VIDEOCONFERENCE MEETING

STATE OF CALIFORNIA

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BOARD OF ADMINISTRATION

INVESTMENT COMMITTEE

OPEN SESSION

ZOOM PLATFORM

MONDAY, JUNE 14, 2021

9:30 A.M.

JAMES F. PETERS, CSR
CERTIFIED SHORTHAND REPORTER
LICENSE NUMBER 10063

APPEARANCES

COMMITTEE MEMBERS:

Theresa Taylor, Chairperson

David Miller, Vice Chairperson

Margaret Brown

Rob Feckner

Henry Jones

Fiona Ma, represented by Matthew Saha

Lisa Middleton

Stacie Olivares

Eraina Ortega

Ramon Rubalcava

Shawnda Westly

Betty Yee, represented by Lynn Paquin

STAFF:

Marcie Frost, Chief Executive Officer

Dan Bienvenue, Interim Chief Investment Officer

Matt Jacobs, General Counsel

Pam Hopper, Committee Secretary

Michael Krimm, Investment Director

Arnie Phillips, Interim Deputy Chief Investment Officer

Christine Reese, Investment Director

Anne Simpson, Managing Investment Director

APPEARANCES CONTINUED

ALSO PRESENT:

William Michael Cunningham

Steven Elias

Sandy Emerson, Fossil Free California

Alyssa Giachino, Private Equity Stakeholder Project

Richard Godfrey, MD, TriCity Ecology Center

J.J. Jelincic

Kareem Raymond, Goldman Sachs

Dana Stokes, Fossil Free California

Sara Theiss, Fossil Free California

Sheila Thorne

INDEX

PROCEEDINGS

CHAIRPERSON TAYLOR: I am calling the Investment Committee open session to order.

Ms. Hopper, can you recall roll.

COMMITTEE SECRETARY HOPPER: Theresa Taylor?

CHAIRPERSON TAYLOR: Here.

COMMITTEE SECRETARY HOPPER: Margaret Brown?

COMMITTEE MEMBER BROWN: Here.

COMMITTEE SECRETARY HOPPER: Rob Feckner?

COMMITTEE MEMBER FECKNER: Good morning.

COMMITTEE SECRETARY HOPPER: Henry Jones?

COMMITTEE MEMBER JONES: Here.

COMMITTEE SECRETARY HOPPER: Frank Ruffino for Fiona Ma?

ACTING COMMITTEE MEMBER SAHA: Hi, Pam. Good morning. It's Matt. I'm sitting in for the Treasurer.

COMMITTEE SECRETARY HOPPER: Okay. Matt Saha for Fiona Ma?

ACTING COMMITTEE MEMBER SAHA: Here.

COMMITTEE SECRETARY HOPPER: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Present.

COMMITTEE SECRETARY HOPPER: David Miller?

VICE CHAIRPERSON MILLER: Here.

COMMITTEE SECRETARY HOPPER: Stacie Olivares?

COMMITTEE MEMBER OLIVARES: Here.

COMMITTEE SECRETARY HOPPER: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Here.

COMMITTEE SECRETARY HOPPER: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Here.

COMMITTEE SECRETARY HOPPER: Shawnda Westly?

COMMITTEE MEMBER WESTLY: Present.

COMMITTEE SECRETARY HOPPER: Lynn Paquin for Betty Yee?

ACTING COMMITTEE MEMBER PAQUIN: Here.

COMMITTEE SECRETARY HOPPER: Madam Chair, all is in attendance.

CHAIRPERSON TAYLOR: Okay. All right. Thank you Ms. Hopper.

And our next order of business is to approve the June 14, 2021 Investment Committee timed agenda. What's the --

VICE CHAIRPERSON MILLER: So moved.

CHAIRPERSON TAYLOR: Thank you. Moved by Mr. Miller.

I need a second.

COMMITTEE MEMBER JONES: Second.

CHAIRPERSON TAYLOR: Second by Mr. Jones.

All those in favor, Ms. Hopper.

COMMITTEE SECRETARY HOPPER: Margaret Brown?

COMMITTEE MEMBER BROWN: Aye.

COMMITTEE SECRETARY HOPPER: Rob Feckner?

COMMITTEE MEMBER FECKNER: Aye.

COMMITTEE SECRETARY HOPPER: Henry Jones?

COMMITTEE MEMBER JONES: Aye.

COMMITTEE SECRETARY HOPPER: Matt Saha for Fiona Ma?

ACTING COMMITTEE MEMBER SAHA: Aye.

COMMITTEE SECRETARY HOPPER: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Aye.

COMMITTEE SECRETARY HOPPER: David Miller?

VICE CHAIRPERSON MILLER: Aye.

COMMITTEE SECRETARY HOPPER: Stacie Olivares?

COMMITTEE MEMBER OLIVARES: Aye.

COMMITTEE SECRETARY HOPPER: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Aye.

COMMITTEE SECRETARY HOPPER: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Aye.

COMMITTEE SECRETARY HOPPER: Shawnda Westly?

COMMITTEE MEMBER WESTLY: Aye.

COMMITTEE SECRETARY HOPPER: Lynn Paquin for Betty Yee?

ACTING COMMITTEE MEMBER PAQUIN: Aye.

COMMITTEE SECRETARY HOPPER: Madam Chair, we have a motion made by David Miller, seconded by Henry Jones for Agenda Item 2, approval of the timed agenda.

CHAIRPERSON TAYLOR: Motion passes. Thank you.

Our next item on the agenda is the Executive Report. Mr. Bienvenue.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Good morning, Madam Chair and members of the Investment Committee. We have a good agenda before us today, so I'll keep my comments brief and just give a quick overview of market conditions in the portfolio and then a quick description of the business before us today.

In looking at the markets, I would say three major economic themes are driving market activity over the recent past. First is the continued very decisive U.S. and global economic rebound continuing the form of a V-shaped recovery.

Second, and consistent with that rebound, we're seeing rising inflation pressure and expectations. And part of those pressures are due to base effects from a weak 020, but also supply bottlenecks as demand jumps ahead of supply coming back online. And really, the key question here is whether inflation will be transitory or be more sustained. And that certainly is what the Fed is watching, and capital markets are watching, and certainly your investment team is looking to discern as data continue to come in.

And the third major theme is central bank policy for both the Fed and global central banks, with the big question being how accommodative policy will remain over time.

And these themes have left markets with a couple of things. First of all, bond yields have certainly bounced off the lows of the pandemic, but they've also come off the highs with the beginning of the reopening and more recently they seemed to have leveled off with the U.S. ten-year hovering around one and a half percent, equities, certainly in the U.S., but globally also have rallied a record or near record highs with corporate earnings being very, very strong in both public markets and private equity markets.

And this, of course, has implications for our portfolio. We know from past discussions that equity risk is the primary source of risk for the PERF. So with these buoyant equity markets, PERF performance has been quite strong, ending the quarter to March 31st with a market value of $450 billion and a fiscal year-to-date return of 15 percent.

Now, bear in mind, of course, that we're long-term investors and we need to look beyond the short term ups and downs of markets. You'll certainly hear us say that when markets are weak, but you should also equally hear us say it when markets are strong. The recent performance is very encouraging, but we do definitely need to maintain a long-term perspective.

Now, in terms of relative return, the PERF portfolio is underperforming the benchmark by 74 basis points, fiscal year to date with private equity as the primary detractor. This is what we would expect, of course, given the performance of the public equity benchmark and lags of private equity valuations. And this dynamic also speaks to our need to pick a long horizon when we're viewing portfolio performance.

And performance of the affiliate funds also has been in line with expectations garnering positive returns from the equity exposures, and with total assets of the affiliate trusts now approaching $25 billion as of March 31st.

So that's a quick overview of the markets and the portfolio, which, of course, is the primary objective of this Committee, but now let's pivot to the business that we have before us today. We'll ead off with the consent items, of course. And from there, we go right to our one action item for the Committee's consideration today, which Christine Reese presenting the recommendations for revisions of the Investment Policy for the Long-Term Care Program.

From there, we'll move on to the information items that are on our agenda and we have three. First is a presentation from Goldman Sachs that is part of our asset liability management work this year. This one is focusing on the capital markets and the outlook for market returns. And bear in mind that the cyclical asset liability management work is one of the most important bodies of work for CalPERS, knowing, of course, that one of our ten Investment Beliefs is the strategic asset allocation is the dominant driver of portfolio risk and return.

Our second information is a first reading of potential changes to the Total Fund and some of the Affiliate Fund investment policies to enhance how we think about and manage tracking error. And these potential changes are in response to Committee direction in November to bring back draft policy changes.

And finally, we have an update on the five-year strategic plan and our Sustainable Investment Strategy. Pleas bear in mind that the strategic plan was adopted in August of 2016, so Anne Simpson is here to walk us through both the original objectives, as well as some of the outcomes.

And that concludes my opening remarks, Madam Chair. With that, I'll turn it back to you to take any questions the Committee may have or to take us through the agenda.

CHAIRPERSON TAYLOR: So I am not seeing any questions, so I'm going to move on with the agenda. We are on item number 4, action consent items. What's the mood of the Committee?

VICE CHAIRPERSON MILLER: So --

CHAIRPERSON TAYLOR: Go ahead, David.

VICE CHAIRPERSON MILLER: I was just going to say move approval, if there are no objections.

CHAIRPERSON TAYLOR: Okay. It's been moved by Mr. Miller.

COMMITTEE MEMBER FECKNER: Second.

Second.

CHAIRPERSON TAYLOR: Seconded by Mr. Feckner.

Ms. Hopper.

COMMITTEE SECRETARY HOPPER: Margaret Brown?

COMMITTEE MEMBER BROWN: Aye.

COMMITTEE SECRETARY HOPPER: Rob Feckner?

COMMITTEE MEMBER FECKNER: Aye.

COMMITTEE SECRETARY HOPPER: Henry Jones?

COMMITTEE MEMBER JONES: Aye.

COMMITTEE SECRETARY HOPPER: Matthew Saha for Fiona Ma?

ACTING COMMITTEE MEMBER SAHA: Aye.

COMMITTEE SECRETARY HOPPER: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Aye.

COMMITTEE SECRETARY HOPPER: David Miller?

VICE CHAIRPERSON MILLER: Aye.

COMMITTEE SECRETARY HOPPER: Stacie Olivares? Stacie Olivares?

COMMITTEE MEMBER OLIVARES: Aye.

COMMITTEE SECRETARY HOPPER: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Aye.

COMMITTEE SECRETARY HOPPER: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Aye.

COMMITTEE SECRETARY HOPPER: Shawnda Westly?

COMMITTEE MEMBER WESTLY: Aye.

COMMITTEE SECRETARY HOPPER: Lynn Paquin for Betty Yee.

ACTING COMMITTEE MEMBER PAQUIN: Aye.

COMMITTEE SECRETARY HOPPER: Madam Chair, we have a motion made by David Miller, seconded by Rob Feckner, all ayes, for Agenda Item 4a approval of the March 15, 2021 open session minutes.

CHAIRPERSON TAYLOR: All right. Great. We -- the motion passes.

And we're going to move on to information consent items. I have not received any requests to pull anything off.

So then we will move on to Action Item 6, policy delegation for the Long-Term Care Investment Policy update. And Dan, is that you?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: All right. Yes. Thank you, Madam Chair. It looks like we have Christine Reese brought forward. So as usual, our support friends are ahead of us. Can we also please bring Tom Toth forward from Wilshire to answer any questions that the Committee may have.

And this item proposes changes to the key parameters of the Investment Policy for the Long-Term Care Program. Bear in mind that the Committee adopted a new strategic asset allocation for Long-Term Care at the March meeting. So the idea of this item is to both walk through the changes to policy and then also the implementation.

And with that, I will turn it over to Christine Reese to take us through the item.

Christine, over to you.

INVESTMENT DIRECTOR REESE: Great. Thank you, Dan. Can you hear me?

(Heads nodding.)

INVESTMENT DIRECTOR REESE: Okay. Great.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: We can

(Thereupon a slide presentation.)

INVESTMENT DIRECTOR REESE: Great. Good morning.

Christy Reese, CalPERS team member.

And this agenda item, the Long-Term Care Fund Investment Policy update, as Dan mentioned, follows on from the investment strategy that was approved in March and brings forward for approval the necessary Investment Policy updates to move to the new strategy. I will cover the strategic asset allocation targets and ranges, benchmark, and tracking error.

So if we could move to page three.

--o0o--

INVESTMENT DIRECTOR REESE: So on this page, we are proposing two modifications to the strategic asset allocation targets that were approved in March. First, we propose to update the policy targets to include TIPS with the fixed income asset class. This move will enhance the efficiency of portfolio management and operation, but will not modify the risk return characteristics for the portfolio as the TIPS target will remain at six percent within fixed income.

Second, we would like to include a liquidity asset class with a target of zero to allow for operational cash flows in the portfolio. And this asset class is currently within policy. It was not however in the March item, so we wanted to bring that forward for clarity as well.

If we could move to page four.

--o0o--

INVESTMENT DIRECTOR REESE: So on this page, we've added the proposed ranges to each of the asset allocation targets. The ranges are somewhat higher for equities and fixed income, but it is important to note that the ranges are not for active management, as in actively over or underweighting asset classes, but rather to allow for market movement between quarterly rebalances without triggering an interquarter rebalance.

If we could move to page five.

--o0o--

INVESTMENT DIRECTOR REESE: So these are the benchmarks that align with the asset allocation strategy approved in March and would just like to note that many of these are the same or similar to current Long-Term Care Fund benchmarks.

And if we could move to page six.

--o0o--

INVESTMENT DIRECTOR REESE: So here we present the proposed forecast tracking error of one percent. And this is the risk management measure of portfolio returns compared to benchmark returns. And we're expanding the definition to include, as well, reporting back to the Board, should the tracking error exceed the limit, we would report and then develop a plan to bring it back within the policy limit.

And then page seven.

INVESTMENT DIRECTOR REESE: So to conclude, and I realize this was a pretty short straightforward presentation, we do recommend to adopt the policy updates and implement those updates in alignment with the implementation of the new asset allocation strategy. So the team will continue with the remaining phases of the project, of contracting, set up, and implementation with that all targeted to be complete in the September time frame.

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

CHAIRPERSON TAYLOR: Thank you. I'm not seeing any questions from the Board, Christine, but I do have a public comment on 6a.

INVESTMENT DIRECTOR REESE: Okay.

CHAIRPERSON TAYLOR: Mr. Fox, do you have the person on the phone?

STAKEHOLDER RELATIONS CHIEF FOX: Yes, Madam Chair. We have J.J. Jelincic on Item 6a.

CHAIRPERSON TAYLOR: Okay. Thank you. Go ahead, Mr. Jelincic.

MR. JELINCIC: Hello -- Hello. This is J.J.

Jelincic. The Committee is going to adopt this policy. And quite frankly, it doesn't give me a lot of heartburn, but I want to point out once again that the Board adopts policies for a reason. And if the policies need to be changed, then staff should come forward with the changes and the reason for the changes. That the policy is being ignored is -- and not complied with is a reason for discipline, not a reason for changing the policy. At some point -- at some point, the Board has to say we are in charge.

Thank you.

CHAIRPERSON TAYLOR: Thank you.

Do we have any other comments, Mr. Fox?

STAKEHOLDER RELATIONS CHIEF FOX: Madam Chair, that con -- that concludes public comment on Item 6a.

CHAIRPERSON TAYLOR: Okay. Thank you. So then we're going to move on to Item 7 and --

COMMITTEE SECRETARY HOPPER: Madam Chair --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Sorry, Madam --

COMMITTEE MEMBER HOPPER: Madam Chair.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Madam Chair, I'm sorry. Yeah, that's an action item, so we need to take action on that item, please.

CHAIRPERSON TAYLOR: I'm sorry. Yes.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:
Thank you.

CHAIRPERSON TAYLOR: I'm sorry. So let's -- I need a motion to pass Item --

VICE CHAIRPERSON MILLER: So moved.

CHAIRPERSON TAYLOR: Moved by Mr. Miller.

COMMITTEE MEMBER JONES: Second.

CHAIRPERSON TAYLOR: Second by was that Mr. Jones?

COMMITTEE MEMBER JONES: (Nods head.)

CHAIRPERSON TAYLOR: Okay. Seconded by Mr. Jones. So we need -- Pam, can you go ahead and take a vote, please.

COMMITTEE SECRETARY HOPPER: Margaret Brown?

COMMITTEE MEMBER BROWN: No.

COMMITTEE SECRETARY HOPPER: Rob Feckner?

COMMITTEE MEMBER FECKNER: Aye.

COMMITTEE SECRETARY HOPPER: Henry Jones?

COMMITTEE MEMBER JONES: Aye.

COMMITTEE SECRETARY HOPPER: Matthew Saha for Fiona Ma?

ACTING COMMITTEE MEMBER SAHA: Aye.

COMMITTEE SECRETARY HOPPER: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Aye.

COMMITTEE SECRETARY HOPPER: David Miller?

VICE CHAIRPERSON MILLER: Aye.

COMMITTEE SECRETARY HOPPER: Stacie Olivares?

COMMITTEE MEMBER OLIVARES: Aye.

COMMITTEE SECRETARY HOPPER: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Aye.

COMMITTEE SECRETARY HOPPER: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Aye.

COMMITTEE SECRETARY HOPPER: Shawnda Westly?

COMMITTEE MEMBER WESTLY: Aye.

COMMITTEE SECRETARY HOPPER: Lynn Paquin for Betty Yee?

ACTING COMMITTEE MEMBER PAQUIN: Aye.

COMMITTEE SECRETARY HOPPER: Madam Chair, I have ten aye votes, one no vote made by Margaret brown, the motion made by David Miller, seconded by Henry Jones for Agenda Item 6a, Long-Term Care Investment Policy update.

CHAIRPERSON TAYLOR: Thank you. So the motion passes. Thank you very much.

We'll move on to item -- Agenda Item 7a, and that's the current market environment.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Thank you, Ms. Taylor. If we could please move Christine Reese and Tom Toth back in the attendee queue, which looks like we've already done. And it looks like we've already got Mr. Kareem Raymond from Goldman Sachs forward also.

So thins brings us to our information items. The first is Item 7A, for which we are joined by Kareem Raymond from Goldman Sachs Asset Management. Mr. Raymond is going to share with us Goldman's views on capital market conditions, long-term outlook, and the factors they see as impacting capital market assumptions.

So this is part of the ongoing asset liability management review for both the Public Employees' Retirement Fund, or the PERF, and also the affiliate trusts. And as I mentioned in my opening comments, this cyclical ALM work is among the most critical bodies of work before us here in 2021. So with that, I will turn it over to Kareem. Kareem, over to you.

(Thereupon a slide presentation.)

MR. RAYMOND: Perfect. Thanks very much, Dan. Appreciate that. And thanks very much to the Committee for your time here today.

Maybe if we flip ahead to the agenda --

--o0o--

MR. RAYMOND: -- you know, I think we're -- this is on the first page here. We're going to look to cover a handful of topics consistent with Dan's commentary. We'll start by providing some historical context for where we are in the markets and where we are in this current market cycle. We'll then review Goldman Sachs asset management strategic long-term assumptions and provide some context in terms of how those assumptions have evolved over the last few years.

And then we'll finish up with a review of some of the key factors impacting those changes, both quantitatively and qualitatively as well to provide some context in terms of where we see these assumptions going on a go-forward basis.

So maybe with that, why don't we flip ahead to slide number three.

--o0o--

MR. RAYMOND: One more ahead.

--o0o--

MR. RAYMOND: Terrific. So here on slide three, we wanted to provide some context first starting with public equity markets to take a look back in terms of how public equity markets have evolved over the last few years. The first comment I'd make is over the course of these next few pages, we're going to take a look back to 2016 and bring it forward to the present. We're looking back to 2016, because that was the last time that CalPERS underwent a more comprehensive ALM study. And so we want to provide some context in between those periods.

And then the first comment I'd just make as it relates to public equities, if you'd just look at this chart visually, while you do see some blips that have occurred over this span of time, most notably the COVID-19 first quarter of 2020 reduction there, public equity markets have performed quite well over this span of time averaging around 15 and a half percent annual average returns over this span of time.

And as Dan mentioned, earlier in the presentation where we sit in terms of public equities at the S&P 500 in particular, as of today, we're really at effectively all-time highs for public equity markets.

In terms of valuations, the light blue dots that we show on this chart are reflective of PE ratios, so price to earnings per share ratios. This is a valuation metric that's fairly common. In the equity markets, generally speaking higher numbers reflect higher valuations of equities. Lower numbers reflect lower valuation levels. And so when you look at the dot to the right there at 23 times, that's on the higher end of valuations over this span of time.

And so what does this -- what does this chart tell us? And, you know, while it's oftentimes very difficult to project forward in terms of the forward outlook for public equities, as a general matter, we do think that there could be potential for more downside than upside in public equity markets, just given, you know, the fairly full valuation that we are at right now and the high levels of equity markets.

You'll see that concept of higher valuations to be a fairly recurring theme as we go through the next couple of slides.

Any questions here before I move on?

Okay. Why don't we move ahead to the next slide, slide four.

--o0o--

MR. RAYMOND: So on slide four here, we're going to take a look back at interest rate levels. So again, taking a look at the same time frame going back to 2016 to the present. In particular here, we're looking at 10-year U.S. treasury yields over this span of time. And what you'll see between 2016 and end of 2020, interest rate yields were generally lower, to the tune of a hundred and fifty basis points over this span of time. And even during the, you know, heights of the COVID-19 pandemic, 10-year treasury yields hit a low of 50 basis points, so quite a bit of downside volatility there.

These historical yields for the 10-year U.S. treasury were in a bit in contrast to what we've seen year-to-date in 2021. Yields have been up quite substantially in the year-to-date period, up by almost 70 basis points through this time frame, which was through the end of April of 2021.

But one thing I will note, if you look at the table in the top right, that 1.63 percent for the 10-year treasury at the end of April was still below average levels for -- over this span of time.

One thing I wanted to touch on before moving on from this page is just giving a little context in terms of how we think about valuations for bonds, for treasury, you know, bonds in particular. Generally speaking, lower rates imply higher valuations for treasuries. Higher rates tend to imply lower valuations. So there -- generally speaking, for bonds, there's an inverse relationship between bond price and the yield that treasuries are yielding at a particular point in time.

And so the simple way that I like to think about this is if you were holding a fixed rate bond that's yielding two percent, if the prevailing interest rates and markets increased to three percent, you know, generally asking the question how would your instrument that you're holding, would it be worth less or more? And generally speaking, it would be worth less, right, because market participants can get a higher yield than the bond that you're holding at this point in time.

And so I give that example just to put in some context where we are on the markets, given the lower --

generally lower level of interest rates again below the average over this span of time. That would imply that treasuries are more highly valued than they have been over this span of time, again implying the potential for more downside to bond prices than upside from here.

CHAIRPERSON TAYLOR: Kareem, I do have a question.

MR. RAYMOND: Okay. Terrific.

CHAIRPERSON TAYLOR: Mr. Jones, go ahead.

COMMITTEE MEMBER JONES: Yeah. Thank you, Madam Chair. Yeah. Thank you, Mr. Raymond. Yeah. On this chart looking at the -- I know this covers 2016 through April 2021. But because the risk-free interest rates forms the foundation for determining ultimately our discount rate, and so looking at this chart just concerns me that is this going to be a long-term situation going forward? I know this is only through 2021, but what are your views in terms of this interest rates remaining slow going forward and then in some cases even negative, because that's going to create some challenges when we have that discussion on our discount rate.

MR. RAYMOND: Yeah. Yeah. No. Thanks very much for that question. And we'll touch on this a little bit as we go on. But, you know, look, I think we certainly have been coming through a period as were -- as displayed by this chart. But if you go back even further, we've generally been on a pretty steady decline of interest rates and discount rates over a number of years.

You know, we do expect and now a little bit switching into kind of how we think about from a research perspective, we do think that interest rates will tick up gradually to the end of the year. I think we're forecasting around 1.9 percent for the 10-year and into 2022 into the low two percent level for interest rates.

And so, you know, we would anticipate that interest rate levels would rise from where they are right now. But we don't anticipate that interest rates are going to get back to the levels seen in, you know, a number of years past any time soon, so some gradual increase, but not a significant increase, we wouldn't expect.

COMMITTEE MEMBER JONES: Thank you.

CHAIRPERSON TAYLOR: Does that answer your question, Mr. Jones?

COMMITTEE MEMBER JONES: Yes. Yes. Thank you, Madam Chair.

CHAIRPERSON TAYLOR: Thank you.

I also had a question, Mr. Raymond.

MR. RAYMOND: Yes, please.

CHAIRPERSON TAYLOR: As the interest rates are low and we're looking at maybe them going up through 2022, will that mitigate or is the choice to do that to mitigate the inflation that we're looking at?

MR. RAYMOND: That's a great question. So what we're showing here is really prevailing market rates. And so this is, you know, effectively dictated by supply and demand balances for fixed income instruments. I think what you perhaps may be referring to is how the Fed might think about rates, and using -- and this now we're talking on the shorter end of the interest rate curve, which is where the Fed has more control, kind of how are they thinking about raising rates to potentially deal with inflation getting out of control.

And, you know, I think what we'll -- what we are projecting in that respect is right now rates on the shorter end, the Fed is being pretty accommodative in terms of how they're thinking about interest rate levels. We are projecting or the market is implying that they expect the Fed to raise interest rates on the shorter end of the curve in late 2022, early '23. That has come in earlier than the market had originally anticipated. And I think that's in part a reflection of higher inflation that we have seen year-to-date and in resent periods.

So, yes, to answer your question, we would anticipate that the Fed would potentially intervene to raise rates to the extent that they saw inflation getting out of control.

Right now, though, I think the view is that inflation is consistent with what they would expect in the context of the recovery that we're in. But we would expect the Fed to take further action to the extent that they saw inflation getting out of control.

CHAIRPERSON TAYLOR: Okay. Thank you.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: And maybe I'll just -- I'll just jump in there quickly, if that's all right. Mr. Jones, to your question also, remember what Mr. Raymond described that if you own a two percent interest -- interest -- two percent interest rate instrument and rates go to three, your instrument will actually be worth less in value. It will sell off.

So while the increase in rates will help us from a forward-looking return standpoint on, you know, interest rate instruments, getting there actually means our instruments losing value. So that's something to just be aware of.

And then, Ms. Taylor, to your question on inflation, you know, that is front and center as I mentioned in my opening comments. That's the area that we're spending a whole lot of time on and something you will see. And I'm happy to see that Sterling Gunn was able to be pulled forward. Apologies to all for not having asked for that. When I saw Kareem, I thought we were set, but that's my mistake.

And -- but Sterling and his team are working a lot on things to stay. All right, what can we do for the portfolio if we start seeing that inflation. Emerging markets is one of those things. And certainly we're spending a lot of time on emerging markets. Private assets, and specifically real assets, is another one that we know that some of those come with some of the things that are a little less comfortable us. But certainly thinking about inflation and certainly thinking about what we can do to both keep returns in the portfolio and then also hedge potential inflation with risk is something that is -- the team is spending a lot of time on.

CHAIRPERSON TAYLOR: Great. Thank you.

Go ahead, Mr. Raymond.

MR. RAYMOND: Great. Thank you very much. So maybe if no other questions on the interest rate side, maybe we can flip ahead to page five.

--o0o--

MR. RAYMOND: So here on page five -- and this is kind of the last of the market backdrop slides that we'll cover. Here, we're taking a look at credit spreads. And so these are basically the spread over and above U.S.

treasury yields that investors are expecting either as an investment grade investor or as a high yield investor.

And so just to walk you through the chart, the light blue line is reflective of BB corporate bond spreads. So think about this more like high yield investor bonds. And the dark blue line is reflective of investment grade or AA corporate bond spreads.

And generally speaking, higher spreads imply higher market stress and lower valuations for corporate bonds. And lower spreads tend to imply less stress in markets and lower valuations for bonds.

And so one of the most noticeable things about this chart is, of course, the spike that you see in Q1 of 2020. That's reflective again of COVID-19 as market participants, you know, obviously got more nervous and worried about the aftereffects of COVID-19, they demanded a higher yield from bond investors for taking on that risk. And so that's really what that's related to.

What you will notice post that Q1 2020 time frame, those credit spreads both on the AA and BB side have come back down. And where we sit right now, AA and BB spreads, if you look at the chart -- or the table on the top right, the current spreads right now are also below the averages that we've seen over this span of time. And so again, consistent with the trends that we've been talk about throughout this presentation, lower spreads would imply higher valuations for corporate bonds. And so that would imply as well, potential for more down -- potential of downside risk, to the extent that spreads were to widen out versus upside of spreads tightening from where they are currently.

Let me pause here before I move on to the next -- to the next section.

CHAIRPERSON TAYLOR: It doesn't appear I have any questions.

MR. RAYMOND: Okay. Terrific. So maybe with that, why don't we flip ahead to slide seven.

--o0o--

MR. RAYMOND: And so, you know, I think what we'll do here in this next section is provide some context in terms of how Goldman Sachs Asset Management strategic long-term assumptions have evolved over this span of time, 2016 to the current.

And so here what we're doing is we're reviewing our strategic long-term assumptions across various asset classes, equities, fixed income, real estate, and private equity. And, you know, I think what you see, by and large, is a fairly consistent pattern with returns for most of these asset classes going down between 2016 and 2020, again, largely due in the more recent period to the after effects of the COVID-19 pandemic as market participants, you know, were baking in or our assumptions baked in the increased stress that the markets were under during the heights of the pandemic.

I would say consistent with some of what we saw on some of the prior pages, we have seen a bit of a rebound in Q1 of 2021. And this is consistent with the recovery of markets in the early part of this year. But one thing I will note, and this is sort of denoted by some of the lines on the charts, while we have seen a rebound in Q1 of 2021, notably we have not seen returns from many of these asset classes get back to 2016 levels. And so again, it just kind of speaks to the reduced return environment that we're seeing currently where we are in the market.

The one exception that I will say here is on the right side of the page you'll see for private equity, you did -- you do see there for that asset class a fairly steady increase in returns over this span of time. We think this is attributable to a couple different factors. One, generally speaking, because we are -- we have been in a lower returning and a lower yielding environment, we see many investors searching for more yield and for more return. Generally speaking, private equity tends to be an asset class that has higher returns on average and so we saw higher allocations to that asset class to help offset some of the lower returns or the return expectations otherwise.

We also saw that some investors had a slightly higher willingness to take more risk, again in part because the lower -- the lower return environment in other asset classes. And so we think that has contributed to how private equity or return expectations for private equity have evolved over this span of time.

CHAIRPERSON TAYLOR: I do have a question.

MR. RAYMOND: Yes.

CHAIRPERSON TAYLOR: So, Ms. Middleton, go ahead.

COMMITTEE MEMBER MIDDLETON: All right. Thank you, and thank you, Mr. Raymond. Very good presentation. Looking at the expected returns for private equity, how much longer do you expect private equity to continue to grow at this kind of rate and what is the volatility of private equity in comparison to other asset classes?

MR. RAYMOND: Yeah. Thanks very much for that question. Yeah. Look, I think some of the trends that have been leading to those, you know, higher return expectations for private equity we would expect to persist, right? On the one hand, you know, as we're sort of demonstrating in this presentation, we do expect for many asset classes, equities in particular, to be in a slightly lower return environment than we were historically, you know, given where funded status levels for many public pension plans, for example.

We do see investors increasingly looking for -- to allocate to asset classes that have the capacity to generate higher returns. So, you know, in that respect, we're seeing a lot of money flow into the private equity asset class. We expect that that trend will continue over the next, you know, few years. And so, as a result, we would expect that return expectations in this asset class, coupled with the fact that investors are continuing to be comfortable with taking more active risk, we think that will -- that will persist over time.

In terms of risk, you know, I think you pointed it out quite well that, you know, I think the -- you know, generally with the higher return, you know, particularly relative to public market equities, we would expect higher volatility with this asset class. But generally speaking, we do see that private equity as an asset class with the higher returns and the higher risk, generally speaking, has higher risk-adjusted returns. So we talk about Sharpe ratios as a measure of risk-adjusted returns. So you're getting adequately compensated in terms of that higher return for taking that incremental risk. So we would expect, you know, higher risk, but perhaps getting fairly compensated you know for that increased risk by higher returns.

COMMITTEE MEMBER MIDDLETON: As more competition comes into the private equity market, more pension funds and others moving to -- in this direction, does that also complicate and exacerbate the risk that we have?

MR. RAYMOND: Yeah, it's a terrific question. And, look, I think what you'll see -- and I think this goes for many of the asset classes, but in some ways private equity in particular, you oftentimes see a pretty wide dispersion, right, between the best performing managers and the lowest performing managers. And so I think -- you know, I think this is what speaks to, you know, the appropriateness and the importance of manager selection and the due diligence of the team to select, you know, quite frankly the best managers and allocate capital to those best managers.

You know, I think we -- despite the fact that we are seeing a lot of capital flow into these asset classes, we have historically and we would expect on a go-forward basis to see a bit of dispersion of return outcomes. And so for the highest skill-based managers with the best track records and the best ability to source, you know, deals on a proprietary basis, you know, I think that's where the returns are going to flow to.

And so, you know, I think you're right it does increase the risk profile, but I think it puts more onus, you know, quite frankly, on the team to focus on, you know, manager selection and identifying the best -- the best managers out there.

COMMITTEE MEMBER MIDDLETON: Okay. Shift gears to real estate. There's been a lot of media speculation, and just speculation among people, as to what the future of commercial real estate is going to be as work starts to evolve in the aftermath of COVID, what's your best assessment of where the real estate market is going to go?

MR. RAYMOND: Yeah. Yeah. No. Very timely question for sure. Look, you know, I think the chart -- and this is a chart reflective of public real estate. You do see a bit of the volatility and some of the implications quite frankly of the impact on commercial real estate and some of the other, you know, retail, you know, real estate as well have really been impacted, right, by COVID-19 in particular, and some of that is reflective of the lower return profile that we show on this chart for real estate as an asset class.

Now that being said, you know, I think in part, now maybe shifting a little bit to, you know, private real estate and some of the other asset classes, we do think that this does create an opportunity to take advantage of some of the opportunities as we see this dislocation occurring in markets. Kind of consistent with the comments that I made on the private equity side, I think this just heightens the focus on the sectors within -- the subsectors, if you will, within real estate to focus on -- you know, as always, a heightened focus on the managers that you are partnering with to get you access to the relevant opportunities.

But, you know, I think in many respects, this can create, you know, more opportunities where we are to benefit from the dislocation of markets and try to position the portfolio in a manner that takes advantage of this -- of this new market environment for a real estate.

COMMITTEE MEMBER MIDDLETON: Thank you, sir.

MR. RAYMOND: Thank you.

CHAIRPERSON TAYLOR: Thank you, Ms. Middleton.

I have another question from Ms. Ortega.

COMMITTEE MEMBER ORTEGA: Thank you, Madam Chair. Thank you, Mr. Raymond.

I just had a question about what the long-term return assumption is that we're using here and just compared to the four-year gaps that are in this chart is what is the kind of long-term assumption period?

MR. RAYMOND: Yes. No. Thanks for that question. Yeah, so all of these returns are based on sort of a forward 10-year view. That's kind of how we define long term. But the way to think about this is we update those long-term assumptions on a quarterly basis. We'll show, actually on the next chart, our long-term assumptions, while longer in nature, are informed by where we are in the current market cycle, particularly as it relates to interest rates.

And so as interest rates move around, we would expect there to be movement in our long-term assumptions. We basically use a risk-free rate plus risk premia type framework. And we tend to weight more recent time periods in terms of how we're coming up with those long-term assumptions more heavily than we do historical periods. And so that's why you do see some variability from quarter to quarter. But generally speaking, we're looking out on a longer term 10-year horizon for these assumptions.

COMMITTEE MEMBER ORTEGA: Thank you.

CHAIRPERSON TAYLOR: Okay. That looks like all my questions right now, so you can go forward, Mr. Raymond.

MR. RAYMOND: Okay. Terrific. So, yeah, why don't we flip ahead to slide nine.

--o0o--

MR. RAYMOND: And so in this next section, we'll look to put a finer pencil in terms of -- and hopefully maybe this will answer some of the -- or put some additional color on some of the questions that were asked, in terms of how we're developing these long-term strategic assumptions. Here on page nine, we'll focus on some of the quantitative factors that influence our assumptions. And then we'll end with some qualitative factors as well.

And so here on page nine, as I mentioned, we're going to focus on qual -- quantitative factors and how -- in particular, we're going to take a look at our U.S. large cap equity assumptions and how they've evolved, kind of disaggregate some of the components of that return profile.

As I mentioned just a second ago, you know, our assumptions are built on a risk-free rate plus risk premia framework. And so if you look at the risk-free rate section, sort of consistent with what we talked about in earlier parts of the presentation as interest rates have evolved and have declined, you know, quite frankly, between Q4 2016 and Q4 2020, you see that our risk-free rate assumption has declined commensurately.

And then as rates have recovered in Q1 of 2021, you also see that our risk-free rate assumption has rebounded to historic levels, right? So that can account for some of the volatility that we're seeing in our assumptions.

The next component, at least in this particular case, is the equity risk premia assumptions. So this is the premia that equity investors would -- are looking for over and above the risk-free rate to get compensated for the incremental risk that they're taking. And so while we have seen the equity risk premia to be fairly stable, historically, we did see that the -- our equity risk premia assumption came down in Q1 of 2021 from 5.3 percent to five percent. And again, this is sort of reflective of the lower assumed return profile for equities that investors are likely going to require on a go-forward basis.

And so when you kind of put this all together on the right side of the page, consistent with what we've been talking about, while we have seen some volatility in return assumptions, we're generally seeing a gradual decline in the expected return assumptions for these risk asset classes. But hopefully, this gives you some context in terms of some of the contributors to the changes of those assumptions over time.

Any questions on this page?

COMMITTEE MEMBER JONES: Can I ask question?

CHAIRPERSON TAYLOR: Mr. Jones, go ahead.

COMMITTEE MEMBER JONES: Yeah. Thank you, Madam Chair. Yeah, Mr. Raymond, you know, you made reference to the risk-free rate. We under -- at least, I understand what's driving those numbers. But when you look at the equity premium risk premium rates, and I can understand if you have historical data, how you come with these numbers, but going forward --

MR. RAYMOND: Yeah.

COMMITTEE MEMBER JONES: -- what is that equity risk premium based on? Is it surveys from investors or it's long-term assumptions by whom? You know, where is that information coming from?

MR. RAYMOND: Yeah. No. Thanks very much for that question. Yeah, so it's -- it is more mathematical, if you will, in terms of how we're taking a look at that. I'll reference a little bit some of what we talked about on the first page, when we talked about how equity markets have evolved over time.

And in particular, I'm going to point out the equity PE ratio numbers that I referenced, right? So as I mentioned previously, equity PE ratios are effectively a valuation metric. It's comparing the price of a stock or an index relative to the earnings per share that investors could expect on a go-forward basis.

And so there is a formulation in terms of how we think about equity risk premia assumptions. You know, I'd say one component of that is looking at valuations, right?

And so taking a current look in terms of the premia that equity investors are looking for. Generally speaking, higher valuations to equities imply a lower yield that investors are willing to accept going forward for equities, okay? So that's one of the factors that's influencing how our equity risk premia assumptions are going to evolve over time.

We're also taking into context changes in interest rate levels. One of the things that we talked about and is -- is the impact that increases in interest rates have on current valuations for riskier asset classes. And generally speaking, if your risk-free rate or the discount rate that you're using to bring future earnings to the present, if those go up, then the present value of those return streams are actually going to be lower than they were before interest rates, or the discount rate, increased over time.

And so that is also another factor that's impacting how that equity risk premia assumption evolves over time. And so, you know, hopefully to answer your question, it's not sort of a qualitative factor. It is more quantitative in nature, taking into consideration both the current valuation level of markets and the expected future forward view of interest rates. Both of those factors are having impact on what our equity risk premia assumption looks like. And so those two factors that I described led to that equity risk premia assumption coming down a little bit about, consistent with kind of what we've been talking about in terms of how valuations are playing out in the markets currently.

COMMITTEE MEMBER JONES: And so -- and given that viewpoint, are there adjustments made to reflect potential black swan events, because, you know, it used to be a hundred years, and now it's 10 years, and it look like it's every year --

MR. RAYMOND: Yeah.

COMMITTEE MEMBER JONES: -- there's a black swan event, that -- so how do you factor the potential of those events occurring in terms of these -- this strategy?

MR. RAYMOND: Yeah. No, Mr. Jones, I appreciate that commentary. So, you know, I guess the way I'd answer that is kind of when I talked about how our assumptions evolve. While they're long term in nature, we do adjust them on a quarter-to-quarter basis, right? And so on this page, you do see that, you know, to your point around black swan events, in Q4 of 2020, particularly as it relates to the risk-free rate assumption, that's really reflective in many ways of the sort of black swan event that we saw in COVID-19, right? And so you see that reflected in the risk-free rate assumption coming down quite significantly between Q4 2016 and Q4 2020.

And so these assumptions are going to take into consideration current market environments, which are reflective of those events. You know, I would say our assumptions are probably going to be a little more lagged in that respect. You know, we're not going to per se, sort of forecast out and make some expectation in terms of how many black swan events that may be occurring, but those -- because of that heightened volatility environment, they are sort of reflected in the assumptions that we generate on a quarter-to-quarter basis. You know, as the market environment becomes more volatile, our asset classes assumptions are going to reflect that volatility on a current basis. If volatility starts to dampen a little bit, that will also be reflected in terms of how we project out on a go-forward basis.

COMMITTEE MEMBER JONES: Thank you.

CHAIRPERSON TAYLOR: So, Mr. Raymond, I think I'm going to sort of continue with Mr. Jones' train of thought here. So basically -- and I think you're using language that kind of confused me a little bit. But in looking at -- investors are looking for a lower yield. So basically after the quote/unquote black swan event of 2020, which was the pandemic, then we had this rally -- this big rally and a lot of confusion. There were different monetary policies that, you know, caused the rally, et cetera.

So are -- so what we're looking at is an overvalue of the market at this point. That's what you're saying. So the expectation is maybe not necessarily a huge black swan event, but just a slow -- it could be, but it could be also a slow decline in the values, is that --

MR. RAYMOND: Yeah, Ms. Taylor, I think you've articulated it very well. I think, you know, harkening back to that original slide that I -- that I shared on equity market valuations. Because of that very strong V-shaped recovery that we had coming out of the lows of the -- of the pandemic, we are sitting now, particularly for U.S. large cap equities, really at all-time highs from a level of the S&P 500, but also from a valuation from a price-to-earnings ratio perspective.

And so as a result, given that equity markets are fairly fully valued, we're not saying that, you know, returns are going to be negative, but we are saying that returns are likely going to be lower for U.S. large cap equities than they have been historically, in part because we're starting from a higher valuation base than where we were previously. So I think the way you articulated it is spot on.

CHAIRPERSON TAYLOR: And I just want to get an opinion on could there be -- I mean, I know we're all doing guesswork here, but could there be, because of this overvalue, are we looking at a possible -- another black swan event in the next few years?

MR. RAYMOND: Well -- and perhaps maybe the way I'd answer it, because, look, I don't want to claim on this call to be a prognosticator, but I think the way we would think about it is the risk profile, right? What are some of the factors that could lead to an improved return environment and perhaps some of the factors that could lead to a more constrained environment on a go-forward basis. And that's what we try to touch on actually on -- on the next page.

And so I don't if there are any other questions specific to this page, but I'm happy to touch on some of those factors on the next page.

CHAIRPERSON TAYLOR: Sure. Go ahead. It doesn't look like I have anymore questions.

MR. RAYMOND: Okay. Terrific. So, yeah, if -- why don't we flip ahead to page 10.

--o0o--

MR. RAYMOND: And so, Ms. Taylor, as I was describing on the prior page, you know, again, you know, certainly not expecting to be prognosticate -- prognosticating around, you know, what we think the future might hold, but what we're trying to do here is highlight some of the factors that we think are supportive to a strong and positive returning environment on a go-forward basis. And then, you know, on this page also highlighting some of the risk factors. Just visually, you can see a little bit of an imbalance between the risk factors and the supportive factors. And so that gives you some context in terms of how we're thinking about, you know, the risk environment.

But maybe what I'll do is I'll tick through both the supportive factors and some of the risk factors and we can talk through kind of where that leaves us on a go-forward basis.

And so, you know, in terms of some of the supportive factors, and I think, you know, Dan had highlighted this earlier on in the presentation, you know, look I think with all the fairly significant fiscal and monetary stimulus that we've had, you know, quite understandably, as a result, and part of the COVID-19 pandemic. So what I'm talking about here is the $1.9 trillion dollar American Rescue Plan, a number of discussions in Congress about trillion plus dollar further stimulus in the form of infrastructure. We've talked about the Fed keeping rates at least in the near term, you know, near zero. Those are all stimulative factors that could be supportive factors for future growth in markets and the return environment.

The second factor is really global GDP growth. And again, this is -- this is part of a function of governments and policymakers globally really stepping in to support their economies in this environment.

And so just for some context Goldman Sachs research for U.S. GDP we're estimating around a seven percent GDP growth for 2021 and around a five percent growth of U.S. GDP in 2022. So, you know, pretty materially above historical averages of GDP. So, you know, strong global GDP growth we also think is a supportive factor.

The last bit is corporate earnings growth, right? So public equities in particular, one of the larger drivers of returns on a go-forward basis is an expectation for higher growth of earnings. And so on this score as well, again, this is really a function of a bounce-back from the lows of last year, but we're expecting quite substantial growth of corporate earnings in 2021, and then a more muted but still elevated five percent growth rate in earnings growth expectations for the S&P 500 in 2022. So, you know, a number of factors for sure that we think are supportive of positive return environment on a go-forward basis.

Maybe just to touch on some of the risk factors though. You know, there are a number here, the first of which, and we've been talking about it throughout this presentation is the potential for and the expectation of higher rates and inflation. And so, you know, I touched on it earlier in the presentation, the ten-year treasury yield at least through April of this year, was up around 70 basis points. That's moderated to around 50 basis points up in the 10-year treasury yield year-to-date, but still higher than where we were before.

Similarly, in part as a result of the rebound in the COVID-19, you know, time frame, we are seeing both headline and core inflation, you know, pick up, such that we're expecting that headline inflation, so that's incorporating both food and energy, in addition to other forms of inflation is going to be around 2.7 percent for -- through 2021 and then moderate a bit to two percent out to 2022.

And so generally speaking, higher inflation, higher rates generally has depressive effects on the return profile for other asset classes. All right. In terms of the Fed, while we've talked about at least historically, a pretty accommodative Fed, I mentioned earlier in the presentation that we would expect that as inflation continues to rise, that the Fed will step in and increase short-term interest rates. We're expecting -- or at least the market is expecting maybe late 2022, early 2023 is when the Fed will start to hike rates to deal with the inflation outlook. And so again, higher rates, generally speaking, can have negative effects on the risk markets.

I also talked about earlier in the presentation just the higher -- and we were touching on this on the prior page, the higher starting level and valuation level for public equity markets. You know, given that we at some of the highs that we've seen for the S&P 500 over its history, highs of valuations, you know, we're just -- while we would expect that equities are going to have positive expected returns, we think that there is the potential for more downside risk that upside, given that the heightened valuations that we're starting at.

The next one, on the flip side of some of the fiscal stimulus that we're seeing in markets, many of the pay-fors, so to speak, that many policymakers are talking about to pay for this increased stimulus is increase taxes on both the corporate side and potentially on individual tax rates, perhaps on the corporate side going from 21 percent to perhaps 25 or 28 percent. And so that can also have a depressing impact on earnings on a go-forward basis.

The last two, I'll just touch on here is, you know, ongoing geopolitical risks. You know, President Biden is with the G7 currently. Hot topics being China and Russia, you know, continued volatility in the Middle East we all think, you know, could be areas of potential risk for global growth on a go-forward basis.

And then the last one I'd mention, and certainly not least, is just, you know, ongoing COVID and pandemic risks. You know, certainly while in the developed world we're seeing progress in terms of reductions of risk as it relates to COVID-19, less so in the developing markets, with new variants, you know, obviously impacting, you know, communities and causing risk to populations, but certainly risks to markets as well.

And so maybe I'll just, you know, pause here and kind of end the presentation by sort of, you know, summarizing sort of what we've gone through. You know, while we have had a number of blips in the market, most notably with COVID-19, because of some of these risks that we've highlighted throughout the presentation, you know, generally speaking, while we are seeing positive expected returns across many of these asset classes, we are seeing a general reduction in that return environment, since the last time that you all did this asset liability study. And so that's kind of reflective in some of the return profile that we've highlighted in the course of this presentation.

I see a couple of questions coming through, but let me -- let me pause there to answer any questions.

CHAIRPERSON TAYLOR: Sure. So real quick, I have a question before -- I don't see any questions on my side coming through. But -- so the highly -- higher likely corporate individual taxes should be mitigated if what you said earlier was true, and the next stimulus package of the infrastructure bill, because then --

MR. RAYMOND: Yep.

CHAIRPERSON TAYLOR: -- there's money, right? So that sort of mitigates that on that side.

MR. RAYMOND: Yeah.

CHAIRPERSON TAYLOR: So hopefully that would even that out. Ongoing geopolitical risk it seems like we had that going on for just a few years and we can't seem to get rid of that.

MR. RAYMOND: Yeah.

CHAIRPERSON TAYLOR: And, of course, the pandemic I understand. And you think because of inflation, the Fed is going to be less accommodative to keeping interest rates low, correct.

MR. RAYMOND: Yeah, that's right. Look, I think, you know, the Fed -- you it's this concept of the dual mandate, you know, trying to maintain full employment, but also trying to keep inflation at bay. And so, you know, it is a bit of a -- you know, offsetting dynamic, where you, in part, create stimulus to increase employment, right, in the markets. But if the markets become overheated, you wouldn't want inflation to start increasing like it did back in the seventies, for example.

We're certainly not anticipating any of that, but that is, you know, one of the key aspects that the Fed is looking after, trying to mitigate it against the economy overheating and using short-term interest rates as a tool to try to, you know, rein in the market to the extent that it starts to overheat.

CHAIRPERSON TAYLOR: Okay. Thank you. I appreciate that. I think I have a question from Eraina Ortega.

COMMITTEE MEMBER ORTEGA: Yeah. Thank you. Thank you, Ms. Taylor.

My question I think is actually for staff, so maybe Dan. I just wondered if there was a plan to look at these assumptions and kind of bring back what they would mean for consideration of the -- of our performance, of what our outlook might be, or as part of the ALM, or -- any plan to do that?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Yeah, that's a -- that's a great question, Ms. Ortega. And, yes, the answer is emphatically yes. So this time, we wanted to have an outside expert come in and talk about kind of some of the expected returns and the like. In July, we will have another panel of experts talking about capital market assumptions and sort of how they build them up and some of the theory behind them.

From there, then we're also going to have our survey, so our staff goes out and does a survey of -- Sterling, can answer this more clearly, but I think it's 11, 12, 13 different market providers, CMA providers. That survey will be in the July off-site. And then also we're going to have a session on just kind of the overall ALM process and how to think about risk balancing and the like.

From there, we come in September to kind of finalize the CMAs, and then also talk through potential portfolios and get a sense of those risk appetites, with the thought being to sort of adopt a new strategic asset allocation. The original plan was November, but certainly it's important that we get this right. If we need more time, we certainly can. But the idea would be to adopt an asset allocation based on these expected returns and risk appetite somewhere around the end of this year.

COMMITTEE MEMBER ORTEGA: Thank you.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: And all of this is part of the staff's input. So certainly -- certainly -- as I mentioned, this is something we're going to spend a lot of time on here in 2021. This is among the most important things we can do together for this year.

COMMITTEE MEMBER ORTEGA: Yeah. And I appreciate that. And I understand some of the longer term planning, but very much think it would be helpful with a presentation like this to then really hear what is -- everything we've just heard, what does that mean for us, if we agreed with these assumptions, or I think it is helpful to see what different types of thinking result, when you actually apply the numbers to our fund.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Certainly. And I think the first step of seeing that will be July. And then we'll definitely look for direction in terms of other areas to explore, if the -- if that doesn't get the -- you know, the Investment Committee everything that they need for September. And as I say, we have several -- this is on every -- every time we're together, this is -- this is on the agenda for this year.

COMMITTEE MEMBER ORTEGA: Great.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Thank you.

CHAIRPERSON TAYLOR: And then, Dan, can I ask you a question. You said bring it to us in September. You're not looking for a vote in September, right? You're not look for a vote till later in the year.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Correct. In September, we're looking to adopt a set of capital market assumptions that we will use to build portfolios, but yes, it will be -- then it will also be starting to talk about sample portfolios in September, with the idea being to adopt a strategic asset allocation very likely in November, depending on whether the Board has gotten everything that they need in July, September, November.

If we need to push that into, you know, say February, March, if we need to call a special meeting, certainly we know that Ms. Taylor you have the authority to call a meeting at any time with ten days notice, we'll certainly look to -- look to have you -- you know, we'll look to be as responsive as we can be to these to get as much data in front of the Board to make as an informed a decision as we can.

CHAIRPERSON TAYLOR: Well, and I also would caution us not to hurry with accepting the CMAs, because that automatically triggers us to have to change the rate of return usually. So I just -- I caution us against -- without all the knowledge that Ms. Ortega is talking about, and having everything that we need, and possibly also looking at impacts on our local agencies if we were to adopt a CMA of 6.8, or whatever, I don't know, you know, less than the seven percent, then what is that impact also? I don't want to rush that, unless we know how that impacts everybody as well as all other avenues that we can take.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Certainly. And that definitely -- so let me just clarify. By capital market assumption or CMA, I'm referring to what we expect returns to be of all of the different asset classes, what we expect the volatilities to be of those asset classes, and how we expect them to work together to offset one another. That, for us, is what we call capital market assumptions.

From there -- to your point, Ms. Taylor, from there, we would look to using those capital market assumptions and using potential portfolios and risk appetites, look to adopt a strategic asset allocation and that's what would set that discount rate, and completely agree, certainly working closely -- you know, Michael Cohen and the Financial Office, sort of lead this body of work, bringing the Actuarial Office, and the investment office together as we work through this in an integrated way. We would have all of that information for your consideration as we look to adopt a discount rate, and that would be certainly November, or to your point, if more time is needed, we definitely do not want to rush it, because of a potential impact.

CHAIRPERSON TAYLOR: Right. Right. I just want to caution us, because the last time we adopted CMAs, we went right into Investment Office telling us we must reduce the rate of return. So I just -- I just want to caution us to be careful that, yes, of course, we're saying that we agree that this is our future forecast, that that doesn't automatically put us in a position to have to reduce the rate of return, so...

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Agreed. And our -- and our goal certainly will be to also bring you as many -- to not have a we must, but to bring as many opportunities as we can to help mitigate that. And which is why I talk about things like emerging markets, I talk about things like private assets, all of those to Mr. Raymond's point expected returns in private equity we know are higher and that we know that comes with some challenges and also things that we don't terribly like. But the idea will be for us to give you as many degrees of freedom as you can, given what the markets are providing us.

CHAIRPERSON TAYLOR: And our risk appetite as a

Board, right, so --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Certainly.

CHAIRPERSON TAYLOR: Okay. I appreciate that, Dan. My next question is from Mr. Miller.

VICE CHAIRPERSON MILLER: Oh, thank you for the presentation. I really appreciate it, Mr. Raymond. I had a question and I'll try to make it coherent. But I understand the choice of using the large cap to look at public markets. But I'm wondering if you have any thoughts about -- because it's -- we have such a more broadly and deep diversified portfolio, any other slices that are important or, for example, contrasting large cap versus small cap, where there any really different experiences over the last few years that would impact forward looking with regard to that kind of chunk of the market?

MR. RAYMOND: Yeah, Mr. Miller, appreciate that question. Look, part of the reason why I focused on large cap to give you that kind of, you know, quantitative response, we tend to use for our assumptions, because large cap U.S. equities tend to have, you know, the best, and the deepest, and the longest, you know, sort of track record and history of information, we use that very much as a baseline, and then many of the other, you know, asset classes in part are built off large cap U.S. equities. And what we do is we look at betas of other asset classes relative to large cap U.S. equities and sort of a model portfolio, if you will.

And so as market betas relative to that baseline portfolio adjust, that will influence the return expectation for some of those other asset classes. And so, yeah, look, we weren't, you know, in the context of this presentation, making a -- our espousing a view of large cap equities, versus small cap, or emerging markets.

You know, for sure we know and we certainly think that those other asset classes, you know, have an important role in portfolios. And we would actually probably say that, you know, as in markets like this, right, you know, you do, as yields for larger cap U.S. equities, for example, become more constrained, going out to some of the other asset classes, like small cap, like emerging markets.

While those might have come with more risk, they also potentially come with higher potential for return. And so my sense is the Investment team, you know, as they discuss some of the various options, those will be, you know, part of the mix, because I think those do create additional opportunities in an -- in an environment like this.

VICE CHAIRPERSON MILLER: Yeah. Thank you. Yeah, as I indicated, I'm pretty comfortable when -- and understood why that was the selected. I was just wondering if there were anything particularly notable that you noticed kind of with regard to any of those other segments that it might be important?

MR. RAYMOND: Yeah. And I think this is the last thing I would mention. You know, I think the broad trend that we showed in this presentation is consistent, right? So generally speaking, higher returns in 2016, those, you know, sort of modulating, if you will, into '20 and into 2021. But, yes, we do -- you know, I think the risk profile, the volatility around some of those other asset classes, emerging markets, small cap have also elevated in the more current market environment, just consistent with what we've seen in markets overall.

And so having consideration certainly both for the return profile, but also to risk of some of those incremental asset classes, will be important. But broadly speaking, I would say the trends are consistent.

VICE CHAIRPERSON MILLER: Yeah. Thank you. That's exactly what I was looking for. Thank you.

MR. RAYMOND: Great.

CHAIRPERSON TAYLOR: Great. I'm not seeing anybody else who wants to ask any questions, so, Mr.

Raymond, I do want to thank you for the presentation. That was really excellent and I appreciate it.

I think we're moving on at this point. And does anybody have public comment on this section, Mr. Fox?

STAKEHOLDER RELATIONS CHIEF FOX: Madam Chair, there are no public comments on item 7a.

CHAIRPERSON TAYLOR: Okay. So then we're going to move on to 7b.

MR. RAYMOND: Thanks very much.

CHAIRPERSON TAYLOR: Thank you, again.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

All right. Thank you, Madam Chair. And definitely thank you to Kareem and to Goldman Sachs for joining us today and helping us with their -- with the perspectives on markets.

Can we please move Mr. Raymond back in the attendees queue. And then can we please bring Christine Gogan and Michael Krimm from CalPERS management, and then also please bring Ali Kazemi with Wilshire forward in the presenters queue to join Arnie and me to answer questions as needed.

By way of background, at the request of Mr. Jones, your Investment team brought forward an item on tracking error to the November 2020 Investment Committee meeting, where we talked about how tracking error is used as a risk management tool.

In that discussion, we talked about a possible improvement in the use of this metric, specifically around measuring and constraining what we're calling actionable tracking error. So at the end of that discussion, management was directed to come back with potential policy language to update our calculation and policy limit around this actionable tracking error. And this item is a first reading of potential changes to the policy statements for the total fund and affiliate portfolios to be responsive to that direction.

So Arnie Phillips, as Deputy CIO for the total portfolio will be presenting this item. And as mentioned, we also have Ali Kazemi from Wilshire joining us to either discuss their opinion or to answer any questions that you may have. So with that, I will turn it over to Arnie to take us through 7B. Arnie, over to you.

(Thereupon a slide presentation.)

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Thank you, Dan. Good morning. Arnie Phillips. So Dan mentioned the November Investment Committee. And we were directed following that very detailed presentation to work with Wilshire and come back with some proposed policy changes designed to further strengthen the fund's governance and accountability.

So with that background, I'm here today with an information item regarding total fund and affiliate fund policy updates. I'll go ahead and summarize the deck and then open it up for discussion, and conversation, and questions.

So the following changes to the Total Fund Investment Policy are proposed by staff. We recommend applying actionable tracking error as a definition to the Total Fund Policy active risk limit. This metric represents the deliberate and controllable departures from the benchmark undertaken by staff. Actual tracking error eliminates the quote noise that naturally results from investing in private assets where the nature of the benchmarks adds tracking error simply through the deployment of assets.

Staff believes that actionable tracking error improves transparency on true shifts and strategy initiative by staff, thus contributing to better governance and accountability for investment decisions. We don't need to jump to them right now, but slide three of nine in this deck will show how actual tracking error provides a clearer metric to measure decisions controlled directly by staff.

And slide four of nine shows how the total tracking error metric, so not just the actionable, but all tracking error as opposed to the actual tracking error can constrain deployment to private assets.

Second, staff recommends lowering the tracking error limit from 150 basis points to 100 basis points. Our intention here is to change the tracking error definition, by not to raise the allowable level of risk taking. That is shown on page eight of nine in the deck, which shows the analysis supporting the drop from 100 basis -- a 150 basis points to 100 basis points.

Third, staff recommends removing the 75 basis point sublimit on asset allocation program decisions, since all allocation management activities are captured in the actual tracking error metric, including the asset allocation portion.

And then finally, there is language in the total fund policy stating that tracking error will be monitored regularly. And in the event of a breach staff will communicate with the Board consultant to determine the appropriate actions, including Board notification.

So why do we want to make these changes?

--o0o--

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: The goal of the recommend changes is to enhance governance and transparency, but not to change allowable level of risk taking. Staff believes that the proposed changes will provide an improved governance metric for the Committee to use when measuring active risk taken by Investment staff, while avoiding an internal inconsistency in the policy where increased allocations to private assets mechanically lead to breaches of the tracking limit if we allocate enough to private assets.

I would like to note, and I think this is an important note, that staff will continue to report regularly both total and actionable tracking error as part of our quarterly updates and monthly in the Insight web portal.

In addition to the proposed revisions to the Total Fund Investment Policy, staff also proposes some related changes to the Judges' Retirement System II Fund and the Legislators' Retirement System Fund policies.

These affiliate fund policies reference the Total Fund Policy, so it's appropriate to update them concurrently with the Total Fund Policy.

And finally, I would like to point out that there is an opinion letter from Wilshire, included in the deck and staff also briefed Meketa on the proposed changes as we went along.

I think I'll stop there, answer any questions on the presentation, the policy, or any of the enclosed slides. Thank you.

CHAIRPERSON TAYLOR: Thank you. All right. I'm not seeing any questions, so...

So I do have a question from Ms. Ortega.

COMMITTEE MEMBER ORTEGA: Sorry. I didn't get my typing in there quick enough. Arnie, I had a question about just looking at the tracking error changes over time. And I don't know if there's -- that's going to be part of the -- any future update, but just that the tracking error that's been reported has gone up. I think the information I have is in each year, and kind of what that means, and is this proposing to address that in any way?

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Yes. So let's look at -- let me get to the right slide here. So first of all, let's look at -- if we can move to page three of nine, please. So the main point on this slide is just naturally as we increase allocations to the private assets, which is a strategic goal of all of us here, given the benchmark, especially in private equity, is global equity, a natural allocation to private equity is going to increase our tracking error.

And the key benefit of this slide, and why we like the actionable tracking error, is if -- where staff can make controllable decisions is in the public markets. And if we were to double our allocations to the public markets, it would show up moving in this slide from 111 to 118, which doesn't really tell you much. But when you look at the right side on actual tracking error, you would see that we actually doubled it. So we do think this metric improves it.

As far as overall levels, the best slide probably -- I'm flipping through here. I think it's eight of nine.

INVESTMENT DIRECTOR KRIMM: Slide nine, Arnie.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Slide nine. Okay. Thank you.

So again, even since we put this deck out, our number has gone up to about 120 now and it's simply because our allocation to private equity has jumped from mid 7s to like 8.3. And so again, the difference relative to the benchmark just inherently increases our tracking error.

And one of the slides in here shows that if the Board, through strategic asset allocation, wanted to increase private equity from eight percent to 10 percent, or from eight percent to 12 percent, we would breach the 150 limit just simply by that decision, irregardless of any other decisions we made as a fund, any internal Investment Office decisions. So it naturally gravitates up.

Michael, maybe do you want to -- on page nine, do you have anymore detail away from just the natural allocations to the private markets and what that means on why we've gone from say 80 in January up to, you know, call it 120 today. I know, COVID and some of the decisions we made to take advantage of some opportunities there probably contributed. But Michael is probably best positioned to add some value here.

INVESTMENT DIRECTOR KRIMM: Yeah. Hi. Michael Krimm, CalPERS staff. You know, Arnie, I think you've more or less captured it. One thing I would caution when squinting at this chart is that at these levels, the fluctuations that you see here are kind of well within the overall measurement error of this metric. So, you know, I think the recent increase that Arnie mentioned, which isn't on here of to around 120 related to the increased weight in private equity is probably the most notable.

But particularly if you squint at the actionable one, a lot of those changes can be attributed to small fluctuation in the risk model, as much as kind of any substantive change in the portfolio.

COMMITTEE MEMBER ORTEGA: Can I ask a follow-up? I mean is it -- is it fair to conclude then that the more volatile private asset classes are then making it slightly harder to benchmark against them and that kind of results in this growing tracking error, again just looking at historically I think it was 0.5 in 2018, 1.1 in 2021. And I guess it feels like this is -- this propose -- or this item is without much context. And so then as I think about benchmark, and tracking error, and then how that relates to performance, and just sort of the connection between all of these issues. And if more private asset classes make it harder to measure the performance and the tracking error just continues to grow, it feels hard for me to -- it's hard for me to see how we as a Board are sort of keeping track of what's going on with those investments.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Yeah. So, Ms. Ortega, one thing I would add and we certainly see it whenever we make an investment decision in the Investment Office is there's never a single metric that will give us comfort when we're trying to buy something. It's -- you know, you hear the -- it's a mosaic of various inputs. And tracking error is certainly not a one size, you know, fits all metric for risk. The policy has our strategic asset allocation weights. We have bands around those weights, so that's another governing factor on decisions the Investment Office can make.

Within asset classes, we have limitations on interest rate risk, and fixed income. We have geographic and sector restrictions in a lot of the other asset classes. So there's a lot of metrics that go into governing the decisions that we make. And certainly our desire to be in private assets is based on a lot of what we just saw in Goldman Sachs' presentation, that we do think the longer term returns are appealing on a risk-adjusted basis in the private assets. And so we fully support and think that's the right decision, but tracking error will inherently add noise to that, because of the benchmark issues.

And so I do think it's worthwhile when you're really trying to govern staff to look at the actionable. But to your point, we're trying to estimate what it means for our portfolio relative to our benchmark. And that is where the total tracking error does give you a number. It basically says 68 percent of the time, we should expect returns to deviate from the benchmark according to our tracking error. And so I think they're all worthwhile measures. And I do think this is a -- an improvement on both internal within the Investment Office, but at the Board Governance level to really track the decisions that the Investment Office is making.

But I certainly would not argue that this number or any number is a, you know, one-size-fits-all and the only number that any of us need to worry about. And so the -- I don't know, for me, it really is an improvement. But to your point, it's just -- it's one number in our overall mosaic of building a portfolio and ultimately doing surveillance on it and projecting what we think returns will be going forward.

INVESTMENT DIRECTOR KRIMM: Arnie, can I make maybe another point related to that.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Yes, please.

INVESTMENT DIRECTOR KRIMM: You know, one thing that's important to emphasize is this particular item we're talking about here relates to tracking error as a forward-looking output of a risk system. So it looks at today's position, pipes it through, you know, the risk system and comes up with a number. This is independent from looking at the performance and outcomes of our portfolio. So this particular risk limit that we're talking about is simply how do we use the risk system.

And so that was -- again it doesn't impact how we report or assess performance. It's totally disconnected.

The other point I would make on these private assets, it's not purely just that they're more volatile. It has to do with the fact that fundamentally these risk systems are really not negatively designed to measure the risk of private assets, because they rely very heavily on statistical data, on, you know, observations of market performance, on even the daily frequency and we just don't have that for the privates.

So the challenge on the privates really is two-fold. One it's that the models just do a really rough job of it and you just don't get the kind of granularity that you do for the public assets. And then the other problem again as noted is that the benchmarks are not investable. And that's kind of actually related.

So those two challenges are kind of structural in private assets and why, you know, a lot of the industry really just doesn't use tracking error for private assets.

MR. KAZEMI: Michael, this is Ali from Wilshire. I wanted to maybe chime in quickly. I think Arnie and Michael have hit on a lot of the key components of the discussion here. I just want to reiterate, you know, we're in agreement with the recommendations here. And I think I wanted to point out that again we're not eliminating any reporting. You know, you'll see within the risk control portion of the agenda item -- or in the material that you still have, the legacy tracking error metric there. We thought that that was important to provide kind of context for what the tracking error has been in the past for the Committee on a go-forward basis.

So you still have that metric there.

Another aspect, with regards to timing, what I think is really, really important is that this is a proactive change? You can see here on this slide, you haven't really hit that 150. We're not near that 150 basis point target, currently with the legacy metric.

What we're really trying to do here is be thoughtful and proactive about potential ways that the tracking error could be breached. And the biggest component of that would be the mismatch and the structural aspect to private equity, tracking error, due to some of the benchmarking issues that Michael touched on.

So in the hopes of being proactive of being forward thinking with regards to how that tracking error metric is Calculated, this is where that recommendation comes from. And the last point is also a really, really important one about official performance measurement. This is not changing how the benchmark return is being calculated for your portfol -- your portfolio. This is strictly within the confines of how the tracking error is being calculated.

So we're not changing how the official performance will be tracked in relation to private assets or any asset. So we're in agreement with this recommendation and happy to take any questions as well.

CHAIRPERSON TAYLOR: Does that answer your question, Ms. Ortega?

COMMITTEE MEMBER ORTEGA: Yes. Thank you.

CHAIRPERSON TAYLOR: Okay. Next question is from Ms. Brown.

COMMITTEE MEMBER BROWN: Thank you, Chair Taylor. So my understanding of this item is that we're basically going to, if this policy is written and then approved, we will be removing all private equity from the tracking error measurement, is that correct?

MR. KAZEMI: Not necessarily, Ms. Brown. So with regards to the degree that you are overweight or underweight private equity, that will still be calculated within the confines of the actionable tracking error metric, so it wouldn't be removed as any kind of implementation contributions coming from private equity versus the benchmark using the ex-ante model.

COMMITTEE MEMBER BROWN: So will this -- so wouldn't a simpler option be just to raise the amount of tracking error we're allowed to have, because I know right now it's at 150 basis points, right, and you say we're nowhere near that. So rather than change the entire policy, so we won't have historical to compare to future, why couldn't we just raise the tracking error -- the allowable tracking error as we hold more private equity?

MR. KAZEMI: So I'll give my opinion on this. And then if, you know, Michael or Arnie want to chime in. To us, the bigger -- one of the really important aspects of this is to ensure that the Committee also has, you know, relevant context into the changes in your public assets. And so by just increasing the overall total fund tracking error to allow for an increase in private equity assets, that would be one way to approach it, but that wouldn't address the issue about having oversight on the public assets.

So to the slide that Arnie had up earlier, if you were to double up your -- you know, your public equity active risk, the current metric you don't really see that. It's not really material overall. And so it essentially distracts from I think what the goal is which is to highlight risk that is actionable in nature.

So for that reason, I -- you know, we're in agreement with staff that reducing the risk and eliminating the private equity implementation component from the calculation, achieves both of the goals, which is to provide more oversight to the more actionable levels of risk and also decrease the amount of overall tracking error that the staff has budgeted for them.

Arnie, Michael, anything to add there?

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Ali, I --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Ali, I'll --

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Go ahead, Dan.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Let me just jump in real quick. I'm sorry. I'll just jump in really quickly. So first of all, I want to go back to Ms. Ortega's question and I think it was a really good question. Remember, that one of our Investment Beliefs, one of our ten is that risk is multi-faceted and can't be captured with any single metric, including tracking error or volatility, which speaks to what Arnie was saying about to mosaic.

So if we can go to slide seven, you'll see that there are a number of different things that we use as our sort of mosaic in capturing tracking error, first and foremost, the asset allocation ranges. But then the second thing, and speaking to this could we just raise the limit, Ms. Brown, to your question. You know, certainly this is an information item. This is something that we have proposed as draft language. If the Board's preference would be to just raise the 150-basis point limit to 200 or something, that doesn't create that disincentive to invest in private markets, that certainly is something that the Board could choose to do.

With us, what we try to do is bring what we thought was more -- was a more thoughtful way to approach this topic of tracking error. And if you go back to slide three that Arnie covered, just to -- just to talk about this slide, right now, what you can see is this middle column, 111, 118, and 107, what that's saying is currently with our current active exposures in the public markets, the tracking error is saying 111.

If we doubled the active exposure in the public markets and we took twice as much active risk in the public markets, it only goes from 111 to 118, which doesn't look like it changes much. And the same thing, we removed all active risk in the public markets, it goes from 111 to 107. Again, it doesn't change much.

And that's why we think that actually on the right side is a better way to do it is to talk about actionable tracking error, because there you can see that it goes from 16 to 31, right, doubling? It doubles the active risk or goes from 16 to zero, again removing the active risk. We think that's a more informative metric.

For us, going on to the next slide, slide -- what is it -- slide 4 here, what we don't want to see happen is that we get a disincentive to invest in private markets, specific private equity. And Ms. Ortega, specific to your question, one of the things, you know, like Michael said, the model doesn't do a good job of capturing risk -- active risk for private markets, but also, additionally, a lot of what's being captured that causes those numbers to be so big is just the fact that private equity isn't public equity. So it's measured against a benchmark that is public equity. The active risk it's talking about is against public equity, but it's fundamentally not public equity. It's private equity.

So that's why you're seeing big numbers. And so for us, our proposal would be to do what we think is a better set of -- you know, set of metrics. Now, we would continue to report total fund tracking error that includes the private markets. We would report that on an ongoing basis, as Arnie said both in the quarterly reporting and also in the monthly Insight Tool. We just think that a better -- a better metric, a more informative metric is this actual tracking error and that to provide -- to have the policy be applied to that is a -- is a better risk management tool. But as I say, these are all proposed draft changes and certainly the Board can take any action that is desired.

COMMITTEE MEMBER BROWN: So, Mr. Bienvenue, we could actually do that, but do it opposite, which is to raise the tracking error limit and have you report separately on actionable, and non-actionable. So rather than change the whole policy in the way we do this, we could just raise the limit and then have you report on the tracking error for the public equities, and then we would have -- we would have this information. I have concerns with having this big broad change rather, than just raising the limit and then having you report on what the information is.

I do have another question for Mr. Ali -- I'm sorry, Mr. Kazemi. Sorry, Ali. And that question is does removing PE from the tracking error, does that, in any way, change the asset allocation sort of the weights or the bands for private equity? What I'm saying is currently we have a policy of how much private equity we can hold. I don't know the number. You know, eight percent, nine percent, 12 percent, whatever it is. And I want to make sure that -- that this doesn't change the amount of private equity asset allocation we're allowed to hold.

My concern is that as we potentially see a large correction in the public markets, our private assets could be actually overallocation. And I don't -- I don't want us to keep buying more private equity if we're over the allocation. And so I -- am I confusing the two or does that somehow impact with this policy?

MR. KAZEMI: It does not, no. To answer your question, this does not, in any way, impact the rebalancing ranges which are an added oversight that the committee has with regards to the asset allocation. And so that is eight percent plus or minus four percent that's still contained within the policy.

COMMITTEE MEMBER BROWN: Right.

MS. KAZEMI. That still is a risk management tool in addition to the tracking error metric, so this, in no way, changes that.

COMMITTEE MEMBER BROWN: Great. So we are at eight percent for private equity and they can go up to -- up to 12 and or down to four, so to speak, right --

MR. KAZEMI: Correct.

COMMITTEE MEMBER BROWN: -- and be within the policy? And we're not looking at changing that at this point in time?

MR. KAZEMI: We are not in any way.

COMMITTEE MEMBER BROWN: Okay. All right. So I still want to go back to my position, which is to go ahead and report to the Board on actionable tracking error and -- so we can see what's going on and then just raise the limit, if we need to, because it -- right now you're saying we're nowhere near the 150 limit. So that's -- that would be my suggestion. And I don't know if any other Board members have any comments.

CHAIRPERSON TAYLOR: (Inaudible) question. So first of all, this is -- we can have them bring that back. This is just an information item, Margaret, so -- but let me ask Dan a question. So this doesn't -- this is -- you're still going to report on the current method -- methodology anyway, correct? So we're using this as a new methodology and a more accurate, as I understand it, methodology. It doesn't track -- it's a risk mitigation tool and a tracking tool. It doesn't do anything to the investment portfolio. And I will ask Dan if, in any way, it should impact our investing in private assets as well. All those questions all at once. There you go can, Dan.

(Laughter.)

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Thank you. Thank you, Ms. Taylor.

So first of all, correct, our plan would be to continue to report both total tracking error, total fund tracking error that isn't the current, you know, reporting metric, and then also actionable tracking error. We would report both in all of the standard reporting. We would apply the policy limit to actionable tracking error that we think is a better -- it's a better number. It's a better metric. It's actually a more accurate capturing of where staff is intentionally proactively deviating from the benchmark. We think that's a better metric. But yes, we would continue to report both.

An alternative would be -- per, you know, Ms. Brown's comment, would be to just raise the overall limit. We just think that's a much more crude tool, because it just raises the limit, and, as I say, it's just -- it's a more -- it's a more crude approach to not constraining private equity.

For -- in both cases, the goal is to -- is to not constraint how much we allocate to private assets knowing that private assets by different -- by definition are different from their benchmark and that our risk models don't very well capture those, you know -- you know, the active risks in those -- in those asset classes.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Hey, Dan, I'd like to add one point. If we can go to page eight of nine. And this is -- this gets into where the -- and again, we could pick a different tracking level number, but where the current 150, and given we're currently at 120, starts to kind of collide with some of the things that the Board has already approved. So if you look at the -- in the chart there, the third one down that says implied using a seven percent growth policy range.

So the public equity strategic asset allocation has a band around it of plus or minus seven percent. If for whatever reason the decision was made to go say plus seven percent over that strategic, that by itself would add 120 basis points of tracking error. We only have 30 basis points left right now between the 120 and 150. And this is only a single toggle within the portfolio. So this is where that number would show up in our actionable tracking error and be a metric that we would have to abide by for the plus 100.

But right now, we couldn't even do what is already in the policy, because of that restriction at the 150. So again, we could pick a different number and we would need to, if we wanted to leverage all the kind of tools in the toolkit that are already in the policy. But this is where we believe the -- just the natural desire for more private assets is over time going to cause that tracking error to go higher. And as it does, it starts to impede our ability to use some of the other tools that are in the policy.

CHAIRPERSON TAYLOR: So what exactly -- can you -- I'm sorry, Arnie. You're kind of confusing me now, so could you sort of boil that down a little bit for me?

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Yeah. So if -- so if we went to the actionable tracking error with 100 basis points, we would have -- one, you would be able to track our activity within the actions that the Investment Office has taken clear, but we would be better able to actually use the tools in the toolbox. So, for instance, this one line item says we have a plus or minus seven around the strategic asset allocation.

Now, that's worth 120, so we couldn't even use all of that today. But given the very low level of actionable tracking error right now, we would have much more flexibility to use that tool than we're going to be able to use in the total fund tracking error, where we're at 120 today and only have 150. And so we just think the total tracking error, as we deploy more to private assets and we get the inherent tracking error that comes with the benchmark issues in the private assets, it starts to lessen the ability to use the tools that the Board has already approved in the policy and starts to make us sort of one dimensional, in that we'll only really be able to do private assets and there won't be much we can do, you know, on the public side.

Now, the tracking error is -- it's a trip. It doesn't necessarily force action. We -- you know, if we trip any of whether it's total or actionable, the next step is to talk to Ali and the Wilshire folks to figure out the next best step and then come back potentially to the board and say, look, we've tripped it, but we're actually comfortable where we're at, and you could just choose to keep it in place.

But for me, the actionable will clearly be a more transparent in our view and allowing us to use all the tools in the toolbox is -- it just allows us to do what we've already approved as an organization around the bands and other allocation decisions. Whereas, we're going to hit that very quickly, if we stick with the total, without, to Ms. Brown's point, raising it.

CHAIRPERSON TAYLOR: Okay. That helps me. I appreciate that, Arnie.

It looks like David Miller. Mr. Miller, did you want --

VICE CHAIRPERSON MILLER: Yes. Yeah. First, I just want to thank Arnie, Michael, Dan, Ali. Very helpful, clear explanations. I'm -- and my comment is I really appreciate this as a re -- a proposed refinement. It's additive. It enhances the team's ability to communicate with us and enhances our ability in terms of oversight to have these -- this additional metric that giver us more of an accurate picture and allows us to really see important differences for what they are, not just artifacts of doing what we need to do to make everything go.

And I think this will be a -- you know, a real benefit to us and the team. And I thank you for bringing it forward. I look forward to, you know, us actually being able to take some action on this some time in the near future.

Thank you.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Mr. Miller, I'd also like to add we view this as a very helpful tool also, as we've transitioned to kind of top down, total fund portfolio construction. You know, I've been here almost three decades and we were very siloed for a very long time. And the move to top-down, total fund, portfolio construction is an extreme improvement in the Investment Office. And this actionable tracking error will allow not only the Board but Dan as the Interim CIO and everything to really track the decisions the fund is making across all of the asset classes, not just within an asset class.

So it's actually a very good management tool internally for us to fit with our transition to this, you know, one fund and one total fund focus. And so it's beneficial internal. I think it's something -- you know, even if the Board chose not to go forward, we would still use it in the Investment Office, because it really fits how we've transitioned to running it at the total fund level.

VICE CHAIRPERSON MILLER: Yeah. Thanks. Appreciate that.

CHAIRPERSON TAYLOR: I don't see any other questions, so what I'd like to -- do you guys have anything else in this presentation before I go on?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: No, Ms. Taylor. We don't have anything else in this presentation. What would be very helpful is to get direction on whether you'd like us to come back with this kind of language or something more, like just raising the limit.

CHAIRPERSON TAYLOR: I am -- I think this language is fine. I'm not hearing anyone but Ms. Brown. And it sounds to me, based on what you guys are saying, is this is the tool that you want to use, that gives you the best leverage, and freedom to do what you need to do. So if that's the case, then this is where we want to move this language forward into an action item, I assume, at the next meeting.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Great. Thank you, Ms. Taylor. So we'll plan on coming back with similar language as an action item in September for the Board to take action on.

And then to Arnie's point, this is some -- this is -- this kind of metric is something that we've been using internally for quite a while, because we do think it's a better -- it's a better metric and it does allow us to manage total fund active risk. So, you know, Michael and his team have been calculating and reporting this metric internally for quite while. And then, you know, with Mr. Jones' request to understand tracking error better, and then our item in November, we thought it made sense to explore whether it made sense to make that the policy language for the Board.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Ms. Taylor --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Ms. Taylor, you're on mute.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: I was just going to add one thing. Really appreciate Wilshire's, you know, walking this through since November with us, and getting to where we think is a really good product, but it's -- their insight and just understanding of the topic and feedback was very helpful and very appreciated.

CHAIRPERSON TAYLOR: And I appreciate it, too. So, yeah, direction from the Chair is to go ahead and move this forward for next meeting for an agenda -- or, I'm sorry, an action item.

I'm sorry. I do have one other commenter, that's

Ms. Olivares.

COMMITTEE MEMBER OLIVARES: Thank you, Madam Chair. I want to thank the team and Wilshire for this presentation. I think it's very help. It's critical that we have a disciplined investment process, and so I appreciate this approach to tracking error limitations.

I think it would be helpful to get an understanding of how pensions of similar size have done something like this to give us the flexibility we need to invest in the private markets, get those returns, take advantage of dislocations, but also use a very thoughtful and disciplined approach to the public markets, where there shouldn't be high tracking errors.

CHAIRPERSON TAYLOR: Thank you.

Stacie are you asking for -- with the agenda item to bring back like a comparison with --

COMMITTEE MEMBER OLIVARES: Yes --

CHAIRPERSON TAYLOR: Okay.

COMMITTEE MEMBER OLIVARES: -- with other pensions of similar size.

CHAIRPERSON TAYLOR: Okay. If that's not a problem, Dan.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: I believe --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: No.

That's certainly something that we can look into and we can bring that back.

COMMITTEE MEMBER OLIVARES: Or if Wilshire could.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Yeah, I think Wilshire has already done some of that work and maybe Ali wants to comment on it. But I do know from some of our conversations that firms -- other firms tend to sometimes look at quote actionable tracking error by ignoring the allocations within various asset classes, where our actionable tracking error actually includes that. So it is a little bit higher bar. But I do know Wilshire has done some work. I don't know if Ali is ready to comment today, but --

MR. KAZEMI: Yeah, just real quickly and we can certainly, you know, bring back some supplementary information as part of the official recommendation. And I believe even in your November material, there was some data from staff in terms of other plans, in terms of their tracking error limits.

And so the one percent falls well within kind of the normal level with what we would see for a large institutional portfolio. And to the point that Arnie raised, a lot of those tracking error limits do not include the asset allocation contribution component. So this does include that, so you could argue that this is actually an even more conservative from a tracking error limit.

I would say, you know, a potential two percent target for tracking error would be on the high end of the spectrum, which is one of the reasons why we're more supportive of, you know, this one percent level that is all-encompassing with regards to implementation and asset allocation.

But we can certainly, as part of our follow-up in the official recommendation item, come back to you guys with some data points on that too.

COMMITTEE MEMBER OLIVARES: Thank you. I think it would be particularly helpful with private equity.

CHAIRPERSON TAYLOR: Thank you. Yeah, we'd appreciate it.

Any other questions from the Board?

And before I move on, I just want to check. So, no, I'm not seeing -- am I seeing anything -- public comment -- requests for public comment on 7b?

No public comment. Okay.

Woops. So right now, I know we have a fairly large presentation coming up next and we have not taken our morning break, so let's take our 15-minute morning break right now and come back -- well, it's going to be about 17 minutes, and come back at 11:45. If anybody has a problem with that, let me know.

Morning break, here we go.

(Off record: 11:26 a.m.)

(Thereupon a recess was taken.)

(On record: 11:45 a.m.)

CHAIRPERSON TAYLOR: We are back in session -- open session. And our next, I'm sorry, agenda item is 7c, sustainable investment five-year strategy plan progress report.

With that --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: All right.

CHAIRPERSON TAYLOR: -- I'm going to hand it over. Thank you.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: All right. Thank you, Ms. Taylor. And I do want to just, one more time, thank everyone for the really thoughtful approach and work in preparing Item 7, both the investment controls and operational risk team, investment risk (inaudible). Also thank Wilshire for working with us closely on this, and, as mentioned, we also worked with Meketa.

So let's move on to 7c. I see we have Anne Simpson in the presenters queue. Can we please get Daniel Ingram from Wilshire also brought forward to the presenter's queue if he's -- if he's not that.

So as we move on to session c -- I'm sorry, as we move on to Item 7c, this is our final open session information item of the day. And as Ms. Taylor mentioned, this is our update on our progress implementing CalPERS sustainable investment five year strategic plan.

So if you'll recall in August of 2016, the Investment Committee approved a five year strategic plan on our approach to ESG and sustainable investment topics. And Anne Simpson, of course, has been very close to and provide a great deal of leadership throughout the execution of the strategic plan, as she's here to walk us through the presentation.

So with that, Anne, I'll turn it over to you to take us through the item.

(Thereupon a slide presentation.)

MANAGING INVESTMENT DIRECTOR SIMPSON: Thank you very much, Dan. It's quite something to think that five years ago we were here with the Board presenting this plan. So it's a real pleasure to be back -- to look back over this five-year period and actually mark the progress.

At the time that the plan was adopted, there were very few investors who'd gone into the depth that we had with the Board's leadership in order to make sure that we'd identified critical issues, given ourselves timelines, KPIs, and so forth. And the plan itself won a number of awards. However, plans are not what matters, it's the results that matter, and that's what we're here to talk about today.

Before going through the presentation itself, I'd just like to thank the wide range of people who've been involved in this work over this five-year period. Each asset class has been actively involved in this work, as have all of the programs in the Investment Office. But it's also taken an enormous amount of work from our legislative affairs team, our Public Affairs team, our Legal Office. So this really has been a total enterprise effort.

Next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So in the previous item, Dan was making reference to the CalPERS Investment Beliefs. And these are really the -- it's the approach to investment which guides all of our work. And on sustainable investment, no different. This slide really highlights the importance of Belief number 4, which reframes the job of an investor to be overseeing the stewardship that companies provide, not just for the financial capital that we invest at CalPERS, but also recognizing that to create long-term value, companies also need to be stewards of human capital, which is why issues around the workforce, the supply chain are also important, but also physical capital. And no better example there than the impact that we're seeing on climate change.

But the important message here is that all the work that we do on sustainable investment is grounded in the economics, in the investment thesis that we have, which is that companies which manage these three forms of capital well are the companies which are going to prosper over the long term, and they're also going to be the companies which have a better line of sight into the risks that companies are facing.

Now, there are several other Investment Beliefs which are extremely important to this work, and, of course, the Beliefs themselves have to be read together. You can't pick one out, but I would just highlight a couple, which are extremely important to this work. And one is this notion that being a long-term investor is both an advantage and a responsibility. Another Investment Belief is that CalPERS responds to the concerns of stakeholders, to the extent that this is within our fiduciary duty, and also that where CalPERS takes risk, we need to be rewarded. So our understanding of the risks in sustainable investment is a way for us to better understand the value proposition.

Now, the other reason for putting this slide up is often this type of work is referred to as ESG, E for environmental, S for social, G for governance.

However - and Daniel at Wilshire has written about this as well - the problem is there's a letter missing, which is the letter of F, and that's the letter for finance. So I do genuinely believe that CalPERS framing of the sustainable investment agenda really does root what we're doing in the economic case.

And when we just talk about ESG, sometimes it can be thought of as something that's separate on the side, but then needs to be brought into the investment process. Whereas, the CalPERS approach really is to see this as embedded in our understanding of both risk and return.

Through this presentation, however, because it's the more popular way of referring to this work, we will call it ESG. But I wanted to put this slide up just to explain how the ideas of ES&G map onto our Investment Beliefs.

Thanks. Next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So the question always is not why. I think we've got a good -- a good grasp on why it's important to consider sustainability issues and investment, because of this relevance to our concern with risk and return.

This slide is about how. And we know that there have been very lively debates, with stakeholders and others, about what CalPERS should be doing in response to the opportunities and also to the risks that sustainability poses for us.

Now, this is our how slide. How do we get things done? The more fancy term, of course, is implementation channels. But there are three things as a very large global asset owner that CalPERS can do.

And the first is advocacy. And this is our role engaging with regulators and policymakers, because we know that, particularly on issues like disclosure, but also on market structure, on incentives that are -- may not be aligned in markets, we have a very important role. And I'll say more about that as we go through the update.

The second channel comes from our position as investors in company equity, where certainly in public markets, this typically comes with voting rights and it gives us the ability to exercise stewardship ourselves, as a part owner of a company to make sure that their long-term success is aligned with our investment goals.

And the third part of what we do is integration. And this is where each asset class bottom up has developed an approach to identify the relevant sustainability factors for their strategy and then worked out an approach for integrating considerations on sustainability into the various stages of decision-making. Now, because of the different way the asset classes work, that integration approach looks different depending on which asset class we're referring to. But later on, we'll come and look at some of the examples of how the asset classes have been doing this.

And finally, everything that we do goes much better when we're working in partnership with others. This is a theme which runs right through this work. And this sense of partnership enables us to learn. We learn from our peer investors. It enables us to share resources, which makes us more effective. And, of course, it means that we can pull our influence. Even though CalPERS is such a large pension fund, typically, because we're diversified, we'll only own a small part of any particular entity, or fund, or company. So working with others becomes extremely important in our engagement work. And even for our advocacy work, when we're able to work with other investors, we can speak with a common voice to regulators. And that really is a way to make sure that we have better input.

Next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So here's some examples. It's not all of them, but these are notable partnerships that CalPERS supports. We support these through, in many cases, we've been a founder of these different groups and also we have a role where either Board members or management sit on the board of these particular company -- particular partnerships, which gives us an ability to not only draw deeply on the work that these groups are doing, but also to contribute and make sure that their work is aligned.

Next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So now we'll turn to what was actually decided on in the plan itself. So the first point is in order to decide what to do, the first thing that was done, in other words, was taking stock. We carried out a very careful and thorough inventory of everything that CalPERS had been involved in in this arena over the years, because this work didn't begin five years ago for CalPERS, it goes back decades.

And for those of you who were on the Board at that time, you might recall we found there were no less than 111 different initiatives through asset classes, at the total fund level, portfolios, policies, statements, guidelines, commitments. And this was an abundance of great work, but it wasn't drawn together into a strategy.

So that posed the question of, well, what really matters to CalPERS investment objectives? What is it that we can do that will have impact, that's going to be beneficial for our members.

So we commissioned an extensive roster of research through the Sustainable Investment Research Initiative, affectionately known as SIRI, but that was before Apple was using this for their robot voice on their phones. But the SIRI was really intended to help us look at all the material that had been provided by the academic community and get an insight into what was going to be valuable for us to focus on.

And it was also recognized at the time that research itself is an ongoing process. So we commissioned a second round of SIRI a couple of years into the plan in order to further examine some of the more complex topics that we were dealing with. And given that this is a complex, it's a new -- its evolving rapidly this whole field of work in investment research will be able to continue.

So that is why research, you see on the left of this slide, with a little Sherlock Holmes magnifying glass looking for clues. This is why research and being research driven is so important to our work, because there's 101 different things that we can do, and there were a 101 different things that we were doing. The important thing is to focus with our limited resources, time and ability to be effective. There's a limit on that, so we need to be careful in the way that we choose to focus.

The second focus in the priorities is, as you see, data and corporate reporting. And this became a very logical thing for us to put as a priority, because in the research process, it was very clear that we were facing a real problem in that there is so little high quality, consistent, comprehensive reporting on sustainability issues. And it is really difficult for researchers even to work out what matters and what doesn't matter, and hand gathering data, and modeling data can be very inefficient and very time-consuming.

So it was decided that what we would do is actually make this one of the six strategic priorities in this plan. Now, this was very bold at the time. The idea that we would somehow enter into the world of international accounting and audit, and regulatory reporting, and say this needs to change. This needs to be modernized, looked like a very big tough thing to do. And it has been big and it has been tough. However, we've been able to make some real progress, which we'll talk about in a moment.

Now, we come to the cross-cutting themes. The other question we posed in the research, well, what matters to CalPERS risk and return whenever, wherever, and however we allocate capital or exercise stewardship. And it was clear, even five years ago, we just had the Paris agreement that -- later that year, December in 2015. This plan was adopted six months later. And it was clear that climate change was becoming not just a source of great opportunity because of the transition in the energy economy, but also it was going to pose different types of risk to the portfolio.

The root of that risk is greenhouse gas emissions. So we took the approach that through engagement, we could identify the biggest sources of those emissions, and the goal to bring them down, in other words, to mitigate the risk by actually going to the source and bringing those emissions in line to what's in -- expected under the Paris Agreement.

The other cross-cutting theme that emerged from the work is the value of diversity. And I think this had been understood even after the 08-09 financial crisis. I remember the IMF saying the biggest un -- under -- misunderstood risk for regulators' microeconomic policy, corporate board rooms, financial institutions was group think. In other words, groups of people who think the same way, see the world in the same way, simply don't have the range of different perspectives to understand how to manage risk well. So that's the first argument in support of board diversity.

And the second is given the extraordinary challenges that companies face, it seems very odd that they would confine themselves to finding board members in one very small demographic. And when we started this work, demographic was typically men over the age of 60, who were white.

So the diversity we could see and the research that we had, at the time, showed -- gave us some insight into this, that diversity matters both for risk and for return.

The next priority is on private equity and profit, and fee sharing transparency. This was an asset class specific project where if you think about the G in ESG, this is a governance question. And one of the most important issues of governance is how to get alignment of interest between us as a capital provider and managers when they deploy their capital. And, of course, the first step to that alignment was transparency.

So working through ILPA, a template was developed in order to improve disclosure around profit sharing and fee transparency. And we'll explain how that's -- that work has been going shortly.

And then finally, and this really speaks to the integration side of the strategy, manager expectations. In other words, we realize that both for our internal and for our external managers, it was important to set clear expectations about how each asset class would be integrating these ESG factors into their investment process. So each asset class, as I said, has developed their own approach and will look at each of them in turn in a moment.

Next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: Okay. Well, look, thank you for bearing with me. I wanted to go into a bit of detail there, because I'm aware that quite a number of Board members were not here at the time that the plan was developed, but we'll speed up a little bit from here.

So what we're going to do in the presentation is, in each case, set out what was the objective for each of the six priorities, then quickly revisit the key performance indicators, or the KPI, in other words, how are we intending to measure progress? So in research, the purpose of the research function in this work is to strengthen our understanding of ESG factors relevant to risk and return, and this is important, specific to CalPERS investment strategy.

Now, if we were a different investor with a lower discount rate or a different time horizon, or maybe a different size, this strategy would look quite different I'm sure. And the purpose of research is three-fold:

One, of course, to validate the factors that we've identified as relevant for investment purposes; secondly, to support the asset classes and integrating those actors across the fund; and also educate. We're recognizing in all humility that many of these topics are new. And for people who may be more qualified some years ago, these were not part of the CFA curriculum back then and then weren't even topics that were being taught in business schools or finance classes.

So education is obviously a continuing benefit for everyone, but on this topic it's particularly important, because it's new and it's challenging. And the KPIs are set out below. We had specific research projects.

So next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So in each of the priorities, there's been so much work done, we'd be here until the middle of the night, if we tried to cover everything. But what we've done is choose an example from each of the workstreams to give you an example of how we've approached the mandate.

So this case study refers to CalPERS report that came out last year. It's on investment strategy around climate change. And it's our first response to the Task Force on Climate-related Financial Disclosure, which is a bit of a mouthful, know for short as the TCFD.

This is an extensive report. For those of you who browse through it, it's 60 plus pages. So we didn't just want this to be a public relations exercise. It was a very, very thorough assessment of risk an opportunity right across the total fund. And as you'll see, what that's enabled us to do is really understand the risk exposure sector by sector and asset class by asset class.

We also completed the last of the carbon footprints, one for each asset class, to give us a sense of what -- what we own by way of emissions, because obviously, if emissions need to come down, we need to have a sense of what the source and the interdependencies between different companies and sectors.

There's also, just to tie all that climate change analysis, which is part ecology, part physics, part meteorological calculations. There's also an assessment of climate value at-risk, in other words, how we translate things that are going on with climate change itself into our understanding of risk in the portfolio.

Likewise, it's not all doom and gloom. There are tremendous opportunities. There's also in the report a green revenue map, which shows where we've got money decked onto those opportunities. And I think just to put a number on both those things, risk and return, we've assesses that about 20 percent of the fund's assets are vulnerable to either transition risk or physical risk, but in turn, almost 20 percent of our private assets investments are in what, you know, tends to get called climate solutions. So we think, although this was an extensive piece of research, it's been extremely valuable to us in understanding the exposure both to risk and return.

We also, along the way, realized that we do not, at this stage, have some of the analytical tools that we need to properly assess that risk. So we worked with Wellington using meteorological data from what used to be called Woods Hole now Woodwell, and it quite well have gone from being a hole to a well, but never mind.

But using meteorological data to map onto the physical location of assets that CalPERS owns. So if you think about something like extreme temperature in the southwest of the United States, we can see projected over time, what risk will becoming to effect assets that CalPERS holds. And obviously, with extreme temperature, we own, for example, a shopping mall, extreme temperature might affect where people choose to live, which would affect the shopping population, not withstanding the use of the Internet. It will also perhaps affect, you know, foot traffic into facilities that we've got.

So there are very simple ideas that the weather actually has an impact on assets, then need to be modeled in a way that can be useful for financial purposes.

Next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So data and corporate reporting. As I said, really, we are often groping in the dark for extremely important information that we need. And the -- as we say with the objective, we, first of all, thought that we need to get initial voluntary corporate reporting on the books really to work out what's practical, what matters, what's relevant to risk and return. And through that, we've been grateful to work with bodies like the Sustainable Accounting Standards Board and others to really push this forward.

However, voluntary reporting is not enough. We've come to appreciate doing the period of this plan that the single most important thing is to get reporting, which can meet the test for quality not just quantity, such that it's at the same standard that we expect for financial information.

And a lot of what companies report on ESG basically gets ignored by investors and it's no surprise, because it's not standardize. It's not audited or assured is perhaps a better term. It's not integrated into the financials. So this really is the important area of work on data and corporate reporting that we've been involved in.

Next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So we want to again give you a couple of examples of where we've been able to make progress. CalPERS for some time has represented the Council of Institutional Investors when the Advisory Council for the international accounting world, that's the IFRS, the International Financial Reporting Standards, that's what IFRS stands for. That role is taken currently by James Andrus, who leads our financial markets work.

CalPERS has also been able to work through, on the U.S. side, through the SEC Investor Advisory Committee, where we have served on that committee and been able to develop specific recommendations for how important sustainability topics can be taken up.

So through this work with regulators, there's two examples here that we're putting forward. The first is on human capital management. Now, if you look at the balance sheet for the S&P 500, it's 85 percent intangibles. Thirty years ago, it was 15 percent intangibles. So what we're really saying is this is kind of a black box in corporate reporting, where we know intangible assets are obviously the source of the greatest value and potentially risk, but we don't have reporting around what's happening with the workforce.

So the recommendation, if -- when we get a chance to look at it, was put forward to the SEC by the Investor Advisory Committee that we worked on, covers basic information that we think is essential, the status of the workforce, full-time/part-time contingent, zero-hour contracts, whatever, that is very important, also, health and safety.

Now, remember this is before the pandemic, but health and safety, workforce benefits, diversity on both gender, and race, and ethnicity, employee engagement, you know, how companies are treating their workforce in terms of engaging and ensuring the status of the workforce, and the participation, and the satisfaction with the workforce is properly handled.

The good news here is that that framework was put forward to the SEC. It was adopted. However, it was adopted as an in-principle reporting framework. And what we've seen in the past year, despite the terrible, brutal impact of the pandemic, is that the reporting from companies in the absence of any standards is just very hit and miss. There's a bit of a narrative here, a bit of information there, and it's very hard to get any real sense of what's going on.

So Chair Gensler in our -- in his investor outreach, which is extensive at the moment and we've had several opportunities to be part of those discussions, has made clear human capital management is next and the consultation was announced just last week.

The other example we want to point to is on climate risk and Divya Mankikar who, at that time, was leading our climate change work, sat as the asset owner representative on the Commodities Futures Trading Commission special report on climate risk as a financial -- as a financial issue.

The recommendations that came out of this are extremely important, because they focus on mandatory risk reporting, the need for carbon pricing, the need for removal of fossil fuel subsidies, and a range of issues, which CalPERS has called for over the years.

Now, why does it matter that we're using this example rather than another one? It's important that this report came out under the previous administration and the United States, and also that it was accepted by the SEC under Chair Clayton. This demonstrates that we cannot approach these topics as a partisan political topic. It's clear that the new administration is making climate change and human capital management priorities. But both of these initiatives that CalPERS worked on and played a key role in made progress on under the previous administration.

I think this speaks to the fact that the economics of these issues is being better understood and it's being viewed really as an investment theme as it should be, rather than --

CHAIRPERSON TAYLOR: Anne, could I ask you to explain who IEA is just for everybody's benefit real quick.

MANAGING INVESTMENT DIRECTOR SIMPSON: The IEA, yes.

CHAIRPERSON TAYLOR: Yes.

MANAGING INVESTMENT DIRECTOR SIMPSON: The International Energy Authority is the world's body -- think of it like world soccer, the organization that looks at global issues and climate change. And they have just come out with their modeling for the pathway to meet the Paris goal of maintaining global warming to no more than 1.5 degrees. And they say there is a narrow pathway for us to do this. And as part of their advise, they say there's no room for further investment in oil, or gas coal, or tar sands. So this certainly put -- got the attention in the G7 discussions last week, as we all know.

CHAIRPERSON TAYLOR: So I just wanted to make sure --

MANAGING INVESTMENT DIRECTOR SIMPSON: Is that --

CHAIRPERSON TAYLOR: The IEA also generally was for talking about -- it was created after the oil crisis here in the United States, I believe, right, correct?

MANAGING INVESTMENT DIRECTOR SIMPSON: Yes.

CHAIRPERSON TAYLOR: It really was a fossil fuel organization, so for -- and I know that you were talking about something else, but this report also talked about mandatory reporting and -- et cetera. I just wanted to get that out there that, like you said, it's no longer political, so...

MANAGING INVESTMENT DIRECTOR SIMPSON: Yes. Yes. No, your point is very well made.

You know, we now have Democrats, Republicans, the U.S., China, Japan, Europe talking not about is this happening, but how do we -- how do we respond? We've moved into the what do we need to do about this as opposed to is this really going on in the first place. And that -- by that, I mean climate change.

A couple of examples to add to what we've been doing. We've also made -- taken opportunities where they arise to weigh in on international consultations and the Korean Financial Services Commission is a good example of this. And as -- and the Board will be aware, we, on a fairly regular basis, do go to give testimony most recently at the House Financial Services Committee and subcommittee as well. And we've given testimony, written and oral, on a wide range of issues around human capital management, and climate change, and market structure, in other words, all of our three forms of capital have been -- we've had this opportunity with our advocacy work to represent CalPERS, which is a tremendous honor to be able to represent CalPERS in these hearings.

May I have the next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: The links to lines to all of that are in the appendix, if anybody would like to see the testimony itself.

Right. Our first cross-cutting theme, climate change, which Chair Taylor has rightly just flagged. The objective here, as I said, is simple -- beguilingly simple. If climate change risk is being exacerbated by global warming, and global warming is being contributed to by company emissions, and we own those companies, then we have an opportunity as the part ownership of those companies to do something.

So the point here on the KPIs that I just flagged is at the point when the Board adopted this plan, we had just completed our first carbon footprint of global equity, which, at that point, had about 10,000 holdings. However, this is why the data so important, in assessing the carbon emissions for those 10,000 companies, we found a shocking thing, which is that 80 -- about 80 companies were responsible for around 85 percent of the emissions. It was an incredible degree of concentration. We only looked at Scope 1 and 2 emissions at that point.

So really this gave us the idea that we could work with others in our philosophy of partnerships, if it was true for CalPERS that just 80 odd companies were producing this volume of emissions, then what we could do is work with others and say, no, we don't have to boil the ocean, to use probably absolutely the wrong metaphor, but we're not trying to tackle 10,000 companies. We need to the tackle about a hundred.

And the KPIs here are obvious that measure and report the reduction in the carbon footprint and ultimately we want to track the financial performance of those companies.

We dubbed these companies systemically important carbon emitters. And that's an important idea and it borrows from systemically important financial institutions, which is an idea that central banks use when they're looking at regulating market risk with -- from a financial perspective. So the idea that there are a small number of equally significant carbon emitters gives us an insight into how we can tackle climate risk.

Just to give you a sense of the scale of these emissions, we calculated last year that the hundred companies that became Climate Action 100+, the hundred companies are the third largest source of emissions on the planet. So number one is China, number two is the United States, number three just 100 companies.

So this focus being data driven and being focused on where we take action is a good example, because climate change is a very big complicated topic, so making sure that we're very disciplined about what we were trying to do was important.

May I have the next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So this graph is really to show you how Climate Action 100+, which is an initiative that CalPERS convened -- I'm going to show you precisely what it's focusing on by -- on this group of companies, because it's one thing to say here are a hundred or so companies responsible for all these emissions. And by 2050, all of these companies need to have reduced emissions by an order of 80 to 90 percent. That's extremely challenging, not just for those companies, but for their whole customer base, because if oil and gas, coal, and other fossil fuels are going to come down, then the users of those energy sources need to be able to transfer to cleaner sources.

And that means industries like transportation, utilities, cement, steel making. You know, our friends at CDPQ remind me that even when you're investing in wind power, you're investing in cement, steel, and shipping, because those windmills don't put themselves up. They have to be transported.

So really what we're talking about with this project is not just getting out the source of emissions, but working with these companies to build out a strategy for their own success and to manage risk an opportunity, but also it's going to have to be done on a sector-savvy basis. In other words, we're going to have to look not just at the supply of fossil fuels, but also the use.

This is another reason why simply divesting from fossil fuels won't get the job done. It's not just that we lose our ability to make change if we divest, it's also -- makes absolutely no difference to the users of those fossil fuels, which is where the bulk of the emissions are.

You know, the use of fossil fuels creates about 80 percent typically of where the emissions lie and that's called Scope 3. That's why Scope 3 emissions are so very important.

So the benchmark that we built out and launched at the beginning of this year essentially, in points 1 to 10, maps out what needs to happen and assesses in its first baseline where these companies are. So as you'd expect, there are short-, medium-, and long-term goals for emissions targets reduction, but also there's a focus in item six on capital allocation. So it's not just the decarbonization strategy, which is on point five, but it's actually looking at where CapEx is going.

Now, some companies have begun not just to make the commitments, that's good, but to follow up with the CapEx alignment, but that's very, very important work. And until that happens, we won't have confidence that things are getting better.

Climate policy engagement, essentially this is political lobbying. We want to make sure that companies, when they're using shareowner funds are not speaking to both sides of their mouths on the one hand saying they support the Paris goals and on the other hand, either in public or quietly behind the scenes, lobbying for rules regulations, and policies, which are going to cut across the Paris agreement.

Climate governance is number eight. We need climate-competent boards. So we need boards across our portfolio that are independent, diverse, and competent. And on climate change transition, this means boards are going to have to find new skills and experience. It's not a matter of business as usual. Business as usual will take us all collectively off a cliff. So we need a fresh strategy, and often that's going to mean fresh thinking, which will mean board refreshment.

And item nine is blank at the moment, because we're doing the work as we speak. And it's the concept of the just transition. Now, in the preamble to the Paris agreement, people forget, because they kind of flip to, okay, what's this all about. Let's get to page three.

The first section of the Paris agreement is all about the just transition. And what it acknowledges is unless the workforce and communities, particularly vulnerable communities, are taken care of with these transitions plans -- first of all, that's not what the Paris agreement is intended to is to trample over the poor and the vulnerable. It's also very important, because in the transition, we need to make sure that there is popular support, political commitment. And that's going to be affected by the extent to which workers and communities are protected during the transition plans.

So we are in the middle of a project at the moment. We're teaming up with the Vatican Council on Inclusive Capitalism, also at the Grantham Institute in London, and the Just Transition Project at Harvard. And we're doing very detailed work to sort of build out what this piece of the benchmark will look like, and then next year we'll be able to start assessing companies.

Item 10, of course, is the obvious, our friends at TCFD, this framework for reporting on climate risk, and you will have all seen from the G7 last week prior to the meeting, a call from the Financial Stability Board to make sure that that mandatory reporting is brought in both internationally and through the U.S. So we think there's going to be good progress in that agreement as well.

So next slide, please

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So we did this slide before we knew the results of the vote, which is -- so we're not being coy about what happened in May. It's just that the timing worked out at the AGM vote. Now, all of you -- all of you will have seen, through a very, very extensive media coverage, that CalPERS supported a cohort of new directors coming on to the Board of Exxon. Now, that has never been done before. I'm delighted to see three of the candidates were successfully voted on. And this has prompted a huge discussion about the vehicle that was used known as Engine 1. Is this a new phase in hedge fund activism? And there's a lot of -- I've got more to talk about on that.

But I think what is important on this slide is not just the result at the AGM with the three new directors coming forwards, the question is how did we get to the point where that was possible?

So this slide really goes right back to August 2016 when this plan -- this strategic plan was adopted, and Exxon was, as we'd expect, identified as one of the systemically important emitters in what became Climate Action 100+.

The following year, recognizing this, CalPERS co-filed a risk reporting proposal, which passed. This was the first time there had been a shareholder win on climate risk reporting. So that in itself was an extremely important milestone.

In response, the following career, Exxon published its first sustainability report. You might think, well, excellent. The problem is that that report excluded what we think was about 80 percent of the story, because it didn't include Scope 3 emissions. And so that same year in -- out of concern with Exxon's then policy of refusing to meet with shareholders, it was actually a policy that Directors are not allowed to talk to shareholders. They had a process whereby questions could be sent to board members through the website, but only if management chose to pass the message on. That was made quite clear. We may or may not pass your message on and you may or may not have a reply.

And really that is not the kind of accountability that capitalism relies upon. It's got to be that the shareowners can hold boards accountable in order to ensure that we get the long-term performance that we need.

In August of 2020, CalPERS came back on the question of climate risk and filed another proposal, this time specifically to say, well, thank you very much for calculating Scope 1 and 2. Scope 1 is when you're pulling the oil out of the ground, scope 2 is when you're refining it, but all the big production of emissions is when the products are being used and that's Scope 3.

By then, there have been news that Engine 1 was filing a proposal to -- not a shareowner proposal -- had filed that it was going to be running new candidates for the Board. And again, I want to say that if we had not won the right to vote against Board members in an earlier period under the corporate governance work, in other words majority voting, we wouldn't now be in the position to hold the Board accountable. And sometimes when we're doing what look like rather boring, technical things, like can we have an amendment to the bylaws, or could we have a voluntary policy to ensure that Board members we can vote against them, not just in support. And that work is really what set the stage for this type of result at Exxon.

So what CalPERS did was have extensive discussions with the Engine 1 team about the criteria -- not the individuals, but the criteria, the missing skill sets, and what was needed. And I also want to acknowledge the vitally important role that CalSTRS played at this stage. We were having weekly meetings and discussions with our sister fund team at STRS. And when Engine 1 put their candidates forward, STRS came out as the first pension fund to support.

So CalSTRS is also actively involved in Climate Action 100+. As we know from the earlier slide, this is now an extremely large initiative. We have a community of around $54 trillion as signatories to Climate Action 100+, all focusing on the same companies and all focusing on the same goals.

Now, it's very important to note that we cannot work as a group. We do not work as a group. Each signatory has to follow their own path, guided by their fiduciary duty. However, with over $50 trillion now agreed on the same priorities at the same companies, it means that we're moving from cacophony to a choir. Some coordinated thinking by investors is actually starting to have an effect.

So not only did CalPERS run a proxy solicitation in support of the candidates at Exxon, we were also at Climate Action 100+ able to host a proxy briefing to allow the four candidates to introduce themselves to the signatories of Climate Action 100+. I think this was extremely important, not just because it gave the candidates and also investors at Exxon a chance to understand what the new skills and experience were that were coming forward, but also to ask really difficult things like, well, how on earth are you going to make change on this Board, if you come in as a minority.

The people are going to be feeling very bruised and maybe unhappy about the fact that you arrived, because some other directors, if you win, are going to lose and well have to step -- so how are we going to work in that type of environment.

So the discussion in that webinar, this global initiative Climate Action 100+, I think, was very important not just for establishing the credentials of the candidates, but also their experience as board members and their collaborative thoughtful approach to working with others and building team at the Exxon board to push out -- to oversee management pushing out the new strategy.

CHAIRPERSON TAYLOR: I'm sorry. I'm sorry. I just -- I've got a couple questions here. Sorry about that.

Ms. Middleton.

COMMITTEE MEMBER MIDDLETON: Thank you, Anne. This comment may have been better timed to come after Anne finished this part of the presentation, but we've heard the argument on a number of occasions that the proper course for us to follow in responding to climate change is to divest. And the alternative that staff has argued consistently is engagement and partnership. And I think what happened in May with the vote at the Exxon board -- ExxonMobil board is an absolute confirmation that the strategy of engagement and partnership is working, and is the right way to go. And on behalf of just an incredible number of people, I want to thank Anne, our team, and all the partners that we had at CalSTRS and across the board. This was -- this was one of the times where the headline read CalPERS and we had a big smile on our face.

(Laughter.)

CHAIRPERSON TAYLOR: And, Anne, I'm not sure you got to the punch line, so let me get you to -- let you go to the punch line. I wasn't sure where Lisa's comment was fitting in, so I'm sorry. Go ahead.

MANAGING INVESTMENT DIRECTOR SIMPSON: No. Well, thank you, for those kind words, Ms. Middleton. And I also want to say not only was this an external partnership with Climate Action 100+, with our sister fund CalSTRS, it was an internal partnership as well. And a special thanks here to Simiso Nzima who leads our corporate governance work in Global Equity for really, really spending -- he and his team taking such a lot of time, and care, and effort with this. And without that one-fund, one-team philosophy that we have internally, we couldn't have -- we couldn't have done this. But thank you very much.

So the result of the vote as -- I think every cliché in the book has been wheeled out to comment, you know, it's a watershed, it's a turning point, it's a historic occasion, it's a game changer. And I think it's all of those things for the reasons Ms. Middleton just said, because what it demonstrates is not just that investors are requesting a response to climate change, investors are requiring a response to climate change.

And for me this is a shift from thinking about investment as this deployment of financial capital, and of course it continues to be that, but it's understanding these three forms of capital and how they need to be managed, and then using our engagement responsibilities, our engagement rights to make change, as Ms. Middleton said, working with others.

So we now have a number of board members who were voted out at Exxon, three new board members voted in, and we'll be in discussions with the company in coming months to make sure that we're closely following how the new board at Exxon is going to be picking up the current strategy. Remember that benchmark slide. If we to pull up the Exxon score, you'd see on almost every measure that Exxon is barely on the starting line, whereas other companies in oil sector, Total, Eni, Equinor, Shell, BP, their competitors are further along.

And we want to see Exxon picking it up and improving its strategy, because, you know, the financial condition of the company is very worrying. At the end of the day, these risks show up in the share price. They show up in the financials. So what's why it's so important to address.

Can we move to the next slide.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So likewise, another area of internal partnership with Simiso and his team in Global Equity. The objective here is to enhance total fund performance by increasing corporate Board diversity. So what -- the work here -- and Simiso has updated you on this in his annual program review each year as he's coming along to do that, the goal is ambitious. We said out KPI is that all public companies in which CalPERS invests should have a dimension of Board diversity ultimately.

But the beginning of this, because we have to start somewhere, there's a lot of holdings in the portfolio. At that point, as I said, there are about 10,000 Is seemed important that we focus on the big companies because these are the leaders by example. It's where we have the biggest economic stake and the focus was the S&P 500. So the initial target for this five-year plan was that all S&P 500 company boards should have a dimension of board diversity.

Now, linking back to the priority on data and corporate reporting, we're back to that same problem, just like we are with climate change, it's very, very hard to actually get reliable information so that you can assess the current state of the board. So for that reason, at that point, the best source of information on diversity at that stage was on gender. Now, there's an advantage to tracking gender in that it's relevant in every market. However, for CalPERS, it's only one dimension of board diversity.

And in our Governance and Sustainability Principles, we talk about diversity being multi-faceted, and indeed it is. And it is not just race, ethnicity, special skills and experience, it is sexual orientation, gender identity, abilities and disabilities, it is your work history, it's your age, your familiarity even with things like technology. So bringing this multi-faceted approach to diversity into an engagement campaign is actually at the moment still not got the benefit of data that allows us to focus in the right way.

And when we were talking about our advocacy work, you'll see that the way we see to fix this is actually by working with the SEC to make sure that we're getting companies required to report on these issues, which then allows investors to know where they need to focus attention.

So with those caveats, we can go to the next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So since the beginning of the plan, the first KPI has been met. Although, it was a limited KPI for the reasons I've explained. So now all S&P 500 companies do have a female director. And since 2017 -- and again, I think this is back to Ms. Middleton's point about the impact of engagement, 65 percent of the companies that CalPERS has engaged since 2017, have added at least one director.

So if you look at the broader market, we've just given you a few numbers here to give you a sense, there is progress, but we still have a very long way to go. This Russell 3000 numbers show that I think we're demonstrating that we can have an impact on this. We've got to get the required reporting in better shape, because that's actually then, I think, going to galvanize other investors, because at the moment even attempts to assess gender, people are looking at names, photographs, using third-party data sources. We're trying to hand vet individual board director status. This is really not an efficient or effective way of working.

Can I have the next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: This is just giving you the same trends and information that you had on the previous slide. You'll see in blue we're on the left where we were in 2016, and how things have improved along the way. I think -- I'm just coming back to Exxon, one of our successful cohort of three was a model.

And you'll see I think the literature shows that three people can be change agents in a group. It's called the power of three. One person on the their own can't do it, even two will struggle, but it's generally understand that with three we're going to start to change things.

So, for me, the interesting chart -- interesting part of the chart is showing the rise in the number of companies for S&P 500, which have three female directors going up from less than a quarter to over a third.

Can I have the next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So here's an example just in the way we're approaching this presentation, to give you a practical example. And this is Lindsay Corporation. So in 2017 July, Simiso's team identified this as a company that lacked board diversity. What followed was request to engage with the board's leadership of course.

In 2018, the company added a female person of color to the board. And the reason for choosing this particular example out of many is it's a chance to remind ourselves of the role that the Diverse Director DataSource, fondly known as 3D, has played in this. And at an early stage in CalPERS work on diversity, we heard often from companies, you know, if only there were people who were qualified, you know, above those who they already knew and played golf with or were familiar to their search firm.

So we set up -- you know, it took a period of time to do this, but set up the Diverse Director DataSource, working again with CalSTRS, our sister found, this is now housed on the Equilar platform. And it's, I would just say, a runaway success. Through that platform, there are now over a thousand diverse directors who have been appointed to public companies. And I think it's been a really practical way to gather talent together. And I think David Chun, the founder of Equilar, was doing an extraordinary job in really just taking an excuse off the table, which is, well, we don't know where to find people. Well, here they are hundreds of them ready, available, qualified, and able to bring diversity to a board and all the benefits that follow.

So next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So now to our governance priority with private equity. And just by the nature of the private equity industry, where typically CalPERS will be a limited partner for the most -- for the most part, and the emphasis here really needs to be to underline that word "limited". We're limited for a reason. We're a limited partner, because it limits our liability, and also because we're hiring a GP, a general partner, because they have the skills and experience for this style of investment, which we can't easily access internally at CalPERS.

So there is real value to us in being a limited partner. However, as with all good things, there's always a downside. By being a limited partner, also we have limited access to information, and that's intended. It's part of the division of labor, the separation of roles and responsibilities between limited partners and general partners.

However, CalPERS is a co-founder of ILPA, the Institutional Limited Partners Association, and has been actively involved over the years and it's wonderful to see Greg Ruiz, MID for Private Equity just appointed to the Board of ILPA. So CalPERS is back on the board, which is important.

The KPI was a tough one. It was to say a hundred percent of core private equity partnerships should complete the ILPA template on profit sharing and fee reporting. This was important, because we didn't want CalPERS just to be moving ahead and being a pain in the neck to our GPs asking for information that no one else had raised a hand calling for.

The importance of working -- again, it's our partnership philosophy. In the course of working with others is we want to lift all boats. We want to make sure that the industry itself improves on alignment with the LPs who are financing the industry. And this is an important first step.

May I have the next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So the outcome here, and many thanks to Dan Tanner from the private equity team for helping us with assessing the progress on this important area of work. At this stage we were putting the presentation together, 94 percent of CalPERS' private equity partnerships were using the ILPA fee template. That's by number. If you look at net asset value, it's 98 percent of the private equity portfolio.

So I think this is an extraordinary sign of progress in the industry, and I think really speaks very well, not just to the engagement model, but also to partnership and how we can -- how we can bring improvement.

May I have the next slide.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: The next priority, number six, is arguably the most difficult and it's the manager expectations work. And why is it difficult?

Well, the issues raised by sustainability are complex. They're evolving rapidly. We've already acknowledged we're in a situation where we don't have data. And there's nothing an investor hates more than not having data. The deploying of capital into uncertainty is the day job of an investor.

However, when we don't have information on some critical issues, not only is it a challenge in our engagement work that it's the focus of our advocacy to get things improved, when we're looking at how to integrate, it also means that we have to do a lot of work in order to make sure that we have the data set, the analytical tools, and an approach which is going to work.

So the way that this priority has evolved is as follows. The objective is to ensure that no less than 100 percent of investment decision-making policies and processes reflect relevant ESG considerations. And if I had a little pen, I would underline the word "relevant".

There's a lot going on out there. There are many, many issues of importance to society, to communities, to workers. Our focus is on what is it that's relevant to us as fiduciaries? What is it that's relevant to us as long-term investors thinking about how to manage risk and how to make the most of opportunities.

So this is a narrower set of concerns for CalPERS from an investment point of view. This doesn't mean that the other issues don't matter. It just means that for us as a fiduciary, we've got to be very disciplined about how we approach these issues.

So the KPI for this objective is that all managers have policies and procedures that are including ESG information in decision-making. Remember, that's for both our internal and for our external managers. And furthermore, that the asset classes establish and implement documented procedures for due diligence, contracting, and monitoring of the managers.

So let's now turn to each asset class example of how they've gone about this.

Could I have the next slide.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So let's begin with global equity. As this is about half the fund, so by value the biggest asset class. Now, I want to go back to something I mentioned at the start, which is the approach on integration each asset class has taken reflects the strategy of the asset class. So in this case, for global equity, as everyone knows, our strategy here is to invest according to an index. That gives CalPERS an efficient way to harvest economic returns. And it's efficient, because it gives us a stable portfolio. It's also constructed in a way that gives us a long-term position.

So it now means is the strategy is engagement. We do have a small number of external managers. We put a link at the bottom of the slide, so that you can see what the Sustainable Investment Practice guidelines are for those external managers.

But the important thing here is, just as with the Exxon vote that we were just talking about, is that we're able to work with others to use our ownership position to bring about change. So positive for risk management and going to help set companies in a better -- companies in a better position, improve the odds. That's what we're looking for.

Back to Ben Meng's advice on thinking in bets. We want to improve our odds of meeting the returns that we need.

So here -- and thank you to the Corporate Governance team for providing this. We just want to give you, in this presentation, a few highlights from this proxy season, so that we could have -- we could have filled this slide with probably another three dozen examples. So these examples really show -- excuse me -- how the sustainable investment agenda is evolving and the broad support that many of those issues are starting to -- starting to gain from investors.

So I'll just run through what these are very quickly. McDonald's. CalPERS, and many other investors, voted against the Board Chair Mr. Hernandez. And this was because of a failure of risk oversight around the departure of CEO Easterbrook, who left in somewhat unsavory circumstances with a rich reward. And I'm sure you're all familiar with this from the media coverage.

The next example is Wells Fargo. There were several issues of concern on the ballot there. But I think the important thing is there was a shareowner proposal supported by SEIU calling for a racial equity audit at Wells Fargo. And we saw this at a number of companies this season, which CalPERS has supported. We've been very consistent with our human capital management advocacy at the SEC. It also absolutely reflects CalPERS commitment to diversity, equity, and inclusion. And through our research work, we have conviction that these are relevant issues for investment performance as well.

Likewise, at Johnson and Johnson, we also supported a call for a racial equity audit and also a proposal which was looking for a report on access to vaccines, very much on the equity and inclusion side of life.

Exxon, of course, we've talking about the Board, but I do also want to flag that we won other very significant votes this season at Exxon, particularly on climate lobbying and on political lobbying more generally. Two separate votes that were successful.

Berkshire Hathaway is an important AGM, because Warren Buffett, it's his last hurrah. The Sage of Omaha went out defiantly in opposition to this climate risk proposal that CalPERS put forwards to approve Climate Action 100+. Now, Mr. Buffett has a very large personal stake in Berkshire Hathaway, so we knew with his opposition this would be a very tough one to win, but it was a very significant vote of support elsewhere across the shareholder base of Berkshire Hathaway where really, you know, we felt the argument -- you know, Warren Buffett's argument was, well, we can't consolidate all the information on the emissions from our different companies that we own a piece of. I

I said, well, you have to do that for the financials, right? That's what the consolidation process requires you to do, and we don't see climate risk as being any different. We expect to have, you know, consolidated reporting from a conglomerate like Berkshire Hathaway.

Chevron we want to flag, because the -- we won last year a proposal on political lobbying at Chevron. But this year, a very important proposal passed, won a majority, which calls on Chevron to -- and the phrase is substantially reduce its Scope 3 emissions. So when you and go to the gas station and buy petrol or gasoline, depending on where you are buying it, the Scope 3 emissions that come from the use of Chevron's products by its retail customers, by its commercial customers is really where 80 percent or so of the emissions.

So by shareholders saying yes, you need to take responsibility for the whole cradle-to-grave production of emissions from your business, that itself is very important. But secondly, it passed saying these have to be substantially reduced, which really means that Chevron has to be now in the business of dialogue with its own customer base as some of the European oil companies already are.

And finally Phillips 66. We're putting this year, because again Climate Action 100+ company, and it was a political lobbying proposal calling for full disclosure and alignment with shareowner interests passed as well.

Let me turn to the next slide. Thank you.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So global fixed income, a completely different strategy, as you are all aware. So also an internally managed portfolio for the most part. However, we've put the sustainable investment practices guidelines with a small number of external managers. You can see how we're -- how we're talking to them and what the expectations are.

Now, global fixed income is not an index strategy. It's an actively managed portfolio. That means that the appropriate point to start thinking about sustainability is in the due diligence for individual investment decisions, so it's fundamental company analysis. So completely different to global equity.

And I just want to note that in talking to our team members, I'd like to thank Paul Kramer for the work that he did to provide the update to this presentation. And he has been able to explain very clearly that the way that there is an integration of these sustainability factors in fixed income begins really at the beginning with screening tools for investment grade debt. These are used to help identify risk and typically from Fed party providers.

And then also, it is these -- the sustainability factors are also used on a relative value basis, so that if there are two recent equal opportunities, this will tip the balance in the decision making, where it's considered to be relevant to the outcome on risk for the company.

We've also put a couple -- an example here, as with the other sections of the presentation, just to give you a sense of what this all looks like in practice. So we've highlighted here CalPERS investments in green and sustainability bonds. And the purpose of these bonds obviously is to provide CalPERS with what we consider to be equivalent credit risk. There's the conventional bonds of the same issuer. And Paul has emphasized when we were preparing this presentation, that the issue is activities in total need to be assessed in making that decision. It's not just looking at that bond itself as though it were a separate part or a separate entity.

But the proceeds of these bonds are used to finance projects, which are going to improve sustainability overall. So some of the examples that we've put on this slide, no doubt, no surprise what they do with renewable power, energy efficiency, clean transportation, and also, you know, the greening of buildings.

And again, if you click on the link at the bottom, you'll be able to see the detailed sustainable investment practice guidelines that global fixed income uses.

Can we turn to the next slide.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So manager expectations in private equity. Again, this is a completely different investment structure as we were just saying. CalPERS typically, other than through co-investments, is a limited partner when deploying capital. And therefore, we're relying on the general partner to manage CalPERS funds, but also to be picking up these important issues on ESG.

So the important thing here is that private equity has surveyed and determined that 100 percent of the external core managers in private equity have their own ESG policies. And that's appropriate, because we need the GPs to have the power and the responsibility to implement. It's very important that the GPs have these policies. As a limited partner, this is something we can -- we can ask for and we can discuss, but the responsibility is with the GP.

Also, and private equity has included ESG considerations in CalPERS side letter for new managers, and also in the internal process for appraising and monitoring progress is now an ESG section in the final investment recommendation that staff make. And there are two examples of companies in our portfolio that Dan Tanner kindly provided, PurposeBuilt Brands and Metallo, two companies both where the business case for their success is firmly rooted in sustainability.

Now, we'll see that we don't have the Sustainable Investment Practice guidelines for private equity here. That's no surprise, because as you know, private equity's new strategy is just being built out and sustainability is one of the five core components. So that previous work has been retired and private equity is in the process of building that piece of the structure as we speak.

May I have the next slide, please.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So here's our other major private markets asset class, real assets. Now, there's a different structure for real assets, typically funds of one. And this has allowed real assets, through separate account contracts, to have a direct requirement for ESG to be integrated into the management process.

This is not just -- we've had and seen a lot of focus on environmental issues, and rightly so, but I think it's also important to know that the Responsible

Contractor Program, which, if you like, is an early example of CalPERS' thinking about human capital management - it goes back many years - there is a hundred percent compliance across real assets and infrastructure with that Responsible Contractor Program.

A further element is that again our philosophy of partnership at work once more that CalPERS is part of the Global Real Estate Sustainability Benchmark and its equivalent for infrastructure, which CalPERS actually helped to build out back in the day.

GRESB, a somewhat unpronounceable acronym, but -- this enables us, through partnership, to gather in data from all of the managers that are being used and also for us to be able to see how we are doing relative to other -- to our peer investors who are also part of GRESB.

What real assets have also done is take their own sustainable investment practice guidelines, which again -- I put a link in the bottom of the slide, and they've actually incorporated it into their procedures manual. They've included ESG questions into manager evaluations, and also that they have integration in their reporting, annual investment planning, the third-party assessments, and also the energy optimization initiative, which the Board will be familiar with. It's been focused on improving energy efficiency, but it's also turned out to be very financially additive for the fund as well.

So -- and just to give you a sense of how big that program is -- and thank you very much to Rina Lessing and Fanny Bourdais de Charbonnière over the last four years, 220 energy optimization opportunities have been identified, which shows the real scope and scale of that work.

May I have the next slide.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: So that really is a whistle stop tour of five years work around these six priorities that were identified based on research, focusing on the economics, and also making sure that we are really being disciplined about what we tackle, how we tackle it, and that we really have got the investment (inaudible)--

(Automated voice.)

CHAIRPERSON TAYLOR: Can somebody mute that?

(Automated voice.)

CHAIRPERSON TAYLOR: Is there a way to mute that?

MANAGING INVESTMENT DIRECTOR SIMPSON: Yeah. I hope whoever it is is able to get back in soon.

So what are the next steps? The five-year -- this five-year program of work, as I said at the beginning really has involved every single division of the enterprise, from Legislative Affairs, Legal, Stakeholder Relations, Public Affairs, the Executive Officer, the Investment Office, all asset classes and programs have had a role to play. And that in itself, I think, has been incredibly valuable. And there are many people to thank in marking the progress that we've been able to make.

So what's next? Well, the first thing to say, I'm not sure we need to keep saying it, but it never hurts. Maintain our focus on the risk return impact of sustainability to support CalPERS investment objectives. That is our fiduciary duty and it also gives force when we speak as an investor to be able to reflect the investment case. And we are also very respectful of the fact that other groups with other points of view and other mandates will be picking up a range of other issues or maybe approaching the same issues, but in a different way. That is how society and the wider economy work. But for investment, we really have to stick to our knitting and not stray out into -- beyond the scope of our fiduciary duty.

I said at the beginning also that research or life-long learning research for us is absolutely the heart of what we do, because we need to be grounded in the economics. And if we're going to be grounded in the economics, we need to be grounded in the evidence. So we have issued two requests for information under the SIRI, this time SIRI 3, Sustainable Investment Research Initiative. We've issued one on climate change to look at specifically the issue of capital allocation. And the other, under human capital management, we really do want to better understand the dynamics around diversity, equity, and inclusion. And we also want to inform our own understanding of some specific programs that we have in this field as well.

So those are RFIs went out. We had, I believe, 17 responses from a very wide range of exceptional sources. We've narrowed it down to two. And many thanks to Nelson Da Conceicao who's been leading our research effort on sustainable investment. He and I interviewed the final two last week, so we'll be in a position to contract in the near future.

The other element that's important for us is that this whole focus on sustainable investment has evolved rapidly. Five years ago, CalPERS was very much in the lead. We were ahead in some areas, but it's been a -- it's been very encouraging to see so many of our peers and fellow investors developing strategies, modeling new analytical tools, gaining new insight into this whole field. So we see that there's going to be an opportunity to benchmark progress and also benchmark possibilities, benchmarking with our peers, learning from others, both through CEM, which does a benchmarking assessment for CalPERS each year, but also through PRI, the Principles for Responsible Investment, because there's an annual survey which is phenomenally complicated and time-consuming.

However - and thank you to all the staff at CalPERS who participated in helping us to do that - it does give us a way to understand how the many, many other investors in PRI are approaching these topics.

And then as always, input from our Board and input from stakeholders on lessons learned is going to be an extremely important part of thinking through what the next steps might be.

In the appendix, if we'd just flip to that final appendix. Next slide.

--o0o--

MANAGING INVESTMENT DIRECTOR SIMPSON: There we are. For those of you who've run out of NetFlix to watch, or Hulu, or books to read on your shelves, here are resources, so you can get the full account of the different topics that we've been talking about today. So we hope that's useful if there's any particular project or piece work that you'd like to actually dig a little deeper.

So with that, Madam Chair, thank you very much. And I'll be glad to answer any questions.

I would also like to say that the other contributors to this presentation are also available. James Andrus, Simiso Nzima, Dan Tanner, Nelson Da Conceicao, Rina Lessing -- am I missing someone? Simiso -- Simiso Nzima.

And yeah, so if you have questions about specific bits of the program, we'll be able to bring them forward to answer your questions.

Thank you.

CHAIRPERSON TAYLOR: Thank you, Anne. I want to thank you and your team for this amazing report, and going over all of our successes, but also going over our challenges, because we know this is difficult work. And I just wanted to make a couple of comments first before I move on.

On page seven, you spoke about -- well, let me get back there real quick -- the TCFD report and total fund exposure to climate risk, carbon footprint calculated for each asset class, Climate value-at-risk analysis. So that's interesting to me, because it always makes me wonder while we want to not divest, what happens if, as we go through this, right, because this is continuing work, that we have done a climate value-at-risk assessment, right, and we find that we have stranded assets or they're not stranded right now, but they will be if we're to reach the Paris Accord 2050 benchmark. So what is our plan for that?

MANAGING INVESTMENT DIRECTOR SIMPSON: Thanks very much. Let me -- Dan, can I pass this one over to you? This is very squarely investment strategy.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Yeah. So, I'm sorry, Ms. Taylor, let me see if I can get the right person forward to answer the question. But can you repeat the question for me, please?

CHAIRPERSON TAYLOR: Sure. When we're talking about the climate value-at-risk analysis and our carbon footprint being measured for each asset class, which means each of our investments, right? So how do we -- how do we mitigate any issues as we're looking at these two data points, if we see that we're going to end up with stranded assets or -- right? So whether it's coal or fossil fuel of some kind, you know, they have to -- we have to be able to, in our portfolio, meet the 2050 Paris Accord.

So as we look at this - and it's not just us. This is going to be other investors and we see XYZ is now going to be -- they haven't changed their business model, so they're going to be a stranded asset, how do we in the future mitigate this, so that we're not holding that stranded asset?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: It's a great question. And I would say that it's probably asset class by asset class specific. And we can certainly go through each asset class, if that -- if that helps at some -- either now or at some point.

Certainly in the case of the public equity portfolio, it's more about -- and again, Anne spoke to it, more about all of our work around engagement and making sure that all of our managers are thinking about this. You know, as we talked about, you know, our equity portfolio is primarily indexed.

So as result of the index, we generally own it. In the case of fixed income, it's much more of an active approach, as Anne said. Now, this is fixed income, of course, so it's more about credit and it's less about asset ownership, but certainly it's part of the mosaic there as well.

In the case of real assets and in the case of private equity -- in the case of private equity, it's more manager expectations. In the case of real assets, it's probably more on us actually having blocks of what can and cannot come into the portfolio and making sure that we don't have these stranded assets. But it's a -- it's a great question and it's -- this, for us, is about that integration of these considerations into every investment decision that we make, so that it varies across the asset class, but certainly it needs to be unequivocally part of the -- part of the overall calculus of our investment decision.

CHAIRPERSON TAYLOR: Okay. Maybe we should look at that at a later day, maybe during ALM or something. I don't know, but it's just a concern. When I saw that, I was like whoa.

And then I had one other question for Anne before -- and we've got several other questions. We talked work -- the S, right, labor, wages, health, and especially after the pandemic, taking care of their health care et cetera. So one of the things that you talked about, and I can't remember what page right now, but -- is getting accurate reporting --

SENIOR STAFF ATTORNEY SIMPSON: Right.

CHAIRPERSON TAYLOR: -- as we do this. And I know that you -- we've one to the SEC on labor issues, et cetera.

MANAGING INVESTMENT DIRECTOR SIMPSON: Right.

CHAIRPERSON TAYLOR: As we get accurate reporting, are we also including -- that reporting can't just come from the company. It should also be like checked off by the employees, because a company could say hey, yeah, we're doing great. You know, we've provided health care. We've provided a living wage. We're doing everything the -- you know, everyone is asking us to do. And then if you go to the employees, they're like, no. So if -- is that included in this?

MANAGING INVESTMENT DIRECTOR SIMPSON: Yeah. Thank you for the question. An absolutely right observation, which is it's human nature. We all like to tell the good news. And it's the good news from our own point of view. Bad news for different points of view, you know, really require third-party verification. And that is why we have auditors. We know on the basic financials if companies were left to do their own -- go their own sweet way saying what the financial condition of the company would be, it might be rather a rosy picture. And the whole point of having an Audit Committee, and having an auditor, and having an internal audit function, and having regulators to make sure that there is truth and fairness in corporate recording, that whole system needs to be brought to bear on issues like human capital management, and it also needs to be brought to bear on issues like climate change reporting.

And that's really why we've evolved from saying let's move forward with some voluntary best practices, we're now saying no. This has got to be dealt with at the top table. It's got to be mandated reporting. It's got to have standards that are bringing forward information, which is then integrated into the financials. That means it goes through the whole internal control reporting cycle with the company, and also the auditor, and ultimately the regulator for those companies that are overseen by regulators.

CHAIRPERSON TAYLOR: Thank you. Yeah, because I'm concerned that it's not just the disclosure of the information, but the verification.

MANAGING INVESTMENT DIRECTOR SIMPSON: Absolutely.

CHAIRPERSON TAYLOR: And I think we would be carrying some risk there, if we're not doing the verification, so --

MANAGING INVESTMENT DIRECTOR SIMPSON: Correct. So our mantra on this is we need information which is standardized, timely, integrated, into the financials, and verified.

CHAIRPERSON TAYLOR: Exactly. Thanks.

MANAGING INVESTMENT DIRECTOR SIMPSON: Yes.

CHAIRPERSON TAYLOR: Appreciate it.

So my -- next is Ms. Paquin.

ACTING COMMITTEE MEMBER PAQUIN: Thank you, Madam Chair. And, Anne, thank you so much for a great report.

It was very exciting to see the progress made on this plan. I remember very clearly all the discussions around the establishment of the plan. And I think -- I have actually two questions.

And the first goes back to Ms. Taylor's question of Dan Bienvenue. And I think that as we look to fulfilling the 2050 net zero promise, I was curious to see if there was any intention to come up with interim targets that I know CDPQ and maybe some others are talking about that and starting to do that, because it just seems like it would be a heavy lift if we didn't start thinking about it and kind of breaking it out into smaller pieces as opposed to just getting to 2050 and then having to do a lot of uplift. So is that part of a potential next part of the strategic plan going forward or is that something that we could talk about at some point?

MANAGING INVESTMENT DIRECTOR SIMPSON: Yeah.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Certainly be happy to talk about it.

Why don't I jump in and then, Anne, if you have things to add, definitely please do. Thank you for the question. Yes, definitely something that we'll want to talk about. As an Anne mentioned on her final slide on next steps, I think the first thing we'd want to see get done as we finish our next round of the Sustainable

Investment Research Initiative, we do think that that research will yield some healthy results that will help us to plan some of these things.

And then the second thing, and candidly is that we believe we need a permanent CIO in the Chair to let us really also use that to formulate the overall forward looking strategy. So between those two things, expect that we would come back with a forward strategy on -- in the future that would allow us to figure out what does the next, you know, five years, 10 years, interim targets, all of that look like.

So I'll pause there. I don't know if Anne has anything to add, but that's -- that would be my sort of high level response to the question.

MANAGING INVESTMENT DIRECTOR SIMPSON: Yeah. No. Thanks, Dan. You remember the slide on the Climate Action 100+ benchmark. This is where we've really made our first important step on targets and timing. On that, we've built out a request for these companies to produce short-, medium-, and long-term targets along the dimensions that we were talking about strategy, emissions reduction, CapEx, political lobbying, compensation, and all that good stuff.

The reason we put those timelines in, and it's going to look different, depending on which sector the company is in, we need to be able to mark progress along the way exactly as you're saying. Now, the danger if we just look at the portfolio, our own portfolio, separate from the real economy is we can do a lovely job looking like we have a net zero portfolio. However, if the real economy hasn't made the transition, we're still exposed to climate risk. In other words, we can run, but we can't hide. There's nowhere to put 450 or 60 billion dollars in a safe place in the world markets, separate and away from climate change.

So that, I think, is a bit of a balancing act at the moment. There are some investors reporting in to the UN Net-Zero Asset Owner Alliance with interim targets, but they're intending to achieve them by divesting, by shedding assets. And our argument back on that is, well, just because you don't own them, doesn't mean these assets aren't still producing emissions. So we've really got to keep this focused on the real economy. And I think that -- you know, that is really the topic of conversation and the run up to COP26, because without policymakers driving this, there's going to be a limit to what the financial markets can do on their own. So that's the partnership theme all over again.

ACTING COMMITTEE MEMBER PAQUIN: No. I appreciate that Anne and Dan. And my last question also is on the carbon footprint reports that we're done for all the asset classes and just curious if there were any other reports that kind of merit global equity where there were a finite small group of carbon emitters which you could really target or was it just spread throughout?

MANAGING INVESTMENT DIRECTOR SIMPSON: I would have to go back and look at the other asset classes. Because we don't have that result, doesn't mean there isn't something buried in the analysis, that -- let me go back and speak with Nelson about this, unless Nelson Da Conceicao is on the line and he can answer that question immediately, since it's --

ACTING COMMITTEE MEMBER PAQUIN: That's okay. If you want to follow up later, Anne, that's fine.

MANAGING INVESTMENT DIRECTOR SIMPSON: Oh, that's great. Yeah, we'll do that. I'll make a note.

ACTING COMMITTEE MEMBER PAQUIN: Thank you.

CHAIRPERSON TAYLOR: Thank you, Ms. Paquin.

My next person is Mr. Miller.

VICE CHAIRPERSON MILLER: Yes. Thank you, Anne. I always look forward to your presentations and hearing about the fabulous work of this team. And it's especially near and dear to my heart. I spent my entire career as an environmental advocate, as a regulator protecting the environment, doing labor rights and advocacy, civil rights and advocacy. And to see CalPERS continue to really lead, implement, get this stuff deployed in a way that's integrated and is really producing results that continue to inspire me, inspire our peers, it's extremely gratifying. Because when we first started a lot of this, it was just seen as a distraction. You know, it's this hippie-dippie distraction stuff and it's not for serious investors.

And now, you know, the whole world seems to be coming around. No, this is about risk mitigation. This is about long-term investment. This is about maximizing the performance of our funds for our members and their beneficiaries. And it's just one of the things I really look forward to these reports, the results, and more fine news in the future. So a hearty thank you to you and to the entire team.

MANAGING INVESTMENT DIRECTOR SIMPSON: Thank you.

CHAIRPERSON TAYLOR: I'm talking and I had it muted. Sorry. Thank you, David.

Next is Mr. Rubalcava.

COMMITTEE MEMBER RUBALCAVA: Thank you, Ms. Chair.

Anne, congratulations on a very nice report to you and your team. I wasn't here when this plan was developed and adopted, but I think it's beautiful how ESG has been embedded in both the risk and the return. So there's -- they see the potential for holding back the economic growth, the long value creation, but at the same time there's a lot of opportunities.

And as we -- and as we -- the earlier discussion I enjoyed about -- the whole thing about the strategic asset allocation is coming forward and how to value and track decisions we make. It's clear that private equity is going to play a bigger and bigger role. And you mentioned in the manager expectations how there's some -- ESG has been incorporated in some of the decision-making, but I'm still curious -- you mentioned side letters. And so I'm excited about that and I'm looking forward to more, but the other -- I just want to follow what Mr. Miller said. He's talked about how -- he made terminology about how -- especially in climate change, how the -- you know, it's basically embraced and accepted that we need to do this.

And I think another area where it's becoming more and more apparent that we need to recognize is diversity and inclusion, which you had a nice little portion on in your report. I think the world -- because of the -- the world is coming around to recognizing it, so -- and I think this is an area where I think it's harder, where you're still developing strategies how to collect the data and report on it, especial -- and so I'm curious what strategies, or how you see this will be impacted, or will be applied, I guess, to the private equity, the private markets, where it's not this transparent how -- have you guys been thinking about that? I'm just curious if -- what has been the thinking there and what can we expect in the future?

But nonetheless, it's beautiful work and you and your team are doing excellent. And I know I sent you off-line a little congratulatory. It was very good work on the ExxonMobil. So thank you.

MANAGING INVESTMENT DIRECTOR SIMPSON: Yeah. Well, on behalf of the many people who are behind this work, thank you for those kind words.

To your question, Mr. Rubalcava, about private equity, it gets back to what's our role as a limited partner. And this is where I think our partnership through ILPA is very important. ILPA has formed a diversity, equity, and inclusion committee. We have a team member, James Andrus who serves on that committee. And what I observed in the GP community is a growing appreciation of the importance of diversity, equity, and inclusion, to the extent that, you know, one of our core private equity managers has actually established a credit facility, offering companies better rates of interest, if they make progress on board diversity.

Now, if that's not making the investment case and putting money on the table, I don't know what is. But I definitely think that the private equity markets have the potential to go further and faster, even when the public company markets on some of these issues. And it's by the nature of the role the GP plays with the company, you know, they're a major stake, typically board seats. You know, there's even a discussion in some academic circles at the moment, is the private equity governance model one to be copied? Not the relationship between LPs and GPs, but the relationship between the GP and the company is one of -- is one that is much closer and of more significance than it's possible to have, you know, with many, many scattered investors in the public market holding.

So I guess that's a way of saying I think there is a tremendous debate going on about this in the private equity community. There's a lot of innovation, like the credit facility that I just mentioned. And certainly through ILPA, this is a topic of real importance.

And, you know, CalPERS returning to the Board of ILPA, I'm sure this is going to be an area where we'll be able to learn more and understand better what's possible, and what's going to be additive to performance.

COMMITTEE MEMBER RUBALCAVA: Well, thank you and we look forward to -- as new developments and new reporting. Thank you, Anne. Appreciate the response.

CHAIRPERSON TAYLOR: Thank you, Mr. Rubalcava. Anne, I just -- I forgot to tell you. On page 20 where you were talking about some of the successes we had at proxy voting this season, I just wanted to congratulate you on all of those successes as well, but specifically on the companies that you pushed the racial equity audits. Very appreciative of that. And I know that's hard work and I appreciate that very much.

Next is Mr. Jones.

Thank you.

COMMITTEE MEMBER JONES: Thank you, Madam Chair. And, Anne, I just echo my colleagues, thank you for a comprehensive and fine report. And I also extend our thanks to the staff members who worked with you on this report. And it just shows how important our work is based on data and evidence.

So while you made reference to your five-year plan talking about five years ago, I remember 2013 --

(Laughter.)

COMMITTEE MEMBER JONES: -- when you formed the -- that academic group to study to collect data --

MANAGING INVESTMENT DIRECTOR SIMPSON: Yes.

COMMITTEE MEMBER JONES: -- to help drive and influence the impact about sustainability factors that would impact the risk and return profile for CalPERS. And so I would just like to suggest that you continue that -- our three-pronged strategy of engagement, advocacy, and integration, because it's working and continue to partner with our peers, and -- because we're now seeing that long-term results of those kind of activities are coming to fruition, so continue the good work.

MANAGING INVESTMENT DIRECTOR SIMPSON: Thank you, President Jones. Much appreciated.

CHAIRPERSON TAYLOR: Okay. Anne, thank you, Mr. Jones. That was excellent.

It looks like we are done with Board commentary. So I understand we have seven people waiting online to give commentary. If -- Mr. Fox, if you want to start.

STAKEHOLDER RELATIONS CHIEF FOX: Yes, Madam Chair. The first caller is Mr. Cunningham.

MR. CUNNINGHAM: Yep. Can you hear me now?

CHAIRPERSON TAYLOR: Yes, we can.

MR. CUNNINGHAM: Well, I'm going to go -- okay. I'm going to go ahead as if you can. So my name is William Michael Cunningham. I'm an economist based in Washington D.C. And for the past 30 years, we founded one of the first sustainable investing research firms, Creative Investment Research in 1989. I'm and adjunct faculty member Georgetown University. I hold an MBA in finance and a master's in economics, both from the University of Chicago. And I'm also a member of the non-fiduciary investment consulting spring-fed pool at CalPERS.

Now, my comments concern your sustainable investment five-year strategic plan and where we think the field is going. We recently submitted a rulemaking petition to the SEC. Our petition, 4-774, calls for a comprehensive framework concerning public company promises of support for Black Lives Matter. As of today, based on our research, 249 corporations have pledged a total of 65 billion in support of Black Lives Matter. Now, that's 14 percent of CalPERS' assets.

We worked in the 1990s with early shareholder activists, like the Interfaith Center for Corporate Responsibility, the United Methodist Church and others, who were filing resolutions at ExxonMobil and Chevron. And I'm glad to see a lot of those efforts come to fruition, because they were focused on uncovering and understanding long-term performance and risk management factors impacting public companies.

Clearly, norms for business reporting activities are changing rapidly in response to new social concerns. Our SEC rulemaking request ties to CalPERS' long-term goals. We seek to strengthen understanding and the ability to manage investment returns by managing risks and opportunities and also reducing the risk from unanticipated events. We think that increases in discrimination negatively impact investment returns. So lowering discrimination will reduce the probability of events that cause catastrophic damage to an economy by negatively impacting markets and investments.

So those are my comments. We respectfully suggest that CalPERS as part of your next strategic plan, not shy away from issues that are focused on race. We think that these factors will significantly have the potential to significantly impact investment returns, as you look at the next five-year period.

So thank you very much. I really appreciate your time.

CHAIRPERSON TAYLOR: Thank you.

Next, Mr. Fox.

STAKEHOLDER RELATIONS CHIEF FOX: Madam Chair, next we have Sheila Thorne.

MS. THORNE: My name is Sheila Thorne. I'm a retired member of the California Faculty Association and a CalPERS beneficiary. It remains to be seen if any real change comes from the new directors of Exxon, but meanwhile, nothing has come of the net zero by 2050 promises from the big energy companies. Exxon, Shell, Chevron, Total, and all the rest present no realistic plans to decrease extraction and reduction annually to reach their stated goals in a managed decline.

Instead, they rely on unproven and often still undeveloped carbon capture technologies, which they think at the last minute will suddenly emerge and clean up the world. Worse, even though the International Energy Agency now advocates no new expansion, the fossil fuel industry continues business as usual with plans to increase exploration and production. For example, Exxon plans for nine billion barrels of oil equivalent from Guyana Stabroek Block alone and to ramp up production in the Permian Basin to make up for COVID slowdown according to a report by Urgewald.

Shell plans to increase liquefied natural gas volumes to deliver more than seven million tons per annum of new capacity by 2050, according to a June 2021 report by Corporate Accountability.

And according to Carbon Brief, Shell's global strategy vision Sky 1.5 plans for continued use of oil, gas, and coal until the end of the century.

Duke Energy also promised net zero by 2050, but plans to keep coal online as late as 2048 according to a 2020 report by the Sierra Club.

In other words, net zero promises are the industry's preferred method of greenwashing and delaying real action. This will mean stranded assets as was questioned a few minutes ago.

This planet will not survive without real action starting now, not in 2050 or even 2040. So engagement to demand concrete, intermediate goals of reduction leading to 50 percent reduction by 2030. And engagement should include zero tolerance for expansion, meaning that companies that continue to expand should be divested.

Thank you.

CHAIRPERSON TAYLOR: Thank you, Ms. Thorne.

Next, Mr. Fox.

STAKEHOLDER RELATIONS CHIEF FOX: Madam Chair, we have Steven Elias.

MR. ELIAS: Yes. Good morning. Can everybody hear -- can everybody hear me?

Okay. Well, I'm going to go ahead and talk assuming that you will.

My name is Steve Elias. I live in Grass Valley, California. I've lived in California for the last 50 years. I have only one item that I want to focus on. And that has to do with what the IPCC, the IP -- IPCC is the UN Intergovernmental Panel on Climate Change. Very, very well respected climate scientists from around the world.

What they had to tell us just two years ago about how it would be a huge -- a huge mistake to focus on the 2050 net zero target.

This was explained in great detail. But the key takeaway is that we need to make significant greenhouse gas reductions in the neighborhood of 50 percent by the year 2030 or we have no chance -- virtually no chance of getting to net zero by 2050.

Again, this is crucial information, because we know at the present time that if the temperature in the atmosphere increases by two degrees centigrade over pre-industrial levels, it will be catastrophic for the plants and animals on earth including humans.

And, in fact, we have already created one degree of warming above that pre-industrial level. And there is another one half degree rise that will be -- that is inevitable no matter what actions we take now, because there is a 10 year lag time owing to how big the earth actually is.

Also, we know that given the amount of greenhouse gases currently being produced, we are on a clear path to two degrees of warming by 2030, unless we begin make dramatic cutbacks now, and that 2030 should be the year we focus on, not 2050.

And finally, notice that I have not used the word "divestment" and we've just heard how we now have placed some new reform-minded people onto the board of a major fossil fuel company, and how this proves engagement is working. But with all -- with all due respect, we really do not have time, given the situation we're in, for the kind of boardroom advocacy and negotiations that will inevitably take place.

I believe we -- I believe that divestment is absolutely necessary. Finally, let me just close with quoting the Pope, okay. So the Pope said God always forgives, people sometimes forgive, but nature never forgives.

Thank you.

CHAIRPERSON TAYLOR: Thank you.

Mr. Fox, the next person.

STAKEHOLDER RELATIONS CHIEF FOX: The next caller is Dana Stokes.

MS. STOKES: I'm addressing my comments to the full Board. I am a CalPERS retiree as is my husband. And like the previous commenter, I am really, really scared out of my mind by the fact that CalPERS is aligning its goals with a 2050 timeline.

Just three weeks ago NPR published a piece saying that according to the world meteorological organization, global temperatures were about 1.2 degrees Celsius hotter than the late 1800s. That was last year. That was during the pandemic when everything was scaled back in terms of human activity that produces GHG emissions. So I -- we just don't have time. We don't have time for CalPERS to be using a date goal that is, you know, 34 to 39 years out into the future.

I just -- I don't see -- I mean, I commend you all on your partnership with many other organizations and that you're being -- you know, holding a very significant place at the table to drive forward response from the -- you know, public investors, and all investor's perspective, but none of it's fast enough. So I would hope that you would reconsider and, yes, do as the previous commenter stated, set 2030 as your goal for a 1.5 degree Celsius, which is -- it's going to take -- it's going to take more than shareholder engagement.

And what does New York state know that you don't know? How is it that they decided to not risk stranded assets by passing a divestment legislative bill.

Thank you.

CHAIRPERSON TAYLOR: Thank you.

Mr. Fox.

STAKEHOLDER RELATIONS CHIEF FOX: Madam Chair, next we have Sandy Emerson.

MS. EMERSON: Hello. It's Sandy Emerson. I'm the Board President of Fossil Free California.

The recent victory at Exxon's annual general meeting where small hedge fund Engine number 1 forced Exxon to seat three new climate savvy directors showed both the power and the limits of engagement. This proxy fight costs $31 million, and was supported by CalSTRS, CalPERS, and the New York State Common Retirement Fund. And it was also supported by key voting recommendations from BlackRock, Vanguard, and State Street.

We congratulate CalPERS for jumping in and working hard behind the scenes. It's always good to see that even an arrogant power elite like Exxon can be defeated on its own turf.

But what does this really mean?

A minority of directors at this huge company might start asking hard questions on climate, but these directors didn't join to put the company out of business. The jury is out on whether their presence can change Exxon's corporate culture and alter its determination to keep adding to its fossil fuel reserves. With engagement, you are asking fossil fuel companies whose share value depends on accumulating new reserves to stop business as usual and begin to manage their own decline.

Science tells us that we must decrease CO_2 emissions by 50 percent by 2030. Net zero by 2050 pledges aren't worth much without near-term science-based targets.

By pursuing engagement alone without the consequence of divestment, CalPERS is showing great loyalty to Exxon. As of mid-2020, CalPERS had more than $426 million invested in Exxon for which it had paid $553 million. CalPERS also has about $235 million of corporate bonds in Exxon, $150 million of which don't even mature until 2050.

CalPERS is betting that Exxon and the other oil giants will survive and should survive until mid-century. But the urgency of this moment dictates that large asset owners and huge asset managers should use every tool at their disposal to speed the transition away from fossil fuels.

CalPERS has demonstrated the power of engagement, but its portfolio still leads to a temperature rise of more than three degrees Celsius. To meet it's own net zero by 2050 goal, and the more important goal of a 50 percent reduction by 2030, CalPERS must reduce its investments in fossil fuels.

Thank you.

CHAIRPERSON TAYLOR: Thank you.

Next, Mr. Fox.

STAKEHOLDER RELATIONS CHIEF FOX: Madam Chair, next we have Dr. Richard Godfrey.

DR. GODFREY: Thank you very much. I want to also thank Anne Simpson for a very articulate, bright, and important presentation that I think received a lot of congratulations and deserves it.

I need to differ in some ways. I'm commenting on behalf of TriCity Ecology Center and my role as an associate clinical professor with UCSF. While my specialty is surgery, I also work in primary care (inaudible).

Two devoted parents have a child of three years age. The child develops a rapid onset fever that by nighttime reaches 103 degrees Fahrenheit. What should they do? They have two choices. They can give Tylenol and wait until the following morning to see if the fever declines or they can go to the ER.

Does the child have the flu or does it have meningitis? What they also don't know is that if the fever increases to 106 or 107, the child may have irreversible brain damage.

How does this relate to CalPERS? You all know that 416 parts per million, you know what the means, the level of CO_2 has continued to elevate despite the pandemic and economic slowdown, and what the IPCC tells us is that it needs to -- in order to stay below a 1.5 degree rise in global temperature, the rise in parts per million of CO_2

should be 350. So we've gone from 350 to 416 and still climbing.

With your expertise in following statistics and graphs, I speak to all the Board, the contradiction and danger of this trend is pretty obvious. Supporting AB 386 is like hiding the thermometer in the bathroom drawer. Continued investment in coal, which you continue to do is like throwing a heating blanket on top of the child.

Let me conclude by saying that we deeply appreciate your work and dedication and please begin taking a leadership role as you're trying to do now in the great moral crisis of our time. When you have to time tonight, continue reviewing the timing and trends of CO_2 and consider robust investment in the sustainable future.

As important as engagement and partnership are, please divest rationally from fossil fuel companies, including and especially Exxon.

Thank you.

CHAIRPERSON TAYLOR: Thank you.

Mr. Fox, next.

STAKEHOLDER RELATIONS CHIEF FOX: Madam Chair, the final caller on Item 7c is Sara Theiss.

MS. THEISS: Hi. I'm Sara Theiss. I'm a CalPERS retiree and Fossil Free California board member. I want to share some good news in case you Board members aren't aware of it. I know, and I've seen over the years, that all of you are deeply concerned about the planet's future. After all, that's what the sustainable investing program is all about. And you also have the fiduciary duty to the fund and retirees like myself.

So recently, BlackRock and Meketa surveyed hundreds of investment funds worldwide at the request of New York City's Controller on behalf of some of the city's pension funds. The two companies separately concluded that investment funds have experienced no negative financial impacts from divesting from fossil fuels. In fact, they found evidence of improved fund returns. In other words, fossil free divestment aligns with your fiduciary duty.

There's several core findings that are noteworthy, including divestment actions by hundreds of funds worldwide have passed the prudence test required of fiduciaries. Fossil fuel stocks have underperformed for at least the last five years, while forward-looking analysis shows significant exposure to regulatory, technological, and market risks.

Also, there is no one model of how to divest. And finally, the global trend in the investment world is towards more public pension divestment from fossil fuels, and the size of individual funds that are currently divesting is increasing.

So as I understand CalPERS Divestment Policy, whether divestment or engagement is a better strategy for mitigating the unfolding climate disaster is a moot point, given the clear financial advantage that fossil fuel divestment has for the portfolio's returns, according to BlackRock and Meketa. As I understand CalPERS Divestment Policy and your fiduciary duty, returns take priority over social goals.

And the last thing is just this is a wonderful series of reports these two companies did. They have a wide and practical applicability as a roadmap. They cover questions of fiduciary obligation costs, post-divestment performance assessment, and investment in renewable energy and a lot more.

There's also an extensive treatment of how other funds of varying sizes and missions have arrived at the decision to divest, and they discuss the policies that these funds adopted, the timing, and any other steps needed for implementation. So I hope that you find this information as exciting and informative as I did, and hope that you will take advantage -- both you and the staff will take advantage of this development.

Thanks so much.

CHAIRPERSON TAYLOR: Thank you.

And, Mr. Fox, is that it?

STAKEHOLDER RELATIONS CHIEF FOX: That concludes public comment on this item, Madam Chair.

CHAIRPERSON TAYLOR: Okay. Thank you. Just a quick question for Meketa, if they're still online, if we could have a copy of that report, that would be pretty awesome, if we could get ahold of that for our next -- before our next Investment Committee meeting.

And then I think we are now moving on -- before we move into closed session, summary -- well, lunch, and then closed session, summary of Committee direction.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: All right. Thank you, Madam Chair. And yes, let's move on to Committee direction. Before we do really quickly, I also just want to express my thanks to Anne in the item, and then also -- you know, I'm not objective. As you may recall, Anne and I being here to present that five year plan at repeated meetings during 2016. But I definitely think a whole lot of progress was made here. Certainly more to be done, but a great deal accomplished and so just really good work by Anne and her team, Simiso and his team, and really everyone across the asset classes. So thanks to all for the really great work on the body of -- on this body of work.

That does take us to Committee direct, and so, I've asked Arnie to actually track Committee direction. So, Arnie, can I turn it to you to walk us through what you have as a Committee direction?

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Yeah. Got it, Dan. Thank you.

Ms. Taylor, the only item I had was the tracking error agenda item, the Total Fund Policy. And we will bring that back in September as an action item. And we will add some information on how other plans are doing it and stuff, which we had in November. We'll elaborate on with Wilshire's help.

CHAIRPERSON TAYLOR: Okay. Thank you.

And then -- I appreciate that. Is there any other public comment, Mr. Fox?

STAKEHOLDER RELATIONS CHIEF FOX: Yes, Madam Chair. We have one caller Alyssa Giachino from the Private Equity Stakeholder Project.

CHAIRPERSON TAYLOR: Okay. Thank you. Go ahead.

MS. GIACHINO: Good afternoon, Chair and members of the Board. My name is Alyssa Giachino with the Private Equity Stakeholder Project. I'm here today to follow up on my comment from April regarding eviction filings by your private equity partner Ares Management and their single family rental company Front Yard Residential.

CalPERS is a major investor with Ares Management and has committed more than 1.3 billion to Ares funds in the last year. Ares last year partnered with Pretium Partners to acquire Front Yard Residential, a single family rental landlord with nearly 15,000 homes around the U.S.

The company has filed more than 500 eviction actions since the beginning of 2021, including more than 390 eviction filings in majority black DeKalb and Clayton counties in Georgia. Front Yard Havenbrook has filed to evict residents at a much higher rate in majority black counties than in majority white counties.

Since January 1st of this year, the firm has filed to evict 16 percent of its residents in Clayton County and 18 percent of its resident the DeKalb County. We have reached out to Ares several times for an explanation of why Front Yard Residential has fired -- filed to evict residents in majority black counties at much higher rates. Ares has not responded.

Instead, Ares Front Yard Residential has filed more than 110 additional eviction actions DeKalb and Clayton counties, since we shared our findings with Ares in mid-April. We have seen a number of filings in the past month, where Front Yard Residential has sought to circumvent the CDC eviction moratorium by not renewing leases of residents that have filed CDC hardship declarations, and then seeking those -- to evict those residents based on that nonrenewal.

For example, NPR earlier this month highlighted the story of Katrina Chism, a single mom, who lost her customer service job during the Coronavirus pandemic and fell behind on her rent. Chism applied for federal rental assistance money and was approved but she said Front Yard Residential told her that her lease was about to end and she had to leave or get evicted.

Quote, "Once you get that eviction, no one is going to want you to rent from them", Chism told NPR. "I don't want to be in a homeless situation", unquote. And in addition to NPR the company's eviction filings, and particularly its disproportionate filings against black renters have drawn media coverage by Bloomberg, CBS News, and Reuters, and are clearly a substantial headline risk.

Ares Management's failure to address or even respond to questions about its company eviction actions represent a significant management failure on Ares part, one that CalPERS should be considered about, given its recent invest of 1.3 billion.

Given the scope of CalPERS relationship with Ares, we believe CalPERS should ask that -- ask Ares Management why its home rental firm is filing to evict renters in majority black counties at five to six times the rate of tenants in majority white counties? In addition, please ask Ares to meet with renters to discuss what steps it will take to address concerns that Front Yard Havenbrook tenants have raised.

Thank you.

CHAIRPERSON TAYLOR: Thank you very much.

Can I ask that we have someone from our PE follow up on that?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes, Madam Chair, we will definitely make sure. I know we've spent quite a bit of time talking with Ares about this very topic, but we'll make sure that we -- that we follow up. And if we'd like to discuss it in closed session, we certainly can also.

CHAIRPERSON TAYLOR: Oops. Sure. Thank you. That would be a good idea. I appreciate it.

So that is the end of our open session in Investment Committee. And sorry for the late lunch, guys, but how about we keep it to half an hour and do -- come back at 2:35-ish.

I'll say 2:35.

(Off record: 2:00 p.m.)

(Thereupon the meeting recessed into closed session.)

(Thereupon the meeting reconvened

open session.)

(On record: 4:00 p.m.)

CHAIRPERSON TAYLOR: It's four o'clock. Thank you all for coming back into open session from our recess.

We've adjourned closed session for items 1 through 6 from the closed session agenda. Let's see. We're back into open session. This adjourns our Investment Committee meeting. The next Investment Committee meeting will be held in September. And I have to ask this question. I'm sorry. Do I need to report out on anything we did?

Is Matt there?

Matt's not here.

No.

Matt?

Okay. I'm going to assume that's a no, so we're adjourning the open session of the Investment Committee and we will reconvene in September.

Thank you all. Have a nice rest of your day.

COMMITTEE MEMBER JONES: Okay. See you all tomorrow.

(Laughter.)

CHAIRPERSON TAYLOR: All right.

VICE CHAIRPERSON MILLER: Take care.

(Thereupon California Public Employees'

Retirement System, Investment Committee meeting open session adjourned at 4:01 p.m.)

CERTIFICATE OF REPORTER

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

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 18th day of June, 2021.

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