the motion to accept the recommendations and move forward?

(Ayes.)

CHAIRPERSON MILLER: No nays?

No abstentions.

The motion passes. Thank you very much. Appreciate it.

INVESTMENT DIRECTOR REESE: Thank you.

CHAIRPERSON MILLER: And with that, we come to action Item 5b, revisions to the Total Fund Policy and Global Fixed Income Policy. This is a second reading. And Dan.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Thank you, Mr. Chair and thanks to Christine and the team.

So next, as you say, we have our second action item of the day. Amy Deming will be walking us through our second read of the policy update reflecting the new strategic asset allocation for the PERF. This will look exactly like what was expected and directed coming out of the March meeting. But rather than steal any of Amy's thunder. I will turn it to her and let her walk us through the item

CHAIRPERSON MILLER: Okay. Thank you.

(Thereupon a slide presentation.)

INVESTMENT DIRECTOR DEMING: Thanks, Dan.

Amy Deming, CalPERS team member. I'm pleased to be here this morning.

So we're seeking approval from the Investment Committee regarding the proposed revisions to policy that came out of the November Board-approved Strategic Asset Allocation. These are the changes to the Total Fund and Fixed Income Policies that we think we need in order to carry out the strategic asset allocation.

And first read was in March. We've incorporated your feedback and we're here for the second read today.

There you go.

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INVESTMENT DIRECTOR DEMING: Just as a reminder, in November, the proposed changes to the policy are coming out of the November strategic asset allocation, and that includes the addition of private debt as a new asset class. Private equity and real assets have been increased in allocation. We've introduced strategic leverage and we've adjusted the public market exposures commensurately.

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INVESTMENT DIRECTOR DEMING: Just to reorient everybody from March. We had two key areas of Total Fund Policy changes. The first was the -- with respect to asset allocation, the second was with respect to investment leverage. All of this is unchanged from March. So not -- not much to -- not much to be too worried about there.

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INVESTMENT DIRECTOR DEMING: With respect to the program area policy changes, again, largely unchanged. Global fixed income all the same from March. Private debt, there was an area of board direction the last bullet point on the page, which we have taken the Committee's feedback and incorporated.

And that leads me to my -- to my next area.

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INVESTMENT DIRECTOR DEMING: The two areas of board direction from March. We've incorporated these two areas. The first being a consolidation of the stand-alone asset class policies into the Total Fund Policy. So what you would expect to see here is no content change, removed redundancies. I think, you know, table of contents, glossary, but all unchanged and melded into one Total Fund Policy that's hopefully easier to read for everybody and less complicated.

The second area of Board direction that we took your feedback on was with respect to the private debt program. We worked with Wilshire. We've narrowed the strategy ranges and targets, and incorporated the appropriate level of diversification for the strategy going forward as we grow.

With that being said, I think I'm happy to hear your questions.

CHAIRPERSON MILLER: Okay. I'm looking and seeing no request -- oh, there we do. Controller Yee.

Let me try it again. One more time. Third is a charm. There we go.

COMMITTEE MEMBER YEE: Okay. Thank you. Thank you very much for the presentation and bring this back. My question really relates to the area of -- regarding the prudent person opinion and the guidelines around those. Are those going to be brought back at some point?

CHIEF EXECUTIVE OFFICER FROST: (Nods head.)

COMMITTEE MEMBER YEE: Yeah. And then just kind of what the current thinking is around those relative to whether the policy will align with the prudent person opinions in private equity.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: So, yes, the plan is for those to come back in September --

COMMITTEE MEMBER YEE: September. Okay.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: -- as a first read and then it would be November for a second read.

COMMITTEE MEMBER YEE: Okay.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Along the way getting your feedback to make sure that we've -- that we strike that right balance of enabling the strategic asset allocation, while also maintaining proper governance.

COMMITTEE MEMBER YEE: Yeah. Okay. So that's the September time frame.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: September and November -- September 1st read.

COMMITTEE MEMBER YEE: Okay. Good. Thank you. Thank you, Mr. Chair.

CHAIRPERSON MILLER: Okay. I have no other requests to speak from Board members.

So I -- I -- it's an action item, so --

COMMITTEE MEMBER TAYLOR: Move approval.

CHAIRPERSON MILLER: Okay. Moved by Taylor.

COMMITTEE MEMBER PACHECO: (Hand raised.)

CHAIRPERSON MILLER: And I have a second by Mr. Pacheco. And I believe we have a public comment on this before we conclude discussion and take a vote. So I would call Mr. Jelincic down to the microphone. And I believe we'll have a clock set up. And, Mr. Jelincic, I believe you'll have what two minutes. And we'll start the clock once you get settled in and begin to speak.

Okay. You have the floor, sir.

MR. JELINCIC: J.J. Jelincic, beneficiary. This policy is clearly within the Board's authority. Whether it is consistent with the Board's fiduciary duty is an open question.

Increasing the risk in this environment is not something I would recommend. I would point out reducing the exposure to factor weighted investing and the private -- or in the public equity, that is a program that tends to do best in volatile markets. In case you haven't noticed we're in one. And I would suggest that you really give some more thought to whether to do that.

The Investment Belief says you will take risk only when you are paid for it. Even the industry does not claim that private equity is a high returning risk-adjusted asset. Just think how valuable Tesla would be and how much money we would have made if Elon Musk could unilaterally define what the value is. And yet, that's exactly what you deal with in private equity.

Increase -- and I will again point out that when you go into private debt, you are saying we will make loans to people that can't borrow from banks and can't borrow in the public market. In many ways, you're doubling down on private equity, because they are the big users of private at this point. So I really ask the Board to think about whether this policy and this increased risk is the appropriate action to take for the beneficiaries.

Thank you.

CHAIRPERSON MILLER: Thank you for your comments.

I don't believe we have any other public commenters. We have a motion on the floor and a second, so I'll call for the question. This is a voice vote. So all in favor?

(Ayes.)

CHAIRPERSON MILLER: No nays.

No abstentions.

The motion carries.

And thank you for the presentation. Again, well done. Thank you to the team. I know there's been a lot of hard work that's gone into this. And it definitely shows in the product that you bring to us.

Thank you.

INVESTMENT DIRECTOR DEMING: Thank you.

CHAIRPERSON MILLER: So this brings us to our information agenda items, which we've all been looking forward to, starting with a presentation on market dynamics and portfolio implications.

Dan.

(Thereupon a slide presentation.)

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Thank you, Mr. Chair. And as you say, we move on to our information items, but we're going to go through current market conditions really just to help the Board with their oversight responsibilities. We'll go through what's going on in the economy, what's going on in markets, and then of course what's going on with the portfolio.

We're going to start with an economic update from Jake Tuttle. And I'll ask the team to go ahead and join me, please. We'll start with an economic update from Jake Tuttle. He's filling in for Lauren Rosborough Watt who you'll see on the agenda, who is at home caring for sick children. From there, we move on to Michael Krimm, who will discuss the overall portfolio positioning and effects, and then we turn to Simiso Nzima, Lou Zahorak, and Sarah Corr, who will provide and update on what's going on in the global equity portfolio, the global fixed income portfolio, and then across the private assets, where Sarah will conclude for us.

So with that, I will turn it over to Jake to lead us off on economics.

Jake, over to you.

INVESTMENT OFFICER TUTTLE: All right. Jake Tuttle, Investment Office.

We cab go to I think it's slide 3.

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INVESTMENT OFFICER TUTTLE: Perfect. Good morning, everyone. It's my pleasure to speak with you today and my sincerest thanks to Lauren for helping me kind of get prepped and everything for this morning. So I'd like to start with a brief look back to establish where we're coming from and what we -- what was talked about when Lauren last spoke with the Committee.

Globally, the post-pandemic economic recovery was well under way by the second half of 2021. The U.S. economy, as measured by real GDP, had exceeded its pre-pandemic level, and most countries globally were rebounding strongly.

As we've noticed in the past, the pandemic recession was unusual in that both the demand and supply sides of the economy had declined. Typically, it's more on the demand side. And what we've seen in the subsequent rebound was imbalanced as well.

Case in point, the U.S. economy experienced about three -- two and a half million excess retirees and other workers choosing not to participate in the labor market, which has restricted the supply of labor, a pivot away from demand for services such as travel and restaurants to goods such as automobiles and other consumer durables led to excess capacity in some areas and constraints in others.

And third supply chain blockages as the global economy reopened at varying paces. This continues to be an issue most recently observed following the COVID related lockdowns in China. So there's a lot that's been driving both supply and demand. Typically, we might show a chart of real GDP or the output gap, but -- and the output gap we define as the excess demand or slack in the economy to indicate where the U.S. economy sits today.

However, it's difficult to get a good sense of the size of the supply-kind -- supply-side constraints in real time from a macro or aggregate perspective. And relative prices are moving relatively quickly.

So another way to show the strong in the economy is to look at nominal GDP, which is the total size of the economy measured at current prices and this is the chart that we have on the left-hand side. What you can see is that nominal GDP is above its pre-pandemic trend and this hasn't markedly slowed in recent quarters.

Now, what's changed? The macroeconomic data haven't materially changed the global economic story since the end of 2021. Slowing growth as the global economy normalizes, tightening policy from monetary and fiscal authorities, and geopolitical uncertainties. A number of factors have, however, changed in intensity and importantly expectations have changed as well.

There has been heightened economic uncertainty around the range of future outcomes and the path by which the U.S. and the global economy gets there. For instance, this type of inflation and growth shock hasn't occurred in a generation. What was once considered transitory inflation by the fed and many analysts is now no longer so. Economists are forecasting core inflation pressure to remain above the Fed's target headline inflation rate well into 2030. The size of the fiscal and monetary stimulus are also unprecedented. And the lack of historical context has increased uncertainty around the outlook, which in turn has weighed on sentiment.

The chart on the right-hand side of this slide shows a range of a number of financial condition indices or FCIs. These composite indices illustrate how tight or easy asset prices and interests rates are in the economy. You can see that recently the range has lifted or tightened, but still remains below its historical average.

In other words, conditions till remain easier or relatively loose.

Of course, as we know, 2022 has seen a significant external shock, that being the Russia-Ukraine conflict. The human toll is devastating, the conflict itself displaced peoples, and the impact on food security for millions of others. A notable implication on prices is centered on food, oil, metals, and gas. These commodity prices were already rising in the post-COVID recovery.

Some of the curtailment, such as fertilizer and food production and distribution will have a long tail with the UN noting that the food crisis will last for years. Consequently, there's increasing uncertainty and waning business confidences -- confidence as firms adjust to rapidly changing relative prices. The implications are material and global.

If we move to the next slide --

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INVESTMENT OFFICER TUTTLE: -- the chart on the left shows the IMF World Economic Outlook's latest update. You can see its forecast for real GDP in the top panel and headline inflation, or CPI, on the bottom panel. The IMF's global growth forecast for 2022 have fallen by 0.8 percentage points since January and 1.3 percentage points since October. Globally, the impact of the conflict is disparate with the U.S. Less directly affected and other countries, especially in Eastern Europe, more directly and severely impacted

In terms of inflation, the IMF has significantly revised these estimates higher, as well as market participants, partially a result of the elevated commodity prices I noted earlier. Global monetary policy is also adding elevated uncertainty. We've see that via the repricing of forward interest rate expectations. In December 2021, just six months ago, market participants anticipated a relatively benign rate -- rate hike path, both in the U.S. and abroad.

Since that time, expectations have adjusted significantly higher, now seeing the federal fund's rate above three percent by then end of the year. Federal Reserve speakers and Chairman Powell have made it clear that the market tightening of short rates and financial conditions, which you saw a version of on the prior slide, is not enough to slow demand nor is the curtailment of supply to ensure inflation eases back.

Last week, the BLS reported the U.S. inflation for May was at a 41-year peak of 8.6 percent year on year, highlighting the challenge at hand. Global central banks are also tightening policy in an effort to curb inflation, and so we see this global theme has emerged.

Rising prices means money in your wallet doesn't go as far, and paired with tightening policy, this tends to slow economic activity. So looking ahead at economic growth in the U.S., which economists had already anticipated would slow towards its long-run average, has risk tied to the downside.

To summarize, recent global events have front-loaded the inflationary impact on the global and U.S. economies. Growth expectations have consequently rerated lower and geopolitics has hastened a reassessment of risk. I'll pass it on now to my colleagues to discuss what that means for the portfolio.

INVESTMENT DIRECTOR KRIMM: Thank you, Jake. Michael Krimm, CalPERS staff.

I'm going to speak about the total portfolio and I'm going to focus my comments on how we think about risk in the portfolio. So if we could go to --

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INVESTMENT DIRECTOR KRIMM: Yeah.

So I'm going to -- the way I want to approach this is I'm going to share with you a couple of different visual perspectives over the next couple pages that look at portfolio risk from different angles.

On this page, we look at recent market experience relative to expectations. This straight orange lines and the gray cones on each chart represent the expected returns and the uncertainty in those returns based on the capital market assumptions we set during our last ALM process starting in June of 2018. The blue lines represent the actual realized performance of our assets relative to those expectations.

The overall interpretation is that despite the recent drawdown, we are still roughly in the range of expectations we would anticipate for various assets and for the PERF as a whole. Of course, we will continue to monitor and update this perspective.

And one comment I would add is that you've heard about the fact that the Environment we are in is unprecedented and I agree with that. The interesting thing about this perspective is that just in a quantitative sense in terms of the magnitude of the outcomes, we are still within a range of expectations.

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INVESTMENT DIRECTOR KRIMM: On this page, we're going to ill -- we're illustrating the primary risk factor of the PERF, which is the risk of the equity market. Rather than showing you a quantitative model to make this point, what we've done here is simply plotted the historical rolling one-year returns of the PERF relative to equities for the last 20 years. The inside blue line is the PERF and the outside gray line is the equity market. Two observations jump out.

First, PERF returns are unambiguously tied to the equity market. Simply put, in general, in years when stocks are up, the PERF performed well and when stocks were down, the PERF performed poorly. This relationship exists both because equities are just simply a large component of our asset allocation, and because even many of our non-equity assets share growth-related risk characteristics with the equity market.

However, the second observation on this chart is a little more positive, which is that the PERF is not as volatile as equities. And that is both because we have a lower overall risk posture and because we don't hold only equities, in other words we have some diversification.

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INVESTMENT DIRECTOR KRIMM: This next chart takes a slightly different angle on illustrating risk. What we're showing you here is a historical simulation of our current asset allocation back almost 100 years, and that's the blue line. Alongside it, you have the performance of the equity market, which is the orange line. In this case, we're showing you drawdowns, in other words, any time the value of the return series falls below its peak.

In contrast to a simple quantitative risk metric like volatility, this way of visualizing risk gives you a more frankly visceral way to get a sense of the pain a portfolio like ours could have experienced through the histories of the markets.

On the far right is the current drawdown that we've experienced this year. And you kind of have to squint a little bit to see it, but we are down, I think as Nicole pointed out in her opening comments, about 10 percent from the peak value of the PERF. And the equity market, since we've printed this, is down probably around 20 percent. And you can't really see that on the orange line there.

In this context, you can see that drawdowns like the one that we're currently in unfortunately do happen repeatedly in the history of markets and things could actually still get worst. And further, some of the drawdowns can last relatively long years even. We're just pointing this out to share that this is the risk profile that we are accepting to achieve our return outcomes.

Now, on the positive side, markets have also consistently recovered from these drawdowns. And the line that we're not showing you, because this chart is supposed to focus on risk, but the line that we're not showing you is the overall positive upward slope in the returns of both the markets and our simulated portfolio that we would have exhibited for this period. And that upward slope of course is the basis for our positive long-term return expectations.

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INVESTMENT DIRECTOR KRIMM: So that's a little background on kind of market history and market action. And now, I want to turn to our portfolio. To start, we're going to -- I'm showing you here the strategic asset allocation. And I think of our strategic asset allocation as our long-term plan. In November, the Investment Committee adopted a new strategic allocation, and that's what we're showing here. The new allocation increased weight to our existing private assets. It introduced private debt and emerging market sovereign bond asset classes, and it introduced leverage as a deliberate tool of strategic allocation.

Given the current environment and all the changes we've experienced in the economy and the markets since November, one could ask whether this long-term plan is still appropriate. We believe it is. In terms of risk management, one of the most effective tools we have is diversification. And one trade that all the recent changes to the allocation have in common is that they support our return objectives while helping reduce our reliance on public equities as our primary return engine.

Our private assets take advantage of our liquidity and long investment horizon to offer either higher returns than equities and/or to provide a diversifying risk profile while still achieving a relatively high return. Think, for example, about the attractiveness of real assets in an inflationary environment. Our varies fixed income segments similarly diversify equities in many environments, though not all I would add, while still offering a return premium.

Our non-cap weighted equity segment adds a risk mitigation tilt to typical stock market returns. And our introduction of strategic leverage allowed the Committee to select a portfolio with two percent less weight in equities than the non-leveraged option with the same expected return.

Altogether, the new strategic allocation reduces weight in public equities by eight percent versus our prior strategic allocation, while achieving a 0.6 percent higher expected return. None of these changes fundamentally alter the risk relationships I showed you on the prior slides. Equity and growth risk will still dominate the portfolio, but all these changes move us in the right direction. Of course, achieving these benefits requires accepting the work and complexity that comes with implementing this kind of portfolio.

And so with that, we'll turn to some perspectives on how our portfolio is currently being managed.

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INVESTMENT DIRECTOR KRIMM: So there's three different perspectives here. I'm going to start at the top with the actionable tracking error. Recall that actionable tracking error, or TE, is best thought of as a measure of how different our public assets portfolios and our asset allocation is from our policy benchmark. More tracking error does not necessarily mean our portfolio is more risk than the benchmark, rather it means we are a greater degree of different.

The current level of TE of around 20 basis points relative to the budget of 100 basis points tells us that our portfolio is closely positioned relative to the policy benchmark. In other words, we are closely following the long-term plan with some slight divergences reflecting active strategies and opportunities we see, as well as the unavoidable frictions of managing a real portfolio versus a benchmark.

The other takeaway from this top chart is that we have excess capacity in our risk budget. That gives us leeway to add new strategies or take advantage of market dislocations that may arise in the current environment.

Next, let's look at the bottom chart, which is the current weight of our three private asset classes within the PERF. We show this exposure against the prior allocation range from the last ALM cycle, which is the two gray bars for Private equity and real assets. And we also show it against the new ranges adopted by the Committee in November, which is the blue bars.

The key thing from a risk management perspective to remember is that we cannot precisely target the weight in private assets. This is a slow moving process where stability and consistency in our deployment is an important success criteria, but the chart shows that we are on track to our new allocation targets and our progress here is due to a combination of steady work by our private asset teams over the last couple years, as well as due to the recent drawdown in the public markets, which reduces the denominator against which these weights are measured.

And finally, we're going to look at the middle section, which are liquidity metrics and we share these to provide a sense of our operational capability to maintain our strategies and take advantage of opportunities should we enter a stressed financial environment. We believe we have sufficient coverage against these metrics as well as other internal metrics that we continuously monitor.

And just as an illustration, during the early 2020 period, which was the acute phase of the COVID drawdown, we had a live test of some of the liquidity management tools that we've been developing over the past years. During this period, we were able to not weather the storm, but also lean into opportunities, both tactically and through maintaining consistent deployment into private markets. So that concludes my comments on the portfolio and risk.

Thank you.

Simiso.

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CHAIRPERSON MILLER: Okay. I don't see any requests to speak or ask questions, clarifying questions, or anything from the Committee. So thank you very much.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Thank you, Mr. Miller. Next we'll move on to some of the Asset classes. So we're going to let Simiso followed by Lou Zahorak, and then followed by Sarah Corr take us through those portions of the portfolio.

CHAIRPERSON MILLER: Okay. So we'll do questions at the very end all of them not between?

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yes.

CHAIRPERSON MILLER: Okay. So no questions, we're on to Simiso.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Thank yo.

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MANAGING INVESTMENT DIRECTOR NZIMA: Thank you, Dan. Good morning, Chair, and members of the Investment Committee. I hope you can hear me well.

Mark Twain is reportedly to have said history doesn't repeat itself, but it often rhymes. And I encourage you, as I go through the slide, to have that in the back of your mind, because it really illustrates what I'm going to talk about here.

So the graph that you see here, the white line represents the S&P 500, which is the largest 500 stocks in the United States by market capitalization, and the blue line represents the volatility index, which is known as VIX, also known as the Fear Index. So the volatility index tends to be stable and low when markets are calm, so in the mid-teens. And when markets are falling or when there's volatility, it spikes high.

I'm going to focus on three parts of this graph and then relate those to what the time period we are in right now. So the first part is the tech bubble. So from 2000 to 2002 where the S&P 500 fell 49 percent during the tech bubble, that fall took two and a half years. So it wasn't and instant fall. It happens over a period of two and a half years.

It took another four and a half years after the bottom of the market in 2002 for the market to recover to its 2000 level, so it wasn't until May 2007. And during that time, VIX also spiked to about 45 percent. Then we move over to the global financial crisis in 2007. Again, the market fell 57 percent. And this time it didn't take two and a half years for the market to fall, it took a year and a half. And it took another four years after the market bottomed in 2009 to recover to its pre-GFC crisis level. And VIX, during this time, spiked to 81 percent.

And then the third area of focus here is the COVID market crash in March 2020. And the market fell 34 percent and the market fell -- this happened within a month, so it wasn't -- you know, it wasn't one and half years, it wasn't two years, it was just within a period of one month. It took only five months from the bottom for the market to recover to its pre-COVID crash level, and VIX spiked to about 83 percent.

Now, if we're looking at the current drawdown, as of this morning, the market is down about 20, 21 percent from its high in Jan -- on January 3rd, 2022 and VIX is about 34 percent. So when you look at this, when you look at where we are relative to history, the drawdown level is still lower than what was seen in the past. The level of

VIX is still lower than that we've seen in the past.

What -- I want to leave you with sort of three messages that you can take from this slide. The first message is equity markets are volatile, but each period of volatility is not the same as the prior ones and often results from different causes. So going back to Mark Twain about history not repeating itself, but rhyming. So we've seen these moves before. This is not the first time. We've seen larger moves than this.

The second point I would make here is that we are long-term investors and should not panic just because of the short-term volatility in the market. We can't predict the duration of market dislocations or drawdowns, because that duration depends on the causes of the drawdowns as well as the policy responses to those drawdowns. The third and final point I would like you to take from this graph and this slide is that every time that the stock market has had massive drawdowns, it has recovered and gone on to reach new heights higher than the previous peaks reached before the drawdowns.

So those are the three messages I would like you to take from this slide.

Let's move on to the next -- to the next slide.

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MANAGING INVESTMENT DIRECTOR NZIMA: Now, looking at our portfolio, because the question you may have is so what? You've shown us the history. You've shown us that markets are volatile -- equity markets are volatile and we've seen this before.

The first thing I would say here is it is hard, if not impossible, to predict when markets are going to fall or when they're going to rise. So as a result, what we aim to do is to build a portfolio that is resilient during market drawdowns, but also that benefits when the market rises.

So Exhibit A for this is our factor-weighted segment. That segment is defensive in nature, and is actually built for periods like this. As of the end of May, relative to the cap-weighted segment, that segment has served us about $3 billion, in terms of -- you know, the performance relative to the cap-weighted. So it's doing what it's supposed to do, being defensive during these volatile markets.

The other point here is that diversification is the only free lunch in investments. Exist B for that is our portfolio is well diversified across geographies, across countries, regions, sectors, and investment strategies.

The third point here is that when you have market volatility, this is actually a favorable environment for active management and for generating alpha above the policy benchmark. Staff will pursue more active investment strategies to take advantage of market dislocations. When you have a lot of dispersion, when you have a lot of volatility, this actually presents a reach opportunity for active management.

That concludes my presentation and I'll hand over to -- to lou.

INVESTMENT DIRECTOR ZAHORAK: Good morning. Lou Zahorak, Investment Director, global fixed income. Today, I will give an update on the fixed income markets and our portfolio and I'd be happy to answer any questions you may have.

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INVESTMENT DIRECTOR ZAHORAK: Since the start of the calendar year, the fixed income market has experienced increased volatility in interest rates and credit spreads. So what's happened to cause this volatility?

I'm going to cite a few factors that Jack -- Jake had touched on earlier. COVID-related supply chain bottlenecks and shortages in parts and inventories has continue to affect many industries and has caused increased pricing pressures. We also have seen in the U.S. that we have a robust labor market, which has been constrained by a lack of labor supply, which has also increased pressure on wages. And as Jake noted, in February, the events in Ukraine unfolded. And as such, it's a sad human tragedy, but economically, the fixed income markets priced in the impacts of increased commodity prices on crude oil, grain, and fertilizer.

This higher inflation is seen by all of us at the gas pump and grocery stores. Last Friday's CPI print of 8.6 percent on an annual increase is the highest its been since last seen in the 1980s. This high inflation is requiring central banks around the world to increase interest rates to slow inflation in order to bring demand and growth lower.

One thing the Investment Office has become increasingly focused on is how the global world order may be changing. Russia's actions in Ukraine and the geopolitical concerns with the U.S. and China relationship has increased calls for de-globalization, which is bringing supply chains closer to the home, which on the margin would also be inflationary.

So looking forward, the world and fixed income markets may experience different risk factors than we've seen for the last 30 years, which may result in more inflation than disinflation.

So what does this mean for the fixed income markets? As you can see on this slide, treasury rates have risen for all maturities. I'd like to highlight that the rates on the screen are as of May 19th. Today, rates are even higher across the curve. The two-year treasury is up 60 basis points, while the 30 year treasury is up 30 basis points.

We know the federal reserve has started the process of raising interest rates to try to reduce consumer demand and lower GDP growth with the goal to lower inflation. Financial markets are expecting the federal reserve to raise the Fed's fund rate 50 basis points at this Wednesday's Federal Reserve meeting. And as of this morning, another 75 basis points at the July meeting. More increases in the Fed's fund -- Fed fund's rate are expected through the remainder of 2022 and 2023. So between now and February of '23, the expectations are that the Fed will raise the Federal fund's rate in total 275 basis points or 2.75 percent.

We're also seeing the impact in the credit markets with higher borrowing rates. You can see at the bottom of the slide credit spreads are higher since the start of the fiscal year and we're seeing higher credit spreads in both the Investment grade market, where companies like Apple borrow and in the high yield market. Corporate bonds like cor -- like stocks are negatively impacted by inflation. Inflation puts pressure on corporate operating costs and margins.

At some point, a corporation's ability to pass on higher prices to customers weakens, and their growth in revenue and earnings expectations fall short. The corporate bond market is starting to price in just these risks.

Next slide, please.

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INVESTMENT DIRECTOR ZAHORAK: So where does all this leave us now from a portfolio construction standpoint? Different points in an economic cycle provide different opportunities. In fixed income, when we analyze the upside and downside potential of an investment, the starting valuation matters. When valuations start to have better upside potential, that's when we make changes to our portfolio allocation.

Now, as an example, during the first quarter of 2020, right before COVID, we did not like the upside-downside outlook in the fixed income markets. Interest rates and credit spreads were low, so we were positioned close to index neutral. To be clear, we did not predict COVID. We just didn't feel like we were being compensated for market uncertainty at that time, so we had a neutral position portfolio.

However, following the COVID outbreak, fixed income markets cheapened substantially and the portfolio was repositioned and we produced in excess of three-quarters of a billion dollars in excess return for the total plan.

Fast forward to the beginning of this fiscal year. Once again, the upside-downside outlook was less appealing, and so the global fixed income portfolio was again repositioned to be close to index neutral. So my main takeaway is that the global fixed income portfolio is well positioned to take advantage of the improved upside-downside outlook and cheaper valuations we're seeing in the current markets in order to take advantage and to add excess returns to the total plan.

Thank you.

MANAGING INVESTMENT DIRECTOR CORR: Thank you. Sarah Corr, Investment Office staff.

2021 was an active year for fund raising in private markets.

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MANAGING INVESTMENT DIRECTOR CORR: A historic amount of $1.2 trillion was raised globally. This would imply that private markets are well-positioned to take advantage of market dislocations.

If you look at the chart on the right, while it represents a real -- a private real estate benchmark relative to a public REIT, the same could be said for private equity and private debt as well, that private markets are less volatile. This would imply that private markets won't fall as quickly as public markets, but they also might not recover as quickly.

Private markets also provide the benefit of diversifying from public equity risk, especially real assets and private debt. In raising rate environment, private debt should perform better as it is mostly floating rate.

Lastly, the real estate benchmark has provided income in every year since its inception. This hasn't always been true for the real estate portfolio. The current positioning of real assets portfolio focused on core income producing assets has maintained a three percent cash yield over the past five years including during 2020.

Next slide, please.

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MANAGING INVESTMENT DIRECTOR CORR: CalPERS' unfunded commitments across the private markets should be able to -- should allow CalPERS to take advantage of market dislocations. That said, it will be important for CalPERS to continue to actively commit to the private markets. Consistent deployment is key to long-term performance in private markets.

Turning to the real assets portfolio. Ninety percent of the portfolio is invested in core assets that are income producing and which make up more -- make them resilient than value-add and opportunistic. The focus on core investments with income production is consistent with the role of real assets.

We've already seen higher rates push out some of the more levered buyers. And CalPERS, as a long-term investor, can take advantage of this by buying all equity and take advantage of the dislocation.

I think we're now open for questions.

CHAIRPERSON MILLER: Okay. I have some questions here starting with Controller Yee.

COMMITTEE MEMBER YEE: Okay. Thank you, Mr. Chairman. Really appreciate the presentation. I just had a couple of questions and it -- I think, Simiso, you were addressing slide 11 with respect to some of the opportunity we have relative to the equity portfolio. Could you just elaborate a little bit more about what the differentiated approach is. That's a term I'm not familiar with.

MANAGING INVESTMENT DIRECTOR NZIMA: Yeah. Thank you, Controller Yee for the question. This was really about moving away from sort of the index approach. So what we're looking at here is that we're using sort of multifactorial strategies.

COMMITTEE MEMBER YEE: Um-hmm.

MANAGING INVESTMENT DIRECTOR NZIMA: We're using enhanced indexing, which looks at companies that have sort of stronger balance sheets and durable business models and so forth. And also, we're looking at active managers, sort of external managers that actually have return and risk profiles that are different from the managers that we currently have in our -- in our roster. So it's all those things sort of combined, but also leveraging the partnerships that we have outside of CalPERS. That's partnerships with external managers or others in terms of just looking for opportunities where we can add alpha.

COMMITTEE MEMBER YEE: Okay. Thank you for that. I may have misread it. I think it was -- I thought it was a different approach, but it's actually pursuant to the active management strategy, so --

MANAGING INVESTMENT DIRECTOR NZIMA: Yes.

COMMITTEE MEMBER YEE: -- we're utilizing all of the tools that we have there. Okay. Great.

I'm happy to hear that our fixed income portfolio is well positioned. This is very, very good news. And obviously very concerned about how persistent high inflation will be. So that was a really great report.

And then to Sarah, this is I think also kind of becoming the $64 million question. And that is as companies are pushing their return to office dates, are we expecting any negative impacts to our portfolio near term?

MANAGING INVESTMENT DIRECTOR CORR: I think it's too early to tell.

COMMITTEE MEMBER YEE: Yes.

MANAGING INVESTMENT DIRECTOR CORR: We're seeing occupancy is still quite high and tenants are paying their rents. But it will take rents -- or leases rolling off and seeing what the lease-up rates are like.

COMMITTEE MEMBER YEE: Okay. Good. Thank you. Thank you, Mr. Chair.

CHAIRPERSON MILLER: Okay. Thank you.

Next, we have Board President Taylor.

There it is. It's got a delay.

COMMITTEE MEMBER TAYLOR: Thank you. It does have a little bit of a delay.

So I have a bunch of questions. Sorry, guys. I want to start with this all looks great and I'm glad we've worked really hard to factor in volatilities and risk, so that we can, you know, sail our way through it hopefully. But I -- what I want to know is with the -- with this risk mitigation strategy, do -- what are our expectations in terms of how we're going to fair next to our peers? And that's more of a Dan question, I think.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah. That's a very complex question. One thing is that we have the factor-weighted equity, so we would expect our equity allocation to hold up better than our peers. However, we also have more fixed income than a lot of our peers. And frankly, you know, as Michael alluded to, usually fixed income serves as a diversifier to equity, and tends to zig when equity zags.

In this environment, in an inflationary environment, they're actually moving together. Now, the other parts of the diversification are helping. And I would say certainly the real assets part of the portfolio where some of our peers have REITs as part of their real estate exposure, we would expect our real estate to hold up better. However, some of our peers also have commodities in their real assets part of their portfolio and we don't, and commodities are performing quite well right now.

So that's a long way of saying we don't know. We -- you know, we -- we manage our portfolio for our liabilities and trying to -- you know, trying to pay benefits to our two million beneficiaries. Where we land relative to our peers will really have more to do with sort of their differential allocations to ours. And ours is set up for our utility function.

So, as I say, it's a complex question and we'll see where we land, but for us, I think it's being focused. And as Michael really said it right, we think our allocation is right for us and we continue to think that the allocation that this Board adopted in November is the right allocation for this portfolio.

COMMITTEE MEMBER TAYLOR: And I agree. I just also think that we -- we presupposed some sort of volatility, so we did factor in a little less return and a little more risk -- you know, less risk. I'm sorry, more return for less risk is -- I think is what we were hoping for.

Sorry, I got distracted.

So also I just want to make sure that we're focusing on the-long term sustainability, right? So there's a couple of factors that I think that kind of got touched on when we were talking about inflationary issues, workforce issues. We're not -- I want to make sure those long-term risk mitigation strategies like our workforce issues, right, our environmental issues are always present in everything that we do here and it's implemented through the market --

(Lights went off.)

COMMITTEE MEMBER TAYLOR: Is there a reason this is happening?

VICE CHAIRPERSON FECKNER: SMUD.

(Laughter.)

(Lights went on.)

CHAIRPERSON MILLER: We're good.

COMMITTEE MEMBER TAYLOR: It was automatically SMUD.

Okay. That it's being integrated throughout our portfolio. One of the things I wanted to mention, we talked about global volatility, right, and we're kind of focusing on Ukraine. But the fact that we have a democracy issue in this country with voter suppression and stuff I think it's very important that we stay aware of this.

(Lights went off.)

COMMITTEE MEMBER TAYLOR: And here we go again.

So those are some of the things I wanted to bring up --

(Lights went on.)

(Laughter.)

COMMITTEE MEMBER TAYLOR: -- and make sure that we are implementing these in our portfolios. I did have a couple of other. That was more of a statement, but --

(Lights went off.)

VICE CHAIRPERSON FECKNER: She's leaning on the lights.

COMMITTEE MEMBER TAYLOR: Oh, you're leaning on the lights.

(Laughter.)

(Lights went on.)

COMMITTEE MEMBER TAYLOR: I want to make sure I covered everything. I think those are all of my questions. If I have any more, I well let you know, but yeah, I think I covered all my questions here.

Thank you.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: I guess just really quickly before we move on to the next question. Yes, those are all topics that are on our radar, specific the resiliency and the sustainability. And actually, Nicole, in her presentation the next one will spend, you know, quite a bit of time talking about that in open and then we'll also talk further about that in closed, but this -- these are unequivocally on Nicole's specifically, but all of our radar.

COMMITTEE MEMBER TAYLOR: Great. Thank you.

CHAIRPERSON MILLER: Okay. Thank you. Next, we have Board Member Pacheco.

COMMITTEE MEMBER PACHECO: Thank you.

CHAIRPERSON MILLER: Let me try it again.

COMMITTEE MEMBER PACHECO: Yeah, there it is.

Thank you. Thank you, Dan. And thank you, team, for that wonderful presentation. I really enjoyed that awesome explanation of just everything on the portfolio and the economics. I have a question regarding the outcomes in the context of the expectation. I believe it is slide number five of page 15, in terms of the returns and the expected standard deviation. I noticed that it was within the one standard deviation. Is there any system that we have in place if it gets beyond let's say the one per -- one -- the one standard deviation to let's say the two standard deviations? Do we -- have we -- do we flag something or is there something there to identify, hey, we've got to -- we've got to address this again and reevaluate? I'm just curious what your thoughts are on that process?

INVESTMENT DIRECTOR KRIMM: So there's not a sort of mechanical system per se. But the reason we have these charts is so that we can monitor it constantly. I think -- remember that these expectations are based on a quantitative risk model, which is imperfect. So we have to take it -- you know, we have to use judgment when we're looking at it. But absolutely, when the -- you know, when the outcomes deviate from expectations, we will start squinting at it more and more closely as that -- you know, as that gets more extreme.

COMMITTEE MEMBER PACHECO: And our -- and our approach was that we were -- we were -- we want to be within the one standard deviation, is that -- is that our -- is that our ideal or is there even -- even better than that?

INVESTMENT DIRECTOR KRIMM: I would say our goal is to follow the straight orange line up, right?

COMMITTEE MEMBER PACHECO: Right. Right.

INVESTMENT DIRECTOR KRIMM: We know that's not possible.

COMMITTEE MEMBER PACHECO: Um-hmm.

INVESTMENT DIRECTOR KRIMM: One standard deviation implies roughly 70 percent, a little less --

COMMITTEE MEMBER PACHECO: Um-hmm.

INVESTMENT DIRECTOR KRIMM: -- range of expected outcomes. Two standard deviations implies 95 percent. So I would say if we are within one standard deviation, we are reasonable happy, and -- but again, it's -- it is a probability thing, so...

COMMITTEE MEMBER PACHECO: Right. And that's -- and since we are in a very volatile environment right now, obviously it is -- it is -- it's that way right now. But thank you very much. That explains it very well.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah. And I would just say what Michael said by saying it another way, by 70 percent within one standard deviation, that means that 30 percent of the time, we would expect to be outside of one standard deviation. And even at two standard deviations, at 95 percent, we would still say that one out of every 20 years, we expect to be outside of even two standard deviations, so --

COMMITTEE MEMBER PACHECO: And that's expected. I mean, that's just probably --

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Exactly.

COMMITTEE MEMBER PACHECO: It's just statistically that's what -- how we would land over time.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Correct.

COMMITTEE MEMBER PACHECO: I mean, there --

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: And that's the reason that we -- that we will watch these and make sure that we're -- that the portfolio is behaving as we expect, but to Michael's point, even one out 20 years we do expect Environments like that.

COMMITTEE MEMBER PACHECO: Yeah. I totally agree with that. Thank you very much. Thank you for that comment.

CHAIRPERSON MILLER: Okay. I have Board Member Rubalcava.

There it is.

COMMITTEE MEMBER RUBALCAVA: Thank you.

Great presentation, folks. And Simiso, I really appreciate that you quoted Mark Twain, because I was thinking of a Mark Twain quote myself, which is, it's better to keep your mouth closed and not let people think you're a fool than open it and remove all doubt

So I'm going to violate this statement --

(Laughter.)

COMMITTEE MEMBER RUBALCAVA: -- by askin a question. You know, I really -- whenever I hear a presentation, I'm always impressed how CalPERS has a very smart staff, and consultants, and -- that we have the -- and the Board adopted a set of location -- asset -- asset liability allo -- asset allocation system that sort of stabilizes for the future and is a recognition of the uncertainty of the market as our new Chief Investment Officer stated at the begin -- in her opening remarks.

And part of that is also recognizing that there's systemic risks in this -- in this system that we invest in. I was appreciative of President Taylor mentioning some of the issues out there. And so I want to follow up and speak to one, which is -- and I'm glad we're addressing the sustainability and we'll have more presentations and discussion.

But sometimes because we're so big and because we're a leader, we should take step forward and engage -- make sure that we work with our investment partners and -- and others to make sure that they follow our guidelines or our -- set up some standards we expect. And one of them I just speak to one of is that sometimes we have companies out there that state they're going to follow certain criteria or say on the environment, and their actions don't follow through.

So I want to make sure that we use our status to engage -- continue that engagement strategy and make sure that we're doing whatever we can to make sure that the people who were in the same -- they're playing in the same sand box, this economy, this -- which we don't always control and we can't control, that they at least try to say true to the goals that we have, that guideposts that we've set are -- are not so much our benchmark, but our statements. And I guess it's -- like I said, Mark Twain had me out there.

I'm trying to say something, but I hope it's a question that's -- let me see if I kind find my question here. So it's more of a concern, but my question is are we engaging with our investor partners and companies to make sure that our long-term goals help manage volatility, you know, since the market is uncertain, and we make sure that they're aligned with our -- what we're trying to also do for our -- to sustain our members' benefits and our investments. So I think that's a question some there -- someplace there. Thank you very much.

MANAGING INVESTMENT DIRECTOR NZIMA: Thank you for the question and the -- and the concern. So within global equity we have the Corporate Governance team. And the team does a lot of engagement with companies around, you know, ESG, you know, around the environmental issues, around workforce issues, human capital management. And these engagements really are focused on long-term sustainability.

So what we care about over the long term is companies that will survive and make the plan money now and in the future, not just now. So we think about this as, you know, engaging companies for the long term sustainable returns. So we typically have -- you know, engage about 2,000 companies per year, you know, the Corporate Governance team. And we talk about some of the issues -- environmental issues.

And when companies don't follow through on some of the -- the promises -- you know, they're public statements, we actually vote against directors.

So, you know, CalPERS is one of the few large, you know, asset owners that actually vote against a lot of directors. I think -- I think last time I was here and did a presentation, I spoke about the fact that, for example, I think last year -- last proxy season, not this one, we voted against over 3,500 directors in the U.S. And again this -- this is in that idea where when we engage and we don't see the results of the engagement, then we hold the boards accountable. So that's really part of our long-term strategy around sustainability.

I hope I answered your question.

COMMITTEE MEMBER RUBALCAVA: Thank you.

CHAIRPERSON MILLER: Okay. Thank you.

Next, I have Board member -- oh.

CHIEF EXECUTIVE OFFICER FROST: Mr. Miller, I was going to have Mr. Andrus --

CHAIRPERSON MILLER: Oh, okay.

CHIEF EXECUTIVE OFFICER FROST: -- also respond to Mr. Rubalcava's question.

CHAIRPERSON MILLER: Wonderful.

CHIEF EXECUTIVE OFFICER FROST: Thank you.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS:

James Andrus, CalPERS staff.

And to further what Simiso was saying, we do appreciate that we have some excellent principles and we do look at those principles and apply them in every case. And what I mean by that is that we apply it in terms of advocating for the position, so it's important that we get each company to do what we would like them to do, but we want to get market participants to do the same. And we do this in a number of ways. For example, I've recently been elevated to the PCAOB IAG to basically a get auditors to focus on these issues, and the SEC IAC to provide an opportunity to have early input on what the SEC is doing.

We're focused -- and, I, mean it's exactly what you're talking about. We're focused on providing our comment letter to the SEC and it addresses those issues, the issues such as greenwashing, where companies say one thing and do not comply. We have an expectation to do something similarly when the human capital opportunity comes out, because we see this in a number of instances.

To the extent that you're talking about a specific case, we have a stakeholder team that addresses stakeholder issues when they are -- when they come to us, Tamara Sells leads and coordinates that operation and I think it's a high-performing operation, in that we assess what the stakeholders are saying and we interact with our asset classes, as well as the companies that they involve directly. So to the extent that there's a direct opportunity, I think we're directly active in those ish -- on those issues as well. And we're definitely open to anything that you may think that we should, in fact, do better and we will actively engage on that.

CHAIRPERSON MILLER: Great. Thank you.

And next we have a question from Director Middleton.

COMMITTEE MEMBER MIDDLETON: Thank you. There we go. Thank you, Mr. Chair.

Simiso and everyone, thank you. This was some really good data and good information. And I'm going to ask one of those questions that I know is somewhat of a crystal ball question. But one of the issues that we're facing is not only the issue of how deep might the recession be and the volatility be, but how long of a period of time it could last. And could you give us some guidance as to how we might approach trying to answer that question?

CHIEF EXECUTIVE OFFICER FROST: I was going to say maybe we should start with our economist.

Is he still up here?

INVESTMENT OFFICER TUTTLE: Left too soon.

Jake Tuttle, CalPERS staff.

So one thing that makes this one a little different, this re -- or the risk of recession a little different is where consumers are. Consumers still have elevated levels of savings, the jab market is still tight. Yes, we're seeing higher inflation pressures. And certainly, like Lou mentioned, we feel that every time we go to the store or the gas pump. One thing that is a comfort is at least that nominal wages have come up as well. Although, in real terms, they are getting eroded, some of those gains.

So as far as the risk for recession this year, we see as relatively low just because of that positioning, that, you know, as we mentioned in the presentation that the demand side typically is going to lead, and the demand side is in pretty good shape overall.

Now 2023, you know, that -- there's more time for these interest rate hikes that are going on right now to start to take hold. But given the economy's position at the moment, we don't see -- if you entered a recession, we don't see it as a particularly -- at this stage, we don't see it as particularly large.

COMMITTEE MEMBER MIDDLETON: All right. Thank you.

Next question. And I'll pick up on President's Taylor's remarks that last November we set an asset allocation plan. We think we've got it right in terms of where we should be. It certainly has been a very volatile fee months and so we passed that. What are the warning signs that you will be looking at to make sure that we are on the right tack, and when and what would cause you to recommend that we make adjustments?

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah. So we -- to your point, Ms. Middleton, we do think that we're on the right track. And as Michael mentioned, we do think the allocation is the correct one. One thing that I think that you'll see us do with Nicole here now -- and it's worth mentioning and I know Mr. Miller, you thanks us for the -- for the presentation. It was actually I think largely at Nicole's direction that we provided this one. And, you know, Nicole and Marcie had a discussion about it. So I do want to give credit where due.

I think you'll see us kind of really trying to manager the portfolio and watching the allocation more in real time. Right now, we're doing it on a calendar basis. I don't think that that's the -- necessarily the right timing. We should be doing it kind of more frequently and more ongoing. And I think your -- you'll be seeing that. Certainly, Sterling and team have brought that, Nicole and team have brought thought.

But I think the things that we'll be looking at is how high do interest rates get, how -- I think we've moved from transitory to persistent to maybe even starting to approach protracted, but how protected is -- are -- is inflation. And as we -- as we watch these things, as I say, we look at the portfolio as being positioned correctly. And remember that we are implementing the new strategic asset allocation effective at the end of the fiscal year. But it will be all of the usual topics and warnings signs. But we have to remember that if I look into my crystal ball and say I what I expect. I do expect more volatility.

And that can even include further drawdowns from here. But about as Simiso and others mentioned, and Sarah especially, drawdowns provide opportunities. And for us, the key is to take that long horizon approach and try to lean into the intelligent opportunities and position the portfolio to take advantage of those risks.

COMMITTEE MEMBER MIDDLETON: You anticipated my next question actually, drawdowns do provide opportunities. What's our cash position to be able to take advantage of those and how certain are we that if we do have a downturn, that we will not have to sell assets in order to make our obligations?

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: I would say the answer to your question is very confident. In the aftermath of the financial crisis, we know that we had some liquidity concerns and challenges. Over the last, you know, decade plus, we have done a ton of work as a team to position ourselves both to have liquidity, but then very importantly, and Michael alluded to this, to have pathways to liquidity, and we have a number of those. As Michael talked about in the COVID drawdown, while not only did some of our peers and even some aspects of the market, even the fixed income markets experienced real liquidity stresses, our portfolio was highly, highly liquid and we were at -- even able to lean in to some specific opportunities that we think that have been and will continue to accretive. So we feel very comfortable with our liquidity position.

You have to be vigilant, right? You never perfect liquidity. So we're being very vigilant on the liquidity position. We feel very comfortable that the portfolio is both liquid and able to get additional liquidity.

COMMITTEE MEMBER MIDDLETON: Okay. Thank you. That -- that covers my questions.

And just to circle back to what I started with, that second quarter of 2020 was a wild ride, as we dropped, but we recovered very, very quickly. The next challenge may be one where the recovery doesn't happen nearly as quickly, and it's being prepared for a much longer trial that we need to be prepared for.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE:

Agreed and having the backbone to stay the course. Completely agree.

COMMITTEE MEMBER MIDDLETON: Thank you.

CHAIRPERSON MILLER: All right. And I have another question from President Taylor.

COMMITTEE MEMBER TAYLOR: I remembered. Yeah, there we go. I remembered my question now.

So I'd wanted to ask a follow-up question on the inflation, the supply chain issues. And part of that is that I've been reading a ton of articles that are -- that's saying basically these corporations are taking advantage of, number one, the supply chain issues to start. Then when inflation started, then they are doing, you know, their own price gouging during inflation and hiding it in the inflation. The same is being said on several cases, because of the profits that our oil companies are making right now.

So when we talk about how -- you know, Simiso, how do -- how do we do that? Do we -- is that a proxy voting issue? Is there something that we as an institutional investor can do to sort of help try to rein that in? These are -- these are operational issues that all consumers feel like they don't have any control over, so it would be -- you know, are there suggestions? I'd just love to hear that.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: I think you said it right in your previous question, Ms.

Taylor. It's about sustainability, right?

So as -- as prices are being passed through and companies stay profitable, as investors in those companies, either in the fixed income markets or in the equity markets, we're -- we're the beneficiaries of that profitability. However, that profitability needs to be sustainable, appropriate profitability such, you know, there isn't some kind of a, you know, political or otherwise backlash to change that equation. So to us, and Simiso talked about it in our engagement, it's really about just making sure that our -- that the portfolio companies that we're invested in, public markets and private markets are thinking through that real sustainability lens, such that they can be profitable in the short-term, but also be profitable in the long term, because that's what accrues to us as a portfolio and allows us to pay benefits over the long term.

COMMITTEE MEMBER TAYLOR: And because these large profitability increases aren't sustainable, right? And I forget who mentioned it earlier, but the fact that you guys are presupposing this is going to come down and this will stop, right, and it's being priced into the market already. So I think that this short-term profit grabbing is just -- I know we don't have any rules against it, but it just seems so counterproductive, so...

And then the other thing I wanted to mention in that with -- for James and the corporations doing the gouging for the oil companies, how -- maybe even Simiso, how do we counter that? I mean, we want those profits, but on the other hand, are they -- are they following our sustainability issues that we ask for them to follow, right, in the Paris agreements, et cetera, while doing this price gouging, you know what I mean? I'm just trying to figure out how -- how they are making billions and billions of more dollars on the backs of all of the consumers while some of them aren't even, you know, complying with our agreements. I don't know, it looks like you both want to talk. So, James, you want to go first.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: Certainly. It's something that we're look -- that we're looking into. And we to realize that this is something that is very, very recent. And so we -- those companies are being scrutinized more than any -- more than any others, especially around the financials. And so when the financials come, we will actually get more information in terms of what they're doing and how they're doing it.

On the other side, with regard to whether or not they're following what we want them to do, because of our work with Climate Action 100+, I have to say the answer is yes. They're providing us the information. They're even providing us more of it.

Now, granted the best example comes out of Shell, an international company in their 20F, in terms of the information that they've been willing to provide us. But the hope is that more of those companies will provide us more information and we'll get greater insight. It doesn't provide you a direct answer right now, but we are, in fact, monitoring and looking into it with a critical -- with a critical eye.

COMMITTEE MEMBER TAYLOR: Thank you, James.

Simiso, did you want to add to that?

MANAGING INVESTMENT DIRECTOR NZIMA: Yeah. Thank you for the question. I think two -- two points. The prices are set in the market, and especially when you talk about commodities and stuff like that. And it's not just U.S. companies, it's global companies. So there's -- there's not that much that, you know, investors can do in terms of influencing prices, because, you know, price discovery happens in the markets. So for things like commodities, we don't have that ability to influence the price of oil and gas. We know some of the reasons that are causing prices to be high now with the geopolitical risks, with the issues that are happening in Europe supply chain, and that has led to higher prices. And on the flip side, these same companies were losing a lot of money when oil prices were low, so, you know, there's that aspect of it.

The second aspect, James referred to the Climate Action 100+ work. I sit on the steering committee of the Climate Action 100+, and we've done a lot of work in terms of collaborative engagements. You know, Climate Action 100 now has over 700 plus signatories with over $68 trillion in assets under management. And we've come up with a net zero benchmark -- company benchmark where we actually look at the progress that companies are making relative to the Paris Agreement and so forth.

And as an individual levels -- investors, CalPERS, we actually started voting against directors based on that benchmark. So when -- when we come back to -- to the Board I think in September, when we do sort of this season's proxy update, you will see that we've actually voted against some directors in some of those companies, where we felt they were laggards. And again, using that benchmark which was developed by the Climate Action 100. A third party actually sources the data and populates that data -- that benchmark.

So there are many angles which we are approaching this, but we agree. And as Dan said, this is about sustainability, sustainable profits, because we need that to be able to pay benefits in the long term.

Thank you.

COMMITTEE MEMBER TAYLOR: I appreciate that, Simiso. I just -- to follow up on that, I just wanted to -- I've asked this before, how -- how do we get to -- how do we decide that these companies aren't being cooperative? At what point -- at what time, right, so that -- what is our benchmark and time frame for us to say, okay, you guys are just not doing this, you're not getting it, and possibly, you know, readjust our investments? Do we have anything on that? Because we -- I mean, what we're hearing now is if we don't start doing -- being more productive at this by 2030, we're -- it's too late. So where -- where are we and do we have a decision point or are we just still on the engagement process?

MANAGING INVESTMENT DIRECTOR NZIMA: I think -- and I'll let Marcie answer some of that, but I think it's also important to think about on the one hand as we are saying we have high prices, and really this is a transition to a low-carbon economy when you're talking about this. The transition is not something that happens right away. If it were to happen right away, where we are without enough sources of renewable energy, we wouldn't be able to meet the power requirements of the world.

And part of it is not about -- part of it is not about the ability to generate renewable energy, it's about the ability to store it, because in Europe energy right now is still sort of an intermittent source of energy. And so if you don't have the capacity to store, so that when, you know, you don't have those sources, at that time, then you actually end up leading to higher energy costs and so forth. So this idea of a transition and -- you know, it's -- it has to be sort of a just transition and just not going to happen on day one, but I'll -- I know Marcie wanted to --

CHIEF EXECUTIVE OFFICER FROST: No. You answered that very well. The only top -- or item I would complement his comments with would be Nicole and I have been discussing putting more detail in our path to net zero by 2050, and so that will be a -- an upcoming Board item.

COMMITTEE MEMBER TAYLOR: That would be great. That would be helpful for us to see where we are. And the transition is very important, so -- and I understand we don't -- I do know that we don't have storage capacity, but we also don't -- aren't seeing a lot of investment into that transition, so we need to be working on that engagement as well, I think. So I appreciate it. Thank you.

CHAIRPERSON MILLER: Okay. Thank you. I have no more questions from the Board. No public comment on this item.

I will thank you. Thank the team. Thank -- you know, I get the briefings and see all the hard work. And so just appreciate that CalPERS continues to put our values into our strategies and that staff are taking that to heart, and your work James, Simiso your teams, because we don't walk away from those issues. We don't walk away from the table and throw up our hands and say, oh, you know. We engage. We're trying to move the needle. And it's a -- it's a long haul. It's a tough, tough challenge, because we've also got our -- the people we're entrust to serve to think about. So it's a tough job, so I appreciate all the fine work that's going into it.

So with that, we'll move on to Investment Strategy, the first 90 days from our Chief Investment Officer.

Dan.

(Thereupon a slide presentation.)

CHIEF INVESTMENT OFFICER MUSICCO: Can everyone hear me okay?

CHAIRPERSON MILLER: There we go.

CHIEF INVESTMENT OFFICER MUSICCO: Hi.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah, so --

CHIEF INVESTMENT OFFICER MUSICCO: I believe --

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE:

-- Mr. Chair, as you said, this is kind of Nicole's observations for her first -- we're calling it 90 days, but it hasn't even been 90 days candidly, but so these will be Nicole observations and so Nicole over to you.

CHIEF INVESTMENT OFFICER MUSICCO: Great. Thank you. I believe we're going to be screen-sharing my presentation as well, if we could get that up as well, please.

And just let me know when it comes up, because I can't see it.

Excellent. Thanks very much.

And again, thanks again for the opportunity to share my insights. It's actually been 76 days I believe today at CalPERS. And I would just first like to say there's been an incredible number of people helping me out today to prepare. So I first would like to extend a huge thank you to the team and the executive team for their continued support. And, you know, I'm sitting here virtually. I've been very proud of the presentations that everyone has made today, so thank you for that as well.

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CHIEF INVESTMENT OFFICER MUSICCO: So with the market dynamics presentation as a backdrop, during our time here, I hope to recap on our mission and vision. I'd like to highlight the four pillars that form the foundation of our strategic objectives. I'll share with you some insights and observations from my listening tour. And we'll complete this open session with a discussion on what it takes to build a resilient portfolio.

Page turn, please.

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CHIEF INVESTMENT OFFICER MUSICCO: I'm very happy to report, as far as what I thought I could cover in the first 90 days or so at CalPERS has really exceeded my expectations. The entire team, as I mentioned, from the executive team, the Investment staff, and across all the functional partners have really made me feel extremely welcome. And we've already had the opportunity to take action on a few quick wins.

Just to highlight and we'll definitely discuss these more in detail, we've been able to refresh the Investment's governance and oversight framework. We've introduced innovation and resiliency as a foundation to our four strategy pillars of people, processes, portfolios, performance. These really act as the guidepost informing our Strategic objectives.

We then committed to a set of objectives and working groups with each of the MIDs being held accountable to measure and -- measure the progress and deliver. And we've initiated recruitment of a couple of key hires that were identified early as talent to add required to execute the strategic asset allocation.

I would just like to remind everyone that from our perspective, and we've talked a lot about this today, but success, and certainly in this environment, really will require a long-term commitment to our strategy through all the business cycles with a renewed focus on innovation, governance, agile execution, and accountable for that performance.

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CHIEF INVESTMENT OFFICER MUSICCO: Just to recap, the mission, when I arrived, was clear. It's to generate risk-adjusted returns, to sustainably pay the benefits of our two million members. And the vision is to work as one team with a culture of trust, respect, and accountability. Now this focus of working as one team is particularly important in the hybrid work environment. We can't lose sight of the fact that I think of investing really as an apprenticeship. So involving our hybrid work model to keep the spirit of an apprenticeship and a culture of trust and accountability will be a very important area of focus for me.

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CHIEF INVESTMENT OFFICER MUSICCO: As we mentioned in the opening, we are in the midst of refreshing our investment strategic plan, which we'd like to better align with the Enterprise's '22 to '27 plan.

The Board's approval of the new strategic asset allocation in November gives us a number of tools now to deliver on the 6.8 percent target return. We've added five percent leverage. We have new strategies, such as private debt, as well as we've increased allocations to the illiquid asset classes of private equity and real assets, and increase allocations to fixed income as well.

The goal of the new investment governance and oversight framework, that I mentioned briefly in the opening, is really to create a CIO-led total fund decision-making forum. The hope here is to have greater accountability over performance and better risk management.

Just to give you some insights into it, the framework includes three new decision-making communities chaired by myself, the CIO, that will come into play at specific deal or exposure thresholds, one for final approval of larger deals or partnerships, one for convening on total portfolio risk and allocation decisions, and one for decisions on people, strategic initiatives, policies, and processes.

The balance that I'm trying to strike here is to ensure that the management -- Managing Investment Directors maintain their delegated authority and agility in in decision-making, but at the same time give myself direct oversight and approval of a few decisions. This will also certainly help with transparency to our execs and the Board, and elevating -- elevating issues in a much more timely manner.

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CHIEF INVESTMENT OFFICER MUSICCO: When I arrived, it was explained to me that recent history, investments had developed strategic objectives around four pillars, which we refer to as the four Ps, Portfolio, Processes, People, and Performance. I like to think of these as four legs to the stool in developing our strategy.

Well, now, we've introduced two themes that will act as the foundation to these four pillars being innovation and resilience. We're going to challenge ourselves to weave innovation into the development of each of our strategic objectives in order to remain competitive globally and further add to the resiliency in our portfolio.

We've created specific working groups staffed with cross-asset class teams to ensure we have both diversity of thought and an increase in cross-team collaboration. And we're in the midst of finalizing smart goals, so that -- within the working groups that we can -- so that we can measure progress and outcomes and all be held accountable.

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CHIEF INVESTMENT OFFICER MUSICCO: To give you a sense of where we are most focused, I'll share a few examples of where innovation and resiliency is being woven into these working groups. In the portfolio, the focus is really on total fund portfolio optimization. This includes everything from looking at centralizing risk, reporting, and balance sheet activities.

On our way -- we are well on our way into building out our private debt strategy as well within the portfolio.

For the process pillar, we're focused on creating an investment data and tech strategy to ensure that we have the tools required to execute the SS -- SAA competitively. We will identify and eliminate bottlenecks to agile decision-making. And we plan to better incorporate ESG and risk to build more resiliency in our portfolio, which has been a great topic that's been woven throughout our day today.

On the performance side, as Marcie mentioned, we are prioritizing our path to net zero and our overall Sustainable Investment Strategy. We'll refresh our Emerging Manager Strategy and we will innovate around new active risk programs across the portfolio, as mentioned earlier.

And finally, on the people side, we've already kicked off a deep dive across each of the investment strategies on existing talent inventory, we're identifying gaps, and we are going to create a long-term people strategy for both retaining and recruitment.

We'll continue to refine our hybrid work model as well, just to ensure that this apprenticeship spirit is still occurring across all levels as we work in this hybrid environment.

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CHIEF INVESTMENT OFFICER MUSICCO: So as mentioned, I started my journey at CalPERS around 75 days ago on this listening tour. And really the intention for taking that approach was just to get a read of the team and the culture, and to receive high level strategy briefings to get a quick -- a quick read of the overall portfolio before making any real decisions.

It's been a whirlwind, I would say. I've had time with the entire team with a mix of one-on-ones and team meet and greets. I got some history of the role that they -- that each of the members have held at CalPERS, including their backgrounds and we've had some fun icebreaker type team interactions. One real positive surprise that I've been left with is the depth of this -- of the institutional knowledge that exists at CalPERS across every investment team, given the long tenor of many and the history of working across departments.

What gets me excited about that is this can be a real competitive advantage for us, especially during such unprecedented times. After the meet and greets, I started to circle back with the teams for high level strategy reviews. This is where I just listened while the team shared what was working well and where we could do more or less within our strategy and our processes. This has really formed the foundation of where we will spend our time around our strategic objectives and the related working groups.

I have also spent time better understanding our risk and liquidity framework, which is topical for some of the questions that just came out of the last session. And we've already started brainstorming on risk budgeting and potential active risk innovation. During this listening tour, some bottlenecks to agile execution have become apparent, so we're going to work on recommendations to fix those. Some of them are process related, some are policy focused, and others are frankly just more tech and data focused.

And finally, as mentioned, I've initiated the talent gap review, working with the teams to identify the risks as much as the opportunities within the current team.

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CHIEF INVESTMENT OFFICER MUSICCO: We've discussed at length today the unprecedented market volatility. So it's really been imperative that I look through the lens of a long-term investor, really ensuring the tools and talent are in place to build innovation and resiliency through the portfolio. Specifically to achieve our mission, I want to ensure that we have a full potential ambition that has clear strategic objectives. I want to ensure we have this -- a governance model that allows for agile decision-making with management and clear accountability, that not only do we have the right skills and capabilities in place, but that I also foster this culture of innovation, and that we value collaboration and transparency across our team with the Board and with our stakeholders.

So I'd say it's certainly been a very dynamic first 75 days at CalPERS. And as I stated in my executive report, our hope is to leave you today with the message that, first off, we have Navigated volatile markets like this before and we are prepared for what's ahead. The team that's in place already has shown great resiliency, great leadership and talent over the last few years, and so they should all be very proud of themselves, and I'm super excited to be engaging with them as we go forward.

The strategic asset allocation approved in November prior to recent volatility is still the right choice to deliver the pension promise to our two million members. It's purpose built, as we've discussed today, for diversification and resiliency. And we will continue to evolve our strategy as appropriate, which is looking to mitigate risk and take advantage of market dislocations. And we are ready for both.

We are going to have time to dive deeper into these observations and implications for the go-forward strategy during our closed session. So with that, before

I completely lose my voice, I am happy to take any questions.

Thank you.

CHAIRPERSON MILLER: Thank you. I'm not seeing any questions from the Board and I don't have any questions from the public on this one -- a request to speak on this one, so thank you very much.

I know you've been putting in a lot of work and getting all caught up. And the team has been very engaged and everything is moving along. So I really appreciate the report.

And we'll move to now summary of committee direction. Dan.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: And, Mr. Chair, I'm happy to report that I did not take any -- any direction this time through, so --

CHAIRPERSON MILLER: I did not note anything.

And we do have a public comment for 6d from Mr. Tim Behrens. So I'd like to welcome Tim up to the microphone. And the timer will be three minutes and will start when you begin to speak. And so whenever you're ready, you have the floor, sir.

MR. BEHRENS: Good morning. I think it's still morning. Thank you, Chairman Miller and Committee members, and members of the Board. Tim Behrens, California State Retirees. I had a bunch comments I was going to make. And after your lively discussion, I have some new ones.

I really appreciate, number one, the Investment Committee members and their presentations today. Every time we have a back-and-forth dialogue between the Board and the Investment Committee, the more I learn as a stakeholder about what it looks like in the future. I really appreciate the team's presentation. My favorite graph was the loss in 2008, because what happened after that, almost a year later, they regained all of that that they lost. Well, that shows how sharp our Investment Committee is at CalPERS. And it makes me feel a little bit better wondering what's going to happen in 2022 and 2023 with the current recession, and raise in prices, and all of us stakeholders on a fixed income saying please, God, help us.

I also wanted to piggyback on something that President Taylor said about the fossil fuel and how much their increased money was for the last couple of years, especially now. I hope that the Board, and the Investment Committee, and the Health Committee will take a look at the pharmaceutical people, because they have made billions of dollars on the backs of us stakeholders and senior citizens in the United States. And there hasn't been --

you know, during COVID, there wasn't a lot of expense for them, but they made a lot of money.

And now that we're coming out of COVID and this is when they're negotiating the rates for next year right now with CalPERS, I urge -- and I'll beat Rob Feckner to this, I urge them to sharpen their pencils on the side of the Board and the side of the staff that are negotiating those rates.

Finally, in and 57 seconds, my original question was about closed meetings. My fellow stakeholders want to know if it's possible for the Legal department of CalPERS to give an overview of what the laws are in California for closed meetings related to the CalPERS Board, so we can better understand why you do a roll call, go to a closed meeting, and we sit in the cafeteria for an hour or two and then you come back.

If there's anyway that that could be massaged where it took less time for the closed meeting and more time for these kind of meetings, where we can -- we can watch and ask questions and watch you ask questions of the staff.

Thank you and have a good day.

CHAIRPERSON MILLER: Great. Thanks for your comments. And I do think some sort of refresher on that would be good for us to have.

And it's also a good segue to, you know, we will now be recessing into closed session for items 1 to 7 from the closed session agenda. So thanks for that segue, Tim. And then we'll be reconvening and we'll probably be taking a lunch break during closed session. At some point, we'll get to that, and we'll be back. And I don't know if I have a great estimate for what time, but we'll come back -- yeah, we'll recess into closed and then we'll clear the room, and take a break, and get back to closed.

So -- yeah, so what 10, 15 minutes to get everything sorted out and start closed.

Okay. Thank you, everyone. This portion is -- oh, now, we're not adjourned. We're recessing into closed. Oh, they want to hear the gavel. Everyone likes the gavel. Okay. Thank you, all.

(Off record: 11:53 a.m.)

(Thereupon the meeting recessed into closed session.)

(Thereupon the meeting reconvened open session.)

(On record: 3:37 p.m.)

CHAIRPERSON MILLER: Okay. Rob likes it when I do that. So we're back in open session to close out open session. And so unless I hear any objections, we will be adjourned for the day.

I have no objections.

(Thereupon, the California Public Employees' Retirement System, Investment Committee meeting open session adjourned at 3:38 p.m.)

CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Public Employees' Retirement System, Board of Administration, Investment Committee open session meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 18th day of June, 2022.

James F. Peters

JAMES F. PETERS, CSR
Certified Shorthand Reporter
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