MEETING

STATE OF CALIFORNIA

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BOARD OF ADMINISTRATION

INVESTMENT COMMITTEE

OPEN SESSION

ROBERT F. CARLSON AUDITORIUM

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400 P STREET

SACRAMENTO, CALIFORNIA

MONDAY, SEPTEMBER 18, 2017

2:00 P.M.

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

COMMITTEE MEMBERS:

Mr. Henry Jones, Chairperson

Mr. Bill Slaton, Vice Chairperson

Mr. Michael Bilbrey

Mr. John Chiang, represented by Ms. Jeree Glasser-Hedrick

Mr. Rob Feckner

Mr. Richard Gillihan

Ms. Dana Hollinger

Mr. J.J. Jelincic

Mr. Ron Lind

Ms. Priya Mathur

Mr. Theresa Taylor

Ms. Betty Yee, represented by Ms. Lynn Paquin

STAFF:

Ms. Marcie Frost, Chief Executive Officer

Mr. Ted Eliopoulos, Chief Investment Officer

Mr. Matt Jacobs, General Counsel

Mr. James Andrus, Investment Manager

Ms. Natalie Bickford, Committee Secretary

Mr. Dan Bienvenue, Managing Investment Director

Mr. Steve Carden, Investment Director

Ms. Kit Crocker, Investment Director

Mr. Curtis Ishii, Managing Investment Director

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

STAFF:

Ms. May Leung, Associate Investment Manager

Ms. Simiso Nzima, Investment Director

Ms. Anne Simpson, Investment Director

Mr. Todd Smith, Investment Manager

Mr. Wylie Tollette, Chief Operating Investment Officer

Mr. Sin Sai Vang, Investment Manager

Mr. Lou Zahorak, Investment Director

ALSO PRESENT:

Ms. Margaret Brown

Ms. Rose Dean, Wilshire Associates

Mr. Allan Emkin, Pension Consulting Alliance

Mr. Steve Foresti, Wilshire Associates

Mr. Daniel Ingram, Wilshire Associates

Mr. Andrew Junkin, Wilshire Associates

Mr. Tom Toth, Wilshire Associates

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P R O C E E D I N G S

CHAIRPERSON JONES: I'd like to call the Investment Committee meeting to order.

The first order of business is roll call, please?

COMMITTEE SECRETARY BICKFORD: Henry Jones?

CHAIRPERSON JONES: Here.

COMMITTEE SECRETARY BICKFORD: Bill Slaton?

VICE CHAIRPERSON SLATON: Here.

COMMITTEE SECRETARY BICKFORD: Michael Bilbrey?

John Chiang represented by Jeree Glasser-Hedrick?

ACTING COMMITTEE MEMBER GLASSER-HEDRICK: Here.

COMMITTEE SECRETARY BICKFORD: Richard Costigan?

CHAIRPERSON JONES: Excused.

COMMITTEE SECRETARY BICKFORD: Rob Feckner?

COMMITTEE MEMBER FECKNER: Good afternoon.

COMMITTEE SECRETARY BICKFORD: Good afternoon.

Richard Gillihan?

COMMITTEE MEMBER GILLIHAN: Here.

COMMITTEE SECRETARY BICKFORD: Dana Hollinger?

COMMITTEE MEMBER HOLLINGER: Here.

COMMITTEE SECRETARY BICKFORD: J.J. Jelincic?

COMMITTEE MEMBER JELINCIC: Present.

COMMITTEE SECRETARY BICKFORD: Ron Lind?

COMMITTEE MEMBER LIND: Here.

COMMITTEE SECRETARY BICKFORD: Priya Mathur?

COMMITTEE MEMBER MATHUR: Good afternoon.

COMMITTEE SECRETARY BICKFORD: Good afternoon.

Theresa Taylor?

COMMITTEE MEMBER TAYLOR: Here.

COMMITTEE SECRETARY BICKFORD: And Betty Yee represented by Lynn Paquin?

ACTING COMMITTEE MEMBER PAQUIN: Here.

CHAIRPERSON JONES: Okay. Thank you.

Mr. Eliopoulos, CIO's briefing.

CHIEF INVESTMENT OFFICER ELIOPOULOS: Mr. Chair, members of the Investment Committee, thank you so much.

Listen, I know wee're getting an early afternoon start to our Investment Committee meeting, so I've revised my opening remarks a few times to make them much more truncated. I did want to really highlight the importance of the partnerships that we have, the strategic partnerships that we have with many organizations across the globe. In particular looking over the course of the summer, I and lots of members of the CalPERS team have attended conferences and events pursuant to these partnerships that have been really a wonderful opportunity to foster the exchange of ideas and opinions and best practices among global public pension funds, other asset owners, managers, leading experts, not-for-profit organizations, and other stakeholders. They really are integral to what we do as an organization.

The Committee knows very well our 2020 five-year strategic plan, which includes our ESG five-year plan, our Investment Office diversity and inclusion 2020 plan, and our emerging and transition manager 2020 plan. And a common theme to all of those endeavors is an array of partnerships that are very important to us. We called it a honeycomb. If you can remember in many of the presentations, where we have interlocking relationships with organizations such as the Global Peer Exchange or the U.N. Principle for Responsible Investment, PRI, Ceres, the Sustainable Accounting Standards Board, the U.N. Global Compact. That's all in the E of the ESG.

And then on the S side, partnerships with the Council of Institutional Investors, ICGN, and many of the -- many more and many of the above.

On the governance side, relationships with organizations like the Pacific Pension Investment Institute, the International Financial Reporting Standards Advisory Council, and the SEC's Investor Advisory Committee. These partnerships are very important to the work that we do. We have strategic partnerships in addition to that. With respect to diversity and inclusion, including with 100 Women in Finance, the Association of Asian American Investment Managers, the

Institute, the Executive Leadership Council, New America Alliance, the Toigo Foundation, and many, many, many more.

What I wanted to underscore is how important all these organizations are to us, and also how much we learn from them as well as they learning from the perspectives of our professionals as well.

We think them very much -- think of them very much as being part of us, part of our partnership. And we believe that CalPERS really does benefit from these bene -- from these partnerships that we have.

I had planned to perhaps go through in a little more detail all of the work that many of our staff has, but let me suffice it to say that I and -- I'll name a few of the conferences or meetings that we've participated in -- and many of our staff -- so, for instance, I and Alison Li who you saw a little earlier this morning attended the annual AIM conference in New York just this last September, just to give you a flavor of this. At the CFA Institute Annual Conference in May, Paul Mouchakkaa and Sarah Corr presented and attended at that conference. Wylie is on their steering committee. Anne Simpson spoke in September on the integration of ESG into the CFA GIPS standards.

Other examples. This recent CII spring conference you saw a full complement of our team, as well as joined by a number of or Board members attending and participating in a number of the break-out sessions on climate change, corporate responsibility, trends with respect to capital formation, a very interesting panel on immigration and the effect of immigration on investment risk, a whole array of topics that were presented at the CII conference.

To pick a few others, Curtis Ishii and Lou Zahorak from our fixed income group, which we'll bearing a little bit later in their annual review attended -- or participants in the Fixed Income Forum. They attended an important conference in Washington D.C. looking at regulatory and congressional implications for the fixed income industry. And they followed that up with a meeting in Los Angeles in June -- the beginning of June.

I could go on and on. The depth and array of participation by your professional staff in these associations is quite meaningful. And I want the Committee to know how important that is to the work we do and the fact that your staff is also gaining key insights by being part of this honeycomb network of associations across the globe.

So with that, Mr. Chair, that's my comments.

CHAIRPERSON JONES: Okay. Thank you very much, Mr. Eliopoulos.

I had come to -- has to my attention that we had a number of public members who wanted to speak under the public comment section of this agenda. And I don't know if you're still here, but I want to apologize for the long closed session this morning. We did have some very, very lengthy discussions on a very -- on a couple of very important topics. So I apologize to you for having to have you wait.

But if you're still here, I'm going to alter the agenda and allow you to speak now, if you would like to. So if those members who were waiting to speak, are you still here?

Okay. Seeing no requests.

So now we will move on -- I apologize for them if they had to leave.

So we're going to consent item, action consent item, the minutes. We need a motion.

COMMITTEE MEMBER TAYLOR: Moved.

COMMITTEE MEMBER JELINCIC: Second.

CHAIRPERSON JONES: Moved by Theresa, second by Jelincic.

Seeing no discussion.

All in favor say aye?

(Ayes.)

CHAIRPERSON JONES: Opposed?

Hearing none. The item passes.

The consent information items. I've had no requests to remove anything from that area of the agenda.

So we will go to the action agenda item. The first Item 5a, Independent Oversight, Changes to the Infrastructure Board Investment Consultant.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: Thank you, Mr. Chairman. Wylie Tollette, CalPERS team member. And I'm going to turn this over to Kit Crocker, an Investment Director in our Investment Compliance team. So, Kit.

INVESTMENT DIRECTOR CROCKER: Thank you. Thank you and good afternoon. Kit Crocker, as Wylie just said, CalPERS staff. Agenda 5a is dealing primarily with the resignation of StepStone, the Board's infrastructure consultant. Secondarily, we are recommending that the Committee take this opportunity to align the contract terms for the infrastructure and real estate consultants.

Turning first to StepStone's offer of resignation. As outlined in our agenda item, we recommend that the Committee accept StepStone's recommendation and appoint, as a replacement, either PCA or Meketa. Meketa being the second highest scorer in the most recent RFP for the infrastructure consultant, and PCA being, of course, the current real estate consultant.

In addition, the Com -- we would recommend that the Committee take the opportunity to align the expiration date of the infrastructure contract, currently set for February 2020, to coincide with that of the real estate consultant contract, which is March 31st, 2022.

And we're recommending against the RFP option, primarily because of the immediate need for a replacement to maintain continuity and avoid a lapse in these critical services.

Secondarily though, please be aware of the available options that, in our view, only Meketa and PCA have the resources, experience, and infrastructure expertise to immediately assume the role -- this important role without a lapse in service.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Just to clarify, only PCA and Meketa within the spring-fed pool.

INVESTMENT DIRECTOR CROCKER: Correct. Correct.

In terms of the alignment of contract terms, we are strongly recommending that we take this opportunity to align the real estate and infrastructure consultant's terms. Doing that would significantly improve the overall efficiency of the Board consultant RFP process by reducing complexity and saving on both Board and staff time. This is consistent with our current Lean Six Sigma initiative across the enterprise.

This is an action item, and we're seeking the Committee's direction concerning how to proceed. With that, I'll pause and ask for any questions.

CHAIRPERSON JONES: Mr. Slaton.

VICE CHAIRPERSON SLATON: Well, I'd like to make a motion, if it's in order, so --

CHAIRPERSON JONES: Yes.

VICE CHAIRPERSON SLATON: I think I'd break it up, so that the first motion is to accept the resignation of StepStone and to authorize the staff to contract with PCA, which is 1C. So that's my motion.

CHAIRPERSON JONES: It's been second by?

COMMITTEE MEMBER LIND: Second.

CHAIRPERSON JONES: Lind.

Okay. So it's moved and seconded.

Discussion?

Mr. Gillihan.

COMMITTEE MEMBER GILLIHAN: Thank you, Mr. Chair. With respect to the motion, I have a couple of concerns. One, Meketa was the highest -- second highest ranked offer the last time we did a procurement, so I mean I think that should matter. If our scoring mattered then, it should matter now. And I'm also concerned about extending the time. We're bringing a replacement vendor in mid-contract, and I'm concerned about extending that time frame. And I would recommend that if we were going to align the contracts that we set that up for 2022, and that this replacement contractor be brought in for the remaining term of the contract they're replacing, and we do a subsequent procurement in between.

Thank you.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: I would like to ask staff why they're recommending aligning these two and not aligning all the Board consultants? I mean, if the object is to avoid doing RFPs, that seems to be a better way.

INVESTMENT DIRECTOR CROCKER: And ultimately we would like to align at least all of the real assets consultants RFPs. This opportunity presents itself simply because StepStone is stepping down now. So it would be -- we would not have to alter the term of an existing consultant's contract.

COMMITTEE MEMBER JELINCIC: Okay. And yeah, I'm -- I'm -- I hate to do this, but I'm actually going to agree with Mr. Gillihan that the points do matter. We went through that process. And since they were number 2, I'd be inclined to appoint them rather than PCA.

INVESTMENT DIRECTOR CROCKER: And just to clarify, PCA, it's my understanding, did not participate in that most recent infrastructure RFP. So it's not that they scored lower, just to be clear.

COMMITTEE MEMBER JELINCIC: They didn't score at all.

CHAIRPERSON JONES: Okay. Mr. Lind?

COMMITTEE MEMBER LIND: Yeah. Just to that issue, points do matter and the process matters, but I think because of our aligning the real assets and possibly aligning the contracts, I just think it makes sense for the real estate consultant and the infrastructure consultant if we can do it to be -- have the same -- be the same.

CHAIRPERSON JONES: Okay. Ms. Glasser-Hedrick.

ACTING COMMITTEE MEMBER GLASSER-HEDRICK: What is staff's recom -- or rationale for proposing that PCA be the awardee versus other options? Is it alignment of assets classes or...

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Well, I'd highlight that it's -- it is, of course, the Board's consultant, so it is your -- absolutely your decision. I think part of the logic -- and we're frankly happy to work with whichever consultant you pick. Part of our logic on consolidating them is is this mimics and mirrors the consolidation of our Real Assets Program. Historically, that was regarded and managed and sort of treated as three separate programs, forestland, infrastructure, and real estate.

You may recall that over the last several years, under the direction of Paul Mouchakkaa, we've consolidated that into one Real Assets Program. You may recall that earlier this year, we decided to move towards one real assets benchmark. And the idea of having one consultant with that -- in alignment with that asset class, that certainly makes some logical sense from a process and from a staff's perspective, but it is your consultant and ultimately your decision.

CHAIRPERSON JONES: Okay. Thank you. Seeing no further requests to speak, we do have a motion on the floor by Mr. Slaton, and it was seconded.

Mr. Gillihan, I don't -- I didn't read your as a motion -- substitute motion.

COMMITTEE MEMBER GILLIHAN: I didn't necessarily make it as a motion. I put it out there as a point of discussion. And seeing no interest, other than Mr. Jelincic, there's no point in making a motion.

CHAIRPERSON JONES: Okay. So then the motion that we're voting on -- Mr. Bilbrey.

COMMITTEE MEMBER BILBREY: Actually, if you put it forward as a motion, I'll second that. I'm in favor of what you're having to say as well, Mr. Gillihan.

CHAIRPERSON JONES: Mr. Gillihan.

COMMITTEE MEMBER GILLIHAN: Thank you, Mr. Chair. So in that case, I would make a motion that we select Meketa as the replacement contractor or consultant with the term of the contract remaining consistent with the prior incumbent's term.

VICE CHAIRPERSON SLATON: So that's a substitute motion.

CHAIRPERSON JONES: A substitute motion. And Mr. Bilbrey seconds. So we will take a vote on the substitute motion first.

So all those in favor of the substitute -- I beg your pardon.

COMMITTEE MEMBER JELINCIC: Yeah, I'd actually like --

COMMITTEE MEMBER MATHUR: Microphone.

COMMITTEE MEMBER JELINCIC: I'd actually like to suggest that we split the vote. Vote on the timing and Meketa separately.

CHAIRPERSON JONES: Maker of the motion a friendly amendment?

COMMITTEE MEMBER GILLIHAN: A friendly amendment.

CHAIRPERSON JONES: Okay. Seconder, you -- friendly amendment?

COMMITTEE MEMBER BILBREY: (Nods head.)

CHAIRPERSON JONES: Okay. So the substitute motion on the Meketa first is on the floor.

So all those in favor say aye?

(Ayes.)

CHAIRPERSON JONES: Opposed?

(Noes.)

VICE CHAIRPERSON SLATON: What happened to my second.

(Laughter.)

VICE CHAIRPERSON SLATON: Where's my second?

CHAIRPERSON JONES: I'm trying to listen -- trying to listen to -- why don't we do a vote on the machine, so I'll know for sure.

Okay. Let's -- this again is on the -- just the Meketa as the replacement, with the substitute motion, indicate your --

MS. HOPPER: An electronic vote?

CHAIRPERSON JONES: Yeah.

COMMITTEE MEMBER JELINCIC: Yeah, he can't hear.

CHAIRPERSON JONES: Okay.

COMMITTEE MEMBER JELINCIC: There are some people who have louder voices than others.

(Thereupon an electronic vote was taken.)

CHAIRPERSON JONES: Okay. So that passes. So Meketa is the replacement vendor.

And now we move to the second part of that motion on the timing. What is your motion on that, Mr. Gillihan?

I -- change it. Okay I got it. You did it.

COMMITTEE MEMBER GILLIHAN: Thank you, Mr. Chair. So with respect to the time frame, I move that the contract with Meketa be consistent with the term of the prior incumbent vendor that they're replacing.

CHAIRPERSON JONES: Which will expire?

COMMITTEE MEMBER GILLIHAN: In 2020.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

2020.

INVESTMENT DIRECTOR CROCKER: That's February 29, 2020 --

COMMITTEE MEMBER GILLIHAN: Yes.

INVESTMENT DIRECTOR CROCKER: -- which is the current date.

CHAIRPERSON JONES: So that's the motion.

Discussion, second part of the motion?

Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Well, I had -- no, I had turned on it while he was trying to figure it out where --

CHAIRPERSON JONES: Okay. So again, let's go to the voting machine on this.

(Thereupon an electronic vote was taken.)

CHAIRPERSON JONES: Okay. The item passes. So that takes care of that item.

Thank you.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: Great. Thank you very much.

CHAIRPERSON JONES: You're welcome. Thank you.

We now will move to Item 6, Program Reviews, Global Fixed Income Annual Program Review.

Mr. Ishii.

(Thereupon an overhead presentation was presented as follows.)

MANAGING INVESTMENT DIRECTOR ISHII: Good afternoon. While my team comes up here, I also have cut a number of things off, so it's a little bit more abbreviated. So hopefully, we'll get through this fairly quickly.

The presentation is broken into three sections. The first one I'm just going to go over the performance of the three programs. I've cut out the roadmaps. You see all the roadmap stuff that we've led, and you see what we plan to do. It's quite extensive.

The second part will be conducted by Lou Zahorak on my -- my right, second right over. He runs our corporate portfolio management and research group. And then the third item -- and he will be talking about our carbon footprinting. And then the third part of the presentation will be presented by Todd Smith, to my right. He's an Investment Manager, and he's going to update you on our efforts of insourcing a lot of the kind of STIF work that we've been doing. It's a fairly large project, so...

And then after each section, I'll stop and -- for any questions.

--o0o--

MANAGING INVESTMENT DIRECTOR ISHII: Okay. So 2016 was a year of rising rates. Rates started the year around one and a half percent, and proceeded up to about two and a quarter percent. And when rates rise, obviously bond prices go down. This drop in rates neutralized the coupon return and spread compression that happened in the other sectors.

And so the benchmark you can see resulted was a negative 0.9. That's the upper section there for GFI. The good part is, is that in excess return space, GFI added about 120 basis points. So we actually got to a positive return for the year.

We're especially proud -- you can see that in all periods, we've added excess return. And we're especially proud those three red circles at the top the 10, 20, and the other one is a 29-year return. So a pretty long one.

But I think that shows a strong management staff and process, and it's consistent through time.

The second program investment -- the inflation assets. The absolute returns, and you can see the benchmark, negative 1.8, was brought down by commodities. A lot of it was oil dropping from about 52 to 46, so -- and then excess return, we detracted about 0.9. So it was a tough year.

The good news is over longer periods of time this program has done fairly well. This is the first year it's underperformed. And I think it -- we have models, and the models have generally worked fairly well, and typically add value over time.

In the last section, which is the liquidity section, it's pretty much sub one percent returns. You can see the excess returns is moderate. These are reflective of the Federal Reserve low interest rate policy, and so it keeps it kind of low.

--o0o--

MANAGING INVESTMENT DIRECTOR ISHII: I think the next page is probably a little bit informative. This is kind of a risk position page for you, and I circled a couple things.

Specifically, what we're -- we've been doing during the year is reducing our risk position. So we're taking down a lot of our high yield corporate positions, and I circled the government section, because this is probably the first time in my career that I'm actually long U.S. governments. And it's not that we think something is going to happen next year, it's just we don't think we're being rewarded sufficiently for the amount of risk that -- tail risk that we see. In fact, we just finished our long-term sector meeting, and nothing came out that was imminent. It's just that our spreads have compressed quite a bit.

The other indicator up there that's a good indicator is yield. And the yield is virtually non-existent relative to the benchmark. So I think these two things show that our risk positions are relatively low. And with that, I'm not going to cover the rest of the roadmap issues, and I'll stop for any questions.

CHAIRPERSON JONES: Okay. Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Curtis, on three -- three of 47, that's -- you've got the govies circled. That's relative to the benchmark?

MANAGING INVESTMENT DIRECTOR ISHII: Correct.

COMMITTEE MEMBER JELINCIC: Okay. I just wanted to make sure.

And on the next page, one of the things you did was evaluated the current strategy with a focus on private markets. Can you share a little bit what you did there?

MANAGING INVESTMENT DIRECTOR ISHII: So what our -- this was led by Mike Rosborough. And what he did is he tried to understand how did the private asset classes include currency in their decision process, and what were the economic incentives.

So he conducted the added group, and they went through and took a look at this, and concluded that in like private equity, there was strong incentives to be more dollar -- 90 percent of their portfolio was more dollar incentivized. Whereas, if you looked on NAV, it looked like it was only two-thirds.

And this resulted in another project you'll see -- he's not going to lead the next phase, but the next phase of the project is one that's being led by the asset allocation group to carry forth and try to figure out kind of more total fund looking at currency.

COMMITTEE MEMBER JELINCIC: And then last month I had asked the question of why our friends across the street beat us in -- particularly inn fixed income. Obviously, they're taking different bets. They have different asset allocation, different liabilities. I appreciate that. But what did they -- what bets did they make that we didn't that worked and what did --

MANAGING INVESTMENT DIRECTOR ISHII: Actually, in excess return space, we crushed them. But what the difference is is in the index. They are Lehman ag, and that -- their interest rate sensitivity component is about -- is a third less than ours. So in rising rates, they do better. And so that's really -- their index did better. But when you look on a comparative basis, in terms of excess return, fixed income has done exceedingly well relative to them.

COMMITTEE MEMBER JELINCIC: Okay. Thank you.

CHAIRPERSON JONES: Okay.

MANAGING INVESTMENT DIRECTOR ISHII: Okay. So I'm going to turn this over to Lou Zahorak and he'll cover the carbon footprinting. Let me get it over there.

--o0o--

INVESTMENT DIRECTOR ZAHORAK: So today, I'm presenting a summary analysis on the carbon intensity of the CalPERS corporate bond portfolio. The corporate bond portfolio has approximately $16 billion of assets. Just as CalPERS was the first U.S. signatory to the Montreal Pledge, today, CalPERS will be the first U.S. pension plan to disclose its fixed income corporate carbon footprint.

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INVESTMENT DIRECTOR ZAHORAK: Okay. Great. Queued it up.

The goal of a carbon footprint is to compare the carbon intensity of the CalPERS portfolio to its benchmark. The methodology that we used in assessing the carbon footprint in our portfolio is similar to the method that the CalPERS equity team used last year when they presented their carbon footprint.

Now, the results of our analysis show that our portfolio has a higher carbon intensity than our index. The higher carbon intensity is attributable to a sector overweight in the utility in -- utility part of the index versus being underweight in the industrial or the financial sectors of the index.

And for the corporate portfolio, 75 percent of the CO2 emissions and the carbon is coming from 20 companies. And almost all of throws are utility companies. Now, what I'm able to report to you today -- if you could go to the next slide.

--o0o--

INVESTMENT DIRECTOR ZAHORAK: Thank you -- is that our -- the CalPERS Governance and Sustainability Group is targeting to engage 14 of those 20 companies. So 70 percent of the companies will be engaged actively by our CalPERS Governance and Sustainability Group. This is a positive, because as bond holders, we do not have the same ability to engage management like our brethren on the equity team or equity holders that can actually drive change at the company level.

Now, when analyzing companies to invest in our corporate portfolio, carbon risk is but one of many factors we look at when we're assessing credit risk. Utilities themselves are unique versus other industries. There's regulation of the utility industry, which allows utilities to earn a profit and/or a return on their investment for the capital expenditures they make in their business.

This is unique. Utilities are subjected to less market competition, they have low cash-flow volatility, and which all affords utilities a higher recovery value if there was a default versus the other sectors that we're currently underweight.

Lastly, I'd like to discuss the limitations to the carbon footprint analysis. It really is just a snapshot in time. Secondly, recognize that the measurement of the carbon footprint only looks at Scope 1 and Scope 2 emissions. What it does not include is Scope 3 and 4. Scope 3 has to do with a company's supply chain. So think of Apple computers versus Samsung. Apple outsources all of their manufacturing, wherein Samsung does not.

Secondly, it does not capture the carbon produced by its customers when they use that company's products.

So again, think of the auto companies, or oil companies, the emissions that their customers produce is not captured in the score or measurement.

More importantly, the carbon intensity score does not tell us which industries or companies will maintain their revenues or their profits should there be a carbon tax instituted globally or into the U.S. It also doesn't tell us which companies will do better financially if there is no carbon tax, and globally we fail to achieve the two percent reduction in CO2 emissions.

All of that additional calculation would require a more sophisticated modeling of carbon risk. And right now, both in the equity world and fixed income world, practitioners are just not there yet. So I will -- I think it will be a matter of time over the next few years, where we will see more sophisticated modeling of carbon risk.

But as of right now, that is the best we're capable of assessing carbon risk, and we're doing it in a manner which is consistent with the methodology that other practitioners are using. So I'd like to open it up for questions.

CHAIRPERSON JONES: Mr. Slaton.

VICE CHAIRPERSON SLATON: Thank you for that information. I did want to point out though that I think on the -- on the utility side, in -- on this particular topic of carbon, we also should be looking at when the trend that started here in California of community choice aggregation, which means communities can essentially opt out of the investor-owned utility for the purchase of power. The utility still remains responsible for the delivery of the energy on the wires and poles, but the community takes over the actual purchase of electricity.

So if that trend continues beyond California, then it's something that we -- both from a risk standpoint, we should be looking at, as well as from the standpoint of carbon.

INVESTMENT DIRECTOR ZAHORAK: I would agree with you. We are looking at emerging threats, emerging technologies -- technological change, whether -- just how quickly battery storage actually gets implemented. We have two analysts that focus on this sector, and so we are, you know, constantly looking alternative threats.

VICE CHAIRPERSON SLATON: Good. Thank you.

CHAIRPERSON JONES: Ms. Mathur.

COMMITTEE MEMBER MATHUR: Thank you. Well very -- I think it's a very positive step that we've done this carbon footprint. Although, as you would note, it's not a perfect approach. It's a flawed approach, but still I think we learned something from the public equity footprint, and I think we've learned something from this footprint as well.

You mentioned some of the attractive features of utilities, and what makes them -- why we basically are overweight to them in global fixed income. One of the things you mentioned is the recovery of and return on capital costs, which actually, in a way, could make them -- could be a basis for some engagement with them around expenditure on capital investments to diversify the sources of energy that they're, you know, using, et cetera, because there might -- for them, it's actually perhaps not as expensive as for others to invest in these types of technologies.

So anyway, I know that there's going to be a corporate engagement strategy with, I think you mentioned, 14, which is on the public equity side, which is excellent. I'm sure we'll have -- start having conversations about what -- about the other six. But to the extent that we can continue to encourage all these utilities and others, who are big carbon producers to do better risk analysis as you mentioned before what happens if the regulatory environment changes if the carbon tax is put in place, et cetera, then we can help, I think, start encouraging better decision making, or more long-term decision making.

So anyway, just -- it's a long statement, but just really to thank you for your work on this.

INVESTMENT DIRECTOR ZAHORAK: Thank you.

CHAIRPERSON JONES: Mrs. Paquin.

ACTING COMMITTEE MEMBER PAQUIN: Thank you. Thank you for the report on the footprint. That's such a great project. I'm very glad that you were able to do it in the past year.

So I'm just curious what types of things through the engagement process will you be asking these utilities to do or to consider doing?

INVESTMENT DIRECTOR ZAHORAK: I mean the engagement is really with our Governance and Sustainability Group, which is headed up by Anne Simpson. And so I would be really -- Anne is the one that could speak best about that.

ACTING COMMITTEE MEMBER PAQUIN: Thank you.

INVESTMENT DIRECTOR SIMPSON: Thank you. Thank you very much. Anne Simpson.

As Lou says, our ownership rights are with the equity side of the shop. So this is where we've got the ability to really drive change. We've been working with our peers and different regional networks to work out what the agenda is going to be for the largest 100 emitters of carbon globally. And, in fact, we're launching a call to action next week at PRI.

And we've got two things that we're going to ask all of these companies to do. And there's a significant number of utilities for all the reasons that Lou has just explained. The first is to start disclosing in line with a new framework that came out through the Financial Stability Board's task force on climate-related financial disclosure. And that's calling on companies to report on four things. The framework has four pieces.

The first is governance. So how is the board allocating responsibility for overseeing not just climate risk, but climate opportunity, which is very closely aligned to the idea of the climate competent board, which is something the Controller raised with us the last time we reviewed our principles.

The second is around strategy for the transition under the goals of the Paris agreement. The third is obvious. It's the risk management that underpins the strategy. And the fourth is around very specific guidance on metrics and targets. And what's interesting, as Lou said, much of the thinking at the moment is around what's called Scope 1 and Scope 2. But this framework calls on companies to also apply Scope 3, which addresses the issue of your suppliers and customers, as Lou was just mentioning.

And what that framework is telling companies to put forwards is a number of scenarios which show how that business is going to make the transition from where we are now to the less than two degrees warming over the twenty -- next 25 years.

So we're just at the very beginning of engaging companies, starting to try out these ideas. And I think we've got some good examples around. For example, NRG, a utility in the U.S.; BHP Billiton, which is a very large mining company. But really, this is a very innovative and I think powerful tool to start having companies setting out, not just, well, here's our plan for making a transition to a low carbon future, but here is some possibilities, here's a range of scenarios, depending upon how the whole climate change agenda, and the economic agenda unfolds, because that will affect plans differently as we've -- as we were talking about earlier today.

So that's the plan. There will be very specific -- the nice thing about the framework that we're supporting with the task force on climate, related financial disclosure, the TCFD is another acronym to get used to.

The nice thing is that they've actually got specific advice for different sectors. So if you go on their website and have a look, you'll see that they've actually got the big framework, which is for all entities, both public and private companies. But then they've got specific advice by the eight sectors that they think are the most significant. So energy, of course, but agricultural, industrials, and, of course, utilities. So that's really going to be the starting point for the discussion about what they need to do.

ACTING COMMITTEE MEMBER PAQUIN: Great. Thank you. Sounds very exciting. Thank you.

CHAIRPERSON JONES: No additional questions on this item.

So, next.

INVESTMENT MANAGER SMITH: Todd Smith, Global Fixed Income.

This project here, the internally managed short-term investment fund is the culmination of basically a two-year project. When we began this project, we had the majority of our short-term assets being managed externally, in what we would call a short-term investment fund, or a STIF fund.

And this is due to the fact that CalPERS has cash held in about 90 different portfolios all around the fund. But in terms of what we control on the short-term investment desk, there's only about three of them that we were actually managing. And so what we're essentially trying to do here with this project is create an internally-managed money market mutual fund for CalPERS' accounts.

And so under the old model, the -- any cash that was deposited into a portfolio would be swept out to an external portfolio to manage that cash. And what we're doing with this project is we're basically using the same type of functionality, but instead of moving it to an external portfolio, we're moving it to an internal portfolio.

And this -- the big part of the focus of this is so that we can control the risk of how those assets are invested. We can control the liquidity of how those investments are managed, and as well as the fact that certainly by bringing money in-house, we're planning on saving quite a bit of money on management fees through -- as a result of this process.

And we're talking about a portfolio that will probably be somewhere in the neighborhood of 35 to 40 billion dollars.

And as you move to the next slide --

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INVESTMENT MANAGER SMITH: -- you can see that there's been quite a bit of work along the way, as we've moved towards putting this project into place. We've updated our liquidity guidelines. We've enhanced our research capabilities. We've hired trading staff. We've hired operations staff to handle the additional workload. And in some respects, we kind of had to create the wheel here, because this is a new product, essentially where we took two different functionalities that are offered by State Street, one is managing a mutual fund type accounting system, and the other is a suite vehicle.

And basically what we've done is we've worked with State Street to get them to connect the two and create a single product that will automate the process of moving the cash to and from portfolios every single day, so that cash isn't just sitting around left to basically just be managed by an outside party.

We've already started to gain some of the benefits of having the updated liquidity guidelines, as well as the enhanced research capabilities as we've brought in about $11 billion, you know, over the past six months to a year that would have historically likely just gone to the external management. So we've already been able to bring in some money to gain some of the benefits of doing that.

But in terms of the actual suite process, we're going to start -- we're actually in the process right now of testing it to see -- make sure everything works correctly, in terms of making sure the money goes in and out of the portfolios the way it's intended to to make sure that the accounting process is done correctly, and everybody gets their fair share of the returns of the fund.

And we're going to start rolling it out across CalPERS starting in October. And it will take us a couple months, as we phase it out. We're not going to move all 90 portfolios in on day one. We kind of want to start small, and then start moving some of the larger portfolios over, so we can gain the benefits of what we're really trying to accomplish here, and that should probably be done by the end of 2071.

And then as we move forward into 2018, it will be the real work of putting the money to work, which is, you know, what we're trying to accomplish. And by the end of 2018, the vast majority of our short-term investments should be managed internally as opposed to externally.

And that's really where we're trying to get to, so that we can control the liquidity, we can control the risk profile. And once again, transparency. Right now, the assets are managed externally and as you move them internally, you have a lot more transparency over how those assets are buying invested.

So, at this time, I would welcome any questions on the project.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Todd, a big proponent of bringing it in-house. Glad to see it.

INVESTMENT MANAGER SMITH: Thank you.

COMMITTEE MEMBER JELINCIC: But how much variability was there in the risk of the assets when they were being managed outside? I mean, if it's all short term, it doesn't...

INVESTMENT MANAGER SMITH: Sure.

MANAGING INVESTMENT DIRECTOR ISHII: Let me answer that.

INVESTMENT MANAGER SMITH: Yeah, go ahead.

MANAGING INVESTMENT DIRECTOR ISHII: So I think the key for us is the -- there's a conflicting kind of goal. Some of the external funds were going for return a little bit, and so they would extend out on the curve -- the maturity curve. And they were investing in, if you remember back in 2007, half, I think the portfolio was in European banks, which we had some concern with.

And so this is -- this project wasn't necessarily driven to save money. This project was initiated so that we would have better risk management. That was my driving force, not to create an internal STIF fund, but to understand and control risk. So I -- I could better tier the investments. We can control what they're invested in, and that was a driving force, making -- or saving money was the kind of additional benefits.

COMMITTEE MEMBER JELINCIC: So if I understood you correctly, part of it is that we were uncomfortable with our exposure to European banks, and we wanted to reduce that. And duration, how far out were they going, you know, where are we doing it now?

INVESTMENT MANAGER SMITH: Sure. I mean, they were kind of going anywhere from nine months to a year in some of the banks that they were investing in. Whereas, we tend to be kind of six years -- six months -- sorry, six months and in. So we are shorter than what they were doing. We're also -- I think we've -- it allows us to be a little bit more selective as well. They had essentially a 65, 70 billion dollar portfolio, and they're just trying to get it out, and to some extent, chasing returns. And so, you know, in this -- with us having control over it, we can control what banks we're investing in and which ones we're not.

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Ms. Taylor.

COMMITTEE MEMBER TAYLOR: Yes. I just wanted to thank you very much and reiterate what J.J. said, which is I really appreciate the fact you guys have brought it in-house. Curtis, for whatever reason, whether it was for risk or whatever, it's great to see that we're using our own staff to do this work, and cut -- caught -- I can say this -- cut costs. So thank you very much.

CHAIRPERSON JONES: Okay. Thank you.

No additional questions on this item.

We move to the next one.

MR. TOTH: Tom Toth with Wilshire Associates. I just have a couple of comments. Our letter on the review of the Fixed Income Program is included in your Board materials. It's under 6c, so I'll just make a couple of comments here and reserve further comments or if there are any questions for our consolidated slide deck a little bit later.

So Wilshire believes the Global Fixed Income Program continues to be effectively implemented in a very risk-aware framework, and in a very cost-effective manner. The realized results really bear this out. Staff pointed out their outperformance relative to their benchmark. But I think as important, from a risk perspective, in many of the measurement periods, you actually have done so with less risk. So the risk-adjusted return is measured by the information ratio remains very robust over a consistent period of time.

So I'm happy to answer any questions or I can reserve further comment for our consolidated slide deck, which I believe is Item 6d.

CHAIRPERSON JONES: Okay. We'll wait.

MR. TOTH: Okay. Thank you.

CHAIRPERSON JONES: Okay. Next is Global Equity Annual Program Review.

(Thereupon an overhead presentation was presented as follows.)

MANAGING INVESTMENT DIRECTOR BIENVENUE: All right. Good afternoon to the members of the Investment Committee. This is our Global Equity Annual Program Review. I'm Dan Bienvenue, CalPERS team member.

As with years past and similar to fixed income, we're going to do two main things here. First, we'll start with an executive summary where we just kind of go through the portfolio's performance, the positioning of the portfolio, and then a couple of the large initiatives that we've both done in the past year, but also looking forward.

And then from there, we'll do deep dives into three different topics. These are topics -- there are two kind of main reasons for these deep dives. Number one, it allows us to kind of go deeply into a few topics that we think are important to the Board, but secondly, and importantly, it allows the members of the Committee to see some of the other members that actually candidly really do the work on the team, where I'm the person you tend to see most, but they're the ones that do all the work, so -- so to let you see those -- some of those people.

First, by way of performance, if we could go to that slide 2, please --

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MANAGING INVESTMENT DIRECTOR BIENVENUE: -- you can see that we had very strong absolute performance this year. The market was up nearly 20 percent. We underperformed slightly, returning 19.7 versus a 19.8 percent benchmark return. This slight underperformance was due to a slight defensive positioning in such a strong rising market.

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MANAGING INVESTMENT DIRECTOR BIENVENUE: Over the three, five -- three- and five-year numbers are much better. The 10-year number, because the outset of that 10-year number is the financial crisis, that's a much more challenged number again. But then when you go to the 20-year and since inception again, we get to sort of better relative return numbers.

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MANAGING INVESTMENT DIRECTOR BIENVENUE: Moving on to portfolio positioning. You know, we have as one of our Investment Beliefs that risk is multi-faceted. And in the past, we've shown you some of the various ways that we look at the risk in the portfolio. This is another one of them. This is the factor exposures in the portfolio as of June 30th. So we can certainly look through a geographic lens, we can look through a sector lens, but the factors is one of the other ways that we look at it. And you can see that we had very neutral weights to both the size and beta factors. Small, you know, overweights, but not statistically significant overweights to carry, which is also known as dividend, and then momentum. And then actually statistically significant overweights to value and to quality.

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MANAGING INVESTMENT DIRECTOR BIENVENUE: Moving on from there into the update on the business, three main accomplishments we thought we would highlight for this past year for fiscal year '16-'17. First, and this was a lot of work, was integrating the corporate governance team and activities into global equities. So that's the proxy voting activities, the corporate engagements and then the financial markets and regulatory work. And we're going to take a deeper dive. That will be one of our deeper dives following this.

We also had two major technology deployments.

The Artemis for global equity. So allowing us to manage plan level allocation shifts using a technology called Artemis. And then secondly Vermont for transitions. So that's a security level transitioning technology.

And then finally, we've rounded out our alternative beta and factor exposure suites. And I know this -- the alternative betas have been a question that we've heard. And so that's one of the other deep dives that we'll get too later.

Going forward, for fiscal year '17 and '18, we have another three that we'll highlight. First of all, preparing for changes resulting from the ALM process, so the portfolio priority work, and then the work around an allocation too growth, including sort of public equity and private equity.

Secondly, we'll continue to execute on our ESG strategic plan. So those are both the core work again of proxy voting, engagement, and financial markets and regulatory work, but then also the six strategic initiatives. And we'll be partnering obviously very closely with Anne Simpson and her team as we -- as we work down those paths.

And then finally, we'll continue to rationalize the global equity portfolio and the business model. And by rationalize, I mean that we just think that it's a healthy process to be consistently looking at what we're doing from a business and from a portfolio standpoint, and asking ourselves what makes sense to do, what we should modify, how we should continue to evolve the business. So that's that rationalization work.

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MANAGING INVESTMENT DIRECTOR BIENVENUE: Okay. So from hear, we'll move on to deep dives. I'll take questions in a second. Just really quickly I'll cover the deep dives are going into the corporate governance business model. We're revising a bit on the business model. An Simiso and James will be digging into that.

Also, our capital allocation process and analytics. And Steve Carden and May Leung will take us deeply into that. And then our alternative beta work, both the history and kind of the exposures in the portfolio. And that will be again Steve Carden and Then Sin Sai Vang.

So happy to take any questions before we move onto the corporate governance business model.

CHAIRPERSON JONES: Okay. Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Yeah. You pointed to -- on 2 of 29 to the low return in the 10-year, and there was a little event early in that year. But one of the things that we keep hearing is that if it happens early, and you get a chance to make it up, it kind of gets lost. But the other thing is the -- we underperformed the benchmark by about 40 basis points, which is almost pushing the edge of your tracking error, what did have -- what have we done over the 10 years that led to the tracking error?

MANAGING INVESTMENT DIRECTOR BIENVENUE: I'm sorry, when you said led to the tracking error, are you talking about at the beginning of the period or are we talking about sort of --

COMMITTEE MEMBER JELINCIC: Well, I don't know. Over 10 years we have a low return. And part of that is, you know, the 07-08 debacle, which clearly brings the average down. But we've also got a 40 basis point tracking error and we run the program seeking a maximum 50. So why the tracking error?

MANAGING INVESTMENT DIRECTOR BIENVENUE: So I would say the portfolio -- the tracking error in the portfolio now is lower than it has been early in the period. Early in the period, if you'll recall, we had ARS, you know, the hedge fund portfolio, still sitting inside of the global equity portfolio. And for part of that, it was part of the benchmark. For part of it, it wasn't. We also had a beta overlay on it.

This is all going earlier in the period. So I would say that the way that the portfolio and the business is managed now is very, very different. I would say the past five years is -- it's been fair -- much more consistent. But going back to the early parts of that 10-year period, it's a fairly -- it's fairly different portfolio management and portfolio construction process.

COMMITTEE MEMBER JELINCIC: Okay. Thank you.

CHAIRPERSON JONES: Ms. Taylor.

COMMITTEE MEMBER TAYLOR: Yeah. Thanks, Dan.

I just wanted a quick question, which was you said we had a defensive position. So are we changing that or is that for future for to us look at?

MANAGING INVESTMENT DIRECTOR BIENVENUE: So if we go to slide 3 again, can you see that at the beginning of the period -- see the red bar that says beta, right? And one year ago we had a less -- a less-than-market beta to the equity market beta. So that was that slight defensive positioning. You can see that now we're actually about beta neutral.

COMMITTEE MEMBER TAYLOR: Okay. Great.

MANAGING INVESTMENT DIRECTOR BIENVENUE: So I would say that we're maybe slightly defensive, especially regarding the really large mega caps --

COMMITTEE MEMBER TAYLOR: Okay.

MANAGING INVESTMENT DIRECTOR BIENVENUE: -- but we're -- from a beta standpoint, we're pretty well in line with the market.

COMMITTEE MEMBER TAYLOR: And you feel comfortable with that?

MANAGING INVESTMENT DIRECTOR BIENVENUE: Very comfortable with that.

COMMITTEE MEMBER TAYLOR: Okay.

MANAGING INVESTMENT DIRECTOR BIENVENUE: We -- you know, these markets where you have some mega caps really -- really flying, those are markets where we will -- we will tend to be underweight those names, just due to the portfolio construction methodology, and that's a position that I'm very comfortable with.

COMMITTEE MEMBER TAYLOR: Okay. Great.

MANAGING INVESTMENT DIRECTOR BIENVENUE: And I think we as a team are comfortable with. Although, this all gets a good robust set of discussion around the table.

COMMITTEE MEMBER TAYLOR: Oh, I bet. All right. Thank you.

CHAIRPERSON JONES: Okay. Mr. Bilbrey.

COMMITTEE MEMBER BILBREY: Just a quick question, you mentioned about deep dives. What's the timeline on those?

MANAGING INVESTMENT DIRECTOR BIENVENUE: We're covering them imminently.

COMMITTEE MEMBER BILBREY: Right now.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Yes, exactly.

COMMITTEE MEMBER BILBREY: Okay. I just wanted to make sure.

MANAGING INVESTMENT DIRECTOR BIENVENUE: So when I'm finished here, it will be these three.

COMMITTEE MEMBER BILBREY: I wasn't sure if you were talking about in the future or now. I thought it was now.

MANAGING INVESTMENT DIRECTOR BIENVENUE: No, now. And then again a year from now very likely.

(Laughter.)

COMMITTEE MEMBER BILBREY: Thank you.

CHAIRPERSON JONES: Okay. Proceed.

INVESTMENT DIRECTOR NZIMA: Good afternoon, members of the Investment Committee. My name is Simiso Nzima, Investment Director, Global Equity.

I'm joined by James, so I'll let him introduce himself.

INVESTMENT MANAGER ANDRUS: James Andrus, CalPERS staff.

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INVESTMENT DIRECTOR NZIMA: I'll jump straight into the presentation starting with slide 2 on global governance integration. The three main points I'd like the Investment Committee to take away from this slide are, one, the governance architecture, which provides the framework for the global governance -- global governance integration is underpinned by the governance and sustainability principles, and the ESG strategy plan, both of which were approved by the Board.

The second point here is that the Governance and Sustainability Subcommittee with its three working groups, which is proxy voting, research, and financial markets ensures that the global governance and sustainability agenda is owned and shared by the entire enterprise, so as opposed to really sitting with just one group, but through the membership of those committees that I assure shares ownership of the agenda.

And the third point I'd like to make there is that the corporate governance and sustainable investments, so two teams, the team that I lead and the team that Anne leads, really works to together on an ongoing basis. And really, there's a lot of shared conversations in terms of what needs to be done, what priorities, and so forth.

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INVESTMENT DIRECTOR NZIMA: Moving on to the next slide. Really, this slide looks at the corporate governance integration into global equity. And the two items that I'd like to highlight here are that staff cross-trained to execute both proxy voting and corporate engagement duties. And the fact that we conducted a business model review really to ascertain what's the best structure and resources to be able to execute on the ESG strategy plan.

I have a few bullet points there, but I'm not going to go through those. But really the emphasis here Investment Belief 3 and Investment Belief 10.

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INVESTMENT DIRECTOR NZIMA: The next slide, which is on the corporate governance organizational structure, really this is the result of the -- you know, after conducting the business model review, I came to the conclusion really that one eliminated the functional structure. So really, instead of having the bifurcation between proxy voting and corporate engagement, what we decided to do is to have this integrated corporate governance role approach.

And the second thing we did was introduce the sector-based structure. And with this sector-based structure, really each member of the team is assigned specific sectors, which they cover. And sector coverage duties include proxy voting, corporate engagement, and regulatory issues.

And I list a few of the advantages of undertaking this approach. And the third thing really is we added one Associate Investment Manager position to the two that came along with the global governance realignment. And these are going to be the members that will lead the different sectors assignments in terms of actual execution of this activity.

And the three positions are currently -- the recruitment for the three positions are currently underway.

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INVESTMENT DIRECTOR NZIMA: Slide five really is simply a schematic representation of the org chart, which I just described in slide four.

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INVESTMENT DIRECTOR NZIMA: Slide six, this, I think, is the -- probably the most important slide of this presentation, and talks about really how we approach the implementation of the corporate governance strategy. So the three main pillars of how we're implementing this work grounded in economics and fiduciary duty, prioritized by CalPERS Board-approved ESG strategy plan, and leverages strategy partners.

Again, we are looking at this in terms of Investment Belief number 3. We're looking at this in terms of effectiveness of private and confidential engagements. We're looking at this as being able to take a mosaic effect as in terms of determining how we're actually implementing the corporate governance strategy.

That concludes my presentation at this point. I'll take any questions.

CHAIRPERSON JONES: Okay. Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Yeah. Clearly, our ESG is helping guide the discussions we have with companies, but what is our ESG policy doing in terms of security selection where we actually invest?

MANAGING INVESTMENT DIRECTOR BIENVENUE: So I would say that, you know, as part of manager expectations, we've been focused on really integrating manager expectations across the portfolio, so that's both the internal strategies and the external strategies.

With the external strategies, it's much more about proxy voting, engagement and those kinds of things. Although, we are one of the -- you know, one of the six strategic initiatives under the ESG strategic plan was to look into a global equity strategy or strategies that have some, you know, structural improved exposure to ESG, and that we're nearing completion of that -- with that research.

Then the other place I would say would be with our external managers where they include ESG, and we're holding them accountable to include ESG topics in their security selection decision-making process.

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Ms. Taylor.

COMMITTEE MEMBER TAYLOR: Simiso, thank you very much for the presentation. I'm excited to hear that we have some positions that you're putting together to support the Corporate Governance Program. I also wanted to kind of piggyback on what J.J. was saying with -- I guess I think as we look at implementing our ESG strategy throughout the global equity fund, I think one of the things we should look at is how we are purchasing the securities, because that should be part of the consideration, I would think, just as long as we're looking at not putting anything in jeopardy in terms of making money for the fund, but at the same time making sure that they're complying with our values.

MANAGING INVESTMENT DIRECTOR BIENVENUE:

Absolutely, that's critical, again, in our proxy voting and engagement, but then also candidly in the strategies. And that's the reason -- you know, global equity is established in a very systematic structured way. We -- you know, that's the way we've been able to internalize, you know, call it 80 percent of the assets is to do that in a very structured systematic with 10,000 securities. But it is definitely the case that looking at the global equity, you know, ESG research in terms of a strategy, and, you know, our external managers, we definitely, you know, want to be, not only -- you know, not only proxy voting and engaging, but then also having our investments reflect our Beliefs.

COMMITTEE MEMBER TAYLOR: Great. Thank you.

CHAIRPERSON JONES: Okay. Continue. No additional questions at this -- on that.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Okay. So with that, I think Simiso and James will step aside, and we'll make room for Steve and May to join us. And again, as I mentioned, this is our -- this is our second deep live, which will be on our capital allocation process and analytics. And I'll turn it over to Steve and May to take it away.

INVESTMENT DIRECTOR CARDEN: Thank you, Dan. Steve Carden, Investment Director, Global Equity. I'll be up here for two items. And we'll take a break in between the two to address any questions you may have.

But the first one is our Global Equity Capital Allocation Committee. This was a committee we formed effectively to establish governance structure in an open setting to discuss ideas and make decisions that impact the entire global equity portfolio.

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INVESTMENT DIRECTOR CARDEN: I focus on the point of it being an open setting, and I reference back to a seminar actually that Rob Feckner spoke at. The pension fundamentals over at UC Davis a few years ago. And Rob referenced the disinfecting qualities of sunlight.

This had been -- the Capital Allocation Committee, had been a small group discussion in prior years, but we decided to open that up to a much more inclusive audience. In doing that, we think that we've gotten more robust discussions, and a sense of ownership across the entire team.

Now, one of the other things that we've done with this is to incorporate some non-global equity key members. We have folks from the trust level portfolio management team, the execution services and strategy, and also the investment risk and performance groups, who sit on -- in these conversations and contribute quite a bit to them.

The other thing that we've done is to create three subcommittees that support both the socialization and guiding the work that ultimately comes to the Committee

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INVESTMENT DIRECTOR CARDEN: The first one we call portfolio positioning. And this is where we look at the portfolio and the market to understand where we are today. The information covered tends to be a good foundational understanding of the global equity portfolio overall. And because of this, we do ask our new employees to either attend or join the subcommittee.

From there, we look at, what we call, the Portfolio of Opportunities Subcommittee. This is where we look at changes that we may want to impact the global equity portfolio. They use some of the input from the Positioning Subcommittee, as well as external resources and their own research to come up with some ideas that they want to look at related to both value-added and risk management. May will talk a little bit about that information here in a minute.

The final subcommittee is the Portfolio Structuring and Execution Group. This represents the implementation arm of the committee overall. The team researches the best ways to carry out the goals and agenda, including looking at things such as investment products. And it ultimately acts as a conductor in coordinating all the implementation efforts.

Now, I'd like to turn it over to May to talk you through some of the information that we cover at the committee, and that helps our decision-making process.

ASSOCIATE INVESTMENT MANAGER LEUNG: Hi, everyone. May Leung from Global Equity. I would like to walk over an example of what we look at in order to formulate our views every month, and potentially reposition our portfolio.

So this is something that, as Steve mentioned earlier, in the Opportunities Subcommittee, we regularly look at and these are types of inputs that we consider.

And I want to just highlight that the data showing here is strictly hypothetical for confidentiality reasons. And also the table has been truncated to only though three regions, but we typically look at nine regions.

So what we have here is the regional table. In addition to the regional table, we also run similar analysis for sectors and for style factors. But this example is only the regional table out of what we call the executive dashboard.

And the executive dashboard is something that's synthesized a variety of valuable insights both from the internal and external sources. So I'll cover the contents that is shown here in the table right now. From left to right, the first column is just a list of the regions. And the next two columns our own for portfolio active weights. So essentially those are the deviations from our benchmark weights. And next to it is the active risk contribution, and that measures what each region contributes in terms of the global equity predicted tracking error.

Everything to the right is the different insights that we consider in order to help formulate our views. We look at active positions from active managers. We run our own quantitative tools that rely on statistical methods such as optimization. We perform bottom-up analysis that looks at key fundamentals at the stock level, and we aggregate them up to help us form a few at the regional level.

We also do top-down type analysis, such as macro-conditions, business cycle, and investor appetite. And last, but not least, we look at a spectrum of external views from reputable research firms and external managers. So those are a range of key inputs that we look at.

The executive dashboard is designed to focus on a very high level summary. So even though what's shown here is -- looks like a pretty simple table, but behind each column there's a lot more details. And each of the three subcommittees go through a very thorough review every month and have a very robust discussion amongst the members to identify where are the potential misalignments and where we would want to consider repositioning.

So going back to this hypothetical -- again, hypothetical example, how we would actually translate information is looking at across collectively the different inputs. What stands out here is that they would suggest a favorable view for Europe UK, while a bearish view for Canada. So in this case, it does point out that there is a misalignment with our portfolio positioning. And we would consider shorting Canada and longing Europe X-UK to make that adjustment.

So hopefully today, I was able to highlight an example and illustrate the types of tools and process that we go through every month to review our portfolio.

Thank you.

CHAIRPERSON JONES: Okay. Thank you.

INVESTMENT DIRECTOR CARDEN: And we'll pause for questions before the next one.

CHAIRPERSON JONES: Sure. Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: I heard you say short Canada. Are we actually shorting, or are we just lightening up from...

MANAGING INVESTMENT DIRECTOR BIENVENUE: We would be reducing our -- you know, we would not be -- I can't envision a scenario where we would be net short a region or otherwise.

COMMITTEE MEMBER JELINCIC: Okay. Thank you.

CHAIRPERSON JONES: No additional questions at this time. So proceed.

MANAGING INVESTMENT DIRECTOR BIENVENUE: All right. Thanks, May. And I guess we'll let May step down and we'll bring Sin Sai up, and then Steve is going to take us through our alternative beta, both the history of the alternative beta work, which has been something that I think CalPERS has been, you know, certainly at the leading edge of, and then what the portfolio looks like today. So I'll turn it back over to Steve.

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INVESTMENT DIRECTOR CARDEN: Thank, Dan. Again, Steve Carden, Global Equity. On to alternative beta. Now, before I begin, I do want to clarify in the discussion, we hear alternative beta, smart beta, factor investing. For all intents and purposes, these are interchangeable in the industry. What we'll look at for consistency is to call it alternative beta as we've defined in this slide.

We identify alternative beta strategies as anything that attempts to harvest the equity risk premium with any attribute other than the market capitalization of firms. This can include factor-based strategies, such as value and quality, as Dan spoke of earlier, or it could be unique diversification focused strategies, such as risk weighted, equal weighted, that sort of thing.

It's also worth noting that alternative beta is not a new concept. It's existed for some dec -- some number of decades in some shape or form. More recently though we've benefited from the evolution of technology and better data, which has allowed institutional investors like CalPERS to construct portfolios reflecting these persistent equity premia.

These core factors, which Sin Sai will talk a little bit more about in a moment can be systematically harvested at a very cost efficient manner.

Before move on, I did want to show the timeline here. We've included this to show the history of global equity's, alternative beta activities, which, as you can see, date back more than 10 years. I think Sin Sai has been a party to that the entire period.

Much of the early work revolved around alternative ways of constructing portfolios that would harvest the equity risk premium.

Sorry.

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INVESTMENT DIRECTOR CARDEN: And these were previously reviewed by this Board. Whereas today, we've been spending more of our efforts and focusing on factor-based strategies. Now, Sin Sai will take a few minutes and highlight these strategies and explain how they are implemented.

INVESTMENT MANAGER VANG: Sin Sai Vang, Investment Manager, Global Equities.

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INVESTMENT MANAGER VANG: So Steve just described the evolution of alternative beta in global equity. I'll continue this conversation by introducing the strategies to be managed and how we implement.

So the first strategy is fundamental indexing. This strategy will weight securities based on fundamental measures, such as sales and dividend. This allows it to harvest long-term expected premium from value investing. So value investing represents the technical expression for just buy low, sell high. Evaluation metrics, as an example, sales of a company relative to its price are used to assess the cheapness or expensiveness of securities.

Next is our risk diversification strategies. These strategies intend to improve the portfolio Sharpe Ratio by lowering the portfolio risk with comparable level of returns. So we employ two strategies of this nature. One focuses on minimizing security level correlation, and the other diversifies country and sector risks.

So the next strategy we have is alternative -- the volatility-adjusted strategy. This strategy will reduce the portfolio risk by shifting security weights from more volatile securities to the lower volatility securities.

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INVESTMENT MANAGER VANG: So moving on to momentum. Momentum strategies is a trend-following strategy that assumes security prices will continue to move in the direction of the trend. Momentum strategies will overweight securities with the recent outperformance, which acts as a diversifier to value strategies.

And last, we have the quality strategy. Quality investing is described as holding financially healthy companies. This means overweighting securities based on key characteristics, such as strong profitability, capital deployment, and earning stability. This strategy is a complement to existing value and momentum strategies.

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INVESTMENT MANAGER VANG: So are these strategies in our alternative beta portfolio. I would move on to how we implement these strategies. So model provision is a business model that utilizes our existing portfolio implementation framework. This leverages our internal portfolio construction an trading capabilities, while sourcing these strategies from both internal and external research providers.

Systematic and factor-capturing type strategies, like alternative beta, are prime candidates for model provisioning, which allows global equity to be competitive with fees and achieve full transparency and control of assets.

So with that, that concludes my part of the presentation.

CHAIRPERSON JONES: Okay. We have a question.

Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: On page five of six, quality. You say that it complements the existing exposures to value and momentum. How much overlap and how much real complementariness is there to it?

INVESTMENT MANAGER VANG: So a good example I guess I can use is Apple. You know, back in -- during the financial crisis, Apple lost a lot of value. So I'm just going to throw some number out there, because I did the research. You know, it's floated around $12 after the financial crisis, so that is a value-like strategy, would hold a name like Apple, because it's an undervalued company.

As Apple continued to grow over the next three years, it carried some momentum effect. And I think around 2012 it got to around $100 in the security price. So with that, there is some overlap in the type of strategies. And today, Apple does have a great product. It is a quality -- produces quality products, so that type of name would exist in the quality portfolio.

So there are overlaps, and there are diversification, because today Apple would not be considered a valued name.

COMMITTEE MEMBER JELINCIC: Is there any point at which Apple would not have been considered a quality name?

MANAGING INVESTMENT DIRECTOR BIENVENUE: You know, I mean, I would say hypothetically if people suddenly stopped buying iPhones and Apple kept aggressively booking sales, then that would be a place where, you know, over time you would see that come through the metrics where the consistency and the volatility around some of their -- you know, some of their financial metrics get worse and worse, and that can -- that's where it would fall out of that sort of quality space.

COMMITTEE MEMBER JELINCIC: You talked about when it was of value, and then when it was momentum. But even during those periods, it would have been considered a quality stock as well, or not?

INVESTMENT MANAGER VANG: Yeah. So for the definition it did have strong profitability, you know, earning stability. So from that definition, Apple should have been considered as a quality name.

COMMITTEE MEMBER JELINCIC: Okay. Thank you.

CHAIRPERSON JONES: Okay. Seeing no further questions on that item, next.

Does that conclude the staff's presentation on -- in this area. So we will now move to the consultant's review of Global Fixed Income Program.

(Thereupon an overhead presentation was presented as follows.)

MR. FORESTI: Good afternoon. Steve Foresti from Wilshire Consulting. I'm joined by three of my colleagues.

So to my immediate left is Daniel Ingram, who heads up Wilshire's responsible investing consulting work and research. Tom Toth to his left, and Rose Dean to the left.

And before we get into some of our commentary regarding the program review, if you just please just take a minute setting up our process and how we go about reviewing the program.

So through the course of the year, we have across these two asset class platforms ongoing conference calls and meetings with senior members of the staff. And the typical agenda in these calls is to get updates on portfolio positioning, changes in staffing, and another just important changes within the program.

We supplement that for the annual program review by doing comprehensive on-site meetings. So the four of us here and other colleagues of ours were on-site meeting with staff. Within the letter -- the global equity letter, in particular, we listed the nature of some of those meetings. So separately carved out functional areas meting with the key individuals on the team responsible for those areas, and again doing a deep dive that would supplement the ongoing conversations that we have with staff.

So what we wanted to do today in terms of setting our agenda, and we'll be brief and hopefully get to any questions that you may have. I'll set up very quickly the roles of the various asset classes within the portfolio. Daniel will spend a minute or two talking about evidence and consistency with Investment Beliefs, and talk about ESG integration type issues. Tom will cover the overview of global fixed income. And Rose will cover summary comments on global equity.

So moving to -- into our deck.

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MR. FORESTI: And this is a slide that I've shared with you in the past, which is a graphical representation of the economic drivers underneath asset classes. And this is based on the factor-based asset allocation research, and work that we've done at Wilshire. And I think it's a -- it's a helpful way to understand why asset classes move the way they do in relation to one another. And sometimes they move together, other times they seem to offset.

And so what we have graphed here is very simply just across two dimensions asset class sensitivity to a growth factor, which is across the horizontal in this chart. So those bubbles that are to the right of the chart represent asset classes that would be expected to perform well, if growth surprises and gets re-priced on the upside. Vice versa for those asset classes to the left, same perspective in terms of sensitivity to inflation with assets up on the north side of the chart responding well to upward revisions and surprises to inflation, and vice versa for those that are to the left.

I've circled the two asset classes for today's program review, which would be the blue bubble there would be the global equity portfolio, and green would be fixed income. The size of the bubbles incidentally here is the expected return of these asset classes. So you can see, just as a frame of reference, liquidity sitting at the crosshairs of the exhibit, which tells you two things, it's a really small circle, which means a small expected return. And the fact that it's at those crosshairs speaks to the stability of a cash investment in terms of if there's a big surprise on the upside or downside with respect to growth or with respect to inflation for that matter. You wouldn't expect volatility out of that asset class.

So with that perspective, just move forward and just look at the relationship now in terms of just different graphical looks at the way these two asset classes that we're discussing today behave with relationship to one another.

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MR. FORESTI: And the chart here just shows the rolling one-year return. And you can see that, you know, just eyeballing the chart, you can see diversification properties here where they don't move up and down together. There are periods of time where they do, and there are periods of time where they don't. And I kind of refer you back to the tendencies they have to behave differently to different growth or inflation environments.

So depending on what the underlying environment is in terms of what's going on with growth expectations, what's happening with inflation, some of the what looks like randomness in this particular chart, I think becomes a clearer picture.

Moving from here -- and you can see if you look at the 2008-09 environment, that's a period of time where they tended to move together and down. And that was some of the things that were going on with credit within a fixed income portfolio that was hurting returns, while equities were suffering in that growth environment as well.

Next page we move to correlation. And this, I think, is usually where people start when they're thinking about cor -- about how asset class behave. Indeed, when we -- through the ALM workshop, correlation is one of the important variables and inputs that we need to settle, but you can see the instability of correlation. What's important here though is over time, you can see that some of these swings are working around a zero, which means over market cycles you would expect these to have very little correlation on average to each other. But again, you can see a big spike here through the '08 environment. And that again speaks to the economic environment that's driving these asset classes.

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MR. FORESTI: I think the three charts in aggregate tell the story that these two programs not only are meant to diversify one another, but they indeed serve to diversify one another within the portfolio.

With that, I'm going to hand to Daniel to talk a bit again about Investment Beliefs and ESG integration.

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MR. INGRAM: Thank you, Steve. Good afternoon. Daniel Ingram, Wilshire Associates.

Adherence to Investment Beliefs, as part of our annual review process, Wilshire gathers examples of, in this case, global equity and global fixed income staff's investment behavior and their practices to ensure they're consistent with CalPERS Investment Beliefs. In the interests of time, I won't go into the four different examples that we've picked out. I'll just pick one, which is the first Investment Belief on the table, which is Investment Belief number 8, costs matter and need to be effectively managed.

We've earlier heard discussion around global equity's combination of cost effective internal implementation, with costs of around one to two basis points, and external strategy rationalization with half of global equity's active strategies now managed in-house.

The next slide, please, Tom.

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MR. INGRAM: Thank you.

Progress on ESG integration. A quick note on Wilshire's review. When assessing the progress on the integration of environmental, social, corporate governance considerations in global equity and global fixed income's investment process, we looked at three areas.

The first clarity of purpose; second, integration and internal investment process; three, monitoring external portfolios.

On the first, does staff have a clear and consistent objective or purpose in pursuing ESG integration. In our meetings with staff, we had dedicated discussions on ESG, and in our agendas. And in each case, the Managing Investment Directors took the lead in those discussions and demonstrated a clear objective to integrate ESG alongside financial and investment analysis.

Second area, internal integration and internal investment process. Is staff able to provide examples of ESG integration in asset manager and security section? And does it have the appropriate governance structures in place to oversee that integration?

We picked out the example of global equity's working group to search for positive ESG-tilted strategies. They, a few months back, put out an RFI for strategies which either had reduced downside risk or incremental return relative to the benchmark with positive ESG. We thought was a good example of integration in terms of the manager and asset selection process.

In terms of governance, we heard earlier around the new structure of the Governance and Sustainability Subcommittee. We note that that is a new structure. It's quite a significant reorganizational structuring, and we will monitor evidence that that will be working effectively over time.

We suggest that we come back to that in March of next year when we do a more -- we proposed to do a more holistic review of the ESG integration programs across asset classes, and also the total program level.

And then just lastly on external managers, we ask the question does staff have a clear process to monitor ESG integration by managers over time? We note some good progress made with external managers with ESG policies. I think 20 percent of managers in 2016 had -- of external managers had ESG policies. That's now up to 70 percent in 2017 have ESG policies.

And that concludes progress on ESG integration.

CHAIRPERSON JONES: Okay. Seeing no questions there. Go ahead. Move forward.

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MR. TOTH: All right. Thank you. Tom Toth with Wilshire Associates. I will -- I'll have a couple brief comments on the Global Fixed Income Program. I'll focus on the SWOT analysis on page 213 of the Board materials. The strengths I think look familiar and really revolve around a strong team with significant experience implementing an investment process that has been very consistent across time. And we look at that very favorably.

The compensation constraints and the challenges that that introduces for both recruiting and retention underlie the weaknesses and threats listed there, as well as potential impacts over succession for the Managing Investment Director position.

The staff is very aware and is thoughtfully considering all avenues related to the senior management and maintaining continuity there. And so we look at that favorably in the sense that it's being discussed, it's being planned for, and depending on what the time frame is, we feel the continuity of the investment team is likely to continue.

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MR. TOTH: If we flip forward, we've seen some of the cumulative performance. You'll notice on slide 214, or 11 of the deck, outperformance over those periods. But I wanted to focus more attention on the next slide. This gets to my earlier comments about risk-adjusted returns within the portfolio. You can see from the depths of the credit crisis in -- I'll call that the middle of two thou -- or the beginning of 2009, and then a very sharp snapback.

The three-year return, since we'll call it about 2012 has remained quite consistent. And at the same time, tracking error, or the active risk in the portfolio, relative to its index has also moderated. And so currently, you have an expect -- an active return on a three-year basis that is about 70 basis points ahead of the index with active risk that's below one percent.

And so when you calculate the risk-adjusted return, that's that information ratio which currently sits north of one, which is a -- which is a very strong level of risk-adjusted return. And you can see that that's been generated on a fairly consistent basis going back to approximately 2012.

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MR. TOTH: And then finally, as we flip forward to page 14, this is our manager research scoring matrix that looks at some of the key components of the investment process, and, of course, the organization and team. The score ranks in the second decile, which is a very strong score for the fixed income management program. They're particularly strong in areas like information gathering, and portfolio construction.

Our score is somewhat tempered by some broader organizational compensation -- concerns around compensation and retention, as well as potential - and I stresses that word - issues around any succession at the MID level.

With that, I'll stop and I'll see if there are any questions on the Global Fixed Income Program before turning it over to Rose for Global Equity.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Yeah. I would actually like to go back to 6c, which was your write-up on the fixed income. And one of the things you point out is is that the program has added alpha consistently. And I'm just wondering how much weight should we give that since that particular index gets beat by 80 percent of all managers, which means 80 percent of all managers are adding alpha.

MR. TOTH: Right. Well, I would say from a consistency standpoint, I think you -- there's -- you should place great weight on it. And you're right, that depending on the timeframe and the measurement period, the -- a global aggregate or a U.S. aggregate index, which is very heavily weighted towards government and agency securities, a tilt towards credit, for example, will tend to be a tailwind. But as staff pointed out in their comments, they have been actively managing around their benchmark exposures. And Curtis specifically pointed out the exposure to treasury securities as being higher than what would -- it would, let's say, normally be.

And I think that's evidence that the investment process is not static, and their positioning migrates over time to take advantage of the relative value opportunities that they see. So I would -- I'd place meaningful weight on the consistency of outperformance over time. It's not 100 percent all the time. You can see on Item 6c, page 13 of the 15, that there is some variability most pronounced during the credit crisis, and then the snapback afterwards.

But even going back to, we'll call it, the mid-nineties, early nineties, that that rolling three-year, 36-month, excess return was consistently positive for the majority of the time with the hiccup during the tech bust in early 2000s, but then recovering in the snapback afterwards.

COMMITTEE MEMBER JELINCIC: Okay. And on page five, you note, as you've noted previously, one of the challenges continue to be the level of compensation to require -- required to consistently attract top tier talent. Have you brought a proposal to the Board on what the compensation ought to look like?

MR. TOTH: Mr. Jelincic, that is good question. No, I'm not aware of any specific recommendations that we've made. I believe there have been discussions with a compensation consultant, if I am remembering back appropriately --

COMMITTEE MEMBER JELINCIC: There has, but not --

MR. TOTH: -- but not from -- not from Wilshire specifically, no.

COMMITTEE MEMBER JELINCIC: Okay. And then on page seven, the MID of Fixed Income is able to vary the duration of the portfolio by minus 50 to plus 10 percent versus the benchmark, is that a reasonable range?

MR. TOTH: I would say, yes, it is a reasonable range that asymmetry in the unweighting being short duration or long duration was implemented a few years back over concerns of rising rates and wanting to provide more flexibility to protect against a rising rate environment. On the flip side, they have slightly less flexibility to take advantage of a falling interest rate environment.

But I think it's important to point out that historically they've managed their interest rate risk fairly tightly to the index. And Curtis can speak more specifically to it, but I can't recall when they were ever close to utilizing that full underweight to duration.

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Okay. Mr. Bilbrey?

COMMITTEE MEMBER BILBREY: Thank you, Mr. Chair.

So a little bit on what J.J. touched on. On attachment -- or Item 6c, attachment 1, 9 to 15 and also on page 14 of where you just stopped on the second part, you mentioned here about challenges about our scoring from Wilshire, and it talks about a lack of long-term retention incentives. Can you talk more about what you see about our lack of long-term incentives.

MR. TOTH: I. Can I think the best example would be, let's say -- let's call it stock ownership in the organization, which can be structured in a number of ways, maybe vesting over a certain period of time, such that compensation is tied to remaining an owner within the firm. And so that's probably the best example of long-term incentive -- long-term retention incentives which are available to asset manage -- employees of asset management organizations, that it's not an option for Investment staff within the INVO Office.

COMMITTEE MEMBER BILBREY: And so if I'm assuming correctly, the outcomes that we're having, or lack of outcome, is because of -- your vision is because of this?

MR. TOTH: Can you clarify, when you say lack of outcome, do you mean the specific scores?

COMMITTEE MEMBER BILBREY: Correct, and what -- and the performance of our portfolios.

MR. TOTH: I do think the retention incentives impacts the personnel and the potential for instability there. And the fixed income team in particular has a fair amount of stability and very senior team currently. The concerns I would say are more future looking than past.

So I think that's what tempers our organizational scores more than, you know, a glaring issue that is currently festering, for lack of a better word.

MR. FORESTI: Tom, if I could just maybe jump in and add to that. So these scores are meant to be relative not to other necessarily large public pension systems running internal and external assets, but rather comparing it across the industry to both those sorts of organizations, as well as to private asset management firms.

So when we're pointing this out, it's not meant to indicate there is a lot more you should be doing to change the way this compensation structure works. And, Mr. Jelincic, to your question, Wilshire has provided feedback to your compensation and talent management committee, and has been very involved in terms of incentive comp and structuring that in a way that incentivizes both the kind of right timeframe in terms of return, as well as risk management.

We highlight these things simply because they happen to be a risk and an impediment in terms of attracting and maintaining talent. That's not to impugn or indicate, in any way that senior and middle members of the Investment staff here are not highly talented investment professionals. It's simply to highlight it is a risk to the organization.

So I think hopefully that context helps a little bit. This is not something in our scoring process, as we again compare you to other asset managers and asset owners, that we would expect to see change in a material way from year to year.

COMMITTEE MEMBER BILBREY: Thank you for clarifying.

CHAIRPERSON JONES: Okay. Thank you.

There's no additional questions on this, so proceed.

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MS. DEAN: Good afternoon. Rose Dean, Wilshire Consulting. So a move to slide 17 of 22, start with the SWOT analysis. The strengths, weaknesses, opportunities, and threats are largely similar here, especially on the strength and weakness side, where we again identify the strength and the experience of the team as a strength of the program, and the weaknesses being organizational and compensation constraints.

More importantly, the forward-looking

opportunities and threats are related to the enhancement of global equity characteristics that the team has discussed. And the opportunity obviously is to manage the program so that the efficiency of the program within the overall asset allocation perspective is increased with the global equity characteristics evolving in the marketplace. And at the same time, the complexity that it brings can be a potential threat in terms managing the sources of risk.

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MS. DEAN: On slide 18, I'll just quickly point out that once again the -- despite the slight underperformance in the past year, the excess return exceeded the 15 basis point target over the period since the global financial crisis. And obviously, the 10-year underperformance reflects the performance during the crisis.

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MS. DEAN: Again, I'll jump to the slide that slows the relative return and risk on slide 19. Here, once again, the black solid line is the rolling excess return, and the blue solid lines are excess risk.

And what I want to point -- and then the dotted lines are the targets. The two observations I have is the Global Equity Program is again managed in a very risk-controlled way. And you can see that since the crisis, the excess return has consistently come down and remained within the target, even though these excess risks are really largely driven by the factor tilts that staff discussed.

In terms of excess return, it's been above the target since the crisis, except for the most recent past. But again, to be fair, at the level of equity market return being close to 20 percent, additional significant outperformance is difficult to achieve.

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MS. DEAN: On slide 20, I'll just spend a couple minutes on the two charts to the left. Here, we're really breaking down the excess return in terms of the upmarkets and the downmarkets. And the blue bar shows excess return in upmarkets, whereas the red bar shows the excess return in downmarkets. You can see that the program really adds value in downmarkets as expected, given the risk-controlled manner in which it is managed.

And in terms of frequency of success on the bottom left-hand chart, you can see that 100 percent of the time in downmarkets, the program was able to add value. And on the longer term periods, again, a significant portion of the time, there were able to add value in the downmarket.

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MS. DEAN: And finally, the scoring for the Global Equity Program is fairly consistent with the scores for Global Fixed Income Program. Being in the second decile, again a very strong score, and the particularly strong in portfolio construction and implementation.

And I'll stop there and take any questions you may have.

CHAIRPERSON JONES: Okay. We have a couple.

Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: On slide 17 in the threats, the bottom line is additional INVO Committee responsibilities. That also showed up in fixed income. What does that mean?

MS. DEAN: That means that the program, especially the senior members of the Global Equity Program and Global Fixed Income Program take time away from their day-to-day program management to be involved in the organizational, more the broader initiatives in different committees. So their resources are now just not focused on managing the program itself, but also being participating in the asset allocation, et cetera, other committees that may be broader in its initiative.

COMMITTEE MEMBER JELINCIC: So that's really focused on the various internal committees they've created --

MS. DEAN: Yes.

COMMITTEE MEMBER JELINCIC: -- as opposed to this Committee?

MS. DEAN: No.

COMMITTEE MEMBER JELINCIC: Okay. And on slide 18, and I think those are worthwhile things, but -- you know, so I'm not -- on slide 18, the longer tenure relative underperformance continues to reflect significant underperformance during the global crisis, but the index reflects that as well. Well, what -- any sense of what it is that made us underperform?

MS. DEAN: Well, one of the biggest drivers at that time when liquidity was the issue, when you have a program that is of the size and you need to generate liquidity, you tend to sell things that you can sell first, which means it -- one, you're selling because of need, so you will not get market price. Bid offer spreads or obviously much wider during crisis. So index return isn't reflective of the liquidity or the actual price you can achieve, but I'm sure Dan can the provide more clarity on that.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Dan Bienvenue, CalPERS team member.

Yes, it was basically I would say three main things. First and foremost, it was just the widening of spreads and having to sell when we needed to sell. So we didn't have the -- you know, due to the needs of liquidity in the organization around securities lending and potential capital calls, we just kept having to sell, and you were -- we were crossing the spread with really wide spreads. And, you know, the term we used was kind of selling into the abyss.

The other topic that was tough was that, as Rose alluded to, we sold what we could sell, which meant that we were underweight the assets that we actually wanted, the assets that held up, and then we were overweight the stuff that we would actually would have preferred to sell but we couldn't.

Finally, it was some of the beta overlay on ARS. We had assumptions around the beta of the ARS Program of being X, and it wound up being significantly north of that what -- with the beta overlay, and which meant that we were overweight beta into a very falling equity market, which is -- those are all bad places to be.

COMMITTEE MEMBER JELINCIC: Okay. Thank you.

CHAIRPERSON JONES: Just a comment. J.J.'s questions about additional INVO Committee responsibilities. When I saw that, J.J., I called Andrew and wanted to know what additional responsibilities I had that I didn't know about.

(Laughter.)

CHAIRPERSON JONES: Okay. Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you.

My question is, I think, both to Mr. Toth and to Ms. Dean. When you're evaluating the team on the sort of -- I'm looking at -- right now, I'm looking at the Global Equity Program sores on page 21, but there's a similar page for fixed income. When you're looking at the quality of the team, to what degree do you assess the diversity of perspectives and skills of the team and how that contributes to better decision making?

MR. TOTH: I can touch on that. It's a component of the discussion. Wilshire is a very big proponent of the efficacy of having a diversity of opinion at the table, because it tends to generate very good discussion, more robust discussion, and avoids group think in a lot of cases.

So that's -- that is a component. It's -- and, in fact, I can speak for the discussions that we had with the global fixed income team. As part of the recruiting process, they're making very intentional strides to broaden out the -- call it, the opportunity set of candidates and trying to bring in as many diverse view points as possible, always making sure that the investment skill set is never compromised. So that is something that they're -- they're working on. I think that's always going to be a work in process. We'll never say that it's -- that is done, as it wouldn't be for any organization. So it is a component and an important one.

MS. DEAN: And just to add to that, you know, as Ted mentioned, there are a lot of networks and conferences that is -- forms a big part of CalPERS network, where, you know, again recruiting was specifically cited as one of the accomplishments that they'd like to reach out to more candidates at the AIM conference for example, et cetera.

COMMITTEE MEMBER MATHUR: And -- okay. Thank you. That's really helpful.

MR. FORESTI: If I could just say, because I think there's a tangible point on the global equity portfolio. And quite frankly, it was an area where last year, we put forth some mild concerns. And staff talked about it today, which was these three subcommittees that were created underneath the GECAC, the Capital Allocation Committee.

And in retrospect, I think the idea when these were set up was to -- more inclusion of ideas, get more of staff involved in the discussions that went into those really important decisions in terms of portfolio structuring.

In terms of our scoring, digging that a little bit last year, because there wasn't quite the formality around it that's starting to develop now. And in retrospect, I think that was intentional and it was to involve more people and allow people to get involved and again share diverse opinions. So I think that's one tangible place where senior staff has done a really good job of getting more voices around the table in terms of how the portfolio ought to be constructed.

COMMITTEE MEMBER MATHUR: Thank you.

CHAIRPERSON JONES: Just an overall question. These program scores, they're not really an evaluation are they? It's -- so what is it telling us? It's not truly an evaluation?

MR. FORESTI: I'm not sure I understand. We put them -- so in the letter, we go through each of the sections of the scoring and we provide qualitative feedback and evaluation on what drove those metrics and those scores. So we do put it forth as an evaluation, in terms again of relative comparisons to how best practices are set up within the investment management industry. So it's a -- we do very much put those forward as an evaluation of the infrastructure that's set up, the investment process, implementation, et cetera.

CHAIRPERSON JONES: Okay. Thank you.

MR. TOTH: And maybe if I can just follow up to make just one further point. And one of the reasons that we break it up into the segments here, whether it's the team, organization, information, portfolio construction is to highlight on -- in a relative basis to Steve's point, the areas of the investment process where the team excels or maybe is -- maybe there are areas for improvement.

As it happens, the evaluation that we've done for both programs are both very good. And whereas you might take an evaluation of another money management firm and the scores are not quite as positive, and the discussion there is, well, these are areas for improvement. I think any organization can always strive to improve. But as reflected in the scores for both of these programs, they're ranked very highly.

CHAIRPERSON JONES: Okay.

MS. DEAN: It's -- sorry, one more point.

CHAIRPERSON JONES: Yes.

MS. DEAN: You'll notice that we don't have a performance category in there. This is a forward looking evaluation of the capability of the organization to achieve its goals through these investment processes, as well as the organization and team. So this is really looking at how the investment process is being thought of, built, and implemented to generate performance that are consistent with the organization's goals.

CHAIRPERSON JONES: Okay. Thanks. That helps.

Okay. Thank you. Okay. No additional questions at this time, so that takes care of that item.

We now will move to Item number 7, Public Asset Class Investment Policies, First Reading.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Thank you, Mr. Chairman. Wylie Tollette, CalPERS team member.

And I think Kit Crocker is on her way up to the desk. There she is.

I'm going to turn it over to Kit, but I would highlight this is a first reading, so we're looking for your feedback. And we actually have some additional changes that staff will be making as well in the policy. And so with that, I'll turn it over to Kit.

Thank you.

INVESTMENT DIRECTOR CROCKER: Thank you. Kit Crocker, CalPERS staff. As Wylie just mentioned, this is a first reading of staff's proposed updates to the Total Fund Investment Policy to reflect changes identified in the course of the public asset class annual review process.

As we've detailed in the agenda item, the updates fall into three main categories: Updates to the low duration section to reflect the removal of some inactive programs, and a proposal to establish a new implied rating process for select security types; updates to the liquidity section to better reflect the role of the program vis-à-vis the total fund; and also expanding the investment universe by one more notch for sovereign securities beyond what was done last April; and finally, a handful of ministerial changes that are primarily reflecting organizational changes within the Investment Office.

So the Committee has received both a clean and a markup version of the policy, as well as an opinion letter from Wilshire Associates. This is an informational item today. We're seeking the Committee's feedback on the proposed changes. And with that, I'll pause and ask if there are any immediate questions, or if you'd like to invite Mr. Junkin with Wilshire to make any comments?

CHAIRPERSON JONES: Yes. Why don't -- before we ask Committee members questions, have Mr. Junkin go ahead and make comments.

MR. JUNKIN: Good afternoon. Andrew Junkin with Wilshire. I think I'll just limit my comments. You've read the opinion letter, I presume. I'll just limit my comments to the low duration program and to the one area that I think was a disagreement between staff and Wilshire on the internal ratings process.

Our concern here is one of just sort of governing policy and being consistent within the policy to the treatment of internal ratings across asset classes. Within the Global Fixed Income Program, there are similar internal ratings. And when it comes to sort of monitoring and risk management, if there are ratings provided by an outside rating agency, and an internal rating then the outside rating agency takes priority.

In this policy, it was proposed to go the other way. And I felt like that opened the door. I wouldn't expect that this would be the case, but it opened the door for potentially there to be some sort of rating shopping, if you will. I don't really like that rating. I want to own more of that security. I'd rather have a higher rating. Let's rate it higher internally.

I honestly do not think that would be the case, certainly with Kevin as the head of the program. But I remember working with Anne Stausboll on a number of these things, and she said you've got to build the policies and delegations for the position rather than the person. So I think that's the right way to think about this here.

Our recommendation was just that you stick with the global fixed income approach, which is if there are cases where there is an internal rating and an external rating, that the external rating is the one that for policy takes precedence.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: Yeah. And we -- Wilshire's noting this was actually a helpful communication to staff. I don't think we were completely aware of this gap in the policy drafting that took place. So we agree with the change that they've proposed. I don't think we -- the three specific security types that were covered under this internal rating process, we didn't necessarily anticipate that that -- that many of them would actually have an external rating, but it is possible that they could.

And because of that, I think we need to make sure to address this, because it is problematic to have even the perception that ratings shopping could occur. So we cannot let that type of process to be evident in the policy. So we'll be -- we'll be changing that in the second draft.

CHAIRPERSON JONES: Okay. Thank you.

Okay. Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you. Just -- I just had a question. I'm not -- it's not really actually with respect to the policy, but it's about this -- the fact that there are two inactive programs that are being removed. Is there a process by which programs become inactive? How does that work? I'm not sure we've ever really reviewed that. Not that I want you to take extensive time here, but I just want a little understanding.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: Yes. It's a great question. And it's actually one of the fundamental reasons that we are bolstering our performance attri -- internal performance attribution capability. That's been an area that where I think CalPERS had work to do. And with the help of our investment risk and performance team, and in partnership with the asset classes, we're really trying to strengthen that.

One of the committees that were mentioned in the opinion letters that are taking up time from the senior level teams is actually our Risk and Attribution Committee. And their sole purpose is to review programs whose perhaps long-term performance isn't meeting our expectations, or isn't achieving the goals that was originally set out to achieve.

And so with that process, that Committee has access to our Internal Investment Strategy Group, and can actually make recommendations or thoughts on which programs we may want to reconsider or may no longer be appropriate.

The two programs in question that are being eliminated through this policy, which is in fact sort of the final stage of the policy elimination process, haven't actually had assets since 2013 and 2014 respectively. They began their wind-down process just following the financial crisis, where both of them were impacted dramatically due to the liquidity challenges during that time period.

Essentially, they no longer were -- became -- they were no longer consistent with the high level diversification of objectives of the Fixed Income Program. So the program, on its own volition, began winding them down. It took a number of years for that to accomplish. This is basically just embedding that wind down in policy.

COMMITTEE MEMBER MATHUR: Okay. Thank you. That's really helpful. It does seem to make a lot of sense to review periodically how our own internal strategies are performing. And so I'm really glad to hear that you're sort of deepening and -- that process. Thank you.

CHAIRPERSON JONES: Okay. Mr. Gillihan.

COMMITTEE MEMBER GILLIHAN: Thank you, Mr. Chair.

With respect to the rating issue that Wilshire raised, I was going to jump in here in full support of Wilshire. I'm glad to hear that staff agreed with the comments. That said, I'm still a little surprised something like this got to the Board with that potential for downstream consequences. So we're glad Wilshire caught it, but we might want to look at our internal policies about how we draft policies, and catch these things before they get to us in the future.

Thank you.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Yeah. I'm glad Wilshire caught it, because I'd already marked it up. But one of the other problems I see here is that we're going to put a process and the specific securities and the codi -- and they'll be codified in the Investment Policy Procedures and Guidelines, which is controlled by staff and the Board never sees, so that, you know, set off some alarms.

In terms of changing the -- in liquidity, changing the policy benchmark from 91 days to 30 days, can you comment on that? I mean, it seems to me that, you know, 90 day T-bills are really pretty liquid.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Yeah. They're -- that change is being proposed, essentially so that the benchmark more closely mimics the lower risk characteristics of the Liquidity Program. I think the weighted average maturity of the liquidity program is right around 30 days with a maximum of 60 days.

And then I think the -- sort of the weighted average of that right now is about 19 days. So it's quite a short-term program.

Essentially, in talking to the program, I think they have the philosophy that they would much rather rely on the maturity of an instrument than the sale of an instrument, because the sale of an instrument is depending on the market continuing to function as we have seen. Occasionally, markets freeze up, and stop the function. Whereas, maturity is reliant on the contractual terms of the instrument, and assuming you've done your credit analysis effectively, you'll -- you're going to get your money back. Whereas a sale, you may or -- may or may not be able to sell at the price you want.

So that the program is brought in at its maturity date. And the feeling is is that the 30-day treasury mimics the -- sort of the characteristics of that program more effectively. It's really intended to be a source of liquidity, and not a source of return for the fund. So the very small yield difference between a 91 day --

COMMITTEE MEMBER JELINCIC: Persuasive. Stop. Don't dig yourself a hole.

(Laughter.)

COMMITTEE MEMBER JELINCIC: The -- on the international security, the sovereign securities, last we used to be at single A. And they said, well, we can get a little bit more if we go to, you know, triple B plus. And now a year later it's we can get a little more if we go to triple B. And a year from now, are we going to say we can get a little more if we go to triple B minus? What -- why the change?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: Essentially, the comes down to Italy and Spain. Those are the two countries whose sovereign securities are currently -- we're prohibited from purchasing, given their current rating. And there's a feeling amongst the team, and I think the markets, that those are still investment grade, should be eligible in the program. Assuming you can hedge your currency risk, which you can quite cheaply and effectively, that those should be markets that should be available for the program to purchase.

COMMITTEE MEMBER JELINCIC: Well, triple B minus is still investment grade. That's what we get next year?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: Yeah. The rating we're proposing moving down to is still well within the investment grade spectrum. In fact, it's a -- it's a notch above the bottom of that grade.

COMMITTEE MEMBER JELINCIC: Well, it's better -- it's better than five B's.

MANAGING INVESTMENT DIRECTOR ISHII: I mean, these are one year -- J.J., these are one-year -- this is Curtis Ishii, Managing Investment Director. Really, the ratings in countries don't change significantly, and they're not like corporates. So they're really thinking -- although, it did include some of the countries. It's really -- my thinking was that, you know, if you put it in the middle range of the Triple B, and it's a bill -- a one year bill or less. And actually they -- we typically don't even go out one year. It's three months.

The probability of it going below investment grade, which is what I worry about, is very, very little. If you go to triple B minus, it can happen. And so I do not see this thing falling any further. It was, I think, an oversight initially of how we kept it at triple B plus, probably trying to be overly conservative. But I think a reasonable kind of compromise. And middle of triple B is fairly safe, I think, for the fund. And these are, like you said, major currencies, so they're hedgeable.

COMMITTEE MEMBER JELINCIC: Well, and -- but if you're doing three months, I mean, why not go to triple B minus. Even if it falls out of investment grade, it's likely to get paid off.

MANAGING INVESTMENT DIRECTOR ISHII: Yes, but again, let's go back to the role. The role is to provide liquidity and safety and not chase return too much. That's why we wouldn't allow the whole portfolio to be in this. It's a partial amount of the portfolio. And in my mind, I wouldn't want to see securities that are not investment grade in your liquidity portfolio.

So even though it -- the possibility is very, very low, and probably the probability, I just -- I think it's -- if it's consistent with the role, that you don't allow securities to be non-investment grade.

COMMITTEE MEMBER JELINCIC: And in the benefits and risk in the Liquidity Program, one of the things I find confusing is potential reduction in risk credit of the portfolio by going to lower level securities. What am I missing?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: I think -- I'm going to take a stab at that, Mr. Jelincic, and I'll ask Curtis to chime in. But I think the idea is is that we can effectively substitute current commercial paper exposure, which is corporate credit. We can substitute that exposure for a sovereign credit, which overall we feel is -- has essentially a lower credit risk, particularly at the levels we're talking about in the investment grade.

COMMITTEE MEMBER JELINCIC: Okay. I'm not sure how I was supposed to read that into that, but that works.

(Laughter.)

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Yeah. I guess we were all tracking on the rating agency issue, because I had marked it up also. But I also marked the other recommendation from your opinion letter regarding the retaining fixed income in the name of the program. So you guys haven't reached an agreement on that issue. Is it still at odds?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: I think it -- I don't necessarily know that we're in conflict on that. We do anticipate that the program, the Low Liquidity Enhanced Return Program, will still be debt securities. So we're frankly open to Wilshire's suggestion on changing it. Although, it doesn't necessarily -- it's not going to have any material impact on the actual portfolio. It's going to -- it's essentially going to be still in fixed income securities.

CHAIRPERSON JONES: Okay.

MR. JUNKIN: And I think the point that we were making was to whom should the policy be most clear? To the internal staff, who will know regardless of what the program is named what it does, or to external users of the policy who might -- you know, the words fixed income might be slightly more helpful to help them figure out what's going on in that policy. That was all.

CHAIRPERSON JONES: Okay. Thank you.

Mr. Bilbrey.

COMMITTEE MEMBER BILBREY: Well, actually, between you and Mr. Jelincic, I think you asked both of my questions, but I am in favor of the last part about putting fixed income back, so that it's very clear to our outside stakeholders.

CHAIRPERSON JONES: Okay. So thank you. No additional questions on this item. We're going to take a five or ten?

THE COURT REPORTER: Five.

CHAIRPERSON JONES: Five minute break, okay, for our reporter.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Okay. Great. Thank you.

CHAIRPERSON JONES: And we'll return to the next item.

(Off record: 4:11 p.m.)

(Thereupon a recess was taken.)

(On record: 4:18 p.m.)

CHAIRPERSON JONES: I'd like to reconvene the Investment Committee meeting. I ask Board members to return to the auditorium.

(Thereupon a discussion occurred off the record.)

CHAIRPERSON JONES: Okay. Let me see, do we have a quorum here one, two, three, four, five, six, seven. We have a quorum.

(Thereupon an overhead presentation was presented as follows.)

CHAIRPERSON JONES: Okay. So let's go to the last item on the agenda -- second to the last -- third to the last.

(Laughter.)

CHAIRPERSON JONES: All right. Okay.

Mr. Junkin.

MR. JUNKIN: Thank you. I've just been informed that I'm one of the key obstacles between this and perhaps for those that are so inclined a cocktail.

(Laughter.)

MR. JUNKIN: So keeping that in mind, I will try to go fairly quickly.

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MR. JUNKIN: So I'm going to -- this is -- we present this report once a year. And this is -- I think of it as a report card and really nothing else. And quite frankly, the report card requires lots of explanation. You can imagine what it was like to be one of my parents. I'd bring home a report card, start explaining right away. I feel like I'm doing that already.

(Laughter.)

MR. JUNKIN: I have a lot of clients that try to make this something that it's not. It is just a way to present your results compared to other "similar" organizations, but similar should be in quotes in that case, because I have -- and I've used this same example for the last 12 years. I have two clients that are both between one and five billion dollar public funds. So that means they're in the same universe. One of them is 120 percent funded and has 65 percent in fixed income. One is 55 percent funded and is in 50 percent alternatives.

They're in the same universe. You compare their total fund returns, they don't -- they both made the right decisions for themselves, in terms of asset allocation, but they look very different. So they don't stack up all that well.

Anyway.

Looking here, if you follow the total plan composite line across, this is the third from the bottom line, you can see first the returns. These are gross of fees, so they don't quite match what you've seen. And the reason they're gross is because everybody reports gross. And if we report you net, the only thing it does is it lowers your ranking.

And then the numbers in the parentheses are the peer group ranking. So one is best, 100 is worst. If you look at three, five, seven, ten years, you can see 82nd percentile, 61st, 62nd, 93rd. We're going to -- so this is kind of the headline. We're going to go through what's caused this as we -- as we walk through the rest of the reports. But those are the numbers.

Now, for example, you can see how the one and 100 works, right, because we've got those examples here. If a hundred percent fixed income -- if someone had a hundred percent fixed income portfolio, you'd see they would have been in the 100th percentile almost all of this time period. And if they'd been a hundred percent equity -- hundred percent Domestic equity, the would have been the best performing fund.

Skip ahead a couple to page four.

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MR. JUNKIN: This is a five year risk versus return plot. There is, believe it or not, a blue capital T in the middle of this graph. It's really hard to find. This is a little bit like Where's Waldo. But the takeaway here is the risk of the plan has been pretty close to median over the last five years, just a little bit higher in the 61st percentile -- sorry, just a little bit lower.

I'm sorry. I'm reading returns. Return is just below median. That number makes sense. Risk, 31st percentile, so a little bit higher than the median.

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MR. JUNKIN: Now, this page is critical. This is the asset allocation. And so we actually capture the asset allocation at June 30 of these large public plans, 10 billion and over. And so where do you look very different? The two that should jump right off the page here are the weights to U.S. equity and non-U.S. equity. So for U.S. equity, you're basically in the bottom quartile in terms of just the weight, not the performance. You have one of the smallest allocations to U.S. equity.

Recall, that U.S. equity, by the way, has been the best performing asset class pretty much for the last 10 years. So this is a pretty significant driver of some of these numbers, and we'll look a little bit more at that.

Non-U.S. equity, you're at the top, top quartile. So you have one of the larger allocations. This reflects the decision that CalPERS has made through the Investment Committee, through staff, through Wilshire to have a global equity portfolio.

So that additional diversification, that's the decision you made. You wanted to adopt a more diversified portfolio has resulted in those weights when you break out the components.

Fixed income, liquidity, those are both near median. Real estate a little bit high. Alternatives, that's another one where it's a little bit lower. And this is two things. This really is private equity and it's hedge funds. Well, you have zero hedge funds at this point, and private equity for you is harder to get the right kind of bite sizes. We've spent a lot of time talking about that today.

So those are -- those are kind of the building blocks that go into this. Now, I'm going to go a little bit out of order. I'm growing to go to page 10 --

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MR. JUNKIN: -- and -- I'm sorry, eight first. So this is just U.S. equity. How did just your U.S. equities do compared to other U.S. equity portfolios of peer institutions? And here, you can see, if you follow that total plan line across, you look at three years, it's near median. You look at five years, it's actually in the 19th percentile. So you outperformed 81 percent of your peers in U.S. equity, over the last five years. Seven years, 40th percentile. Ten years, 35th. So really U.S. equity has been a pretty solid place for CalPERS

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MR. JUNKIN: Move ahead a couple of slides, this is the same ranking for international equity on page 10.

Here, again, three years a median return of right about two percent. Five years a median return precisely of 8.6 percent. And the return seven and 10 years are a little bit -- a little bit lower, but -- so it's interesting. Think back to the domestic equity page that we looked at, the five year universe rank was the 19th percentile.

Here, it's the 50th percentile, but your global equity, total public equity ranking, which is now on page 6, this is why I went out of order, for five years is the 59th percentile.

So you start doing the math how does that work? Well, it's because you had so much more international equity compared to your peers, right? You actually had two pretty good performing programs. But the weights, because of that decision to be sort of more globally diversified created this chart, which has, you know, ramifications when you look at your peers.

Okay. Keeping in mind cocktail hour.

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MR. JUNKIN: Page 12, private equity. Here, private equity has actually been -- anything lease than five years, I'd just disregard here. So five years, 28th percentile, 29th, 25th. You know, despite the challenges of your size, performance has been pretty good there.

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MR. JUNKIN: Fixed income. This is total fixed income on page 14. Performance versus peers, five years, seven years, ten years, it's been great.

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MR. JUNKIN: There's not much to say there.

And then let me find real estate. Page 20. This is a little bit of a tale of two cities. Over the last year, performance has been okay. The 35th percentile out to seven years, it's been pretty good. 18th percentile, and then there that's 10-year number, which obviously has all of the impact that happened in '08-'09. And it -- those three years between seven and ten.

So a couple years from now when those are out of this, this chart gets a whole lot easier to present, but -- so that -- I'll stop there. I'm happy to answer any questions about any of the pages I covered or any of the pages I didn't cover.

CHAIRPERSON JONES: Seeing no questions, so you achieved your goal.

(Laughter.)

CHAIRPERSON JONES: Okay. Thank you very much. And now we move to Summary of Committee Direction.

Mr. Eliopoulos.

CHIEF INVESTMENT OFFICER ELIOPOULOS: I don't think there was any in open session.

CHAIRPERSON JONES: Right. Okay. Then we have one request to speak. Margaret Brown, if you'll come down. And the mic is my left, on your right. And you'll have three minutes to speak. And we -- and I before you start, Ms. Brown, I just want to also, since I mentioned earlier that anyone who was here earlier that wanted to speak, and we didn't allow you an opportunity to speak, you can come now and speak for -- in this section of the agenda, if you still would like to speak.

So go ahead Mrs. Brown. And your clock will start once you introduce yourself.

MS. BROWN: Thank you. My name is Margaret Brown. And I'm running for the CalPERS Board on Position B. Thank you for the earlier chance to speak. I had just rushed in so I wasn't ready, but I don't mind waiting and going through all the Investment Committee information.

I had written a letter to the Board and senior staff on Saturday evening about the closed session agenda. It occurred today from about 8:45 to 2:00 p.m. So I think you probably had a lot to discuss today. It included eight items.

But in my email to you all, I noted that only Item 2 was properly agendized. It also appears that staff did attempt to correct the defect in the notice by updating the agenda yesterday. So I would like to know, first of all, which items were actually discussed in closed session?

Are you allowed to tell me that, Mr. Chair, which items were actually addressed in closed session.

CHAIRPERSON JONES: I'm going to -- you want to complete -- is that your one question?

MS. BROWN: Sure, that's my main question.

CHAIRPERSON JONES: Complete your time and then we will determine that.

MS. BROWN: Thank you.

And then I just want to again provide a reminder that Bagley-Keene requires a 10-day notice, which you guys met on the original agenda. But however, the closed session items were not properly noticed. And, of course, if there is an emergency, Bagley-Keene allows for a 48-hour emergency notice, which the revised agenda did not meet either.

There's just a lot of important things going on with the investments and BlackRock, and people need to have adequate notice for those items, and it needs to be done properly.

Thank you.

CHAIRPERSON JONES: Matt, you want to -- the one question that she asked.

GENERAL COUNSEL JACOBS: The question is whether we can advise her with respect to whether -- what items were heard?

CHAIRPERSON JONES: Yes.

GENERAL COUNSEL JACOBS: Yeah, sure. Items 2 through 8.

CHAIRPERSON JONES: Okay.

MS. BROWN: Thank you very much. Thank you.

CHAIRPERSON JONES: Okay.

Yeah, Matt, would you also just highlight the steps we took to make the correction was really ministerial?

GENERAL COUNSEL JACOBS: Oh, sure.

CHAIRPERSON JONES: Yeah.

GENERAL COUNSEL JACOBS: The -- we read Ms. Brown's letter on Saturday, or actually Sunday morning. We determined that the defect that she had identified was minimal. That we also checked the case law that we understood, and actually the Bagley-Keene Act itself, which says that substantial compliance is what the Bagley-Keene Act is meant for, or -- that there is human error that is recognized, and that -- and therefore, substantial compliance with the Act is deemed sufficient. The Act says that. There's multiple cases that say that.

So we felt comfortable that this was not a violation of Bagley-Keene. But nonetheless, in the -- in an abundance of caution, we went ahead and revised the Investment Committee agenda to place the citations to the Bagley-Keene Act in the place that they were supposed to be, instead of where they were, which was just moving it a couple of lines up on the agenda.

CHAIRPERSON JONES: Okay. Thank you very much.

Yeah. And just additional information, other than adopting the minutes, there was no action taken in closed session.

GENERAL COUNSEL JACOBS: That's correct, yes. Thank you for that clarification.

CHAIRPERSON JONES: Okay. Thank you.

Okay. Then that concludes this meeting and this meeting is adjourned. Thank you very much.

(Thereupon California Public Employees' Retirement System, Investment Committee meeting open session adjourned at 4:32 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 22nd day of September, 2017.

James F. Peters

JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063