MEETING

STATE OF CALIFORNIA

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BOARD OF ADMINISTRATION

INVESTMENT COMMITTEE

OPEN SESSION

ROBERT F. CARLSON AUDITORIUM

LINCOLN PLAZA NORTH

400 P STREET

SACRAMENTO, CALIFORNIA

MONDAY, NOVEMBER 18, 2019

9:00 A.M.

JAMES F. PETERS, CSR
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A P P E A R A N C E S

COMMITTEE MEMBERS:

Mr. Rob Feckner, Chairperson

Ms. Theresa Taylor, Vice Chairperson

Ms. Margaret Brown

Mr. Henry Jones

Ms. Fiona Ma, represented by Mr. Matthew Saha

Ms. Lisa Middleton

Mr. David Miller

Ms. Stacie Olivares

Ms. Eraina Ortega

Ms. Mona Pasquil Rogers

Mr. Jason Perez

Mr. Ramon Rubalcava

Ms. Betty Yee, also represented by Ms. Lynn Paquin

STAFF:

Ms. Marcie Frost, Chief Executive Officer

Mr. Matt Jacobs, General Counsel

Dr. Yu (Ben) Meng, Chief Investment Officer

Mr. Eric Baggesen, Managing Investment Director

Mr. Dan Bienvenue, Interim Chief Operating Investment Officer

Ms. Sarah Corr, Investment Director

Ms. Kit Crocker, Investment Director

Ms. Caitlin Jensen, Committee Secretary

APPEARANCES CONTINUED

STAFF:

Mr. Paul Mouchakkaa, Managing Investment Director

Mr. Simiso Nzima, Investment Director

Ms. Christine Reese, Investment Director

Ms. Beth Richtman, Managing Investment Director

Mr. Greg Ruiz, Managing Investment Director

ALSO PRESENT:

Ms. Lisa Bacon, Meketa Investment Group

Mr. Ben Claire, Sunrise Movement

Mr. Al Darby, Retired Public Employees Association

Ms. Sandy Emerson, Fossil Free California

Ms. Christy Fields, Meketa Investment Group

Mr. Robert Girling, Emeritus Retired Faculty and Staff Association

Mr. David Glickman, Meketa Investment Group

Ms. Costanza Gonzalo, Sunrise Movement

Mr. Steve Hartt, Meketa Investment Group

Mr. Andrew Junkin, Wilshire Associates

Mr. Steve McCourt, Meketa Investment Group

Ms. Christine Nelson, Retiree

Ms. Lynne Nittler, Fossil Free California

Ms. Deborah Silvey, Fossil Free California

A P P E A R A N C E S   C O N T I N U E D

ALSO PRESENT:

Ms. Sara Theiss, Fossil Free California

Ms. Sheila Thorne, California Faculty Association, Fossil Free California

Mr. Tom Toth, Wilshire Associates

Ms. Vanessa Warheit, Fossil Free California

I N D E X

I N D E X   C O N T I N U E D

P R O C E E D I N G S

CHAIRPERSON FECKNER: Good morning, everyone. We'd like to call the Investment Committee meeting to order. First order of business will be to call the roll.

COMMITTEE SECRETARY JENSEN: Rob Feckner?

CHAIRPERSON FECKNER: Good morning.

COMMITTEE SECRETARY JENSEN: Theresa Taylor?

VICE CHAIRPERSON TAYLOR: Good morning.

COMMITTEE SECRETARY JENSEN: Margaret Brown?

COMMITTEE MEMBER BROWN: Here.

COMMITTEE SECRETARY JENSEN: Henry Jones?

CHAIRPERSON FECKNER: He'll be here.

COMMITTEE SECRETARY JENSEN: Fiona Ma represented by Matt Saha?

ACTING COMMITTEE MEMBER SAHA: Here.

COMMITTEE SECRETARY JENSEN: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Present.

COMMITTEE SECRETARY JENSEN: David Miller?

COMMITTEE MEMBER MILLER: Here.

COMMITTEE SECRETARY JENSEN: Stacie Olivares?

COMMITTEE MEMBER OLIVARES: Here.

COMMITTEE SECRETARY JENSEN: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Here.

COMMITTEE SECRETARY JENSEN: Jason Perez?

COMMITTEE MEMBER PEREZ: Here.

COMMITTEE SECRETARY JENSEN: Mona Pasquil Rogers?
CHAIRPERSON FECKNER: She'll be here.
COMMITTEE SECRETARY JENSEN: Ramon Rubalcava?
COMMITTEE MEMBER RUBALCAVA: Here.
COMMITTEE SECRETARY JENSEN: And Betty Yee?
COMMITTEE MEMBER YEE: Here.
CHAIRPERSON FECKNER: Thank you.
Item 2 is approval of the November 18th Investment Committee times agenda.
VICE CHAIRPERSON TAYLOR: Move approval.
CHAIRPERSON FECKNER: It's been moved by Taylor.
COMMITTEE MEMBER BROWN: Second.
CHAIRPERSON FECKNER: Seconded by Brown.
Any discussion on the motion?
Seeing none.
All in favor say aye?
(Ayes.)
CHAIRPERSON FECKNER: Opposed, no?
Motion carries.
Item 3 will be the Pledge of Allegiance?
If you could all please rise and face the flag.
(Thereupon the Pledge of Allegiance was Recited in unison.)
CHAIRPERSON FECKNER: Thank you.
Item 4, the Executive Report. Chief Investment

Officer briefing. Mr. Meng.

CHIEF INVESTMENT OFFICER MENG: Thank you, Mr. Chair.

Good morning, members of the Investment Committee. In addition to the standard reoccurring items, this morning open session we have Item 7a, where we ask you to approve the scoring of the subcommittee of the -- of the Board under selection of the independent Board consultant.

And then on section -- on Item 8a, we'll bring back to you the second reading of the investment policy revision of public assets. If you recall the last time at the Investment Committee, we brought the first reading to you. In Item 9, we'll continue the annual program review. And this month today, we'll cover the two private asset classes namely private equity and real assets. If you recall in August, we brought the annual program review of TLPM, the total trust level fund function as well as OS, opportunity -- Opportunistic Strategy Group to you for review in August. And then last time in September, we brought to you the two public assets, the public equity and fixed income.

So item 9 today is a continuation of the annual program review. In Item 10, we're going to have the first reading of the program policy revision of private asset classes. And then Item 11, we have three items. 11a is affiliated trust fixed income benchmark update. 11b is our update on sustainability investing, and then 11c is our annual update CalPERS for California.

So with that, back to you, Mr. Chair.

CHAIRPERSON FECKNER: Thank you.

That brings to us Agenda Time 5, the action consent item. It's the -- 5a, approval of the September 16th meeting minutes.

VICE CHAIRPERSON TAYLOR: Move approval.

CHAIRPERSON FECKNER: Moved by Taylor.

COMMITTEE MEMBER MILLER: Second.

CHAIRPERSON FECKNER: Seconded by Miller.

Any discussion on the motion?

Seeing none.

All in favor say aye?

(Ayes.)

CHAIRPERSON FECKNER: Opposed, no?

Motion carries.

Items 6, information consent items. Have no requests to remove anything from that agenda item, we move to Item 7, the independent oversight, the Board investment consultants.

For that, I call on Mr. Bienvenue.

INTERIM CHIEF OPERATING INVESTMENT OFFICER

BIENVENUE: Thank you, Mr. Chair.

As you recall, a subcommittee was delegated from the Investment Committee to work through the interviews with the Board investment consultants. Recall that we're looking for consultants in the category of general pension, private equity, real estate, and then infrastructure.

As a result of those interviews, we have a set of scoring. And what we need from the Committee is to approve the scores, and then create the Notice of Intent to Award, such that -- subject to -- subject to successful contract negotiations.

So in the category of general pension, the leading score was Wilshire. They had 651 points for their interview score, which brought them to a total of 1,001 points. And that's the highest scoring finalist in the category of general pension.

In the category of private equity, Meketa scored 700 points at their interview score, which got them to a total of 970 points. And they are the highest total in the private equity consultant category.

For the real estate consultant, Meketa again scored 700 points for their interview, and again were the highest scorer overall in the category with 1,043 points.

And then in the category of infrastructure consultant, Meketa again scored 700 points which brought them to a total of 1,050 points. And again, they were the highest scoring finalist. So the subcommittee's recommendation is that the Investment Committee approve the scores, and then subject to successful contract negotiations, award Wilshire as the consultant for general pension, and then Meketa for private equity, real estate, and infrastructure.

And with that, I'll pause and turn it back to you, Mr. Chair.

CHAIRPERSON FECKNER: Thank you.

So we need a motion to approve the subcommittee's scores.

COMMITTEE MEMBER JONES: Move it.

CHAIRPERSON FECKNER: Moved by Jones.

COMMITTEE MEMBER MILLER: Second.

CHAIRPERSON FECKNER: Seconded by Miller.

Any discussion on the motion?

Seeing none.

All in favor say aye?

(Ayes.)

CHAIRPERSON FECKNER: Opposed, no?

Motion carries.

Anything else you need on that Mr. Bienvenue.

INTERIM CHIEF OPERATING INVESTMENT OFFICER

BIENVENUE: No, sir.

CHAIRPERSON FECKNER: Very good. Thank you.

Brings us to Agenda Item 8. 8a, public asset class second reading of the policy and delegation.

Mr. Meng.

CHIEF INVESTMENT OFFICER MENG: Yes, I'll turn it over to my colleague Kit.

INVESTMENT DIRECTOR CROCKER: Good morning. Kit Crocker, CalPERS staff.

CHAIRPERSON FECKNER: Good morning.

INVESTMENT DIRECTOR CROCKER: Item 8a is the second reading of staff's proposed changes to the program policies for global equity and global fixed income arising out of this year's annual review. These are primarily intended to reflect the introduction of segments for these asset classes.

As you'll recall, of course, for the global equities portfolio, that would be the split into cap-weighted and factor-weighted segments. And for global fixed income, the segmentation into treasuries, spread, and high yield.

And as typical with these annual routine updates, we're also proposing some clean-up changes. Since this is a second reading, we are seeking action from the Committee at this time. So with that, I'll pause and see if we have comment from the Board's consultants.

MR. TOTH: Good morning. Tom Toth with Wilshire Associates. We provided our opinion letter on the initial reading. There have been no substantive changes there. We remain comfortable with the changes as proposed.

CHAIRPERSON FECKNER: Thank you.

Ms. Brown.

COMMITTEE MEMBER BROWN: Thank you, Ms. Crocker. I know this is the second reading, and I like this, because it gives us a chance to look at it again. So I had a question about attachment 2, page four of nine. And maybe this also could be for our consultant. And I'm looking at table 1 where it looks like item two, we're removing. And, by the way, thank you for putting the marked up versions on here, so we can really see what we're removing.

I'm -- I have a concern that we're removing - and maybe we're not. Maybe it's somewhere else - that the "Staff shall report concerns, problems, or material changes and all violations of the policies". And it says, "At the next Committee meeting or sooner, if deemed necessary". So is that gone completely and does that mean that the Board won't hear about problems or material changes or is it somewhere else in the policy?

INVESTMENT DIRECTOR CROCKER: No, definitely not.

I'm glad you asked. Since staff's obligation to report these policy violations is now stated generally for all asset classes in the Total Fund Investment Policy, we're making -- just making the conforming changes to the program policies to remove that, because it's now redundant with what's in the total fund.

COMMITTEE MEMBER BROWN: And so it's somewhere else in --

INVESTMENT DIRECTOR CROCKER: It's in the Total Fund Investment Policy, yes.

COMMITTEE MEMBER BROWN: Okay. Thank you.

All right. Thank you.

CHAIRPERSON FECKNER: All right. Thank you.

Seeing no other requests. What do we need here?

A motion before you?

INVESTMENT DIRECTOR CROCKER: Seeking action, yes, please.

CHAIRPERSON FECKNER: Al right. Second reading. So what's the pleasure of the Committee?

VICE CHAIRPERSON TAYLOR: I'll make a motion.

CHAIRPERSON FECKNER: Moved by Taylor.

COMMITTEE MEMBER MILLER: Second.

CHAIRPERSON FECKNER: Seconded by Miller.

Any discussion on the motion?

Seeing none.

All in favor say aye?

(Ayes.)

CHAIRPERSON FECKNER: Opposed, no?

Motion carries. Thank you.

Agenda Item 9, information agenda items, real assets.

Mr. Meng.

CHIEF INVESTMENT OFFICER MENG: Yes. Thank you, Mr. Chair. As I said, this item covers the annual program review of the two private asset classes. We'll start with private -- real assets first and then followed by private equity. And as I noted, each one item is paired with the consultant's review as well.

(Thereupon an overhead presentation was presented as follows.)

CHIEF INVESTMENT OFFICER MENG: So with that, I turn it over to my colleague Paul.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Thank you, Ben. Good morning.

CHAIRPERSON FECKNER: Good morning.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: It's a pleasure to present the annual program review for real assets. I am Paul Mouchakkaa. And I'm joined by several members of the real assets team behind me. I want to emphasize that the deck was a total team effort.

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MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Thank you, Ben.

So the role of real assets is to provide the total fund with stable cash yield, inflation protection, and diversification of equity risk. Over the course of this business cycle, the real assets portfolio has transitioned materially. Ten years ago, it was not aligned. Five years ago, it was somewhat aligned. And today, the portfolio is significantly aligned with its role.

That transition has taken time. Most importantly, it has required strong support from the Board as well as energy and focus of the staff. The strategy employed by staff entailed two competing objectives, prudently winding out of legacy or non-strategic holdings, while acquiring core, high quality, well located, essential assets. These core assets are aligned with our role and are performing well for the total fund. In essence, the strategy is right.

In keeping with Ben's Four Ps, today I will discuss our program in terms of performance, portfolio, people, and process.

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MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So beginning with performance. After two consecutive years of strong absolute and relative performance, returns for real assets slowed in fiscal year 18-19 to 3.7 percent. However, given the illiquid nature of private real assets, more emphasis should be placed on longer term numbers.

The real assets portfolio generated five year performance of 7.5 percent lagging the benchmark, but exceeding the actuarial rate of return, as well as the ALM capital market assumptions. Underperformance was the result of non-strategic legacy assets such as forestland and non-core real estate.

What powered our performance, however, were the core holdings in real estate and infrastructure. The core assets in our portfolio generated a 9.8 percent return for the same five-year period outperforming the benchmark.

Moving to our second P, portfolio. Over the past five years, our core exposure has grown to 85 percent from 46 percent. This was nearly $30 billion of investment activity and portfolio growth. Our core program has grown by approximately 20 billion through acquisition and value change, while our non-core, or legacy, holdings were wound down by approximately $10 billion. This dollar movement is significant in a market such as real assets.

Lastly, our infrastructure portfolio has now hit approximately $5 billion. And staff has put in place a repeatable business model that will allow infrastructure to continue to grow in a disciplined manner.

This leads us to our people and process. It's these two ingredients after all that make things happen. Our team is skilled and united, while operating in a well organized and risk-aware process. The team's hard work over these five years has had a cumulative effect of bringing us to a much stronger position. Real assets has successfully implemented a disciplined framework of underwriting and a business model whereby separate accounts, with strong governance, ESG integration, and reduced fees now dominate the makeup of our portfolio.

Further, this business model has not inhibited us in execution. CalPERS has a strong brand and reputation in the market and access to best-in-place partners.

In conclusion, real assets recognizes performance was not strong over the past year, but it has not deterred our focus. It is important to maintain consistency, which means pace deployment, disciplined underwriting, and sound internal oversight.

Consistency and discipline allow real assets to continue to provide its role to the total fund. We remain committed to further aligning the portfolio with the tried-and-true strategy that the Board approved that has served the system well.

Thank you, and we welcome questions.

CHAIRPERSON FECKNER: Thank you.

Ms. Taylor.

VICE CHAIRPERSON TAYLOR: Yes. Thank you.

Thank you, Paul, for your report. It was very good. I had one question on the forestland and none-core. It sounds like you're winding that down. When do you ex -- have an expectation that that won't be such a drag on the portfolio?

CHIEF INVESTMENT OFFICER MENG: Good morning, Ms. Taylor. That's a very good question. As we speak, we have been working on exploring other ways to speed up the transformation for our real asset portfolio to more core. But due to the illiquidity nature of these assets, it has been a slow moving process. But we plan to bring back to this Committee in December with a plan how to speed up the transformation process, so that we can put this behind us. And then the staff, as well as our capital, can focus on more area with higher potential.

VICE CHAIRPERSON TAYLOR: Thank you. And I have an expectation that I think -- and this happened way before I was on the Board, but forestland was purchased thinking that we would be dealing in, I guess, timber, right? That has not materialized and that's why the loss or it's just not sell -- I'm not clear on that.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: The thesis around the forestland portfolio predates, I think, virtually everyone sitting at this table.

VICE CHAIRPERSON TAYLOR: All of us.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: But it was part of the ILAC program, the inflation-linked program, in 2007, I believe.

VICE CHAIRPERSON TAYLOR: Um-hmm.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: And then -- so these purchases were made at that point in time with the notion that this would provide some inflation protection. Now, the -- it's not a condemnation on the timber industry. It's just our holding that we sold last year was a very challenged investment for CalPERS.

VICE CHAIRPERSON TAYLOR: And then I assume the one we're currently holding still is as well.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: The one that we currently hold has not performed nearly as badly as that one. That one has --

VICE CHAIRPERSON TAYLOR: Okay. But it's still a drag it looks like, as I was flipping through --

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: It has been a drag compared to the benchmark, correct.

VICE CHAIRPERSON TAYLOR: Yeah.

Go ahead, Ben.

CHIEF INVESTMENT OFFICER MENG: Yeah. And exactly as you just point out, a number of the we call the legacy assets, the investments were made a long time ago, some ten or some even 20 years ago.

VICE CHAIRPERSON TAYLOR: Got it.

Then my last comment is AB 547 has passed and it's the janitorial bill that provides that our custodians that are employed in our buildings are able to do sexual harassment training. And I'm just hoping that the folks -- our managers that we're dealing with are making sure this is taking place. And I just wanted to talk to -- have you talk about that.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: We will contact our core -- our separate account managers and find that out for you.

VICE CHAIRPERSON TAYLOR: Yeah I'd appreciate it, because it is now the law, so --

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Yes.

VICE CHAIRPERSON TAYLOR: -- so we have to make sure that does happen.

Thank you.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: You're welcome.

CHAIRPERSON FECKNER: Thank you.

Mr. Jones.

COMMITTEE MEMBER JONES: Yeah. Thank you, Mr. Chair. Yes, thank you for the report, Mr. Mouchakkaa.

The -- my comment goes to the infrastructure presentation. And as you said that you will be utilizing some discipline to see if we could increase our allocations to infrastructure. And looking at the net returns over the one, three, five, and ten year, they've all been very positive, outperforming the benchmark, et cetera.

But we also have been talking about doing more in infrastructure for a long time now. So why haven't we seen any progress to allocate more to infrastructure? Because at least four or five years, we said we're going to do more, because it was such a high returning asset for us.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So within four years, our infra program has grown from two billion to five billion. So it's about a billion dollars a year that we have been deploying or growing the portfolio, mostly through acquisition and deployment.

It took us a couple of years to just establish the business model, in terms of setting up -- finding the managers, setting up the governance. In the past year, we have now deployed into one open-ended fund and established two separate account vehicles that our design for us to be in a better position to deploy capital.

We are committed. Right now, our numbers state that we're at 4.8 billion. However, what's actually in the ground, but not called yet, would take us closer to almost $6 billion. So we have been deploying at roughly about a billion dollars a year over the past four years.

CHIEF INVESTMENT OFFICER MENG: Mr. Jones, in addition to what Paul just said, there are two other reasons. One the infrastructure deal flow is lumpy. It doesn't come all the time, but when it comes in large size. So we need to get our processes ready internally, which we are.

Then the other reason is that there have been increasing demand for core infrastructure assets and our underwriting standard, our return target a little bit higher than other investors. So it make us less -- in a way, less -- we are less price competitive in the marketplace.

But given that challenge, despite of that challenges, the team continues to look for ways, you know, to utilize or take advantage of our scale and brand name, so that we can invest in deploying more capital into core infrastructure projects.

COMMITTEE MEMBER JONES: Okay. Thank you. And so do we have a specific target as we do with private equity. We indicated that we need to deploy $10 billion a year going forward. So do we have a similar target for infrastructure like that?

CHIEF INVESTMENT OFFICER MENG: For infrastructure, we do not have a specific target for infrastructure, but infrastructure is part of the real assets now. And real assets target is 13 percent, currently about 11 percent. So similar to private equity, we have been struggling to get to our target. Private equity target is eight percent. And currently, we stand at 6.9 percent.

So we have -- we realize the benefit of private assets to our portfolio. But at the same time, we also realize the challenges or constraints we face in today's market environment.

COMMITTEE MEMBER JONES: Okay. Thank you. I appreciate the comments. And it's just that it's such a high performing asset. And I'm -- why can't we get more money. It's kind of like private equity. We need to get more money out there, because that's where we're going to get the returns. We need to pay our benefits. So thank you for your comments.

CHAIRPERSON FECKNER: Thank you, Ms. Brown.

COMMITTEE MEMBER BROWN: Thank you.

Mr. Mouchakkaa, can I call your attention to attachment 1, page six of 26. And I just had a question about these -- these valuations are how we come up with these net returns. So when we look at real assets, they're at 3.7 and they underperformed. But I want to go all the way down to forestland, which is negative 10.7 percent.

So -- and the asset value is 1.3 billion. So what we don't see here is what it was -- what the asset value was last year or what changes occurred. Do we -- do you prepare those tables, and can the Board see those, to see like if we purchase -- let's just say for -- I know we didn't purchase any. But if we sold any forestland, what the changes in valuations were, which caused this negative almost 11 percent, or is it just based on valuations. Basically, you get new valuation that the land has dropped or the value has dropped ten percent and that goes in there.

And my concern is, is that if the managers are doing the valuations, how are we checking that those valuations are real? Is there a third-party -- is there a third-party audit of those or is there a random audit of those valuations? Just concern, because I think we pay a lot of our managers based on assets under management.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Um-hmm.

COMMITTEE MEMBER BROWN: And so it would be nice to know that we're just not relying on their valuation, that there's some third party. So I know there's a lot of questions in there, but just curious how you get to that table?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So with respect to your first part of your question, on forestland, we sold our largest single holding in forestland last year. So our net asset value, I believe, was closer to 1.8 or 1.9 billion, the last time I presented the annual program review. I can -- we can confirm the precise number, but it's closer to $2 billion. And therefore, what's shown as the change in value was really mostly the sale of that asset that caused the negative 11 percent return and caused the drop in value.

Now, if I can call your attention, Ms. Brown, to page -- page 18. On the far left paragraph, this shows the proportion of our holdings that are in separate accounts, whereby we have some control features. There -- today, we send it a little over 90 percent of our portfolio is in separate accounts. Virtually all of that 90 percent we appraise through our internal CalPERS Valuation Policy.

The other nine percent that's in these commingled fund type of vehicles, they tend to be valued the way -- based on a manager with an audit firm.

COMMITTEE MEMBER BROWN: Great. So what about tracking, almost like a general ledger, where you show the ins and outs, do you -- how is that tracked in your office and at what point can maybe the Board take a look that, or I would like to take a look at that, sort of the purchases and then the declines in value?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So in terms of how we track it --

COMMITTEE MEMBER BROWN: Um-hmm.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: -- we look at -- there's a schedule that I -- we look at every quarter, that is the cash flow, the contributions and distributions, so plus and minus, and then whatever would be the income plus the appreciate -- we hope for the plus of appreciation.

COMMITTEE MEMBER BROWN: Right, appreciation.

(Laughter.)

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: And then that gets you to your ending. And we look at that movement or conti -- we call it our continue -- continuation schedule every quarter in terms of how our -- the flows and the valuations move in our portfolio.

COMMITTEE MEMBER BROWN: I'm not sure if anybody else would like to take peek, but I would just like to -- just to see one to see how you come up with that final number, that would be great. Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Thank you for this presentation. It's very thorough. I had a couple questions about the one-year versus the three-year performance on page 15. So it looks like the one-year benchmark was 6.5 percent and the net return for CalPERS was 3.7 percent. But then I look at the three-year and it seems like the performance was much better with the benchmark being 6.8 percent and CalPERS net return 6.4 percent. Could you please walk me through what happened between the three-year and the one-year?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Sure. The two previous years our performance was over the benchmark. We had 7.4 percent two years ago and we had eight percent last year. Our performance was slowed by two major factors this year. One was the sale of that timber asset that we brought up earlier. That pulled down performance quite a bit, but that was one that we expected.

The second is a point that Wilshire has actually brought up in -- last month, as well as Meketa, which were our retail portfolio took some valuation write-downs and we did that ahead of the benchmark. And I believe

Wilshire pointed out last -- not last month, but August, in the August IC, that we were more or less ahead of the curve.

We now have two quarters that have been booked in our benchmark. And that benchmark has begun to take its write-downs in the retail arena. It did not take them last year. And so therefore, they're more or less catching down to where we are and our retail has stayed relatively flat for this fiscal year. So that last fiscal year we took the timber sale, and we took valuation write-downs in our retail that caused us to have a much lower return. Whereas, the benchmark for that -- up until the end of our fiscal year had not recognized nearly the amount of hit on retail that we did.

COMMITTEE MEMBER OLIVARES: And what are we projecting for our performance this year versus the benchmark?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: We don't --

CHIEF INVESTMENT OFFICER MENG: We don't really have a projection. We don't project our year-by-year return. But if you were referring to capital market assumptions, every four years we do formal capital market assumptions. And then in between when there's new information coming, we try to update our capital market assumptions at the midpoint. But we do not -- for each asset class, we do not do annual return projection.

COMMITTEE MEMBER OLIVARES: Oh. Okay. That's different.

I also had a question about governance. So I saw that enhanced governance has increased to 91 percent. Is that with the different ESG factors that were included in here?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Which slide are you on?

COMMITTEE MEMBER OLIVARES: I believe that -- wasn't that page -- it might be page six.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Page six. So our separate account, Ms. Olivares --

COMMITTEE MEMBER OLIVARES: Sorry, page 12.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Page 12. All right. So our separate account model that we run in real estate, and now in infrastructure that we've implemented a few of these, there's a few -- beyond the control features we have around the pace of investment, the capital, and the leverage, we also have implemented some of the important ESG initiatives through that governance model. One is our Energy Optimization Program with -- within our Real Estate Program, and then our ESG matrix, which is a framework that all of our separate account managers must put together for us to assess various ESG type risks around maybe climate, or water, or social issues that may be pertinent to that particular asset. We've integrated that through that separate account model, where we have the ability to do that.

COMMITTEE MEMBER OLIVARES: Thank you. And then I see that there are 26 external managers. Do we anticipate that there will be so many going forward or are we going to try to narrow down the manager pool at some point?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So roughly four years ago, I got here and we had 68 internal managers around -- 68 managers within real assets. And that number has been wound down considerably through a lot of this, the ten billion that I reference in terms of the sale of non-strategic legacy assets. So it's been narrowed down quite a bit.

We don't anticipate it to really move dramatically down or dramatically up from that number at this point in time?

COMMITTEE MEMBER OLIVARES: Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman. And I have some ESG-related questions as well, if I may.

I know the real assets carbon footprint portfolio will be completed I think within this next fiscal year. And I was curious as to whether the findings of that effort will be brought before the Committee at some point?

And the reason for the question is just to understand how that might impact the -- I used impact. That's a very -- how that might affect the investment strategy and things like, you know, change in geographic preferences and areas of focus.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: It's linked in our climate risk report, but we'll ask Beth to take on the question more directly.

COMMITTEE MEMBER YEE: Great. Thank you.

MANAGING INVESTMENT DIRECTOR RICHTMAN: Good morning. Beth Richtman, Sustainable Investments.

The Sustainable Investments team has worked very closely with the Real Assets Program to complete the carbon footprint on the timeline I guess set forth by our strategic plan. And so we do have findings on this. And I will say that the work that we put in place over the fast several years within the Real Assets Program using GRESB as a tool, and working with all the managers using this importance governance structure that Paul talked about, has been instrumental in us getting the level of transparency and reporting that we needed to actually do the analysis.

COMMITTEE MEMBER YEE: Okay.

MANAGING INVESTMENT DIRECTOR RICHTMAN: In terms of the findings, I believe that they will be put as part of the overall climate risk report that we will be delivering at some point probably in early 2020.

COMMITTEE MEMBER YEE: Okay. Great. That's fine. And maybe, Beth, while you're hear, I have a question about forestland and really appreciate the staff refining this area of the portfolio. Are there larger discussions with respect to any opportunities for forestland going forward as a potential for providing carbon offsets?

MANAGING INVESTMENT DIRECTOR RICHTMAN: So I will say that that is an area of research. I think, you know, earlier this year, the Board approved new policy language in our governance and sustainability principles that talked about the importance of having a carbon pricing framework that incentivizes that type of natural ecosystem carbon sinks.

Currently, the pricing in those frameworks and their focus on ecosystem services to -- including carbon sinks provided by natural ecosystems is not at a level where we see that as a -- as a place where we could deploy significantly. But that is an area that we're watching.

And it's something that we look forward to policymakers developing the right policies around to create the right incentives for investors like us to be able to find those opportunities.

COMMITTEE MEMBER YEE: Okay. So that's going to be tied very much to the pricing and valuation policy work. Okay. Got it. Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Middleton.

COMMITTEE MEMBER MIDDLETON: Okay. Thank you, Mr. Chair. I'd like to go a little bit more broadly and follow-up on some of the questions that Mr. Jones was asking. In terms of our broad allocation to real assets, are you satisfied with where we are at today?

CHIEF INVESTMENT OFFICER MENG: You mean satisfied in terms of the allocation target?

COMMITTEE MEMBER MIDDLETON: The total amount that we have in real assets?

CHIEF INVESTMENT OFFICER MENG: So the short answer is no, we're not satisfied. But at the same time, we have to acknowledge the challenges and constraints we face. And with that, again under Paul's leadership and then Investment Management Committee, the senior group, we are fully committed to deploying as much capital as we can prudently to private equity and real estate.

COMMITTEE MEMBER MIDDLETON: So this --

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: I'm sorry. Can I just make one comment also. Ben, used the word "prudently" and I think it's worth commenting on that. And this speaks to Mr. Jones question also. It is -- you know, infrastructure is one of our highest performing asset classes, but it's because we've kept high underwriting standards. We could certainly deploy more, but that would mean reducing our underwriting standards, which could potentially mean reducing the returns. So there's this -- there's this balance between getting enough out, but getting enough out with the expected returns and the needed returns.

COMMITTEE MEMBER MIDDLETON: So projecting ahead, how long do you anticipate it will be before we have increased the value of real assets using the kind of prudent underwriting that we're approaching today, and again, in very broad terms?

CHIEF INVESTMENT OFFICER MENG: In infrastructure assets, again, as I said, it comes in lumpy. So we're trying to find out ways to take advantage of our strengths, which is our size. So which also means that when a larger size deal comes to our attention, we need to get ready -- be prepared to be comfortable with some amount of concentration risk in the portfolio. And as we speak, you know, Paul brought to my attention there's a potential large deal the team is currently looking on can be in orders -- I want to say could be in orders of billions.

And one of the questions, you know, when Paul first talked to me, Paul asked me, you know, are we -- will we be ready, you know, with these kind of concentration risks? And I encouraged Paul and the team to look into it. The more we know, then the more -- the better we can answer the question are we comfortable or not.

COMMITTEE MEMBER MIDDLETON: Okay. Thank you.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: And one point, if I may add, Ms. Middleton, is one of the strategic cornerstones of the real assets portfolio is that we hold the assets. They're meant to be held for a long period of time. And so it takes that extra -- that extra layer of really thinking through the asset for the long term knowing that our portfolio won't be churning much, when we get it to where it needs to be.

COMMITTEE MEMBER MIDDLETON: Okay. Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Brown.

COMMITTEE MEMBER BROWN: Hi. I want to biggy back on something Ms. Olivares asked or in your answer to her, Mr. Mouchakkaa. And that is you talked about the reason why we had -- why we lagged the benchmarks in one and three years is one of the things was we had write-downs in valuations. And I sort of have a general question about that and maybe this also goes to Mr. Meng.

And that is at what point is the Board informed of those write-downs in valuations, whether it be in real estate or any other asset we hold, including private equity. When we have write-downs in valuation, when is the Board informed or is the board informed?

CHIEF INVESTMENT OFFICER MENG: I would like to say the Board is always informed. Every time we put out a performance report, either by monthly, quarterly, or annual. So all the performance numbers, when we receive it, we share with the Committee with no constraints or no holding back, if that's what you are asking for. So the Board is always informed.

COMMITTEE MEMBER BROWN: And maybe I shouldn't say informed. If you give us a big table that shows the value of the asset -- like in the CAFR, it shows the value of the asset now and the value of the asset later. But we don't know if that value has changed, because whether you sold something or is it just a write-down. So I'm more cur -- I'm more curious or concerned about if we have a large write-down in a major asset that the Board be informed, whether it's in open or in closed session that we know.

I don't know what the dollar value is, but if it's a major write-down, we would like to know, like some property holding or something like that. That's my preference that it be discussed, not just put in a table with, you know, thousands of other numbers.

CHIEF INVESTMENT OFFICER MENG: I would think -- as we move to the Insight Tool, I would think there would be ability for you electronically you can show it by the amount of write-down. We can also think of other ways. You know, depending on what's the right threshold the Committee deems appropriate, we can highlight, you know --

COMMITTEE MEMBER BROWN: Yeah. And I'm not just talking about like say if real estate drops ten percent and then, of course, it all drops. But I'm talking about things that are exceptions or concerns that the Board -- I would want to be made aware of.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Mr. Jones.

COMMITTEE MEMBER JONES: Yeah. Thank you Mr. Chair. Yeah, piggybacking again on your response to Ms. Middleton's question about more detailed underwriting is causing. And maybe this is going to be addressed in the consultant's report, because Meketa does talk about some threats to this asset class, such as downturn in the market growth, proliferation of new bank lenders, less regulation, high leverage. Are these the type of additional underwriting provision you're referring to or should we just wait till Meketa does its report?

CHIEF EXECUTIVE OFFICER FROST: Thank you, Mr. Jones. It think we -- to talk further in detail about our underwriting stands, we would need to do that in closed session.

COMMITTEE MEMBER JONES: Okay. Okay. Thank you. I take the question back.

(Laughter.)

CHAIRPERSON FECKNER: Thank you.

Seeing no other requests, anything else from you, Mr. Mouchakkaa, on this item?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: No, thank you.

CHAIRPERSON FECKNER: All right. Before we go to the consultants, I do have a request from the public, Al Darby. Please come forward. The microphone will be turned on for you. You have up to three minutes to make your comment.

MR. DARBY: Good morning. Al Darby, President, RPEA. I want to preface my remarks this morning with the statement that this is above my pay grade. So I've asked a consultant -- an expert consultant to give us some help on this subject. That person, of course, is J.J. Jelincic the only consultant that's available to us who served on this Board for 20 years and has intimate knowledge of all of these policies.

With that, I want to say that the Real Assets Program within the program being presented, it appears that the -- there's a relocation of limits to PRP, in other words, more staff responsibility and no Board review is required.

The second substantive change is the proposed deletion of leverage limits from the RA Program Policy, which were previously relocated to newly created leverage policy related procedures, PRP, to align with recently approved changes centralizing leverage management for the public assets class, in the total fund level and relocating program specific constraints to PRP. The same change is true for PE.

This language is being removed. This moves leverage out of the policy a Board control and PRP will take over. So this proposal suggests that no more oversight of the Board in the matter of leverage.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Next is the Board consultant's review, 9b.

MS. FIELDS: Good morning.

CHAIRPERSON FECKNER: Good morning.

MS. FIELDS: Christy Fields, Meketa Investment Group. I'd like to first thank the Committee for retaining us to be your real estate consultant going forward. Thank you very much. It's been our pleasure and honor to be your real estate consultant for the last ten years.

It's also nice to be here presenting the annual program review, which we have been doing for the last ten years. It's gotten progressively easier story to tell. And that's a credit to Paul and his team and all the work that they have done and continue to do.

David and I are going to focus our comments primarily on the SWOT section of the letter that we prepared and then we'll take questions after that.

But as Paul mentioned, the portfolio is accomplishing what it is set out to do, providing current income with which you can pay your beneficiaries, important diversification against your growth and equity risk, and protection against inflation.

Amongst the strengths that we've highlighted, I'd like to call out particularly the long-term strategy, which has increasingly well integrated with the overall strategic direction of the fund. There is increasing congruency between what the Real Assets Program is delivering to the fund through the underlying portfolio composition.

I'd also like to call out the diversity of the group of the investment team and the strong leadership. Paul has been here almost five years now and he provides a very measured, intellectually honest, and disciplined approach to investing. He's a strong mentor to his team. And he's provided really good research discipline.

The improvement in the research produced by the group has been truly impressive over the last few years. And I think that informs the performance of the real estate portfolio.

The last of the strengths I'll call out at this point is the scale. You all have this in spades. And it serves the real assets portfolio in particular, because of the business model that it allows, which is these large, fee-efficient, scalable separate accounts.

David.

MR. GLICKMAN: Thank you.

David Glickman

CHAIRPERSON FECKNER: Microphone.

Thank you.

MR. GLICKMAN: Thank you. David Glickman, Meketa

Investment Group. I'm going to spend one more minute on a strength, which riffing off of Ben's four Ps, I'm going to call the four Cs, which are aren't about buying diamonds today, but rather are collegiality, cooperation, cohesiveness, and consistency. One of the goals of the annual program review is to report what has happened. And another goal, at least from our point of view, is to try to look forward. And there will be a downturn in real estate performance coming forward. We're not sure when or how much, but there will be one.

And an asset that you have that isn't reflected on your balance sheet, but which is an important asset that will serve you well in those times is your staff. And the fact that they have been together and are consistent in their approach in executing your beliefs and your policies will give you protection when the downturn comes. That's not so easily visible right now, but we think looking forward it's useful for you to know.

Turning to some of the things that are challenges and weaknesses. No offense, Christy, but scale is one of those too. The ability to be nimble in specific real estate transactions is not part of your everyday program, since the dollar amounts that you need to invest to be effective are not small amounts, and there are lots of competition for the properties that you seek. So in that case, scale works a little bit against you.

You are a first call when deals of size come to market and that's an advantage. But the ability to do lots of deals fast is not something that is part of this program.

Let me talk about another more general weakness, which was alluded to in some of the comments from the Board members about the infrastructure implementation. Similarly, in real estate, there are an awful lot of investors who are chasing the same deals that you are.

And to staff's credit, they have maintained the discipline around their return hurdles and not chased deals. And we've noticed that for every year that we've come to report to you for the last seven years and we think that that's a strength.

There are two markets at which to look, one is the space markets of the individual real estate properties, which are pretty chose to equilibrium. The difference between the demand for space and the supply of new space being created is at a pretty reasonable comparison point.

But the other market, which is capital markets, there are imbalances. There is more capital chasing transactions than there are transactions of merit. And so that's going to affect the deployment and the pacing to some degree. And over the long term, that should settle, but in the shorter term, that may be an area of some difficulty.

MS. FIELDS: With respect to opportunities, I think CalPERS sits in a really interesting space in the middle, in the nexus, of some of these that we've highlighted here, including the changing way that people are interacting with their built environment, sustainability efforts, and data analytics in portfolio management. You have a very large diversified portfolio. And so you have, in essence, a terrific beta lab for understanding how all of these dynamic forces will interact to impact real estate. And your business model allows you to be pretty close to your real estate through these separate account relationships and to have the governance needed to -- to be able to kind of peer around the next corner and understand how your real estate portfolio is going to be impacted by some of these dynamics.

So I think there's a lot of opportunity here ahead of you for CalPERS real estate.

MR. GLICKMAN: And last, we'll talk about a couple of threats. Not all threats come true, but prudence suggests that you prepare for them in any event. The one that gets most of the headlines right now is changes in space use, or what's referred to as disruption. And this is an area that you are exposed to. You are less exposed than some other real estate investors in part because you retain good control and governance over your assets, you can make changes directly, if you find that that's important, and you are less exposed than some other investors because the quality of your portfolio, the locations, the assets that you own, is of high quality, and therefore will continue to be attractive to the largest percentage of prospective users.

At the same time, as was described in the write-down of the retail properties, people are changing how they use their real estate. Your property managers, your outside investment managers have low enough leverage in the separate accounts and access to capital, so they will be able to respond and hopefully anticipate some of these changes in what we think is a protective way, compared to some other real estate owners who are leveraged too high or don't have access to additional capital to keep making the improvements and changing the character of the properties to continue to attract tenants and consumers.

The things that we watch closely are new supply that isn't already leased, so spec building, and the willingness of construction lenders to advance higher and higher percentages of the cost of new construction.

So far, those two areas are moderate and we don't see an excess of new speculative building in most markets in most property types domestically. At the same time, as new lenders come into the arena, as banks have restrictions lifted from them and they begin to look at construction lending as a highly margined part of their business model, you have to be careful markets don't get ahead of themselves in delivering new supply.

With that, we will ask the Committee if they have any questions for us, which we would like to try to answer.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Mr. Jones.

COMMITTEE MEMBER JONES: Yeah. Thank you, Mr. Chair. Yeah, thank you for the presentation. And recognizing that our real assets is a long-term opportunity that we're looking at 40, 50 years out in the future, I was at a meeting last week and there was an observation of AI implications in hotel, where it was all face recognition. There was -- you know, you check in, you order food, you turn on the lights, everything was done by -- through an AI component.

So I wanted to get your views on where do you see the AI -- what is the -- what do you see the implications of our going forward in real estate, infrastructure in terms of its -- in terms of AI's impact on our portfolio going forward?

MR. GLICKMAN: Well, I'll try, not being an expert on AI. There are -- it is said that real estate specifically has been a little bit late to the party in terms of modernizing the interface between the customer and the landlord.

And so there is a lot of attention in an area that's called prop tech, where the disciplines of technology and real assets are trying to be merged. In order to be effective, it's going to require capital. And there will be false starts. But I think, in general, your managers are well positioned, because the balance sheets of the individual real estate partnerships that you've created have capacity to make incremental investments not only in new physical space, but in technological advances as well.

We know, for example, that the shopping center -- the regional mall owners with whom you are partners, are spending tens of millions of dollars a year to try to continue to make those malls attractive for people to show up and to integrate point-of-sales in the malls with point-of-sales on the internet.

And so we follow those trends and we think that as the best and the brightest ideas emerge, which will cost money, your managers are going to be able to deploy them and implement them in your properties.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: If I may add. Thank you, David. One of the disciplines that we have in our business model is, what we call, the AIP, or annual investment plan. It has two of your letters, but it doesn't mean artificial intelligence. But the annual investment plan where each of our separate account relationships come and meet with all of our -- all of our staff to propose their plan for the next year.

In this discipline, we are talking about the exact trends within each of the specific area, whether it be retail, or office, or apartment, so that we can evolve our portfolio, either through the sale of properties we don't believe will be positioned well for the future or reinvesting in properties that we believe maybe just need some reinvestment, or reaffirming the properties that we believe should stay, and lastly, investing in new properties for the future.

So that discipline of us having these annual plans come through our shop within real assets really give us the ability to evolve the portfolio in a very disciplined way. And I always like to say these trends you never want to overreact, but you also don't want to underreact. And we try to find that balance of being very measured at the same time and consistent, but methodically adapting to a trend or a change.

COMMITTEE MEMBER JONES: Okay. Thank you very much. Appreciate that.

CHAIRPERSON FECKNER: Thank you.

Ms. Taylor.

VICE CHAIRPERSON TAYLOR: Yes. Thank you. Thank you, Mr. Glickman and Christy. I'm sorry.

I had a couple of -- actually, I had one question to start with. You's mentioned earlier about space disruption. So what constitutes space disruption -- new space space disruption?

MR. GLICKMAN: So the most visible example of space disruption is WeWork, where the traditional office model was supplemented by a communal office model. And there have been disruptions in industrial warehouse, where owning a distribution facility close to the last mile of delivery becomes much more critical than being located at the intersection of two interstates.

The office and the industrial are supplemented by retail disruption, where you buy things from Amazon rather than going to the Department store. So those are examples. The malls are another high profile example of having dramatic changes in the use of the square footage, where the old department store is now a community college. So those would be some examples.

VICE CHAIRPERSON TAYLOR: Okay. Great. Thank you. I -- I was also a little concerned in your threats outline of, "There's a proliferation of non-bank lenders and less regulation". I understand that our underwriting is much better than that and that we're not getting involved in that, but -- and then "higher leverage and speculative supply". And you did mention that, but what kind of impact is that going to have in the future, even though I -- I suspect that we won't have any of those in our portfolio, but it may affect --

MR. GLICKMAN: So here's how I think it might affect it. There's two ways. One is if new supply is delivered and not taken up, not leased ahead of time, then that's going to potentially depress market rents for that subsector. And when the evaluation of your assets occurs each quarter and each year, the lower growth rate for rents over the next projected period is going to diminish the value of your existing asset.

The second way that it's going to potentially hurt is if a lot of new space is delivered, then the competition for your tenants is going to increase. And the new empty space is going to try to make a deal to take your tenants and fill up their buildings.

So the prospect of new supply being created speculatively is something that might indirectly affect your assets when the leases in your assets roll to mature and have to be released.

VICE CHAIRPERSON TAYLOR: Doesn't that -- I guess when I think about that though, don't we have a shortage of office space and retail -- well, not retail space, but office space, in general, in the bigger cities right now. So I don't -- you know, I'm not speaking just in Sacramento.

MR. GLICKMAN: So your -- your portfolio is very well occupied. Your commercial assets, not counting apartments, but -- are somewhere north of 90 percent.

VICE CHAIRPERSON TAYLOR: Okay.

MR. GLICKMAN: And the average lease term on the office leases and the other retail and industrial leases is somewhere around six years on average. Apartments, of course, are leased either for six months or a year, so that's a little different.

You are somewhat insulated. Different submarkets have different supply and demand characteristics, so that the vacancy rates in some submarkets are troubling. There have been a lot of new apartments created in Phoenix, Arizona over the last years. And so rental growth in

Phoenix apartments hasn't been terrific for the last couple of years. That will subside over time, but there is the possibility that the new supply will make it difficult.

Most markets are close to equilibrium. Nationally, office vacancy is at a relatively low rate from a historic basis. Retail has problems. Apartments are at a high occupancy rate, low vacancy rate. And industrial seems to be at the lowest vacancy rate right now. So it's not a threat right now, but opening the spigots to new construction could change those dynamics over a 24- or 36-month period.

VICE CHAIRPERSON TAYLOR: Okay. Did -- Ms. Fields, did you have -- it looked like --

MS. FIELDS: (Shakes head.)

VICE CHAIRPERSON TAYLOR: Okay. Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Thank you for this presentation.

I had a couple questions under the section "Diversification Along Key parameters", and some of the allocation there. In particular, for the real assets segments, we have some policy ranges and limits, and then our exposure. And I noticed that essential, specialized, and international seem to be out of range.

MS. FIELDS: Sorry. Excuse me. The ranges are zero to then the upper band limit. Am I misunderstanding the question?

COMMITTEE MEMBER OLIVARES: Yeah.

MS. FIELDS: So essential is 0 to 25 and has a exposure of zero. Residential is 0 to 40 and has an exposure of 23.6. Is that what we're looking at?

COMMITTEE MEMBER OLIVARES: I'm looking at Attachment 2, page six of nine.

MS. FIELDS: Oh, I think that's infrastructure.

COMMITTEE MEMBER OLIVARES: Okay

MS. FIELDS: Sorry. They're up next.

COMMITTEE MEMBER OLIVARES: Thanks.

CHAIRPERSON FECKNER: Anything else, Ms. Olivares?

COMMITTEE MEMBER OLIVARES: No, thank you.

CHAIRPERSON FECKNER: All right.

Seeing no other requests.

MS. FIELDS: Thank you.

MR. GLICKMAN: Thank you.

CHAIRPERSON FECKNER: Anything else?

All right. Before we go on to Item 9c, I just want to state that, Mr. Darby, I believe the person who was sharing information with you, that information was for the previous agenda item for 8A not 9A. So now that we've digested what you had to say, I believe that's where that was coming from.

All right. Now, we move on to Item 9 -- so I don't if that changes your request to speak under 9c, so you just might want to consider that.

MR. DARBY: No, it doesn't.

CHAIRPERSON FECKNER: Thank you. All right, 9c, the private equity.

(Thereupon an overhead presentation was Presented as follows.).

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: Sorry, Mr. Chair, for 9b, we still have the infrastructure consultant.

CHAIRPERSON FECKNER: Oh, very good. Sorry. Yes.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: Meketa will cover infrastructure and then we'll move on to 9c.

CHAIRPERSON FECKNER: Had me confused, since one was sitting over here and didn't say anything. I thought well what are we doing over here.

MR. McCOURT: We'll be quick.

CHAIRPERSON FECKNER: No hurry.

MR. McCOURT: Steve McCourt, Meketa Investment

Group.

Our report is fairly brief. I'll make a couple of summary comments and then hand it over to Lisa for a handful of observations, and, of course, welcome any questions from the Committee as well.

Three comments I'd like to make. First of all, as was reported by staff and commented on already, performance has been exceedingly strong for your infrastructure assets. Over the prior ten-year period, the annualized return is 17.9 percent. That, of course, is your average return each year over those ten years.

I wanted to highlight the power of compounding in the sense that what that means for you is that every dollar you had invested in infrastructure ten years ago it turned into $5.70. Every billion dollars turns into $5.7 billion. So this has been a very strong asset class for you. The challenge that's been highlighted is trying to get more dollars into this asset class given the competition for it.

Your program is in compliance with all policy parameters and we believe it's fully aligned with all of your Investment Beliefs.

And with that, I'll hand it over to Lisa for a few additional comments.

MS. BACON: Good morning. Lisa Bacon, Meketa

Investment Group. I'll walk through a couple of the comments that we made in there. They're consistent and echo the comments that Paul made in his report, and also some of the comments my colleagues made around the real estate portfolio.

Starting with performance, as Steve mentioned, and others have, it's stellar, impressive. I wouldn't -- and we've -- we've guided the -- I wouldn't expect it to continue at these levels. Some of your experience in the infrastructure program has been unique. And I would expect that to moderate some. Part of the marks right here are benefiting from a very competitive core marketplace, which is the same market that you all are wanting to deploy money into.

And so that goes to the comments also that have been made around the team's careful underwriting and discipline, which we've had occasion to observe really over the last four to five years, as a Board consultant, and then as a -- as a regular consultant. And so we can attest to the truth in that.

With respect to the growth of the portfolio, that also has been impressive. Perhaps a little slower than you or staff may have liked, but I think appropriate for the asset class and the kinds of accounts and governance structures that you all are seeking. It's fairly easy to make commitments to commingled funds and get capital drawn. It is harder to develop strategic relationships with best-in-class partners to negotiate separate accounts with the kinds of favorable governance that an institution like CalPERS can command, and then to have those managers in turn also be disciplined in the marketplace in getting the kinds of assets that you all are seeking.

We've noted before the tremendous growth from even ten -- you know, from ten years ago when the program started out at about $700 million to almost seven and a half million now, when you think about what you've got committed that hasn't been drawn, and what you've got that's invested.

With respect to the net asset value, as Paul mentioned, it's almost $5 billion. He's had charts that show you the growth in that over the last couple years of a billion a year. That's really a tremendous accomplishment in terms of getting that kind of capital out with the kinds of discipline, and in the diverse amount of assets in various sectors and in various geographies to create a well diversified portfolio.

I'll also want to comment on the managers and the investment structures. Again, echoing Paul's comments that somewhat following the real estate model, but modifying it for the realities of the infrastructure space, the investment program is seeking to primarily deploy capital through separate accounts.

In infrastructure, in some respects, that, I would argue, is more challenging than in real estate. Because the assets are so large, it is -- it s much harder to go and get multiple infrastructure assets with a single manager in the kind of volume and capital deployment that I've seen be successful in the real estate space.

The kinds of assets that CalPERS is looking for are multi-billion dollar assets usually. Some of them are more in the middle market, several hundred million dollars, but they're all highly -- highly competed. And so it takes CalPERS relationships with these managers, with the sellers as a partner that can transact and a partner that is interested in a long-term hold.

Paul also mentioned some of the accomplishments this year. With respect to some new separate accounts, some expanded separate accounts, and some strategic commitments to commingled funds that will provide certain access to certain kind of investments, we've had the opportunity to watch staff develop this strategy and tailor it for the infrastructure program over the last couple years. I know it's been frustrating for some of you all and for them in the time it's taken to accomplish this. But I can tell you that the outcome is very impressive with respect to the accounts they have, the governance they have, and the managers that they're going to be able to move forward with. And so we have very positive views about the team being able to continue to deploy the amount of capital they're seeking to deploy in the space with best-in-class managers.

I think I'll conclude my remarks with that and answer your questions.

CHAIRPERSON FECKNER: Thank you.

Seeing no other requests, did you want to ask your question again, Ms. Olivares?

Push your buttons.

Mr. Rubalcava.

COMMITTEE MEMBER RUBALCAVA: Thank you, Mr. Chair. I think I've asked this before and I can't remember the an -- where -- I need a refresher. What is a club and consortia vehicles?

MS. BACON: So the term club generally refers to a -- sort of an invitation only commingled fund, if you will. So generally, it's anywhere from two to four usually large pension plans that have similar goals and objectives, and similar longer term hold, and so they negotiate a -- this invitation only account with a general partner. So it looks similar to a commingled fund, but there are fewer members. They have more -- many more governance rights than typically they would have in a typical commingled fund.

So it's -- it's not exactly the one-to-one alignment or relationship of a separate account, but a lot of managers -- either want to expand their separate account business or they're potentially leery of having an account with one -- just with one LP. Having a club also gives the manager more capital, for example, and more dependable capital. It also helps the LPs participating in that the ability to maybe not deploy such a big chunk into a single asset, but take maybe a smaller piece, but still have -- have the kind of governance that they're looking for.

COMMITTEE MEMBER RUBALCAVA: Thank you.

Thank you, Mr. Chair.

CHAIRPERSON FECKNER: Thank you.

Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Thank you.

So this -- sorry, I'm going to ask the question now.

MS. BACON: Page six of nine.

(Laughter.)

COMMITTEE MEMBER OLIVARES: Page six.

MS. BACON: So on this table with respect to the real asset segments, these segments are judged for compliance at the Real Asset Program level. And so they're not judged for compliance at the infrastructure portfolio level. And so we put these here just really for informational purposes. And since infrastructure is a relatively small portion -- smaller portion of the whole Real Asset Program compared to the 30 some billion dolars that real estate has, the weights in infrastructure don't -- don't influence the overall numbers that much.

But as the infrastructure program grows, it's just something that we look at just to see what the relationship is. And at least right now, there's no sort of positive or negative judgment around the numbers.

COMMITTEE MEMBER OLIVARES: I'm sorry. I'm trying to understand, so we have policy ranges in place, right?

MS. BACON: Yes.

COMMITTEE MEMBER OLIVARES: But we're outside of those policy ranges.

MS. BACON: So the policy ranges are applied at the real asset program level --

COMMITTEE MEMBER OLIVARES: Um-hmm.

MS. BACON: -- and not at the infrastructure portfolio level.

COMMITTEE MEMBER OLIVARES: Um-hmm.

MS. BACON: -- so these are informational only and they're not --

COMMITTEE MEMBER OLIVARES: And why are they not applied at the infrastructure level?

MS. BACON: They don't have to comply.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So we are in compliance. I want to start with that. We are in compliance with the limits in the policy guideline, given that this is measured at the real assets level. So I don't have the table committed to memory. But across our separate segment limits or ranges, all of them are within compliance today. It's just -- I believe what Meketa did was just only look at within the infrastructure portfolio and not across the program.

COMMITTEE MEMBER OLIVARES: Right, I understand that.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: The other point I want to make is in terms of policy, the infrastructure policy limits kick in once it gets over $5 billion, which we will -- we will be in that position next year -- over this year, I should say, this fiscal year. Because once you're below five billion, you might do one deal a few hundred million, it can move the needle so dramatically, that at five billion there's enough of a denominator for us to now measure the policy limits. So in this fiscal year, we'll have breached the $5 billion floor, and all the policy within infrastructure will kick in.

COMMITTEE MEMBER OLIVARES: So going back to the ranges that are indicated here, so zero to 25 for essential, and we're at 32; zero to 40 for residential -- I'm sorry zero to 20 for specialized, we're at 27; international zero to 25, we're at 29.4, you're saying those don't -- those policy ranges do not apply because this is for infrastructure in particular. And if there was a policy range for infrastructure, it wouldn't apply until it's at five billion or more?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Five billion. So I'll give you the -- the real -- the actual figures for essential. So the zero to 25 percent permissible range for essential, we're actually at six percent when you do the across real assets. So we're within the range. And then I believe the other one you mention was international?

COMMITTEE MEMBER OLIVARES: So essential, specialized, and -- so I get there's real assets versus international.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Yeah.

COMMITTEE MEMBER OLIVARES: But I still want to understand why we have these policy ranges in place for infrastructure, what's the thinking behind that, and then why do we have this change at the $5 billion mark?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So the ranges that you see are simply for real assets. They are not for infrastructure, if I -- if I'm understanding.

COMMITTEE MEMBER OLIVARES: So we don't have a policy range for infrastructure.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: We don't have a specific range for these segments, because the segments apply to the whole portfolio. There are some segments that include two different -- you know, they technically include real estate and infrastructure together.

COMMITTEE MEMBER OLIVARES: Um-hmm.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: So take something like commercial, commercial would include an office building, industrial, and let's say a toll road. So they all kind of merge together in order to -- for us to manage the real assets pool.

The second point I made was just the fact that any specific policy limit related to only infrastructure is enforced once we get above a $5 billion net asset value. In order for us to build the portfolio up until that point, there could be a lot of movement. And so therefore, we, with the Board, put together that floor in order for us to get -- get -- in order for us to build the portfolio up until five billion.

COMMITTEE MEMBER OLIVARES: So what are the policy limits once the $5 billion trigger has been met?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: The policy would only apply to things like --

MR. McCOURT: Yeah, so the rest of that table applies. So if -- if you look at that table, the footnote under the real assets segment --

COMMITTEE MEMBER OLIVARES: Um-hmm.

MR. McCOURT: -- sort of highlights that's for informational purposes only, because those policy limits are at the real assets level. We're just providing that --

COMMITTEE MEMBER OLIVARES: Um-hmm.

MR. McCOURT: -- those allocations for information. The rest of the parameters that are mentioned there, the risk clarifi -- risk classification, geographic region --

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: And leverage.

MR. McCOURT: -- and leverage are applicable to the infrastructure program and the program is in compliance today with all of those, even though what Paul had mentioned, technically it doesn't have to be, because it's not quite at $5 billion yet.

CHIEF INVESTMENT OFFICER MENG: Yeah. And to answer your question, Ms. Olivares, the reason we need $5 billion -- no magic about five billion. We need a size -- a sizable portfolio. As I mentioned that particularly for infrastructure investment, the size can be lumpy, right.

COMMITTEE MEMBER OLIVARES: Um-hmm.

CHIEF INVESTMENT OFFICER MENG: We have a big deal coming in -- if your denominator -- the size of the overall portfolio so small, the denominator is so small, we have a new deal comes in can easily move you, the constraints of the policy range from one way to another. So that's why need to build a large enough portfolio before we can apply any meaningful constraints or policy to that segment of the portfolio.

COMMITTEE MEMBER OLIVARES: Thank you. Yeah, I understand that. I -- so after that five billion trigger has been met then, what -- do any policy range limitations apply to infrastructure when it comes to essential, specialized, and international or no?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: The only areas the policy covers are risk classification, so that would be the core, value-add, or opportunistic, geography being the United States, developed markets, or emerging markets. And then there are leverage limits around debt service coverage ratio and loan-to-value. All of those items would be covered within the infrastructure portfolio.

COMMITTEE MEMBER OLIVARES: Okay. So no infrastructure segment policy ranges apply?

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Correct.

COMMITTEE MEMBER OLIVARES: Thank you.

MANAGING INVESTMENT DIRECTOR MOUCHAKKAA: Sorry about that.

COMMITTEE MEMBER OLIVARES: That's fine.

CHAIRPERSON FECKNER: All right. Very good. Thank you.

Anything else?

Great. All right.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: And, Mr. Feckner, I misspoke. Next is Wilshire and then we move on to private equity.

CHAIRPERSON FECKNER: Got it.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: Thank you, sir.

CHAIRPERSON FECKNER: I wondered why he was sitting there, so...

(Laughter.)

MR. JUNKIN: I've wondered that myself.

(Laughter.)

MR. JUNKIN: Andrew Junkin with Wilshire Consulting. Good morning. At the risk of gilding the lily, I have a few comments, but I will keep them short.

So I'm going to wear two hats. One is the general pension consultant and then one is the forestland consultant.

The -- as the general consultant, the most important part of this review to us is that the real assets asset class is playing the role it was designed, to protect against inflation and to hedge against equity risk. So it's doing both of those. We make some comments specific to that in our letter. I won't -- I won't rehash those here.

When it comes to forestland, I think I was here with the investment was made in Crown Pine. So there was some question about -- or a comment that Paul made about that. And at the time, and goodness this was -- what was the -- 2007, so 12 years ago, there was an expectation that forestland was going to be a big part of the CalPERS portfolio, going forward, like moving up to five or ten percent of the program. In some ways, that was sort of mimicking some of the things that the Ivy League Endowments had done.

So the Crown Pine investment was looked at as kind of a big step forward towards that goa. But the market changed with the global financial crisis. If you can believe it, it actually became less liquid. And illiquid market becoming less liquid. And sales went from some sizable chunks to very small chunks. So CalPERS never really was able to build a fully diversified portfolio. It's hard to estimate the size of the institutional forestland market.

But one of the recent estimates is it's a couple hundred billion dollars. So if you think of CalPERS at ten percent, you know, you'd be almost 20 percent of that market. That just doesn't work in an illiquid market.

So timber broadly, your portfolio obviously hasn't done as well as the other segments of real assets. CalPERS had some very specific issues with Crown Pine, which are now gone. The issue of leverage, some forced sales there. It was very concentrated. The remaining assets, as Paul mentioned, are better. There's no rush to fire sale them. They have to compete against the rest of the real asset portfolio. There is now no longer a forestland benchmark. There is simply a real assets benchmark.

And if you find additional forestland that fits well within that portfolio, then you could consider it. There's none being considered at the moment, but there's certainly no rush to get rid of the assets that you have at the moment.

I do want to spend just one second here, and I think everybody has touched, on it, in particular, as it comes to building up the infrastructure portfolio and why aren't we moving more quickly? And I think that's a great question. But I think actually forestland is a pretty good example of why you want to be careful.

So there was a lot of concentration risk trying to move that portfolio forward quickly. And we can see what happened, you know, with the benefit of hindsight. Infrastructure admittedly has been slow growing. It is also an illiquid hard-to-transact market. Pricing and pacing is an issue.

If you look at the broad, private markets, we've seen such a seismic shift for investors over the past 10 or 15 years. There is now $2.6 trillion of dry powder, with a "T". Of that, a billion and a half is private equity, and I know they're coming up next, and I know that pacing there is an issue. So keep that in mind.

And that $2.6 trillion is up about 30 percent in the last three years. Money is just pouring into private asset classes. So real estate there's dry powder of about 400 billion. And infrastructure there's dry powder of about 250 billion. So to the points that have been made about sort of accelerating the growth and the infrastructure market are moving the weights forward, it's tough. It's tough to compete.

There are a lot of people chasing those assets and I think that using forestland as an example, you can see the benefit of the discipline that staff has had in the infrastructure market.

CHAIRPERSON FECKNER: All right.

MR. JUNKIN: Happy to stop there.

CHAIRPERSON FECKNER: Thank you.

Mr. Jones.

COMMITTEE MEMBER JONES: Yeah. Thank you, Mr. Chair. Yeah, Mr. Junkin -- yeah, just -- but on the point about the slow growth in infrastructure to take from lessons learned the timberland -- timber issues. But those are really two very different industries. The forest is a very small piece of the economy. The infrastructure is the total economy.

So you may not want to use the same lessons learned from timber to use for such a large potential asset class. It's just an observation.

MR. JUNKIN: I completely agree. Really, might point was about the concentration of trying to build a portfolio when you have to take a bigger bite of something to kind of move the portfolio forward.

COMMITTEE MEMBER JONES: Okay.

MR. JUNKIN: And it can work out really, really well, as I think some of your first infrastructure investments did. And they -- they -- because you had zero to start with, your first few were significant pieces as a percentage and they did spectacularly well.

COMMITTEE MEMBER JONES: Right.

MR. JUNKIN: I'm using forestland as the countervailing example to that.

CHAIRPERSON FECKNER: All right. Anything else, Mr. Jones?

COMMITTEE MEMBER JONES: No.

CHAIRPERSON FECKNER: Okay. Seeing nothing else, thank you very much.

That brings us to Item 9c, private equity.

Mr. Meng.

(Thereupon an overhead presentation was presented as follows.)

CHIEF INVESTMENT OFFICER MENG: Yes, Mr. Chair. So again, this is the annual program review of the second private asset class, which is private equity. So with that, I will turn it over to my colleague Greg Ruiz and also to together with the consultants.

MANAGING INVESTMENT DIRECTOR RUIZ: Good morning.

CHAIRPERSON FECKNER: Good morning.

MANAGING INVESTMENT DIRECTOR RUIZ: Before I dive into my presentation, I wanted to start with an overall assessment of the program. I believe the core of our Private Equity Program is stable and healthy. We have strong relationships with high quality managers and maintaining, cultivating, and expanding those relationships is going to be fundamental to the success of the program.

The private equity industry is dynamic and changing and there are opportunities for us to continue to evolve our private equity strategy. It's important that we do so.

A thoughtful and cautious evolution to our program will better position us to leverage our core capabilities, achieve our targeted rate of return, while deploying additional capital into the asset class.

--o0o--

MANAGING INVESTMENT DIRECTOR RUIZ: As we move to the presentation itself, I'd like the start with our portfolio.

The objective of our private equity portfolio is to enhance the equity returns of the fund. Our allocation to and returns from private equity today are the result of decisions made over the past five and even ten years. Likewise, the decisions we are making today will not be fully experienced in the portfolio for five or ten years to come.

With such a long dated asset class, it's incredibly important that we have consistency and a long-term commitment through all market environments.

We have a very talented team with significant experience in private equity. Under the leadership of Sarah Corr over the past two years, the team has shown resilience in the face of significant uncertainty about the direction of the program.

This has been no easy feat, and I'm incredibly proud of the work the team has done to maintain CalPERS' position in the industry, while developing an inclusive and collaborative culture.

When we look at our performance, there are three methods we use. We look at our performance relative to a benchmark, relative to our asset liability management assumptions, and relative to other asset classes, in particular global equity.

I'll go into additional detail later in the presentation on our performance. But at a high level, we've outperformed our benchmark over the 20 and one year time horizons, and we've underperformed our benchmark over the three, five and ten-year time horizons.

Relative to our ALM assumptions, and other asset classes, we've outperformed for nearly all time periods.

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MANAGING INVESTMENT DIRECTOR RUIZ: We had a number of accomplishments over the last fiscal year, including scaling our capital commitments to nearly $7 billion. This represents a significant step up over the prior year, and we're on track to exceed that amount this year.

We've evolved our team structure by integrating underwriting and monitoring. We've also continued to improve our culture. We also have assessed new methods for capital deployment, including co-investment, as well as partnering with teams to gain exposure to areas we miss in our current relationships.

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MANAGING INVESTMENT DIRECTOR RUIZ: We also have a number of major initiatives on our plate for this fiscal year. As part of my early assessment, we will initiate a strategic planning process to frame our long-term objectives. We participate in a rapidly changing industry. And we've seen our peers evolve in some ways, where we've yet to commit yourselves. We will build on the important work that's been done over the past few years, take stock of where we are, and assess how we can position ourself for success for five and ten years to come.

You'll see us continue to focus on our core capabilities, which are effective underwriting and engage monitoring. And we will also assess how we can expand our investment capabilities.

Co-investment is going to be an important element of our strategy moving forward. And it's an area where I expect we'll make progress this year. It will also be an area here we need to assess our resources. We'll need to look at what we need to execute the strategy, and we may need to expand our capabilities with additional resources. We will also continue to integrate ESG factors into our investment processes and areas where we've made significant headway over the past few years.

--o0o--

MANAGING INVESTMENT DIRECTOR RUIZ: On this slide we lay out performance. Once again, they're the three relevant comparisons I noted earlier. Compared to benchmark, you'll see we outperformed our benchmark over the 20, and one-year time horizon. And we've underperformed over three-, five-, and ten-year time horizon.

Relative to our ALM assumptions, we've outperformed over all time horizons, with the exception of the one-year. And relative to the global equity benchmark, we've outperformed over all time periods.

--o0o--

MANAGING INVESTMENT DIRECTOR RUIZ: Overall, I believe we have a strong core private equity portfolio. When we assess our historical performance, we've been most successful when we stick firmly to our core. And we've underperformed when we've strayed too far from our core.

So on a go-forward basis, we will remain focused and expand only into those areas where we have high conviction. We can leverage our core capabilities to drive durable outperformance.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Brown.

COMMITTEE MEMBER BROWN: Thank you, Mr. Chair.

Mr. Ruiz, I've asked this question before, probably not of you, of Mr. Baggesen. But he explained it to me and I didn't understand the explanation. So maybe I can get you to put it in plain English. When I look at page six of 23, the one we were just looking at, the PE policy benchmark, and I don't understand why it's only four percent for last year.

MANAGING INVESTMENT DIRECTOR RUIZ: Sure.

COMMITTEE MEMBER BROWN: Oh, Ben, you want to take it.

MANAGING INVESTMENT DIRECTOR RUIZ: No, I'm happy to jump in.

COMMITTEE MEMBER BROWN: Okay.

MANAGING INVESTMENT DIRECTOR RUIZ: So the way our benchmark works is it's set basically on a public equity index, and then there's an additional amount above that. So until recently it was plus 300 basis points. Now, it's plus 150 basis points.

COMMITTEE MEMBER BROWN: Um-hmm, 150.

MANAGING INVESTMENT DIRECTOR RUIZ: So the benchmark is just going to be a reflection of the underlying public index, plus now 150 basis points. So it will fluctuate each year. And years where the public markets perform very well, it will be high and years when it -- they perform less well, it will be lower.

CHIEF INVESTMENT OFFICER MENG: In addition to the spread on top of the public equity market returns, there's also a one quarter delay. So our -- because of the appraisal process.

COMMITTEE MEMBER BROWN: Right.

CHIEF INVESTMENT OFFICER MENG: So it's one quarter lagged public equity plus 150.

COMMITTEE MEMBER BROWN: Yeah, the benchmark just seems so low, like I could stagger over that bar.

CHIEF INVESTMENT OFFICER MENG: But please, be mindful that we are trying -- this is a long-dated asset class where we focus on long term. So the year-by-year return public market, given the volatility of the public markets. So you -- we expect to see this kind of volatility in the benchmark.

COMMITTEE MEMBER BROWN: Okay. Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman.

I want to just take a look at slide 23 and understand a little bit better why the fees were substantially higher this fiscal year when the assets under management dropped by about $700 million.

MANAGING INVESTMENT DIRECTOR RUIZ: Yeah. So there's really two components of the fees that are lumped in, if you look at the external management.

COMMITTEE MEMBER YEE: Right.

MANAGING INVESTMENT DIRECTOR RUIZ: There's two components to the fee. One is the management fees we pay on our assets and the other is performance fees.

The way the performance fees work are they -- our managers will take a share of the profits above a preferred return.

COMMITTEE MEMBER YEE: Right.

MANAGING INVESTMENT DIRECTOR RUIZ: When there is a strong selling environment and we're receiving a lot distributions, they will receive a share of those profits. So while overall fees went up, the vast majority of that is driven by the performance fees, which means we also receive very significant distributions.

COMMITTEE MEMBER YEE: Okay.

CHIEF INVESTMENT OFFICER MENG: You see so this is the very place that we're happy to pay a higher fee. It means that our managers have generated a higher return. And we want to see this -- that is alignment of interest. When we do well, we don't mind they do well.

COMMITTEE MEMBER YEE: Right. Okay.

And I guess on the issue of alignment of interests, I wanted to just kind of get your sense of how much influence CalPERS really has on GPs with respect to ESG factors and on -- on analysis of potential investments. So are our policies integrated into the portfolio company operations? I guess, where does -- where does that consideration get made?

CHIEF INVESTMENT OFFICER MENG: So I will take first stab, and then turn it over to Greg, and maybe even the Beth and Anne as well.

So in terms of our ESG integration in private equity, so I see a few layers. First, before we select a general partner during the due diligence process, we ask them what they do. How do they do to incorporate into the

ESG considerations. So that's the due diligence process.

And then we also asked portfolio companies -- the GPs when they invest in portfolio companies, they take these factors into consideration. And at the same time, when we analyze the GP itself, for example, the governance, and we look at how GPs conduct themselves from the ESG lens as well. So there's a few layers before we select them, and then we work with them, then we encourage them to consider these factors in their underwriting.

So that's your second. Your first question how influential or how much we can do impactful CalPERS can be in terms of advocating ESG considerations.

We have to say that we are very proud of what we have done. But we have to recognize the reality as one investor of one public pension fund, our voice is limited. But even given that constraints, we're very proud of what we have done in terms of advocating the considerations and engaging with companies. But we also have to be very mindful in terms of integration into our portfolio. And that's where apply the highest standard which is our fiduciary duty.

COMMITTEE MEMBER YEE: Right. Okay. So -- and I appreciate that, because I think it -- certainly on every level that we will be engaging in the earlier stages. That makes sense. And hopefully there will be some opportunity to actually incorporate some of the good work that has been done, particularly carbon footprint data and the like.

We have been a leader at CalPERS with respect to corporate board diversity on the public side. And I recently sent a letter requesting more information with respect to private equity managers and portfolio corporate board diversity. I just wanted to get a sense of are there opportunities for us to continue our leadership respect to the -- on the private side?

CHIEF INVESTMENT OFFICER MENG: So on that note, there is organization called ILPA.

COMMITTEE MEMBER YEE: Um-hmm. Yes.

CHIEF INVESTMENT OFFICER MENG: I want to Institution Of Limited Partner Association.

COMMITTEE MEMBER YEE: Uh-huh.

CHIEF INVESTMENT OFFICER MENG: And as a representative of the entire LP community, I think they can be the most effective.

COMMITTEE MEMBER YEE: Okay. I just want to be sure that we hopefully can take every opportunity to try to push those goals and look at what more can be done, and particularly since we're making such progress on the public side.

COMMITTEE MEMBER YEE: Thank you.

CHAIRPERSON FECKNER: Thank you.

Mr. Perez.

COMMITTEE MEMBER PEREZ: Mr. Ruiz, on slide 14, of 23, your first bullet there says, "Maximize risk-adjusted rate of return and enhance the equity return to the total fund". Can you ex -- can you explain in English how we can maximize the risk-adjusted rate of return in private equity?

MANAGING INVESTMENT DIRECTOR RUIZ: Yeah. So what that means is we're looking to back managers. So these are people who are investing in companies. We're looking to back managers who we think can durably add value through all cycles. So that's any kind -- regardless of how the broader market is performing, we want to back managers who we think have specialized skill sets that can add value beyond that.

So the role of private equity in our portfolio is to partner with these groups and deploy capital to them in the hopes of generating returns that are above what we're seeing in any other asset class.

COMMITTEE MEMBER PEREZ: But how does that -- how does the maximizing the risk-adjusted return?

MANAGING INVESTMENT DIRECTOR RUIZ: Yeah. What we mean with the risk-adjusted piece is we always think about the risk when we're deploying capital. And you could chase high returns in any given place in the market. But if you're not thinking about the downside protection, you expose yourself to changes in the market environment, where what once looked very attractive has become much less attractive.

And so I think what your see -- you'll see in our underwriting process is we are constantly asking ourself how managers think not only about the opportunities, but also the downsides. So there may be times where we do not engage with a manager who has very strong returns, because we don't have the belief that at an underlying level they're going to outperform across cycles. It's difficult work, but that's where we spend a lot of our time and diligence.

COMMITTEE MEMBER PEREZ: Thank you.

CHAIRPERSON FECKNER: Thank you.

Mr. Jones.

COMMITTEE MEMBER JONES: Yeah, thank you, Mr. Chair.

Yeah. A couple of technical questions. If you could go to page 16 of 23. Yeah, the less than one percent target is -- will that eventually go to zero, because did -- did we have a policy to change our strategy in venture capital allocations?

MANAGING INVESTMENT DIRECTOR RUIZ: You know, it's a very good question. And I'd say with venture capital, it's an area where we're actively considering our approach. And as was mentioned in the earlier presentation, one thing that we always have to think about is how do we participate in a particular segment at scale.

Our historical experience, as you see there, has not been particularly strong in the asset class. I think there are certainly arguments both ways and it's an area where we're taking kind of a close look at how we want to position ourselves going forward.

COMMITTEE MEMBER JONES: Okay. But did the Board take action to remove this asset strategy from the portfolio or that's just a staff --

CHIEF INVESTMENT OFFICER MENG: I do not think so. I don't think the Board made a decision to remove venture capital from the portfolio. The -- what you see tail-end of venture capital in the portfolio, less than one percent, I would call that almost like a legacy asset is left over from early days. And as Greg just mentioned that in the past, we -- we were out of the VC -- the market segment for a number of reasons. And now, we are trying to find ways to get us back into the VC community and get venture capital investment back into our portfolio. But the fact that we have been out of the market for so long, there -- there are some catch-up to do.

COMMITTEE MEMBER JONES: And that was the basis for my question, because if -- on our private equity model we talked about going forward in venture capital, but I thought I remembered the Board taking action on this specific strategy some years ago. So maybe I'm --

CHIEF INVESTMENT OFFICER MENG: Maybe Sarah -- Sarah --

COMMITTEE MEMBER JONES: Yeah, I'm just trying to make sure we're not having conflicting policies. And so that's the reason for the question.

INVESTMENT DIRECTOR CORR: Sarah Corr, Investment Office staff. When these ranges were put in place back in 2012, I believe, it always was one percent. At that point in time, staff didn't believe we could deploy capital in venture capital in a meaningful amount. The average fund size for venture funds is smaller than our average commitment is. And so it's like a really hard area for us to deploy capital given our scale.

COMMITTEE MEMBER JONES: Okay. So it was just this -- your strategy decision. It wasn't a Board decision. That's what I was trying to get at.

INVESTMENT DIRECTOR CORR: The Board approved the policy target of less than one percent.

COMMITTEE MEMBER JONES: Oh, okay. Less than one percent. Okay. All right. Thank you.

And then the other question is Ms. Brown's question about the four percent benchmark. And I remember you gave us a tutorial on benchmarks. I think we spent almost an hour being oriented in benchmarks. And so that -- public equities plus one and a half, 15 -- 150 basis points, was that a policy decision when we changed it?

CHIEF INVESTMENT OFFICER MENG: Yeah. So that was part of the 2017 ALM process.

COMMITTEE MEMBER JONES: Yeah. Okay. Okay. So we -- it was a policy change. I just wanted to put that in the record.

Okay. Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Brown.

COMMITTEE MEMBER BROWN: Well, thank you. Let me piggyback on Ms. Jones -- Mr. Jones piggybacking on me. I want to go back to that same table, page six of 23 and go back to that PE policy benchmark of four percent. Have we calculated that to see what it would have been under the prior calculation, the old -- the old number plus 300?

CHIEF INVESTMENT OFFICER MENG: So that would 550. The previous one is public equity plus 300. So this is public probably equity plus 150.

COMMITTEE MEMBER BROWN: It was really much more complicated than public equity plus 300. It was a bunch of things as someone reminded me of that. It was really complicated, plus 300 the old benchmark.

CHIEF INVESTMENT OFFICER MENG: It was public equity -- the compensation public equity benchmark has different components. And now I believe it is MSCI All World All Cap. So the one index plus 150. You're right, it used to be a combination for a few subindex and plus 300.

COMMITTEE MEMBER BROWN: So have we done that calcu -- I'd be interested in knowing what that calculation was, if we go back. It just looks like we -- with the new benchmark, we've set it way too low. That's my only concern, that if we can really just, you know, stumble over the benchmark, then it's not -- it doesn't appear to work for me. But we'll -- we'll find out and we can also ask our consultant about that.

CHAIRPERSON FECKNER: Anything else, Ms. Brown?

COMMITTEE MEMBER BROWN: No. Thank you.

CHAIRPERSON FECKNER: All right. Mr. Rubalcava.

COMMITTEE MEMBER RUBALCAVA: Thank you, Mr. Chair.

I appreciate the continued focus integration of ESG factors. And I appreciate the discussion about risk -- maximizing risk adjustment rate of returns. But one thing I just want to make sure we're conscious of or want to speak -- if you could speak to it, Mr. Ruiz, is something I didn't see is -- speaking of risk, is human capital management. I know in private equity there's been a lot of literature about -- there's been negative consequence about layoffs. And I'm thinking of the Toys"R"Us story, you know, things like that. So I just want to make sure that that's something we're also focused and are moving forward.

MANAGING INVESTMENT DIRECTOR RUIZ: Yeah, it is -- you know, when we assess managers, we assess them across many dimensions. But I'd say through it all, it's incredibly important to us that we partner with people of integrity. And so that's kind of first and foremost. And I'd say the -- there are many complexities once you get into managing companies. And we try and pick partners who we think will navigate those as well as possible.

You know, once we enter into a partnership, we are not in control. You know, we're one voice, but we are an active voice. And, you know, we certainly try and use our influence with our managers to get to the best outcomes we can.

COMMITTEE MEMBER RUBALCAVA: Thank you.

CHAIRPERSON FECKNER: Thank you.

Mr. Saha.

ACTING COMMITTEE MEMBER SAHA: Thank you, Mr. Chair. And thank you for the presentation, Mr. Ruiz, as well.

Question about something you mentioned in your presentation about that the culture has improved. And it was on page four, one of the bullet points is that you "Built a more effective and collaborative culture". And I don't want to infer anything negative about what the culture may have been, but maybe you can elaborate a little more on what -- how you've improved or what's been done.

MANAGING INVESTMENT DIRECTOR RUIZ: Yeah. And much of the credit goes to the team and happened before I was here in this role. But I think what you've seen over time is movement towards kind of much better leveraging of our intellectual capital across the team, less siloing, more collaboration, more inclusion, more robust discussions. And I think all of that leads ultimately to better investment judgments and investment outcomes. So that's -- kind of those changes, you know, we've seen on the team and I think have been clear positives.

ACTING COMMITTEE MEMBER SAHA: Okay. Thank you.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: And I think it's worth noting that -- and Greg is spot on right, that this is something that we've seen within the private equity team, we've tried to drive within the entire Investment Office. That's been a real focus of Ben's. It's all focused on the total fund and one team. And then even within the enterprise, we ourselves is one team trying to manage this large portfolio to pay benefits over a multi-generational time horizon, but it's all about one team and one fund.

ACTING COMMITTEE MEMBER SAHA: Thank you.

CHAIRPERSON FECKNER: Very good. Thank you.

All right. Seeing no other requests, anything else Mr. Ruiz?

MANAGING INVESTMENT DIRECTOR RUIZ: No.

CHAIRPERSON FECKNER: Very good. Thank you.

Wait. Before you -- before you leave we have one request from the audience. Mr. Darby, please come forward. Again, you'll have up to three minutes for your comments.

MR. DARBY: Mr. Chair, Board members, Al Darby, RPEA President.

Again, I preface my remarks that they were based on information from an expert consultant, someone who served on this Board and was an Investment Officer at CalPERS for many years.

The staff here is proposing to amend the definition of customized investment account in the CalPERS specific glossary of terms to provide staff with more flexibility in selecting partners for these specialized accounts. The current constraints are quite stringent, distinct expertise, and in an industry geographic region investment style and with demonstrated ability to provide top quarter returns.

So softening these requirements would again be an abdication of Board oversight in this whole private equity scheme of things. So again, Board erosion of oversight is suggested by this proposal.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Item 9d, the consultant review of the Private Equity Program.

MR. HARTT: Good morning. Steve Hartt from Meketa Investment Group.

CHAIRPERSON FECKNER: Good morning.

MR. HARTT: I'm joined by my colleague Steve McCourt. Here to discuss the 2019 program review, which we've included as Item 9d in your package.

So first I wanted to thank you for your renewed confidence in Meketa Investment Group as your private equity Board consultant. Thank you very much.

I just wanted to go through a couple of topics not going through page by page here, and Steve will pick up on a couple as well. I think that some has been discussed already here. But the important aspect of deploying assets at scale for this program is quite important. The program has ramped up its deployment of capital, as little as $3 billion a couple of years ago, to now seven billion and kind of rising from there.

So in terms of dollars, it's been increasing. We've noticed also that the quality of the underwriting has remained strong as well, so we feel good about that.

But in order to continue to deploy at scale, additional avenues of deployment need to be continued to be thought about. As been discussed, co-investments is one that is under active review now, and is getting continued attention, and expect that's going to be implemented more specifically later on in this year or in 2020.

Also -- as also been discussed here, the reduction of siloing within CalPERS and the more emphasis on the one fund approach has allowed staff to think more broadly about opportunities that may be available. And without having to consider should it belong in one area or another, the right groups with the right analytical capabilities and relationships can assess those opportunities. So we've been pleased that that's continuing and a developing area within CalPERS.

And the activities -- there have been a lot of work done by staff on the Pillars 3 and 4, the horizon and innovation portfolios. That's not at front burner right now certainly, but there was a lot of work that was done and continued thought process around that to see if that will make sense to move forward.

Moving to the staffing. As Greg had mentioned, I think the staff had done a really good job at maintaining CalPERS' presence in the marketplace and increasing the pacing over the last couple of years. And that's been good to see. And obviously now with Greg established as the Managing Investment Director subsequent to the end of the review period, but that's a definite plus and can be -- have the team more settled in the private equity area.

I'll turn to Steve to talk about a couple of further topics.

MR. McCOURT: Great. Thank you. I'm going to address performance and portfolio implementation. As staff noted at the end of the fiscal year, the Private Equity Program was valued at $26.5 billion. That was a three percent decrease in NAV over the prior year. Much like the last eight or nine years, the net asset value declined, not because returns were negative. We've gone through the positive returns, but you continue to get more cash back in your private equity program from general partners and you allocate to them. This year, that amount was about $2.7 billion received back from general partners. And since 2011, you've now received $34 billion in cash back from the program, in excess of contributions to the program on a net-of-fee basis.

The performance of the program over time has been strong. For the trailing ten years, the program has produced a return of 14 percent per year on average. Again, translating that into kind of a cumulative return number in the last decade. That turns every dollar in the private equity asset class into 3.7 dollars -- or every billion dollars into $3.7 billion.

It's been your strongest performing asset class over that time period and has outperformed your long term expectations in private equity, as well as the fund's actuarial assumed rate of return. As was noted, the current benchmark to private equity returned 4.4 percent for the current year. So your program outperformed that benchmark by 3.3 percent.

And over the trailing three, five, and ten years, your returns have approximated that benchmark. They've failed to achieve the legacy benchmarks that you've had in private equity over that time period. In terms of implementation, much like with infrastructure, as was noted, the challenge in private equity has been less about achieving great returns and more about how to achieve scale in the asset class in a very competitive, illiquid market environment.

Greg mentioned some of the elements that staff is looking at to expand their ability to achieve higher levels of investment in private equity. We would highlight that co-investments we believe are going to be a strong area to continue to look at to allocate additional capital to the space and ina much more LP-friendly fee way, and also expanding relationships beyond the Core 30 relationships that you have in order to achieve the -- the long-term pacing assumption required to achieve your long-term target investment allocation.

The final thing I want to highlight is that the plan -- the program is currently invested within all policy parameters, as noted on page six of our memorandum.

MR. HARTT: Final thing, as your Board consultant, we remain very active with the staff in all aspects of the program. So all 18 of the investments that were completed in the fiscal year, we were involved in the policy compliance review. There were 34 Investment Committee -- Review Committee meetings that took place, where those and other investments were discussed, and we participated in all those.

And there were a number of policy changes and reviews that we conducted, and, of course, the semiannual reports that we have been involved with. So we remain very enthusiastic about the Private Equity Program and look forward to another good fiscal year.

Happy to answer any questions.

CHAIRPERSON FECKNER: Thank you.

Ms. Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman. So what I'm hearing is that we're comfortable with the ability to meet the $10 billion annual pacing goal and -- or given the focus on some of the other areas that -- to improve to try to meet that, right?

MR. HARTT: So I'd say there's two aspects to it. The first aspect being that -- the staff capability to --

COMMITTEE MEMBER YEE: Yes.

MR. HARTT: -- actually review the investment opportunities. That is there. The other important aspect is as of this moment, this fundraising environment, there is ability to actually deploy at that pace, because there is a lot of managers raising that capital.

COMMITTEE MEMBER YEE: Right.

MS. HARTT: You know, a challenge might be in a different environment will there be $10 billion worth of available high quality opportunities for CalPERS in situations where managers are not raising as much capital? And I think that's going to be -- it's going to be very helpful for the staff to have additional avenues and ways of deploying capital, having the co-investments, having the separate managed accounts, having these other avenues that they can pursue to be able to deploy that capital. But for the next year, they're turning away more capital opportunities than they are underwriting for sure.

COMMITTEE MEMBER YEE: Okay. Good. Good.

And then when the list of the core GPs reduced to the 30 a few years ago just to focus on investing with quality GPs - and I was happy to see the discussion about really increasing that number - obviously with more penetration in the area of co-investments. I assume you believe that's prudent to do as well.

But my real question is are there best practices that will ensure that we are going to continue to invest with quality GPs going forward as we expect?

MR. HARTT: Yeah. So the underwriting process at CalPERS is very strong. I think that, you know, you can see both in this year's letter and prior year's letter, there were some new managers that became part of the portfolio. So, you know, the CalPERS folks are -- and staff are certainly looking for new managers on an active basis and using their transition manager programs, emerging manager programs as some of the sources to find those opportunities.

So at this point, we feel that they -- they are continuing to pursue those other managers. And that makes sense to do and they have strong underwriting practices around that.

MANAGING INVESTMENT DIRECTOR RUIZ: Controller Yee, I just wanted to jump in on that.

COMMITTEE MEMBER YEE: Please.

MANAGING INVESTMENT DIRECTOR RUIZ: While we are expanding the amount of managers we're looking at, I would just convey that the bar for becoming a new manager in our portfolio is incredibly high.

COMMITTEE MEMBER YEE: Yes.

MANAGING INVESTMENT DIRECTOR RUIZ: So first and foremost, we want to maintain incredibly high underwriting standards. We think there are more than 30 managers that reach that bar. But as we look at new opportunities, it's going to be a very small subsegment of those that actually become part of our portfolio.

COMMITTEE MEMBER YEE: Okay. That makes sense.

And then to Meketa, so do you have any ideas about what more staff could do to achieve the diversity in both GPs and portfolio company boards and management? I mean, are you seeing kind of activity outside of CalPERS that may be helpful?

MR. HARTT: I know that they include those sorts of aspects in their underwriting process and their due diligence.

COMMITTEE MEMBER YEE: Um-hmm.

MR. HARTT: I'm looking for that. And noting that the ESG is an important aspect of their underwriting processes as staff has explained.

There is some limitation as a limited partner in a fund about how one can -- subsequent to the commitment of the capital, how one can direct the general partner. But there is a general movement within the private equity and private markets manager community in general that these are important aspects, and they are being taken care of, and being addressed maybe not consistently across all managers, but it is an area of focus and importance for the general partners.

And I think as mentioned also, ILPA, as a trade organization --

COMMITTEE MEMBER YEE: Um-hmm, right.

MR. HARTT: -- has made it some -- you know, able to amplify the voice for, you know, a larger set of limited partners on these sorts of topics.

COMMITTEE MEMBER YEE: Great. Thank you.

Thank you, Mr. Chairman.

CHAIRPERSON FECKNER: All right. Before we go on to Ms. Olivares, I was just going to ask if you could weigh in with your opinion or your view on our benchmarking and how difficult is that to achieve and what are other funds doing?

MR. HARTT: So benchmarks are, you know, a challenge. We've talked about it several times in here. I think that where it is now, that the -- having the benchmark now focused on the next alternative asset class for these sorts of dollars to go into being the public equity asset class is the right one, because, you know, if you weren't going to do private equity, where would you try to get something similar. That would be the global private equity.

The spread of 150 basis points we do believe is appropriate as well, because it is a reflection of what is expected for that asset class for private equity to achieve in excess of the public equity markets.

And by aligning the benchmark with asset -- long term asset class expectations, there is some internal logic around that, that we believe makes sense.

The -- across different investors, different LPs that are participating in the asset class, the large majority have some sort of a public equity plus a spread approach. Some of them use different sets of public equities for that benchmark. Some have, in addition, what they call a peer index, which is, you know, a private equity related index, how is that asset class doing overall, and comparing how the performance of the private equity in the -- the particular LP's portfolio is doing against the broad marketplace and to try to see -- essentially answering the question there how much of the returns stream that is available in private equity is the LP actually achieving. That's answering a little bit of a different question, so -- but overall, for this purpose in terms of should we allocate -- should CalPERS allocate money to private equity or not, having a public equity plus a spread benchmark I think makes a lot of sense.

MR. McCOURT: And I just want to add or emphasize one element of that, which is your private equity benchmark is aligned with your long-term asset allocation assumptions for the asset class and the Global Equity Asset Class. So to have a benchmark that differed from your asset allocation policy, as it did historically, does strike one as a little inconsistent from a policy perspective.

And much like every asset class on the planet these days, return expectations are lower today than they were five years ago or ten years ago. So the reduction in the premium is consistent with how other asset classes were treated in the asset allocation process.

CHIEF INVESTMENT OFFICER MENG: Mr. Chair, if I may add on. This question came up a couple times this morning on the private equity benchmark and partly the spread. It used to be 300, now it's 150. So I would like to highlight two caveats to that. For one, generally speaking, people believe the additional or the spread on top of public equity. We expect that from private equity.

And that's really mainly to compensate for the illiquidity premium. Because compared to public equity, private equity is not illiquid. So naturally, as an investor, we demand some premium to be paid for the illiquidity.

So that illiquidity premium now is again smaller and smaller, simply because since the global financial crisis of 2008, global central banks have been flooding the capital market with excess liquidity. When you have so much liquidity available, naturally the price for liquidity will come down. So that's one reason for the narrow spread.

And the other one, over the decades of experience, we realized that for our size to earn -- we run $400 billion fund. To earn seven percent return is much harder than $40 billion fund to earn seven percent return. So naturally our -- the size of our Private Equity Program is much larger than many of our peers. And for smaller program, they were able to deliver generally speaking higher return. But at our size, it's getting harder and harder. So that's, you know, additional caveat to why the spread is coming down. One is the illiquidity premium is coming down and the other is the -- our size is getting bigger and bigger.

CHAIRPERSON FECKNER: Thank you.

Thank all of you.

Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Thank you. This is helpful. And I, too, have questions about the benchmark again. So I'm looking at page three of the report -- attachment 1, page three of eight. And I see that the benchmarks are both footnoted. The current benchmark and the previous benchmark is footnote number 2.

The current benchmark is the Custom FTSE All World All Cap Equity.

MR. HARTT: Yes.

COMMITTEE MEMBER OLIVARES: What do we mean by custom with that? We're not just taking FTSE All World All Cap, the one year benchmark and adding 150 basis points with a quarter lag.

INTERIM CHIEF OPERATING INVESTMENT OFFICER

BIENVENUE: So, Ms. Olivares, it's the global equity benchmark. As we've discussed, it's the idea of taking what we can get --

COMMITTEE MEMBER OLIVARES: Yeah.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: -- in the public markets relative to the privates. Our public markets benchmark is a custom benchmark, customized for the capitalization levels it goes into, what countries it includes, all of those kinds of things. So it's not the off-the-shelf FTSE. It's the customized version of the FTSE.

One of our other customizations is X tobacco and some of the other topics that are in there.

COMMITTEE MEMBER OLIVARES: So if I look at the one year FTSE All World All Cap, it's 11.92 for one year.

MR. HARTT: So part of -- part of what's causing some discussion, maybe not confusion, but -- is something we call endpoint issues. So this is -- this return that we have for the FTSE All World 4.4 is based upon it's a March to March performance.

COMMITTEE MEMBER OLIVARES: Sure.

MR. HARTT: And if you recall, there was that period in December where that return had been substantially decreased and then came back. If you looked at a different set of 12 months, so June to June, it will come up with a different number.

COMMITTEE MEMBER OLIVARES: Um-hmm. I'm looking at March 31st, 2019 report, so it's a year over. And then I just looked at an October report, and I looked at MSCI. I've looked at Cambridge. So I've looked at three different benchmarks, right? So there's FTSE, there's MSCI --

MR. HARTT: Yep.

COMMITTEE MEMBER OLIVARES: -- All World All Cap, that one year is 12.58. Cambridge uses Wilshire 5000 Plus, that's in the 12 range too. So I'm really trying to understand. And this is just like public equities, right? That doesn't include the illiquidity premium. I don't know how we get from a range of around 12, which should be plus 150, or 300, for illiquidity, to 4.

MR. McCOURT: Yeah, I think we'll have to go and look at the data. According to this, the FTSE -- the custom FTSE benchmark was up 3. -- 2.9 percent.

COMMITTEE MEMBER OLIVARES: But, yeah, you're saying custom -- So are we -- is there some type of discount factor that we're using or -- I don't understand.

MR. McCOURT: No. It's just -- it's just customized for some of the specific constraints and exposures that your Global Equity Policy has. But the custom benchmark shouldn't differ materially from the off-the-shelf benchmark. It's going to be very, very close.

COMMITTEE MEMBER OLIVARES: So you mention the constraints. So it's customized for the constraints. But when we're talking about customization, are we talking about a discount factor that's being applied?

MR. McCOURT: No.

COMMITTEE MEMBER OLIVARES: No. Okay.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: So Ms. Olivares, I think we'd have to see your data. What this is saying is that the FTSE All World --

COMMITTEE MEMBER OLIVARES: Um-hmm.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: -- without the constraints from March 31st of 2018 to March 31st of 2019 earned 4.4 percent. I'm sorry, earned 2.9 percent would be what the --

COMMITTEE-mEMBER OLIVARES: Um-hmm.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: -- global equity benchmark earned. Our customization caused us to earn 2.5 percent. And that's why the FTSE All World plus 150 was 4.4. And the FTSE -- or the CalPERS custom benchmark was four percent. That's -- again, that's 150 basis points in excess of what the public markets earned.

COMMITTEE MEMBER OLIVARES: Yeah. So I want to make sure we're comparing apples and apples, because when I pull up the one year it's -- I'm getting a different number, and same for MSCI.

MR. HARTT: Yep. So just one other thing here. On that custom policy benchmark, that four percent, is actually composed of three quarters of the FTSE plus the 150 and one quarter of the old policy benchmark, which was a mix of two FTSE benchmarks, right?

So there might be a little bit of a difference. So if you look in the -- the second line of the second bullet point, "The previous benchmark blend of FTSE U.S. plus FTSE All World X U.S. plus three percent. So there was one quarter -- for this particular time period, there's one quarter that was of that previous benchmark and three-quarters of the FTSE All World All Cap.

So I believe that the 40 basis point difference between the FTSE All World 150 and the policy benchmark is likely explained by that.

COMMITTEE MEMBER OLIVARES: I want to make sure I'm understanding. So again in the second footnote, I see that the current policy benchmark is a custom FTSE All World All Cap plus 150 basis points, lagged by a quarter. But the previous benchmark was a blend of FTSE U.S., plus FTSE All World X U.S., plus three percent lagged one quarter from September 2011 to June 2018.

MR. HARTT: Correct.

COMMITTEE MEMBER OLIVARES: So that's what you're talking out.

MR. HARTT: Right.

COMMITTEE MEMBER OLIVARES: So there's a part of it that overlaps.

MR. HARTT: There is one quarter that was overlapped for that. So there's three quarters of the new one, one quarter of the old one.

COMMITTEE MEMBER OLIVARES: Thank you.

I believe it was in our last meeting, where we talked about the illiquidity premium, right? And I understand that other pension funds have an illiquidity premium of 300 basis point, sometimes up to 500. I'm trying to understand why we're at 150?

MR. HARTT: So there are a couple things. So we had talked about looking to align the capital market assumptions with the benchmarking process. And the capital market assumption has, for a long time period, expectation of private equity outperformance of about 150 basis points. So that's getting the alignment between the capital market assumptions and the benchmarking so that that kind of makes sense together, rather than having them being not coming together.

MR. McCOURT: And just to add, I would say historically the industry standard was a premium of around 300 basis points. That's changing rapidly. So funds are, like yourselves, adopting lower premium levels today, both to align the private equity benchmark with your forward-looking expected returns, and also to address some of the challenges that Ben mentioned about all asset classes being priced higher, meaning forward-looking returns are lower than they were historically.

COMMITTEE MEMBER OLIVARES: And the 150 basis points, is that sufficient, not just for illiquidity also, but for the due diligence, right? There's a lot more due diligence that goes into private equity. There's a lot more monitoring.

MR. McCOURT: Yeah.

COMMITTEE MEMBER OLIVARES: It's much more expensive, right, because it's not publicly traded.

Do you feel like that 150 basis points adequately captures the illiquidity, and the additional cost of due diligence, and the risk?

MR. McCOURT: Our judgment is yes, it does, particularly for a fund of the size of CalPERS, which is able to kind of smooth out those expenses across a larger asset base. The expectation for returns is 150 basis points net of all fees and costs, et cetera.

And we think that's a reasonable expectation and one that compensates the investor appropriately for additional risks and illiquidity for the asset class.

COMMITTEE MEMBER OLIVARES: Thank you.

CHAIRPERSON FECKNER: All right. Seeing no other requests, anything else?

MR. HARTT: Nothing at this time. Thank you.

CHAIRPERSON FECKNER: Very good. Thank you.

Before we go onto the next item, we're going to take a 100-minute break for the court reporter. So we'll reconvene at 11:25.

(Off record: 11:15 a.m.)

(Thereupon a recess was taken.)

(On record: 11:25 a.m.)

CHAIRPERSON FECKNER: If we could please take our seats.

Thank you. We're back on Item 10a, Ms. Crocker.

INVESTMENT DIRECTOR CROCKER: Kit Crocker, CalPERS Investment Office staff.

Item 10a is a first reading of staff's proposed updates to the private equity and Real Assets Program policies arising out of this year's annual reviews.

For private equity, staff proposes to amend the definition of customized investment account in terms of the elements to be considered in selecting the GP. Now, the problem here is with the implication that this is an exhaustive list. We're not proposing eliminating the requirements of appropriate expertise. Simply -- it's Simply the point that to provide a partial list is too restrictive and implies that other forms of expertise might not be considered validly.

As regards to the Real Assets Program Policy, there are two primary substantive changes. First, the expression of staff's authority at the program level, that is to say at the Real Assets Program level, rather than at each of the three individual portfolio levels.

And second, the proposed relocation of the program's specific leverage constraints to policy-related procedures. This is consistent with the centralization of leverage management at the total fund level, already I think blessed in concept by the Board at the September IC.

Now, since this is a first reading, we're looking for input from the Committee, so I will pause there and ask if -- invite Wilshire to comment.

MR. TOTH: Thank you. Tom Toth with Wilshire Associates.

I'll just make a couple of comments on the substantive changes. And first to start with the definition of the customized investment account. I think it's very important to emphasize that this is not meant to soften the underwriting standards for those investment implementation vehicles. It's really to provide more flexibility in terms of the facets which are considered when deciding whether or not a customized investment account is appropriate.

One example, and I thought it would be helpful to bring forward for a facet, which is not in the industry geographic or style expertise, list is strong deal flow. You might look for a manager that brings interesting or attractive deals to the table. So that's just one example of a facet, which is not included there, so I think that's important to point out.

I think the key word, as we talk about some of the other changes, is implementation flexibility. That's really what you're looking to provide in order to ultimately enhance returns. So that's what's behind the changes in the delegated limits. The -- including all of them in one aggregate level and then allowing staff to decide where to implement on a cumulative basis those commitments across the underlying portfolios, whether that be in real estate or whether that be in infrastructure.

And then lastly, the adjustment or the removal of the leverage limits constraints. I think the important point there is that this really is maintaining the status. The limits which are being moved from the policy into the PRPs remain the same. So we don't expect that to have an impact on the strategic risk level of the implementation of those parts of the portfolio.

So all of that said, we're comfortable with the changes and would appreciate any feedback that the Investment Committee has to provide.

CHAIRPERSON FECKNER: Thank you.

Ms. Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman.

I appreciate the explanation about the revision with respect to the customized investment act GPs. And I guess since this is first reading, I wanted to just ask, if you could just go back and kind of read it to be sure it really kind of highlights that this is not at the expense of expertise and experience, and that this is really more for flexibility. Because I think the way I read it -- and I'm happy to go back and read it again, but it just seemed like -- it left me thinking why wouldn't we want to have the most experienced, you know, people working with us, and regardless of the PPO?

And so if we could just kind of review for that maybe tone or emphasis, I would appreciate that.

INVESTMENT DIRECTOR CROCKER: Yes. Happy to.

COMMITTEE MEMBER YEE: Okay.

CHAIRPERSON FECKNER: Thank you.

Mr. Jones.

COMMITTEE MEMBER JONES: Yeah, thank you, Mr. Chair.

Yes, my comment -- question rather is on attachment two, page four of eight. And it's the removal of the -- "The staff shall report concerns, problems, material changes...", et cetera, "...to the Committee as soon as possible". "At least at the next Committee meeting" is deleted. Where did it go?

INVESTMENT DIRECTOR CROCKER: Yes. We've been in the process of removing the redundant references to that requirement from the program policies, as we discussed, I think. And it is now going to exist solely in the Total Fund.

COMMITTEE MEMBER JONES: Okay.

INVESTMENT DIRECTOR CROCKER: So there is one expression of that requirement and it exists in the Total Fund Investment Policy.

COMMITTEE MEMBER JONES: Okay. So the policy didn't change, it's just being moved.

INVESTMENT DIRECTOR CROCKER: Correct.

COMMITTEE MEMBER JONES: Okay. Thank you.

CHAIRPERSON FECKNER: Ms. Brown.

COMMITTEE MEMBER BROWN: Thank you. I knew that was your answer to that question I was going to ask the same as Mr. Jones. And then I do want to piggyback on what Controller Yee said, which is when I read it, it looked like we were saying we weren't focused on expertise, or experience, or special skills.

INVESTMENT DIRECTOR CROCKER: Right.

COMMITTEE MEMBER BROWN: And so it looked like why are we saying we don't need that. So let's take a look at how that's worded.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Thank you.

I want to understand more about the customized investment -- or the CIA, customized investment account and what's happening with not focusing on just those funds that are top quartile?

MR. TOTH: I'll take a first stab at that, Ms. Olivares. I think the primary goal there is not to limit the opportunity set to those that have had top quartile returns. The idea being that by limiting it to those who have done well, you might miss out on opportunities for managers who are going to do well going forward. So while the performance track record is absolutely going to continue to be a part of the due diligence process, by not -- the goal of eliminating that statement is not to just focus attention on those who have done well in the past.

COMMITTEE MEMBER OLIVARES: I understand that. But does that also leave room to go after bottom quartile or is there some type of safety mechanism around that?

MR. TOTH: So it does leave room, because you are eliminating that. But to -- I think it's important to point out that the due diligence and the underwriting that the team goes through is undoubtedly going to continue to utilize the track record and the results as part of the due diligence process, but not by policy, limiting it to top quartile managers.

COMMITTEE MEMBER OLIVARES: So the request is to have the policy read basically that we could pursue a fund regardless of quartile?

MR. TOTH: Past quartile rankings, that's right.

COMMITTEE MEMBER OLIVARES: And how is that handled by other pensions?

MR. TOTH: I think the way I would describe it, and I'd be happy to get input from the other consultants and staff, past performance is always going to be part of the underwriting, the due diligence process, and the attribution of how any Private Equity Group or private real asset group has driven results, who's responsible for it, over what time period, what did the market look -- environment look like when that was done?

And so I think that is still going to be part of the process, but it's just not pre-defining what the universe is going to start with just those top quartile managers.

COMMITTEE MEMBER OLIVARES: So I'd like to better understand the risk associated with this. So assuming we have the highest performing team possible, due diligence was done perfectly, what are the risks, if that's not in place?

MR. TOTH: I think implementation of private equity and private real assets is the difference between success and failure candidly. The median return for a private equity manager is not materially different from what you would get in public markets. So implementation is absolutely key. So I think having a strong team in place is going to be one of the critical drivers of success for the portfolio.

COMMITTEE MEMBER OLIVARES: I'm sorry. I should clarify, in terms of changing the policy. So if the policy is changing from focusing on funds that have had top quartile returns and eliminating that portion, so that no quartile is being targeted, we could go to bottom quartile, what are the risks associated with that policy change?

MR. TOTH: I don't think there's an increase in risk associated with that policy change, because, as we oftentimes see, those better performing managers have some mean reversion or they get too big for their own good, so to speak, and therefore, don't necessarily provide the same level of returns that they had in the past. So again, I think it comes back to the diligent underwriting standards that the team brings to bear when evaluating the opportunity set.

And again, keeping in mind that part of that diligence incorporates analysis of the track record. So this isn't to say that track record no longer matters. It's just not a limiting point for the initial universe.

COMMITTEE MEMBER OLIVARES: Would you recommend additional language or safeguards around this change in policy?

MR. TOTH: I think this is sufficient. And one other point, which hasn't been made, and it's mentioned, I think, in both Meketa's opinion piece, as well as in staff's, is that each of these opportunities comes along with a prudent person opinion, so another set of eyes, so to speak, on the establishment of these types of implementation vehicles. So that's another safeguard to your point about what does this due to the risk of implementation within private equity.

COMMITTEE MEMBER OLIVARES: Thank you.

MR. TOTH: You're welcome.

CHAIRPERSON FECKNER: All right. Thank you. Seeing no other requests, anything else, Ms. Crocker?

Okay. Thank you.

Brings us to Agenda Item 11. 11a is the Affiliate Trust. Mr. Meng.

CHIEF INVESTMENT OFFICER MENG: Yes, Mr. Chair, so this is about the fixed income benchmark update for the Affiliate Funds. With that, I will call my colleague Eric Baggesen and Christine Reese.

CHAIRPERSON FECKNER: Just a second. Before we go there, Mr. Darby had requested item 10a. I'm sorry. I missed that.

Mr. Darby, please come forward.

MR. DARBY: Al Darby, President RPEA.

I preface this session with the statement that I have consulted an expert -- an expert in CalPERS investing to elicit this response related to the current item of discussion.

One of the provisions that I believe it's in attachment two eliminates the number two provision, which is, "Staff shall report concerns, problems, material changes, and all violations of policy. These reports shall include explanations of any violations and appropriate recommendations for corrective action at the next Committee meeting or sooning -- or sooner, if deemed necessary". And that has been replaced with less stringent language and it eliminates -- further eliminates or diminishes Board oversight.

So again, this is an issue of these proposals that continue to erode Board oversight and the actions of the staff.

Thank you.

CHAIRPERSON FECKNER: Thank you. 11b please -- or 11a, I'm sorry.

MANAGING INVESTMENT DIRECTOR BAGGESEN: Okay. Good morning. Eric Baggesen.

CHAIRPERSON FECKNER: Before you get started, Mr. Jones wants to make a comment.

COMMITTEE MEMBER JONES: Yes. I think it's important, Mr. Chair, that that question that Mr. Darby raised about it's being eliminated, that question was raised a few minutes ago, and it was responded that it was not being eliminated. It's being moved to another section.

CHAIRPERSON FECKNER: Correct. I think we all heard that --

COMMITTEE MEMBER JONES: Yeah.

CHAIRPERSON FECKNER: -- more than once today that it's just been moved to the Total Fund Performance, not individual, so we eliminate the redundancy.

Thank you.

MANAGING INVESTMENT DIRECTOR BAGGESEN: Okay. Good morning.

CHAIRPERSON FECKNER: Good morning.

MANAGING INVESTMENT DIRECTOR BAGGESEN: Eric Baggesen, Managing Investment Director for Trust Level Portfolio Management.

Agenda Item 11a is an information item that seeks to provide the Board with a bit of understanding about how some benchmark changes that were made to the CalPERS Fixed Income Benchmark in relations to the PERF, the Public Employees' Retirement Fund. And those changes were made this past summer.

There's implications for some of these benchmark changes, because we actually have shared benchmarks that exist not only for the PERF, but are also used for some of the affiliate funds. So my colleague, Christine Reese, a Investment Director within the Global Equity Program will get into a few of the specifics about that.

But the other point that I wanted to make in relation to this agenda item was that this item was created really at the advice of Wilshire Associates. And Wilshire is demonstrating, in essence, their oversight or their judgment about what types of items need to be brought to the Board. And this was a question that came up this past, well, I think two Board meetings ago. A question was asked about how Wilshire uses their judgment and when do they choose to bring information or make the Board aware of a body of information that they think is important for this Board to understand.

And this is an example basically where this agenda item has been created because Wilshire believed that this was a piece of information that you as Board should be aware of.

So I wanted to acknowledge that reality. And we have Andrew Junkin here as well from Wilshire Associates basically that can answer any questions or provide any other commentary that he has. So I think with that, I'll just turn it over to Christine though to go through the specifics.

INVESTMENT DIRECTOR REESE: Thank you, Eric. And good morning -- afternoon, I'm not sure exactly where it is -- Mr. Chair and members of the Committee. Christine Reese CalPERS team member.

So as Eric mentioned, this item is to provide you with some information about the Affiliate Funds' Fixed Income Long Liability Benchmark. As he mentioned, when the changes were made to the PERF benchmark, this is a shared benchmark, and so those changes were also made to the Affiliate Funds.

At that point when that was known, we looked to analyze the effect of those changes for the Affiliate Funds and the appropriateness of that change. And in working with the various investment teams, as well as with Wilshire, we believe that the rationale for the benchmark change applies both to the PERF and the Affiliate Funds.

In the analysis that was performed for the PERF benchmark, both TIPS and agency debt, which are being removed from the benchmark, were found to reduce both liquidity and equity risk diversification. So removal of these two asset types should improve both of -- both of those measures.

The inflation protection element for the Affiliate Funds will be fully addressed in the TIPS Asset Class. So each Affiliate Fund asset allocation has a distinct TIPS asset class.

And lastly, I just wanted to say that we have worked closely with Wilshire Throughout this process to ensure that this benchmark is appropriate. And at this point, I'll turn it over to Andrew for a few comments.

MR. JUNKIN: Thank you. Again, I'll be brief.

As Christine covered, this is something that we discussed. Honestly, this came down to a question of materiality, right? And so we've had some questions, as

Eric noted, over the past few months what rises to the level of materiality. From a risk and return standpoint, this does not rise to the level of materiality, because it was a fraction of a segment within the Affiliate Funds. And the purpose of -- the inflation protection purpose of having TIPS in the portfolio was already addressed with a separate allocation to TIPS.

We just felt it was appropriate to bring this to your attention, that this was a follow-on action to the action that you took to remove TIPS and agencies from the Global Fixed Income Index and therefore portfolio for the PERF that it follows through to the Affiliate Funds.

So that's it. Not trying to make too big a deal out of it, but it was something that we wanted to have flagged for your attention.

CHAIRPERSON FECKNER: Thank you.

Any requests?

Seeing no requests -- oh, here we go. Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Sorry. I have one.

So I get it's focusing on treasuries, taking out TIPS, taking out agency debt. How does this affect the overall number, just out of curiosity? What benchmark number do we see now when we exclude those?

INVESTMENT DIRECTOR REESE: I'm not exactly sure

I understand the question.

COMMITTEE MEMBER OLIVARES: Well, this changed the benchmark number, right? So, I mean, TIPS is obviously lower. So I'm wondering if it will reduce it a certain amount.

INVESTMENT DIRECTOR REESE: In terms of risk and return?

COMMITTEE MEMBER OLIVARES: Yes.

INVESTMENT DIRECTOR REESE: So removing TIPS and the agency debt should -- and replacing it with treasuries should increase both the return and the risk nominally.

COMMITTEE MEMBER OLIVARES: Thank you.

INVESTMENT DIRECTOR REESE Um-hmm.

MR. JUNKIN: I think when we looked at this at the -- at the PERF level, it was maybe a basis point of expected return.

COMMITTEE MEMBER OLIVARES: Um-hmm.

MR. JUNKIN: So I would call -- on a forecasted ten-year basis. So I would call that well within the estimation error window.

COMMITTEE MEMBER OLIVARES: Thank you.

CHAIRPERSON FECKNER: All right. Thank you. Seeing no other requests. Thank you very much.

That brings us to Item 11b, Mr. Meng.

CHIEF INVESTMENT OFFICER MENG: Yes, Mr. Chair.

Good afternoon, members of the Investment Committee.

As you may recall, that in 2016 calPERS adopted the first five-year strategic plan for sustainable investments. And this agenda item is to give you a progress update to date.

And as a long-term investor, climate risk and long-term sustainability for our fund are of paramount concerns to us. Sustainability for CalPERS means repeatability of investment returns. We need those returns to fulfill our fiduciary duty and to pay benefits to millions of Californians, not just now, but for generations to come. So that's why climate change is an investment issue for us.

We also recognize that although we are the largest defined benefit pension fund in the U.S., the scale and complexity of climate change requires that we work together with investors, policymakers, regulators around the world.

When compared to our global peers, the reality of our fund imposes additional challenges for us, such as our lower-than-desired funded status, our seven percent return target, and our need to pay out about $24 billion in benefits every year.

And not only we have a current liability of about $24 billion a year, it is important to note that the dominant source, about $0.60 of every dollar for that $24 billion comes from investment returns. We need those investment returns now and in the future.

If the market fails us, or we miss our targets, the hard working people of California and the employers take on the financial burden. Thus, everything we do must be 100 percent aligned with generating the needed returns.

As such, we encourage our stakeholders to take our unique challenges into consideration, and at the same times we would like to assure our stakeholders that everything we do is 100 percent aligned, and we are 100 percent focused on generating the needed returns.

For non-stakeholders, such as outside parties, who do not bear the financial risk of our fund, but advocate using our fund to take actions beyond the scope of our fiduciary duty, and advocate using our fund to advance their agenda, we ask that they respect our fiduciary duty, acknowledge the aforementioned unique challenges we face, and appreciate the fact that even with our constraints and unique challenges, we continue to lead on climate change initiatives on a global scale.

We're proud to have co-founded Climate Action 100+, to have released a detailed and a comprehensive document on our real estate energy automization program, to have joined the Net Zero Asset Alliance, and to have released the fiscal risk of climate change, which we call PROCC, which is the first of this kind of report.

We are also staunch supporters for the Paris Agreement and carbon pricing. The least of our accomplishments and examples of our global leadership do not stop here and will continue our work in engaging and advocating. But given our fiduciary duty and unique challenges we face, we cannot and we do not compromise on our investment underwriting. Now, we will wake and constrain itself to a limited set of investment opportunities.

So with that providing a context, I will turn it over to my colleague Anne Simpson, Beth, and Simiso to discuss the agenda item.

(Thereupon an overhead presentation was presented as follows.)

CHAIRPERSON FECKNER: Very good. Thank you.

INVESTMENT DIRECTOR SIMPSON: Thank you very MUCH, Ben. Anne Simpson, CalPERS.

INVESTMENT DIRECTOR SIMPSON: My first request, as a -- showing our team work, is for Ben to pass the clicker down.

(laughter.)

INVESTMENT DIRECTOR SIMPSON: There you areI. This is how we work together.

Thank you.

So, good morning. I think we're still in the morning, Board members. This is the midway point of the CalPERS strategic plan on sustainability. And given that we have so many new Board members, a few for whom this is a trip down memory lane, we thought today it would be helpful to recap how the strategic plan got put together, how the priorities were selected, what the evidence was that this is how we achieve our risk-adjusted returns, and give you a progress report on two of the highlights, one being climate change, referencing Ben's comments and also diversity and inclusion. Now, there's a lot more, so what we've done is embed some links into the agenda item, so that you can look at the wonderful progress on integration, which Beth is leading, other areas of work, which Simiso is leading, and also learn more about the policy and advocacy.

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INVESTMENT DIRECTOR SIMPSON: So tease are our topics in this item. We'll have a quick overview of the strategic plan itself. We'll also going to introduce a new organizational structure that has been adopted, which has been intended to strengthen the execution of the priorities that the Board agreed, the update, and then we'll finish just by looking at the question of partnerships.

As Ben said earlier, we aren't in a position to lift all issues on our own. We have to work with others. We may be a big fund, but it's really in partnership that we make progress.

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INVESTMENT DIRECTOR SIMPSON: So how did we begin?

CalPERS understanding of the importance on sustainability really goes back a very long way. Back in 2011, the Board could see there was a lot of activity in this arena, first thing to do was some stock taking. And actually by appointed consultant, looked at the total fund and everything that was going on that could be badged as something around the theme of sustainability.

And I remember well, that the number that the consultant came up with was 111, there were 111 different good things going on. Some of them were statements. Some of them were portfolios. Some of them were promises on capital allocation, guidelines, principles, voting, campaigns. It was a lot. So it seemed that the important thing to do was looking across all of this activity is decide, well, what of this really matters for CalPERS? For our fiduciary duty, what's real going to have relevance for risk, what's really going to have an impact on return.

And this is obviously quite a few years ago now, but we decided to take the bold step that what we needed to do is have an independent review of the academic evidence. And we called this the Sustainable Investment Research Initiative, or we called it SIRI for short. And I think Apple forgive us, but I do think we got there first

So Siri, which is on the website, and you can take a look a the papers. I used a team of academics based in Columbia and also nearby at UC Davis - finance professors chiefly - to look at the great range of research that had been published in respectable academic journals.

We do chose the decision not to look at material from the market, because there's always some influence there. We thought we've got to be very rigorous. So the SIRI review covered nearly a thousand papers. And that highlighted a number of areas that either were very consistent with the risk and return objectives of CalPERS, or had some suggested areas for us to work on, and some areas where it really wasn't clear whether we had the data to take a position.

But there was some insight from our own experience and some leading examples, where we thought we could move forward. And it was in that spirit of wanting to be based on evidence, wanting to be grounded in economics, that the -- that the Board really began to think about developing a strategy.

The work that we did through the famous SIRI fed into the Investment Beliefs and really helped the Board craft the language around sustainability that you'll find in the Investment Beliefs. And also, it helped us take a bigger hold of what were then over 100 pages of the CalPERS Governance Principles. Through that process, we brought them down to around 30 pages, a little more reasonable to get through, and also structured them around what we'd found in this research review.

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INVESTMENT DIRECTOR SIMPSON: So what happened next? Well, you'll like the old fashioned light bulb. Of course, this is an Edison light bulb. That's very -- you know, very old. Very old now. We're all on LEDs. But the planned development began and it went through and iterative process of workshops, discussions, Board meetings, and input with the Board.

The plan was developed in 2015. That was an important year for CalPERS, because it's also the year of the Paris Agreement. And the plan was then approved in August of 2016. And actually, CalPERS won a big prize for doing this work, because at that stage we were the only, if not one of very few plans, which had decided to adopt a strategy.

Why does that matter? Well, a strategy says you have to identify your goals. It also has key performance indicators. It has timelines and check-in points, where you're going to course correct and make changes of -- you know, based on what you've learned as you've gone along.

So I think we won the Responsible Investor Global Award for Industry Leadership and Innovation for adopting the plan, which CalPERS was very proud of.

2019, earlier this year, Beth and Simiso gave you an update, which we've given you a link to in March. And the five-year plan that we have is intended for the KPIs for the five years to be all completed. Some of them are very demanding, but I think we're in good shape. Some of the issues that we're dealing with go much further out than five years. Climate change is a good example.

But this round of the plan we feel confident across the team that we're on track for all of the performance indicators that the plan includes. And we'll all be very glad to give you more insight on that in a moment, if you have questions.

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INVESTMENT DIRECTOR SIMPSON: So let's come back to the Investment Beliefs. Why do these matter? This is really what I see as our compass. It doesn't make decisions. It doesn't tell us where to go. But they -- these Beliefs guide the Investment Office in the direction that we need to take, navigating extremely, I would say, treacherous times ahead of us in the financial markets with volatile markets, with a seven percent discount rate, at around 70 percent funding.

And when I came in this morning, I was struck that we have a new version of the Pension Buck. And for me this is -- it really sums it all up beautifully. Out of every dollar that we pay, as Ben says, nearly $0.60 comes from the investment returns. So we could not take it more seriously, that managing risk to protect assets and achieving these returns is our fiduciary duty. But it's more than our fiduciary duty, it is something that we are personally and professionally committed to, because taking care of our members is so important.

So these Investment Beliefs bring together some ideas. It's, in a way, wrong to just pick out five, because the first Investment Belief is that liabilities must drive what happens with assets and asset allocation. And that really is the Pension Buck, who's going to pay those pensions and what's CalPERS role in that.

But the second idea around sustainability is woven right through all of the Investment Beliefs. And there's a good reason for that. Although, we have to be a very short-term investor, because guess what, pensions need to be paid monthly and CalPERS puts out over $20 billion in cash every year. People can't pay the rent without an IOU, they can't go to the grocery store, or buy things for their grandchildren, or pay bills. We've got to have that cash on a monthly basis for the members.

So CalPERS, unlike some other investors, is actually quite short term. I mean, we've got to have a section of the assets really directed towards putting those pension payments out every single month.

But we're also very long term, because people joining the fund now may have 60, 70 years before their time in retirement ends. So we think of the fund really as perpetual. We're not only long term, we're permanent.

So the second Investment Belief really sums that up. It says having this long-term investment horizon is an advantage. It means we can take positions where there's illiquidity or the returns are going to be harvested over a very long period. That's good, but it's also, the Investment Beliefs says, a responsibility. We have a responsibility to advocate with policymakers, with managers, with companies to make sure that that long-term approach is aligned through the market. So that's one

Investment Belief that really reflects this thinking about sustainability.

There's also number three says that the CalPERS Board's decisions and management decisions will reflect stakeholder views, where that's consistent with fiduciary duty.

CalPERS fiduciary duty sits in the California Constitution and there's nowhere higher to go. So ensuring the prudence, the care, minimizing costs to employers that's in the Constitution, that cannot be overridden. But engagement with stakeholders, understanding their perspectives, learning from their insight is very important to CalPERS. And that's why there's an Investment Belief there.

Next, this was very innovative in the day. CalPERS states that there are three forms of capital that matter to long-term value creation. There's financial capital, which is, of course, the traditional day job to manage, there's human capital, and there's physical capital. And that's really how CalPERS thinks about ESG.

E for us is physical capital, S for us is human capital, and F -- and G is the governance of financial capital.

The other two examples are obvious. Risk for us to multi-faceted and climate change is called out as an example. And finally, whether it's internally for CalPERS, or with our managers, or with the companies we invest in, team work is essential, and diversity and inclusion underpin all of that.

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INVESTMENT DIRECTOR SIMPSON: How do we get this done?

Well, we identified in the strategic plan three channels. The first is that we need to be able to advocate with policymakers and regulators. Secondly, that we can use our ability to deploy capital to ensure we're engaging with companies and managers. And thirdly, we need to take the relevant elements into our internal investment decision making. And that's where we have our three-legged stool of the strategy, advocacy, engagement, and integration. And all of those we know are going to be more effective if we can work in partnership.

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INVESTMENT DIRECTOR SIMPSON: We have learned as we've gone along, that this is a very big agenda. The strategic plan is very focused with the priorities. But the new organizational structure that we have really allows the executive office to pick up a new role on advocacy and partnerships, which means that there's an enterprise wide approach now with Marcie in the read for that work.

And in the Investment Office, global equity with Simiso's leadership will continue to lead on engagement. And sustainable investments, led by Beth, will continue to push forward the very important work on integration.

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INVESTMENT DIRECTOR SIMPSON: The six priorities, you can see they're set out here, but we're just going to focus on two examples.

The first is climate change. So CalPERS signed up for something called the Montreal Pledge, which meant that we said we would map our carbon footprint in global equity. And Divya Mankikar, an Investment Officer at the time, did this extraordinary piece of data analysis on our 11,000 or so companies to find that less than 100 were responsible for the majority of the emissions.

And with that insight, there's a good example where data drive decisions, we were able to share that data with other asset owners and investors, and say, look, if there's only a hundred or so companies responsible for the bulk of emissions, we could have a very focused strategy on making sure that those companies get aligned with Paris.

So where are we now?

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INVESTMENT DIRECTOR SIMPSON: We launched -- and thank you, Betty Yee, was there for us at the One Planet Summit to launch this.

Climate Action 100 is now the world's largest investor action initiative ever attempted. It has investors representing $35 trillion in assets. And the companies that we're engaging are more or less equally spread between North America, Europe, and Asia. So it's a very global group.

You can look at the website for Climate Action 100 to get all the detail. We just published our first report showing some very major carbon emitters agreeing to what we're asking for and the example -- some of the examples are up here, but they're in the oil sector, mining, cement, energy, even Nestlé. So, you know, people who make chocolate biscuits also have a role here in the supply chain.

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INVESTMENT DIRECTOR SIMPSON: The other area -- and Ben said earlier how proud CalPERS is of the work that we've been leading in climate change. This has been acknowledged by the media. And I think we're just flagging three examples.

The Financial Times, which has recognized Climate Action 100+ as a giant step forwards; the Economist, likewise a very conservative publication and very well respected; and finally, in the mainstream, Time Magazine recognized CalPERS this summer among its list of 15 women leading the fight, alongside Greta Thunberg and Christiana Figueres who was negotiate -- was the coordinator for the Paris agreement.

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INVESTMENT DIRECTOR SIMPSON: So let me now turn to Simiso to give another example of how the CalPERS strategy, the approach that we have, is really generating results.

So, Simiso, over to you.

INVESTMENT DIRECTOR NZIMA: Thank you, Anne. Good afternoon, the Investment Committee. Simiso Nzima, Investment Director, Global Equities.

On diversity and inclusion, the numbers speak for themselves. We have had 53 percent of the companies that we engaged since July 2017 adding a diverse director to their board, so the element of diversity that they didn't have. This is 361 companies of 682.

About 200 companies, which we're actively engaging with right now in different stages of engagement, in terms of enhancing their diversity, and again these -- we expect that those active engagements will result in additional appointments of diverse candidates to the boards of corporate companies that we are -- we're focused on. And we have actually met the -- one of the KPIs for the S&P 500 where we're looking at least getting oil companies in the S&P 500 to have, you know, at least an element of diversity to have gender diversity on their board.

Where the diversity engagements are not working, we've actually used our investor rights to hold boards accountable. So we voted against 255 directors at 97 companies just this past proxy season. If you look at last proxy season, that number was 468 directors we voted against 845 companies. So that number is actually coming down, which shows that companies which previously were not open to this idea, they're actually now opening up and doing the stuff that we're asking them to do.

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INVESTMENT DIRECTOR NZIMA: And again, on diversity and inclusion, really our approach is based on the empirical evidence that shows that companies which are more diverse tend to have better financial outcomes, higher innovation, and, you know, better spend on R&D. So this really is about returns. As Ben said at the beginning of this presentation, this is about sustainability of returns.

In terms of the media impact, again, a number of media outlets have picked up on the work that we're doing in this space. Those are some of the highlights, but there are a number of them, not just -- not just those two that are put out there.

And just this past month, CalPERS was a recipient of the 2019 Silicon Valley Leading the Way Award. And this is an award which was given for the strong leadership that CalPERS has done in terms of trying to get corporate boards to diversify. So there's really a lot of recognition that CalPERS is getting in terms of the work that we're doing on diversity. And we'll continue to hold companies accountable and try and get as many diverse candidates on company boards as possible.

I'll hand it back to Anne.

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INVESTMENT DIRECTOR SIMPSON: Thank you. Thank you.

We just want to finish with three other forms of recognition, which CalPERS is very proud of, not just in the media, but globally. PRI has established -- this is the UN Supported Principles for Responsible Investment has formed a Global Leaders's Group. There's one asset owner in the United States which is a member. And Theresa Taylor was at PRI in person this year to stand and receive a standing ovation in the auditorium and take a bow. So this is really a very important recognition for us that our peers see CalPERS leadership.

Likewise, on the very tough issues of how we're going to manage data, and targets, and methodologies on climate change, which is really tough stuff, the United Nations Sectary General personally invited our Chief Executive, Marcie Frost, for CalPERS to join the Net-Zero Asset Owner Alliance. Again, CalPERS is the first U.S. fund to join that group.

And finally, another sign that the wide range of CalPERS commitment to sustainability is recognized is an invitation for Marcie, CalPERS CEO, to join the Vatican Council on Inclusive Capitalism, which builds on prior work at the Vatican around climate change.

So let me leave it there. There are two other slides for you to look at, which give you examples of the partnerships that we have, both as members and as having Board seats, and also with a wide range of regulatory bodies where we sit on the Board. Staff members, like James Andrus and others, are taking board seats and really speaking for CalPERS in the global regulatory arena.

So the strategy, the philosophy, that we have is that we have ambition but we're humble. We know that we're in the foothills of a very long climb on many of these issues. But there's a very old saying, which Dan actually has on his email signature box. And it is as follows, "If you want to go fast, go alone. If you want to go far, go together".

So the work that we do in partnerships is because CalPERS not only needs to go far, we intend to go far. So I know that Beth, Simiso, Ben and I will be glad to answer any questions that you might have.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Ms. Middleton.

COMMITTEE MEMBER MIDDLETON: Okay. Thank you, Mr. Chair.

And this is actually -- will be more of a comment than a question. But first, I want to congratulate the team for all the work that you have done. And I think it's incredibly important work that we're doing.

Recently, at one of the Board meetings where we heard a discussion on diversity and inclusion, I asked the question as to whether or not those corporate board diversity and inclusion efforts included LGBTQ identified individuals and was very pleased by the response.

Shortly thereafter, I attended the National Association of Corporate Directors annual conference. During that conference, there were multiple panel discussions on the question of diversity and inclusion.

Not one of those panels included an out LGBT individual, not one of those panels included a discussion of issues around individuals being out as LGBTQ, either on their panel or in their organization, nor did it happen in any of the other discussions of the seminars that I sat in, and I sat in on 13. And in most of those, diversity and inclusion was talked about at least once during the panel.

Lastly, Deloitte has done an incredible amount of work, most particularly in establishing long-term metrics on diversity and inclusion. None of those metrics include LGBTQ. If we are going to step up our game in this area, I think CalPERS is going to have to take a lead.

Thank you.

CHAIRPERSON FECKNER: Thank you.

INVESTMENT DIRECTOR SIMPSON: I wanted to -- thank you. Anne Simpson -- to say that CalPERS' principles include these various including LGBT in our definition of diversity. And when we were pulling together the refresher on the research, we had a presentation from Credit Suisse on some very important research they'd done around funding indicators for Board members who were out as members of the community and finding that that was associated with improved financial performance.

And we'd be very glad to share that with the

Board for those who weren't there at the time. But it really bears out I think in intuition or in insight, which is that diverse boards should bring a whole range of perspectives that are going to really help with both risk and return.

CHAIRPERSON FECKNER: Thank you.

Ms. Taylor.

VICE CHAIRPERSON TAYLOR: Yes. Thank you, Mr. Chair. So I want to thank you Ann, Simiso, and Beth for all the work you've done. I've been here since -- if I go back on this since 2014. So I was at the very end of when we put it together. But I'm very appreciative of the work you've done, that you continue to do on this. I'm looking forward, because I know how difficult it is. This is one of the subjects that comes up often when I go to PRI or elsewhere, for having some sort of data reporting, whether that's on climate change, diversity, getting corporations to report back to us. Those -- that information is difficult and I'm aware what of that. And I hope that we -- I know that there are several different data reporting companies that we're looking at.

But overall, I know that, as CalPERS is, you know, the norm breaker doing this, I'm hoping that we can come up with a standard across the country. I know they have in Europe sort of. They have -- it's better than ours right now, so I would love to hope -- to see that CalPERS participates in some sort of standard across the country.

I also wanted to congratulate Anne because she didn't mention this herself. But Anne Simpson was the woman that was recognized in the Time Magazine, 15 women on climate change. So I wanted to make sure that everybody recognized that.

(Applause.)

VICE CHAIRPERSON TAYLOR: And finally, I just had a question. So we do a proxy voting season every season. And now we have new SEC rules. Could I get just a high level -- and maybe you haven't had time to look at it yet -- a high level overview of how that makes you -- how that makes you feel like that's going to impact us?

INVESTMENT DIRECTOR NZIMA: Thank you. Simiso Nzima, CalPERS staff.

So the rules haven't gone in -- you know, right now they're still in the proposal phase.

VICE CHAIRPERSON TAYLOR: Right.

INVESTMENT DIRECTOR NZIMA: So we'll be commenting on those. But again, I think, you know, they're rules which affect the proxy advisory firms, which will really affect -- in terms of the research that we get from the proxy advisory firms, the timing of that research, and potentially could increase the cost of us acquiring that research, which really does affect the -- you know, how we -- we evaluate some of these proxies.

Again, we use our own Governance and Sustainability Principles and the Investment Beliefs to make decisions. But we use these -- you know, the proxy advisory firms to really look at the research and point us faster in terms of achieving those -- you know, arriving at those decisions.

There's also the potential that it could actually end up resulting in one proxy advisory firm surviving instead of -- there are two main proxy advisory firms which control 90, 95 percent of the market. And if one of them ends up going under, it means really then we have a situation again our costs could go higher or the voting platforms that we use to cast our votes, because again, we use the technology, which is hosted. It's one of the proxy advisory firms. So that's a risk on the research side.

Then there's a risk on the shareholder submission. So the two elements to the shareholder submission issue is the increase in the amount of holdings that you should have to submit a shareholder. Right now, it's $2,000 worth of stock that you've held for one year.

With the proposals, that changes that if it's

$2,000 worth of stock held for at least three years. So between 2,000 and 14,999. And then $15,000 worth of stock held for two years or $25,000 worth of stock held for one year. That will not probably affect us, but it will affect a lot of other, you know, small investors who've been, you know, really helpful in identifying some of the emerging issues, because again, you know, some of the things which we take for granted now, started as emerging issues and filed by smaller shareholders.

That doesn't affect us that much. But there's the issue of resubmitting of shareholder proposals --

VICE CHAIRPERSON TAYLOR: Right.

INVESTMENT DIRECTOR NZIMA: -- where really right now, if a proposal gets less than three percent the first year, then it won't be eligible to be resubmitted for the next three years. So it is three, six, and ten percent. That's the current -- current resubmission threshold. Three percent first year, six percent the second time it's submitted and ten percent the third time.

The proposal is to increase those who say five percent the first year, 15 percent the second year, and 25 percent the third year. And that sort of constrain the ability of investors, including us, really, when you think about any emerging issues, because no new emerging issue will get, you know, 25 percent the first time.

VICE CHAIRPERSON TAYLOR: Right.

INVESTMENT DIRECTOR NZIMA: Most of these issues, even on climate risk reporting in the U.S., you know, they're getting really low shareowner support in the beginning.

So these -- these -- there are those issues that we have to think about. But again, there's a comment period. We signed onto the -- a letter from Council of Institutional Investors asking the SEC to increase the comment period from 60 days to 120 days, so that we have enough time to really analyze the impact on this on our ability to be responsible fiduciaries.

VICE CHAIRPERSON TAYLOR: Okay. Great. Thank you very much.

CHAIRPERSON FECKNER: Thank you.

Ms. Paquin.

ACTING COMMITTEE MEMBER PAQUIN: Thank you, Mr. Chair. Thank you for this report. We also remember the start of this process, so it's very gratifying to see how well it's been implemented and still more work to come, but glad to see the progress so far.

So I had two questions. And the first relates to a couple comments the Controller made earlier this morning regarding diversity with the private asset classes. And we have been such a lead with the public companies. And I recognize it's a different structure -- different ownership structure, governance structure. But is there any thought to using some of the strategies, lessons learned from the public sector in the private sector?

CHIEF INVESTMENT OFFICER MENG: If I may, I plan to address this question in closed session this afternoon.

ACTING COMMITTEE MEMBER PAQUIN: Okay. All right. Thank you.

And the other question I had was I think the new org chart you showed on slide seven. So I'm just curious how this works as far as integrating the partnership work with what Beth does with the integration into the portfolio and what Simiso is doing with engagements and proxies, because I remember a couple years ago, there was the -- a different org chart being implemented then as well to sustainable investments. I think we called it corporate governance at the time. And it was somewhat of a couple of missed opportunities, because it wasn't really flowing from one team to the next team. So how do you plan to ensure that there's no hiccups this time?

CHIEF INVESTMENT OFFICER MENG: Yes. So that's a very good question. That's one very first thing we thought about it very hard how to address this potential challenge, one of which, we're going to have a steering committee. So it will be Marcie, myself -- Marcie from the CEO office, myself from the Investment Office, plus Dan Bienvenue, then plus, you know, Beth, Simiso, and Anne will meet regularly to talk about the initiatives from -- if we would have three pillars, you know, advocacy, engagement, and integration. So we'll make sure that the collaboration among the three pillars as soon as possible.

ACTING COMMITTEE MEMBER PAQUIN: And will we still be nimble enough to respond quickly to certain opportunities that come up with our partnership groups?

CHIEF INVESTMENT OFFICER MENG: Yes.

ACTING COMMITTEE MEMBER PAQUIN: Sometimes they don't give a lot of time.

CHIEF INVESTMENT OFFICER MENG: Yeah, so that's the goal exactly.

ACTING COMMITTEE MEMBER PAQUIN: Okay. All right. Thank you.

CHAIRPERSON FECKNER: Thank you.

Mr. Perez.

COMMITTEE MEMBER PEREZ: Thank you. Simiso, on page 11 of 15, the last bullet, you said you voted against -- or we voted against 255 directors. My understanding were that we voted against the appointment or the selection of a director to that board?

INVESTMENT DIRECTOR NZIMA: So companies have the annual elections. Most directors are, you know, elected annually to a company board. So we voted against the election of the -- either the chairman of the board or the chairman of the board and the entire nominating and governance committee, because this is a diversity issue on the board -- nomination to the Boards.

COMMITTEE MEMBER PEREZ: Okay. Thank you.

INVESTMENT DIRECTOR NZIMA: Yes.

COMMITTEE MEMBER PEREZ: And then I just want to acknowledge Ben's courage in his opening statement regarding -- reminding -- or his appeal to the public to work within our -- you know, we have to work within our constraints. And we need to earn our returns not so much anything else.

Thank you, Ben.

CHAIRPERSON FECKNER: Thank you.

Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Thank you. I'm just curious if there's any correlation that we found between our sustainability -- sustainability strategy and our investment performance?

CHIEF INVESTMENT OFFICER MENG: I would say too early to tell. But as Anne mentioned earlier on, in her presentation, when we engaged the comprehensive, the SIRI, the research, the review of all academic studies, with the help from the professors from University of Columbia and

UC Davis.

We found -- if I remember correctly, we found strong evidence behind G, the ESG, the G part. E and S I believe -- just because of so new, the lack of data. So it's too early to tell.

COMMITTEE MEMBER OLIVARES: Thank you. And then --

CHAIRPERSON FECKNER: Just a second --

COMMITTEE MEMBER OLIVARES: Oh, sorry.

CHAIRPERSON FECKNER: -- Ms. Richtman has --

MANAGING INVESTMENT DIRECTOR RICHTMAN: I was just going to add one additional thing to -- Beth Richtman Sustainable Investments, which is that, you know, with a lot of our efforts, we haven't fully integrated or we even rolled out sort of significant integration process into our investment decision-making.

And we are in the early stages within different asset classes, so it really depends. On real assets, for instance, we have, for several years now, been using the ESG matrix that Paul mentioned to make sure that we were identifying risks to help us achieve better risk-adjusted returns.

And also, with the Energy Optimization Initiative he mentioned earlier as well, that's a place where we are actively looking for opportunities to make more money, because we're integrating an environmental sort of opportunity lens related to energy.

COMMITTEE MEMBER OLIVARES: That gets to the question I was going to ask, which is, is our sustainability strategy applied across all asset classes in a way that's even?

MANAGING INVESTMENT DIRECTOR RICHTMAN: So I would say that our asset class strategies are very different.

COMMITTEE MEMBER OLIVARES: Um-hmm.

MANAGING INVESTMENT DIRECTOR RICHTMAN: So if you think about global equity, which is index oriented versus, you know -- and also largely internally managed versus private equity, whereas discussed earlier today, we're largely investing through general partnerships and commingled funds, where we have limited governance versus our real assets, where we have very strong governance, as Paul mentioned, and we often have sort of accounts of one, where we're the only client of the general partner. And in some -- that is in some cases.

In other cases, we're the only LP in the fund. And so it has to be different, because of those types of, I guess, differences amongst the investment strategies and also the types of assets we're invested in. So, you know, one project we were looking at right now is doing some research on the types of indexes available and what potentially you could think about related to ESG integration. We're still relatively early in that work, but that is something for an index-oriented strategy that you would need to think about versus on a real assets you're looking at individual, you know, chunky investments that may be several hundred million, maybe even a billion dollars that are fixed in a specific environmental and social context in a location that you have to underwrite it in a different way than you would looking at it in say an index.

COMMITTEE MEMBER OLIVARES: But is the sustainability strategy applied across all the asset classes or is it not considered in some cases?

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: So our Governance and Sustainability Principles are part of the Total Fund's Policy. So they are our principles across the fund. However, the way that they're actually acted on varies asset class by asset class, just because of the nuances of the asset class.

CHIEF INVESTMENT OFFICER MENG: So just -- sorry. Just to add onto that. So the answer is yes, it is applied to all asset classes, but exactly the different asset class, the readiness think about either advocacy, or engagement, or integration. The readiness for each asset class along the three pillars are different. So in principle, we -- we are applying to all asset classes. But taking into the uniqueness of each asset class.

COMMITTEE MEMBER OLIVARES: I think that would be helpful to see going forward in terms of how we apply it to each asset class. I recognize it's very different in how they're treated.

And then just getting back to the -- was it the six pillars, I saw diversity and inclusion -- I'm sorry, six priorities -- for external. But what about internal, are we also prioritizing diversity and inclusion?

CHIEF INVESTMENT OFFICER MENG: The answer is a resounding yes.

COMMITTEE MEMBER OLIVARES: Thank you.

CHAIRPERSON FECKNER: Anything else, Ms. Olivares?

COMMITTEE MEMBER OLIVARES: No, thank you.

CHAIRPERSON FECKNER: All right. Thank you. Seeing no other -- nothing -- no other requests, anything else on this item?

All right. We do have a number of requests from the audience. I'm going to call you up in pairs, two at a time. You'll have up to two minutes to make your comments please due to the large number of requests. And I encourage you to not repeat the person in front of you.

Please offer some new comments when you come up.

And just please don't read us the status quo email that was sent out. I mean, I got 70 of the exact same thing, so please give us some new information.

First, we have Sandy Emerson and Deborah Silvery, if you'd please come forward. The microphones are turned on for you. Give your name and affiliation for the record, please.

MS. EMERSON: I'm Sandy Emerson. I'm the Board Chair of Fossil Free California. And we have just released reports showing the effect of staying invested in fossil fuels by three State pension funds, CalPERS, CalSTRS, and Colorado's PERA. Collectively, PERS, STRS, and PERA would have been $19 billion richer if they had divested from fossil fuels ten years ago. For CalPERS, that's $11.9 billion, $5.5 billion for STRS, and 1.77 for PERA.

These studies were performed by Toronto based media and analysis firm Corporate Knights. And the methodology for each fund was exactly the same. For the publicly disclosed portions of the portfolio, for the public equities returns were compared on a quarter-by-quarter basis with fossil fuels and without. So it was a comparison of 40 quarters. The portfolios -- the return comparison reflected all inflows and outflows to the funds, including dividends and they were rebalanced quarterly.

As you know, the UC system recently resolved to divest its endowment and pension funds, $83 billion worth, resolved to divest from fossil fuels. Staying invested in fossil fuels might make sense if fossil fuel investments were making money, but they've been losing. They've been worst performing sector of the S&P 500 for the past decade. The percent in your portfolio has declined from 17 percent ten years ago to about eight percent now. And that's based on a decline in value. The investments that you hold have remained fairly constant. So divesting can improve returns.

Thank you.

CHAIRPERSON FECKNER: Thank you.

MS. SILVEY: I'm Deborah Silvey a CalPERS retiree, a I want to speak to what this Corporate Knights study means for me and each of my fellow CalPERS pension holders. We have been told at the these Board meetings that continued investment in the fossil fuel sector is a sound growth strategy for the present and for the next several years, but this study underscores the extent to which the sector is losing strength.

Because of this market decline in the energy sector over the past ten years, CalPERS has lost money for its members by delaying the inevitable shift away from fossil fuel investments. There's a chart on page six in the study that gives a clear picture of the lost value per member. And as you'll see there, it's a very simple chart. There's a -- it's based on an analysis of public security filings over the past ten years. It's estimated that CalPERS would have generated more than $6,000 additional value per member if the fund had divested its fossil fuel stocks, including the entire energy sector along with other securities with more than ten percent fossil fuel revenue.

But even if we include a narrower slice of the market, the energy sector plus other securities with more than 50 percent fossil fuel revenue, CalPERS would have generated more than $4,800 additional value per member had the fund divested.

So it's important to note that the report understates the fossil fuel holdings and opportunity costs since it covers only public equities, but not private equities or bonds. For example, BlackRock has lost its clients an estimated $90 billion over the last decade because of its investments in fossil fuels, according to a report from the Institute for Energy Economics and Financial Analysis.

In fact, BlackRock reports a trend toward funds with less fossil fuel exposure is the fastest growing fund for them. So it's time for us to move money to safer investments.

Thank you very much.

CHAIRPERSON FECKNER: Thank you. Next up is Sara Theiss and Ben Claire.

MS. THEISS: Hello. My name is Sara Theiss. As a CalPERS retiree, I'm a stakeholder. I'm also a member of Fossil Free California. As you know, I attend these meetings regularly and regularly comment on the latest developments demonstrating that the fossil fuel industry is in financial decline. Others in FFCA have been doing the same thing for several years.

With the report that we released earlier this month, we present additional robust evidence of this decline. The results are consistent among all the three funds studied. They're consistent with an analysis done in the last year of the New York State Retirement Fund, a study done a couple years ago of the Massachusetts State Pension Fund. They're consistent with UC's decision to divest for, as Sandy stated, purely financial reasons.

This data is not cherry-picked. It's -- as stated, it's part of a ten year trend. You're free to test the data yourselves, because the data file is available. I think it's in a link to the materials we sent. And the study author is also available. His name is on the press release that we sent. I believe you received individually these -- this material, I think last week and then we sent it to Mr. Feckner and other people at the end of October.

So given this, I don't understand why the Board has not yet engaged the staff on this topic. I strongly request that the Board agendize the topic of continued investment in the fossil fuel industries. If there are reasons not to reallocate the fund in this respect, PERS members such as myself who've contributed to part of the fund deserve to hear. It's time to get answers from the CIO and staff, especially given the fund's concern about PERS' underfunded status.

Thank you.

CHAIRPERSON FECKNER: Thank you.

MR. CLAIRE: Hi there. My name is Benjamin Claire. I'm a fourth year student at UC Davis studying climate change. I'm a future stakeholder and I'm here to emphasize the fact that investing in fossil fuels is simply a bad financial move.

As previously mentioned, the U.S. system understands this, as just two months ago UC officials announced divestment from fossil fuels. And I really want to highlight this point.

Following the divestment announcement, the UC Chief Investment Officer, Jagdeep Singh published a piece in the Los Angeles Times stating that quote, "We believe hanging on to fossil fuel assets is a financial risk", unquote. He also added that there were quote, "More attractive investment opportunities", unquote in new energy sources, meaning renewables like wind and solar.

We know that fossil fuels are causing climate change and this endangers my own future. We know that climate change causes intensified natural disasters, as we saw last year 85 people in California lost their lives from the Paradise wildfires. This is a matter of life and death and divesting from fossil fuels can save lives especially within California.

Thank you.

CHAIRPERSON FECKNER: Thank you.

Next up, Lynne Nitter[SIC] and Costanza Gonzalo

MS. NITTLER: Hello. I'm Lynne Nittler. I'm a retired teach of 33 years with health care at CalPERS.

Notwithstanding the report that we heard earlier today, I am still incredulous that CalSTRS is invested in fossil fuel stocks at this late date. It is clear that investments in fossil fuels are unwise financially, as the Corporate Knights report shows.

The extraction of those fossil fuels is

destructive to our land, air, and water. Many communities across our country are left with polluted drinking water, illnesses, and degraded land as the fossil fuel companies move on to new fracking sites. Worst still, fossil fuels release CO2 as they burn, altering our atmosphere. We have literally changed the climate, such that our children have taken to the streets in defense of a livable planet, as Greta Thunberg says, "How dare you".

CalPERS prefers engagement over divestment. I suggest it's too late. Engagement ignores -- oh, I'm sorry. The only engagement that will stop the disasters already escalating around the globe is to stop burning fossil fuels, that is stop drilling and mining now.

We are already nearing irreversible tipping points. The time you waste on engagement keeps us from making the transition to renewable energy and frankly dooms us. CalPERS is a position to usher in a new era. If you divest the 17.6 percent of your portfolio currently in fossil fuels and invest in clean renewable energy that propels us into a more sustainable future, you lead the way for others to follow.

Scientists, some 11,000 of them just last week, give us just ten years to make that shift. So you have a choice, you can lead us to our destruction or to a brighter future. If you have children or care about them, the choice is obvious. What are you waiting for?

CHAIRPERSON FECKNER: Thank you.

MS. GONZALO: Hi. My name is Costanza Gonzalo. I'm a UC Davis student. I'm studying environmental policy analysis and planning. And I think my colleagues have already mentioned the economic parts of the argument, but I really want to emphasize the moral part of it and emphasize that divesting from fossil fuels is the good path in history. And you all have investment power, which is really powerful in our market and our policy. And I think it's very important to change that to more economically and more of -- morally better choices that we have.

And as I'm graduating in June, I want to work in a place that will give me funds later that will protect me. And I don't want to work in a place that doesn't care about my future or my generation. So I really think that divesting in fossil fuels is a very important thing in this problem.

So, yeah, thank you.

CHAIRPERSON FECKNER: Thank you.

Next up, I have Sheila Thorne, and Robert Girwing[SIC], and Christine Nelson. You can all three come forward, please. You're the last three.

MS. NELSON: My name is Chris Nelson. I am -- I was -- I'm a retired public health nurse in Butte County.

I just wanted to relay to you, I talked about the Camp Fire when I was here in March, as part of my discussion, my input about climate change and what we need to be doing.

But, you know, my colleagues who are competent people, who've -- who I worked with for a dozen years and I knew -- I know how great they were, they are now reduced to nostalgia PTSD, spending all of their time on the past. They are -- they're ruined. And they have retirements. They had insurance. They've moved to Oregon. But the -- the -- our community people are still living in RVs. There is -- there is still not water for the people of Paradise. There -- you know, it is -- it can't be redone. You can't undue some of these things. And, for me, the only performance indicators that are going to matter is that we -- that we become carbon neutral on CalPERS. The investments that you have really when you talk about course correction and volatility, you need to make the changes. We can't do it for you. And we count on you. We get these rosy announcements for you, but we retirees know what's going on.

And this is -- Hagel used a word -- words, dogmatic slumber. That's the problem here. You guys have got to change and you have to not keep patting yourselves on the back for what you've done. You haven't done enough. And we want to see climate change not be as horrible as it's going to be, if people don't wake up and make the movements soon.

CHAIRPERSON FECKNER: Thank you.

MS. THORNE: My name is Sheila Thorne and I'm a retired member of CFA and also a member of RPEA. And global warming is damaging the earth now at an unprecedented pace, according to the September meeting of the International Panel on Climate Change, even worse than previous projections.

Global warming is so far advanced a tipping point has already been reached. They now predict that 100-year floods will become annual events by 2050 in some cities, including Los Angeles and San Diego. Lancet reports that human exposure to fire has already doubled since 2000. And by the end of the century almost all the world's population could be exposed to mosquito-born diseases once limited to the tropics, according to PLS -- PLOS, tropical diseases report.

In the face of climate chaos, how can any of us continue on as normal. How can you continue to uphold shareholder engagement when despite years of this policy, U.S. oil companies, trying to grab what they can before being regulated and legislated out of existence, still account for 60 percent of world growth in oil and gas production, expanding four times more than any other Ed and ignoring climate action goals.

How can you continue to risk our pensions in fossil fuel industries that are not only destroying the world as we know it, but are losing money? How can you continue to invest in a sector of the economy whose decline is likely to snowball as the world transitions, warns Mark Carney, Governor of the Bank of England, creating financial chaos and bankruptcy rather than invest in an expanding and profitable green future.

Please, do your fiduciary duty.

CHAIRPERSON FECKNER: Thank you.

MR. GIRLING: Good afternoon. My name is Robert Girling. I am a retiree. I'm a legislative representative for the Emeritus Retired Faculty Association and -- Faculty and Staff Association of the California State University.

I'm an Emeritus Professor of business administration. And first of all, I wanted to thank the Board and to thank CalPERS for making my retirement possible, and for that check that I get every month, which is due to the fact that you, as a group, and CalPERS as an organization, and the staff, have been so careful and thoughtful with the management of the resources which have been put at our disposal.

I've also started something called the Sustainable Enterprise Conference 15 years ago, which we brought together leaders in education, community, and -- business and government to talk about opportunities for investment in alternative technologies and so forth in the future.

And I think that that's something that I'd like to see CalPERS look more closely at is the issue of alternative forms of investment.

I also wanted to share with you some information that was -- I received recently. It's a recently released study. It's called analyzing the financial risk of holding fossil fuel assets in the CalPERS portfolio. It was prepared by Professor Clair Brown's lab at the Institute for Research on Labor and Economics[SIC] at the University of California.

And this study documents what we've heard about from some of the previous speakers in terms of the fact that energy is lowest performing sector in the S&P 500 with negative returns as opposed to the benchmark return of 355 percent. That's a huge difference. You were talking about benchmarks earlier. And I think that relates to that.

CHAIRPERSON FECKNER: Your time is up. Please come to an end.

MR. GIRLING: According to the report's projections though, if CalPERS does not remove companies which are heavily invested in fossil fuels, we will be holding potentially stranded assets that both underperform --

CHAIRPERSON FECKNER: Can please bring to an end. Your time is time up.

MR. GIRLING: -- other investments and contribute significantly to the global carbon emissions.

Can I just have one more minute, please?

Thank yo.

I think it's really important to -- that we as a group -- I mean, we're citizens. We're the people of California, the greatest state in the nation. We have the responsibility to lead. And as citizens, we have the responsibility to take on the challenge and to show other countries what -- and other people across the nation what we can do as a group.

I don't want us to make the mistake that was made in terms of failure to divest in PG&E. I think that the future is with alternative energies. I don't think that we can divest overnight. It's something that has to be done gradually. But to begin that study is something that is important to do right now and perhaps to create a committee of CalPERS to look into this and to provide monthly reports on that divestment.

Thank you very much for listening to me. I -- and thank you again for all that you do. I really -- I mean, it's service to the people of California and service to people of the world that you are doing. So I really honor each and every one of you and thank you again.

CHAIRPERSON FECKNER: Thank you.

We have one more request to speak Vanessa Warheit.

MR. WARHEIT: Thank you all very much. My name is Vanessa Warheit. I'm the Executive Director of Fossil Free California. And I'd like to speak to you both in that capacity, but also on behalf of my mother Virginia Warheit who's a CalPERS retiree. And she couldn't be here today because of health issues.

You've heard from others about the data that is now available showing the ongoing losses to CalPERS from not divesting from fossil fuels. Your fiduciary duty requires managing risk and securing returns for all members, young and old. And the good news is that divesting no longer presents a choice between short-term and long-term needs. Divestment serves both and allows you to fulfill your fiduciary duty.

Today, fossil fuels are no longer a blue chip investment. I know it's hard to wrap our heads around that when that's been the reality all of our lives. But that is the case today, they provide bond-like returns with highly volatile equity-like risk. Meanwhile, the planet is literally on fire. And funds like CalPERS represent in very real terms our last, best hope to avert a global crisis unmatched in human history.

For all the talk of ESG leadership, the fund's engagement with the fossil fuel industry has failed, even under the old rules at the SEC, and we are now out of time.

You need to act with great speed and great courage. I urge you, on behalf of the human race and the countless species also facing extinction, to divest all but a small amount of your investments in fossil fuels. As the gentleman mentioned earlier, you are legally able to continue engaging with only 2,000 invested over a year or two in any given fund without exposing billions of hard earned dollars to such high levels of risk.

My mother Virginia -- I would love to speak for a moment on her behalf, if you don't mind.

CHAIRPERSON FECKNER: Quickly, please.

MS. WARHEIT: Thank you.

She retired ten years ago from the City of Palo Alto as senior city planner. And there are two things she wants me to tell you. First -- and I'm now channeling my mother -- fossil fuels are not a good financial investment. You have obligations, present and future, and we need to use all of the information available to us to choose the best investments. And you now have information showing that these are not a good investment.

Secondly, we paid into this fund. This is our hard earned money you are investing for us, and it is foolhardy to keep investing in fossil fuels when they have hidden the true cost of the climate crisis for decades and they're continuing to fight efforts to transition to a cleaner energy economy. It really bothers me that my money is being used for something that is so destructive. I demand that you align our investments with the physics of the climate crisis and the goals of the Paris Climate Accord, and follow the lead of the UC Regents, and divest immediately from fossil fuels.

Thank you very much.

CHAIRPERSON FECKNER: Thank you. Thank you all for your comments.

We'll move on to Item 11c, CalPERS for California Annual Update.

Mr. Bienvenue.

CHIEF INVESTMENT OFFICER MENG: While we're waiting for Dan to get ready, I just want to make one comment. Early on, we mentioned that every year we pay out about $24 billion to our retirees. That is part of CalPERS for California most of that $24 billion consume the spending in California.

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: Thanks, Ben. Thank you, Mr. Chair.

Agenda Item 11C is an information item on CalPERS annual report on investments in California. It originally came to the Committee as a consent item in June, but is being brought back to the Committee as an information item upon request.

The Consultant who prepared the report is here to answer any questions as needed. And in the interests of time an approaching lunch, I'll pause there and happy to take any questions.

CHAIRPERSON FECKNER: Seeing none. Good call.

(Laughter.)

INTERIM CHIEF OPERATING INVESTMENT OFFICER BIENVENUE: Thank you.

CHAIRPERSON FECKNER: That brings us to Agenda Item 12, Summary of Committee Direction. Mr. Meng.

CHIEF INVESTMENT OFFICER MENG: Yeah. I noted two. One is from Ms. Taylor earlier regarding the -- during part of the Real Assets Program review, you mentioned making sure that, you know, our managers are in compliance with the new law in terms of sexual harassment prevention training.

And the second one was from Ms. Olivares when we were talking about the policy revision of the private assets. So the comment is to make it more clear that this is not to get rid of the areas expertise -- actually is moving that to somewhere else. So I noticed these two items.

CHAIRPERSON FECKNER: All right. Very good.

Seeing no other requests.

This meeting is adjourned.

(Thereupon California Public Employees' Retirement System, Investment Committee meeting open session adjourned at 12:54 p.m.)

C E R T I F I C A T E OF R E P O R T E R

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 21st day of November, 2019.

JAMES F. PETERS, CSR
Certified Shorthand Reporter
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