MEETING

STATE OF CALIFORNIA

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BOARD OF ADMINISTRATION

INVESTMENT COMMITTEE

OPEN SESSION

CALPERS AUDITORIUM

LINCOLN PLAZA NORTH

400 P STREET

SACRAMENTO, CALIFORNIA

MONDAY, MARCH 14, 2022

9:30 A.M.

JAMES F. PETERS, CSR
CERTIFIED SHORTHAND REPORTER
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APPEARANCES

COMMITTEE MEMBERS:

David Miller, Chairperson

Rob Feckner, Vice Chairperson

Fiona Ma, represented by Frank Ruffino

Lisa Middleton

Eraina Ortega

Jose Luis Pacheco

Ramon Rubalcava

Theresa Taylor

Betty Yee

STAFF:

Marcie Frost, Chief Executive Officer

Dan Bienvenue, Interim Chief Investment Officer

Matt Jacobs, General Counsel

Amy Deming, Investment Director

Pam Hopper, Committee Secretary

Matt Flynn, Investment Director

Sterling Gunn, Managing Investment Director

Arnie Phillips, Interim Deputy Chief Investment Officer

Christine Reese, Investment Director

APPEARANCES CONTINUED

ALSO PRESENT:

Axel Christensen, BlackRock, Inc.

Rose Dean, Wilshire Advisors

Tammy Dhanota, Service Employees International Union Local 521

Pramol Dhawan, PIMCO

Sandy Emerson, Fossil Free California

Christy Fields, Meketa Investment Group

J.J. Jelincic

Greg Olafson, Goldman Sachs

Michael Ring, Service Employees International Union

Sheila Thorne, Fossil Free California

Mullissa Willette, Service Employees International Union Local 521

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PROCEEDINGS

CHAIRPERSON MILLER: Good morning. Welcome, everyone. I'd like to call to order the Investment Committee. The first order of business is the call to order and roll call. Ms. Hopper.

COMMITTEE SECRETARY HOPPER: David Miller?

CHAIRPERSON MILLER: Here.

COMMITTEE SECRETARY HOPPER: Rob Feckner?

VICE CHAIRPERSON FECKNER: Good morning.

COMMITTEE SECRETARY HOPPER: Frank Ruffino for Fiona Ma?

ACTING COMMITTEE MEMBER RUFFINO: Present.

COMMITTEE SECRETARY HOPPER: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Present.

COMMITTEE SECRETARY HOPPER: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Here.

COMMITTEE SECRETARY HOPPER: Jose Luis Pacheco?

COMMITTEE MEMBER PACHECO: Present.

COMMITTEE SECRETARY HOPPER: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Present.

COMMITTEE SECRETARY HOPPER: Theresa Taylor?

COMMITTEE MEMBER TAYLOR: Present.

COMMITTEE SECRETARY HOPPER: Shawnda Westly?

CHAIRPERSON MILLER: Excused.

COMMITTEE SECRETARY HOPPER: Betty Yee?

COMMITTEE MEMBER YEE: Here.

COMMITTEE SECRETARY HOPPER: Mr. Chair, all is in attendance with an excused for Shawnda Westly.

CHAIRPERSON MILLER: Okay. Thank you, Ms. Hopper.

Next order of business is approval of the March 14th, 2022 Investment Committee timed agenda. What's the pleasure?

COMMITTEE MEMBER TAYLOR: Move approval.

CHAIRPERSON MILLER: Moved by Ms. Taylor.

VICE CHAIRPERSON FECKNER: Second.

CHAIRPERSON MILLER: By Seconded by Mr. Feckner.

Any discussion?

Okay. I'll call for the question. Ms. Hopper

VICE CHAIRPERSON FECKNER: No. You can do it out loud.

COMMITTEE SECRETARY HOPPER: Oh, we can do it out loud. Okay. All in favor?

(Ayes.)

CHAIRPERSON MILLER: Nay?

Abstentions?

Okay. It's unanimous. The ayes have it. The motion carries.

Next order of business is our information item agenda, and Emerging Markets Panel. So Arnie, or Ben --

Dan.

(Laughter.)

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Good morning, Mr. Chair and members of the Committee. Normally, we provide an executive report to start us off. However, we're going to invest some time this morning discussing the emerging markets. So I'll save my comments for the first -- for the, I'm sorry, the second part of open session and we'll go right on to our panel here, and I'll ask our panelists to please join us up here.

And this is a timely discussion. We witnessing events in Europe, and specifically in Ukraine, the likes which we haven't seen in nearly 80 years. As we know, on February 21st -- 24th during a United Nations Security Council meeting, Russian President Vladimir Putin declared a special military action against the Ukraine. It's important to take a pause here and reflect on the tragic human toll, particularly for those who are fighting, evacuating, and cost in the crosshairs of this really tragic situation. These are truly saddening events with severe costs in terms of human life and misery.

And we're also conscious of the fact that these events are even impacting people here in our country and even at CalPERS, our CalPERS teammates, our members and beneficiaries, and our member agencies with varying relationships to the peoples of the Ukraine, Russia, and Belarus. And I can only speak for myself, but I'm deeply saddened by these events and those impacted definitely remain in our thoughts and our prayers.

Now in response to the attack President Biden declared it unprovoked and unjustified and coordinated with western partners to enact severe and consequential restrictions and sanctions, and has continued with these developing repercussions. And the conflict, and the result of sanctions, have had negative direct and indirect impacts on financial markets, which of course impacts our portfolio.

Related to the direct effects, CalPERS does have Russian exposures, with some direct public equity, private equity, and real assets holdings in the portfolio. And those investments have, and likely will continue to experience some impairment in value.

Fortunately, however, we have no Russian bond exposure. Yes, for equity, both public and private, and yes for real assets, but no Russian bonds in the portfolio. Also fortunately, the total Russian exposure makes up less than one-fifth of one percent of our portfolio, or less than 20 basis points. But we do have exposures and those exposures will suffer and we wanted to be clear on that.

We'll be working across the asset classes on how we address those impacts and resolve those exposures. Given the volatility of the current situation, exit strategies are limited, including closure of the Moscow Stock Exchange, but we're staying abreast and considering options in real time on the appropriate and fiduciarily responsible path forward.

Importantly also, we've been working with Nicole, our new Chief Investment Officer, in advance of her joining, but ensuring that we're getting her thoughts and inputs on how to address both these Russian exposures and the market volatility specifically, but also on the portfolio strategy, including the ALM outcomes more broadly. And these events surrounding Russia and the Ukraine are a stark reminder of the geopolitical risks and realities that investors must contend with when managing a global portfolio like ours.

Emerging markets, those national economies that are becoming more integrated, it's the global developed markets, come with higher uncertainty and risk, but they also often come with greater opportunities for growth as well as diversification benefits. Investors who chose to participate in these markets expect to receive a risk premium, the potential for higher returns at the portfolio level, to compensate for that increased uncertainty.

And that takes us to today's panel where our experts will talk to us about investing in emerging markets and the risks and opportunities that come with these investments and the rationale for doing so. So I'll pause there to see if there are any questions or comments before turning it over to Arnie to introduce our panel members and to kick us off.

CHAIRPERSON MILLER: Okay. Any questions from Board members?

I'm not seeing any, so let's go forward, Mr. Bienvenue, and --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: All right. Arnie, over to you. Take us away.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Thank you, Dan. Good morning, members of the Investment Committee.

THE COURT REPORTER: Microphone.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Good morning, members of the Investment Committee. We are fortunate to be joined today by three experienced emerging market panelists who are responsible for investing in the equity market, the fixed income market, and the private markets to have a discussion on investing in emerging markets across the various asset classes in a diversified portfolio.

When we were putting this panel together a few months ago, we certainly didn't foresee the increased relevance of this topic. Obviously, the last few weeks have taken it to a completely different level. Dan gave a timely update on the Ukraine situation in our portfolio, but this panel is really targeted at a macro level. And so our discussion is really designed about the overall emerging markets and less so about specific countries per se.

I'll start out by having each of the three panelists give a quick overview of their responsibilities and their background. I'll then go through a list of questions. Our goal is for it to be just a free-flowing conversation. So I'll give the question out, the three panelists will just jump in as necessary. Please jump in from your side as necessary too. You know, the goal is really a lot more of them talking and a lot less of me talking. And ultimately, it is designed to be interactive and your questions are certainly more important than my questions. So I will adjust my questions to fit the time slot as needed.

So with that, let's go ahead and get started.

Pramol, you want to give us a quick update of your background and what your responsibilities are at PIMCO.

MR. DHAWAN: Sure. Thank you, very much, Arnie.

My name is Pramol Dhawan. I'm the Head of Emerging Markets at PIMCO. I've been at PIMCO for around nine years now, prior to which I managed global emerging markets at Société Générale in New York and in London. I did my Master's degree at UCLA and my undergraduate degree in the United Kingdom. I'm also a Board of Directors of the Emerging Market Trade Association, where I represent the firm on various emerging market legal issues to do with the contracts.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Thank you, Pramol.

Greg.

MR. OLAFSON: Good morning. My name is Greg Olafson. I work at Goldman Sachs. Thank you for having us here today for this interesting and timely topic.

I'v been -- I've worked at Goldman for 21 years. I'm Canadian -- a Canadian citizen, but I spent most of my career in Europe, almost all of that with Goldman. My current role is Co-President of our Alternatives Business in the Asset Management Division. Alternatives is like the private equity, private credit, and so forth.

And so while I can speak on the broader emerging market opportunity representing the whole Asset Management Division, I'm flanked by two, I think, very capable firms and representatives on the more public side. My comments can, if you like, focus on the private side to some extent, because that's where I've spent my career.

With that, I'll pass it.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Axel, last but not least.

MR. CHRISTENSEN: Thank you. Good morning and thank you very much for having us today. My name is Axel Christensen. I'm the currently Chief Investment Strategist covering Latin America at BlackRock. I am part of the BlackRock Investment Institute, which is an autonomous entity within BlackRock, which focuses on producing insights and serenity content for clients.

My background with emerging markets is quite close, including a time span of about 25 years, including the time I spent before BlackRock. I am a national of Chile, so I am -- want to share the view from an emerging market investor and very -- you know, I'm very excited to be here today, because I worked for a pension fund in Chile, so -- and we always saw CalPERS as kind of a role model in terms of pension fund development in the region. So I'll be more than happy to share how emerging markets have evolved and how, as Arnie was pointing out, as well as Dan, terms -- in terms of how diversification, enhancements of return, and other aspects make it a very important focal point of every portfolio in a pension fund or other type of institutional portfolios.

Thank you.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: Thank you, Axel.

And our goal was again to have broad representation of both public and private markets. And I think it's pretty obvious from the introductions there that we should be able to talk about any asset class in a diversified portfolio.

So with that, let's start off with a very high level question. What is the role of emerging markets in its various forms and asset classes in a diversified portfolio?

MR. DHAWAN: Sure. Maybe I can kick it off. Well, firstly, emerging markets is the single largest pool of capital in the world. We overtook the U.S. in 2017 and now represents the largest single pool of capital in the world. So I think in a global portfolio context, it's very difficult to ignore the largest pool of capital in the world. And then when you look at the economic output, EM contributes around two-thirds of global economic output, but in some clients' portfolios can be less than five percent of clients overall portfolio allocations.

Now, that being said, over time, we expect emerging markets to start converging towards development -- developed markets. But in terms of overall allocations, as well as in terms of how institutions are created, and formed, and seek to preserve the rule of law and property rights. And that's an ongoing process. It's more of a long-term process in nature.

But EM assets, within this kind of great pool of capital provide income-generating assets. They provide diversification as a number people have mentioned before, but they also provide idiosyncratic values. We often talk about emerging markets as if it's -- if it's a homogeneous term. It's clearly not. This is a combination of lots of different countries, lots of different risk premiums combined together within the public fixed income world, which I traffic in, that allows investors to have more of a long-term orientation to harvest those risk premiums in a sensible manner over time.

So when we think about EM here at PIMCO, we think that it's going to be a structural source of value opportunity for us. When we think about its value, pretty much across every asset that you're going to here today, vis-à-vis fixed income, we see embedded value or risk premium in those assets. So the question is not should we have it, the question is how much and in what form?

And I think that, you know, generally speaking, we want to be very mindful of the idiosyncratic risks that are present and to try and harvest those risk premiums in a very diversified fashion.

MR. OLAFSON: I think -- I think, Pramol, that's very well said. I mean, the bottom line is EM it's not monolithic. It's a -- it's a big world. There's a lot out there, and I think -- but it's complicated. And I think the real reason we would -- we go, and where we have gone, and again in my career, I started just investing the firm's balance sheet. And so I was saying, you know, to Pramol and Axel at the outset, 20 years ago, I wasn't thinking about asset allocation. We just flowed where we thought there was opportunity, and that took us to some emerging markets.

And we would go there simply for opportunity. We found great companies, we found great partners, and often at better valuations, simply because, you know, it is more inefficient. It's not as picked over. They're not as developed. So the way that we invest, very hands-on, very detailed, very on the ground played well to that. And it has proven to be very fruitful over very long periods of time. And then there are events, and -- you know, this is partly what we'll be talking about today. You have exogenous shocks. You have those in developed markets as well.

It's just that I think that one of the common futures - it's stating the obvious in these emerging markets - is that they are less developed, less resilient, less liquid. And so, you know -- and all of that tends to sort of, you know, become correlated, you know, at once.

So I think there are great opportunities and we have many, many examples that we can get into of we find great companies and great partners, but we do it, you know, one deal, one country, you know, one decision at a time.

Axel, I don't know if there's anything you'd like to add.

MR. CHRISTENSEN: Sure, just to emphasize. I think it's quite clear if you have been looking at the asset class -- if we can call it an asset class. It's very diverse in nature. So that investors have been pursuing primarily three, you know, points. Access to higher returns, and this is, you know, traditionally linked to the fact that emerging economies has -- have exhibited in the last, you know, decades higher growth than most of the developed world. Then also more attractive valuations, made mention to that.

A lot of those valuations are more attractive, because, yes, you are taking on higher risks, but you're also investing in markets that are less efficient in terms of providing more opportunities for investors that actually, you know, kind of kick the tires and do more research on. They're, you know, as we would call it, under-researched. They're not pursued. They're not analyzed as much developed markets. So there's opportunities in finding value in companies.

And then finally, we believe that there's a strong component that has to do with the gap between the size that emerging markets have today, in terms of their economic importance, in terms of population, in terms of so many aspects that make them very relevant at the global scale, that mismatch the -- you know, the role or the amount of investments that financial markets have in them. So to the extent that we see convergence as more investment, be it public, be it private, find their way into emerging markets, that also will be a very strong component to make those investments more attractive from an investment point of view.

So I have -- you know, I just want to share with you a couple of numbers to give you some sense of that. So emerging markets have about 30 percent -- represent about 37 percent of global GDP, but they represent only about 13 percent of market cap. So that tells you that there's still a very big gap to be closed, and that gap for us is a very interesting investment opportunity.

Back to you.

MR. OLAFSON: I just had one thing. Both Axel just mentioned and Pramol as well like this notion of convergence. But I don't think that's a foregone conclusion. I actually think that the -- and we see this notably on the private side where we are active. We come in. We're either -- we may not always be in control, but we certainly require protections, and rights, and influences, though we may be in control. And so we are affecting that converging. We're bringing best practices to these companies, and that's what, in part, drives the value creation. There's growth. There's the value you buy at, but there's actually driving -- and it's in part why we're welcomed. Like, we have a good name. We have a -- people look at us as, you know, validating, but that validation comes with action.

And so we think that that's in part how we create value, is that we -- it's a little bit, you know, what's going on in ESG and everything right now. If you don't adopt these best practices, you're not going to achieve the highest valuation. And in emerging markets, if you don't adopt international norms, you're not going to be able to list on the New York Stock Exchange or you're not going to be able to raise capital from the likes of CalPERS or others. And so we think that's just, in part, what explains how you make a return.

MR. DHAWAN: Just one additional point to that as well, I think that that's certainly true for the corporates, but it's also true on the sovereign side as well. If you think about what the implicit agreement is for emerging market countries, especially the more frontier countries that are trying to develop their capital markets, they basically want to over time move away from a dollarized economy, in general, not all of them, but towards building out their local markets, developing their local market yield curve, such that their pension funds can invest in their own risk-free assets.

In order to be able to do that, they need to be able to offer enticing yields to offshore investors to be able to bring capital in, to be able to construct a yield curve. And then over time, they can move away from having these kind of pegged currency regimes whereby effectively, if you're in a purely dollarized economy, you outsource your monetary policy decisions to the U.S. Federal Reserve, and that's somewhat of a lack of sovereigncy on those countries.

Over time, they want to promote their own domestic currency. They want to promote their own domestic yield curves. They want to build their own institutions in many of the ways that Greg mentioned following EM best practices. And that's really the trade-off that you're making at various stages on the sovereign life cycle is, you know, where is this country at this particular point in the life cycle? How much do they need to give up to international investors for that risk premium for you to be able to underwrite their legal jurisdictions? And what's the glide path going to be, because you know that the politics is going to be -- is going to be fragile, so you can't underwrite a four-year economics -- four-year political cycle. You need to have a longer term vision about the glide path of those countries.

MR. CHRISTENSEN: Just provide somewhat of a different perspective on how important development of local capital markets are from the local investor base as well. So local pension funds are very important, not only in developing their own markets and the fact that international investors would help in terms of, you know, coming in with best practices, there's a lot to be said on how those local investors also contribute to the development of their markets as well, not only in terms of providing markets for companies to access capital, and not only the large corporations that probably could list in New York, but probably, you know, some of the smaller companies that you, by the way, can only get access by investing in those emerging markets. They won't -- they're not large enough to be listed in larger markets, so you'll have access only if you go direct, but also in providing advancements in terms of proper corporate governments.

It's interesting to say, for instance, that right now in Colombia you will find a larger number of women in boards than you find here in the U.S. And that has to do with the fact that Colombian pension funds have been very active in promoting more inclusion and diversity in Colombian boards, and pension funds have a lot to do with that, so -- so it's -- you know, there's a lot that local investors look at global investors as role models, but, you know, with a lot of humbleness, sometimes there's some things that have to -- that global investors can learn from local investors and institutions as well.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

This is working much better than I even anticipated, the three of you just going back and forth is spectacular.

And you actually cannibalized my second question a little bit about pros and cons. So maybe I'll change it a little bit. We constantly task our internal staff with checking their asset classes hat at the door and looking at a total fund perspective. So we talked about pros and cons here. Is there different asset classes that handle the pros and cons, you know, better in the emerging market, whether it's equity against fixed income, or public against private? So maybe I can ask each of you to check your professional day job at the door and really just think holistically at a macro level on best way to engage in the EM markets.

MR. DHAWAN: Yeah, maybe I can start. Maybe I chose the wrong seat sitting right next to you. It seems I have to go first all the time.

(Laughter.)

MR. DHAWAN: I think it just warrants taking a holistic look. I mean, you know, privates versus public, I mean there's great scope for private investment in emerging markets. COVID was somewhat of a cathartic issue, and to many emerging market, sovereigns particularly, where they were shut out of capital markets completely. Until the Federal Reserve came in and backstopped the liquidity of the markets, issuers were locked out of capital markets all the way through the high yield spectrum to the investment grade spectrum.

However, those that were able to access private markets, alternative sources of capital, were able to be able to raise financing in most of the most trying circumstances. And on top of that, those that had access to local markets as well were able to morally sway domestic pension funds to rollover debt during those really, really tough circumstances. So whether it's, you know, the relative value of local versus -- by local I mean local currency versus dollars, equity versus debt, public or private, I think what you will see more and more from emerging market corporates and sovereigns is just a it want to have as much operational flexibility as possible, to know that there are different actors out there that have different time horizons and different orientations, and to make sure that they have access to those during good times, so that when markets do drawdown and when things become a lot more volatile, then they can call on those sources of capital to make sure that they have all the financing they need.

MR. CHRISTENSEN: I'll break the trend then.

So definitely a holistic view in emerging market makes sense for several reasons. One is the fact that you will get different diversification aspects. So many times equity markets in emerging -- in the emerging markets base are not fully representative of the economic complexity of a given country. So you will access -- get access to maybe state-owned or state-controlled companies, but not necessarily companies that are much more relevant in the economic space.

So if you look at Latin America, for instance, a lot of the mining companies are actually held by conglomerates, international conglomerates, so it's very difficult to get direct access to the sector through the equity markets.

However, they're quite active in the credit market. So if you, you know, complement both the equity and the fixed income market, you can broader do the diversification.

At the same time, liquidity is also a concern. But it also is a source of return and long-term investors such as pension funds are very well placed to get compensated for taking on that liquidity risk. And so -- and you can think about the inherent liquidity of some of the capital markets that are not well developed, so that will happen in the public markets, but also think about other less liquid investments or totally illiquid, such as infrastructure, in countries that are requiring a significant amount of investment in those areas.

If they want to continue to have high growth, they've done the easy part. Now, they need the part that means having or maintaining high productivity and that means having better, you know, roads, better ports. And so a lot of investment in that area again that would complement what you have in public markets is a great way to capture the increased investment premia that you get - you're less liquid as I mentioned - but at the same time, also have a positive impact on the development of the countries themselves. So They're a win-win for the country, because they developed, but also for the investor that they're getting very attractive long-term returns on those type of projects.

MR. OLAFSON: So the first thing I would say is that, you know, certainly when it comes to investing matters, I don't really believe in absolutes, certain ones, but not too many. And so sort of sitting here and saying, well, I would only do, you know, either fixed income, or only equity, or only public or private, I mean, I think that that is all a function of how you're constructing your portfolio.

I think Axel touched on something, you know, your plan, and you play -- you should play to your strengths obviously. That's what we always try to do. I think that's -- so you're big, you're sophisticated, you can tolerate this illiquidity and you should harvest this illiquidity.

And so -- but be aware, I mean, you know, when you go to these places, as I said before, you know, liquidity will disappear with some frequency, and so be ready for that, and so then don't -- and I would say and -- so don't be -- or be very mindful that if you think that you're taking a lower return because there will be liquidity, when you need it, it may not be there, so you may not able to actually -- you know, you might just be better off taking the truly illiquid, because again no maxims. I'm not here like pitching the private side. It's just where we have lived.

And then when we go on the private side, and we're going direct, we have certain things that we're very, very focused on how we do that. We do it -- we do it by going local. Like, I think it's very dangerous to be what we call more of like a tourist in these places, and that does happen. Money will -- we were talking about Brazil earlier, and Brazil, what did you say, it was -- it's always the future opportunity.

MR. CHRISTENSEN: No. They say that Brazil is the economy of the future and always will be. That's kind of the --

(Laughter.)

MR. CHRISTENSEN: -- the joke.

MR. OLAFSON: Yeah, but it's wonderful country and a great opportunity. It's just that in part because it -- I think it has such great prospects, and because it is perhaps maybe easier to access, it's maybe nicer to access, whatever it may be. And there have been enormous successes that have come out of so many -- and a great population and a big population. There's this company Nubank you'll know. We were a lender to them very early. We were not able to do the equity, because of -- we're investing off the balance sheet. This is a company that listed at $40 billion. Now, it's worth only 30, because of, you know, great opportunities.

The approach -- despite what I just said about that debt investment, our general approach is that if we're going local and we're going private into these companies, we want the equity upside. We want to participate in that growth. And if the mandate allows for it, I think pursue that opportunity, you know, find the right partners, make sure you're working with a manager who is present on the ground, but also present locally but with a global -- a global control function a global management function, because that's how you ensure you have those global norms I mentioned earlier, but with the local diligence and the local understanding.

MR. DHAWAN: I think also what the Board can take a little bit of comfort from is, you know, within the public market space, the indices that one tends to invest in, they have evolved a lot over the past five to 10 years. You know, going back into the early 2000s, hard currency, sovereign bonds had maybe 20, 25 countries in the index. We're up to close to 80 countries now. So the index itself is promoting and propagating diversification. You see that across the corporate bond space. We have over a thousand different ISINs in the -- in the indices, indeed in the local space as well.

So the index is helping to push this norm of diversification as well. And I think that's really what you want to have. You know, being a big manager, being a long-term oriented investor, you really want to make that diversification work on behalf of you.

MR. OLAFSON: Maybe one thing that ties this back to the first question as well, and building on what Pramol just said, one of the reasons to go to these markets is that -- is in part what's going on in the developed markets. There are 50 percent fewer public companies listed in the U.S. or in the developed, I think principal U.S., markets now than there were. So, you know, your opportunity set is shrinking, at least on the public side, while it's growing because of capital markets development, because of these companies getting bigger, and accessing, and listing, and so forth. So, you know, there's this shift. And I think for a plan of your scale and sophistication, to not be involved in that or understanding that and frankly participating and benefiting from it, I think would be a lost opportunity.

MR. CHRISTENSEN: Yeah, certainly. And it's not just having access to that idiosyncratic element that Pramol talked about. Emerging markets is continuing to deliver global champions. Companies -- if I take a phone right now, chances are a big part of the components of that phone come from an emerging market, so technology has been a big part.

I think on my way here to the west coast, I probably on a Brazilian fabricated plane, Embraer. So these are not just companies that are developing their own industries in-house. They're becoming global champions as well. They're able to compete with developed market companies as well. The integration is becoming quite high. And they're also coming to developed markets as well. So just heard of a -- I think LG having -- which is a Korean company, a joint venture with GM to start building batteries for cars here in the U.S. So it's coming both ways. So again, you might find yourselves reinvesting in here in California through an emerging market company, believe it or not.

MR. OLAFSON: I also flew on Embraer Air on the way here. I thought of the same thing. It was -- and the final thing to build on what you were -- what you were just saying is, you know, you think EM partly used to, I think, be very maybe natural resource driven or very how did you get access, what was available, the big banks locally, natural resources, maybe real estate. Those can all be good opportunities, but I think the biggest thing is the human capital opportunity. You know, as you move, and you touched on it, to technology, and you move to innovation, there are no -- I mean, borders don't mean as much. Smart people exist everywhere.

I was in a fascinating meeting last week where Mate Rimac, who's a 32-year old engineer from Croatia. And I'm not saying you should over allocate to Croatia --

(Laughter.)

MR. OLAFSON: -- but he is -- he has developed -- he's an entrepreneur around electrical engineering. He started this when he was -- and he was a car buff. So he has built -- his company that he's built, which now has partnerships with Porsche and many of the large -- it all around EV battery technology. So he has fastest production automobile in the world now. He's very proud of that. But he's this 32-year old guy from Croatia. And that -- who cares about supercars. It's actually the battery technology and the linkages into the rest of the car. That will feed into autonomous taxis and all sorts of other things.

And so, you know, he does that from Croatia. There's great innovation in -- all of over the world. And again, I think, you know, you have to try to get that exposure however, you know, your mandates permit.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: So I'm going to seize on a couple things you said there. So I do think the liquidity is there until you need it, you know, then it's not is a good point. And I heard infrastructure mentioned as an area which we care immensely about and have an opportunity there.

How do you incorporate the regulatory environment of a country, rule of law, and even ESG into decisions on which countries or which asset classes to participate?

MR. CHRISTENSEN: Do you want me to give you a break on this one?

MR. DHAWAN: Sure.

(Laughter.)

MR. CHRISTENSEN: Okay. So you think -- you have to think about it real hard. All right. And that's kind of the short answer to that. Because when you invest in projects, and infrastructure, and other type of endeavors that have less liquidity, you kind of, you know -- and with a pension fund call -- we joked around, you kind of are subject to what we call the, "Hotel California Syndrome".

Have you ever heard it? You can come in many times but you can never leave. That's sometimes what happens when you invest in very low liquidity type of assets. You really have to, first of all, do a lot of due diligence in terms of not only what the final investment, who your partners are going to be, be them global or local partners, because you will have perhaps to stay somewhat longer than you might have initially thought, because of market conditions, because of regulatory change.

Now having said that, in my experience, a lot of emerging markets actually welcome and are open to the influence in terms of how they want to establish regulation around critical sectors, such as infrastructure. So it's not uncommon that they ask global investors what type of structures, how should I deal with these type of risks, because they understand they have a limited, you know, range of alternatives for seeking investments in very -- again, very long-term type of projects, such as infrastructure. It's not like they can fund them locally very easily.

So they listen to what investors have to say. And then many times, they are willing to adjust regulation for that investment to go forward. It doesn't happen all the time, and, of course, you have to consider that. And there is political change that will come with regulatory changes as well. But then again, you know, you have to really work hard, because once you get into that hotel, it's not that easy to come -- to come out.

MR. DHAWAN: Yeah. Maybe I can just add. You know, one way that we find it helpful to think about EM corporates and sovereigns is across this notion of houses and neighborhoods. You know, ideally you want to try and find a good house in a good neighborhood. But occasionally, there are good houses in not so good neighborhoods or bad houses in great neighborhoods. What you really don't want is the bad house in the bad neighborhood. And that's really what you're trying to -- trying to avoid when you're -- when you're looking for corporates.

But EM corporates, and Axel mentioned national champions before, you know, they have a very strange dynamic sometimes with national champions, particularly the commodity exports in corporations, because if you imagine their cash flow systems, they receive revenues in dollars and their liabilities are in local currency. So in the event of a crisis where currencies sell off, they have what we call right way around risk on their portfolio.

And in Brazil, you've got two of the largest producers Vale and CSN, both are very much emblematic of that characteristic. So they receive their revenues in dollars. They pay their liabilities in local currency terms.

So I was talking -- I was talking with the CFO at Vale last week, and, you know, he was asking me, because Vale has just started to trade inside of the Brazilian sovereign in terms of where the credit spreads are. And usually that's become, you know, I guess an unwritten rule where corporates will really struggle to trade inside of the sovereign.

And he asked me do you -- you know, do you think this can continue -- this is prior to Russia and Ukraine. Do you think this can continue to happen? And I said, Tim, I said, you know, you've got an incredibly good balance sheet. You've got almost no outstanding net debt. In fact, you're retiring net debt. Iron ore are through the roof and set to continue to stay high. And quite frankly, you own 40 percent iron ore production. So even if they come down, you can slow down production and stabilize this pricing. It's a pretty good story that we have there.

And he said, well, you know, why do the credit agencies not give us benefit for that then? And I said well, you know, some -- one of the exercises that we do quite often at PIMCO is we take that house and we shift it to another neighborhood. And we say, okay, what is that credit rating bump that that corporate would get if it wasn't in Brazil, it was in Australia, like the other big iron ore companies?

And you get about a three notch credit rating uplift for that particular name, just because of the neighborhood that it's -- that it's in. And I say that not because it's a singular example. There are many cases of these types of corporates, that if you shunted the neighborhoods, you would actually got a significant credit uplift, spreads would tighten, equity valuations would be higher, but they're kind of brought down by the neighborhood that they're within.

And in terms of ESG, I think one of the greatest ironies of ESG is that it's -- it has tended under its current guise to traffic money into those corporates that just don't need it or need it the least.

Much of emerging market, especially middle income countries, really do need ESG development. They need to be able to really think critically about how to move themselves away from fossil fuel dependencies into much more renewable sources of energy. Lots of very interesting projects.

We just completed one in the ivory coast, which was to build an asphalt, 634 kilometers of roads linking the most impoverished areas of the country to the existing infrastructure network. And that allows for people to get to hospitals and to get to schools in just a much shorter time period. But just to give the panel an idea, it took over a year for us to get comfortable with the use of proceeds of the funds to make sure that the Ivory Coast and our partner JP Morgan during this were -- they did to the UN SDGs, and to make sure that we had a process of monitoring and checking that was consistent with a large investment.

And although I would say that, you know, it's certainly very clear in my mind that EM requires and needs a lot more help on the ESG side, it's very fair to say it's harder and a little bit more murky on the emerging market side. So I think that it just -- it warrants, you know, and increase level of diligence when you do those types investments.

MR. OLAFSON: Yeah. Look, I think that's all very well said. I mean, the -- our experience -- you're going places where there -- you're -- and I spent actually a number of years in Africa for Goldman very under the radar, balance sheet thing, and it was fascinating, but the institutions are not as strong. Your knowledge of these countries is not as well developed. I think your -- the diligence you need to do -- and, you know, to Arnie's point, I mean, there -- some things will go wrong despite --

CHAIRPERSON MILLER: Could you get a little closer to your mic.

MR. OLAFSON: I'm sorry. Is that better?

CHAIRPERSON MILLER: There we go, a little better.

MR. OLAFSON: Yeah. Sorry. Things will go wrong. And you have to be prepared I think as a Board, not withstanding the best efforts you, your partners, your advisors, everybody will make, something bad, unfortunate will happen. It might be a macro thing, it might be a micro thing, but I don't think that those should color the broader opportunity. The opportunity is too large to ignore. If you think about ESG, which is a very complicated topic, certainly on their -- on the environmental side of things, it also doesn't respect borders. I mean, climate change is not a region thing.

And I think this point about technology and the role that will play, you know, alternative energy, if China really is determined to zero carbon by 2060, we think that's a $16 trillion investment opportunity, whether it's local or international. I mean, that's just gargantuan. And that's just that country. And you focus on that country, because they're probably one of the larger contributors to emissions along with developed countries as well.

So there are great opportunities. You know, on the S side, I think again be very, very careful. There are many, many things that we won't go near. I think though we can also learn in terms of -- and it can be quite -- I don't know if we can learn, but this approach -- and it can be very volatile, that, you know, China has taken on this common prosperity approach, where they have basically just enforced -- I'm not exactly sure why they do that. It's either enlightened or maybe they're trying to make a point, but, you know, enforcing around tutoring and things.

And then that has a great impact on that industry, many of which were listed internationally. So, you know, these are complicated topics. I think there -- it's not that you can't, I think, participate in the promotion of -- in fact, you have to participate in the promotion of these best practices, but we, I think, can find opportunities if we do it in a very diligent way. And I think you could as well.

MR. CHRISTENSEN: Let me just add to comment on the opportunities that cling to ESG. As we see it, it's almost like a no-brainer in one sense. You know, meeting some of the emission standards are global objectives. If the UE -- if the U.S. meets net zero omissions let's say in 2050, but the rest of the world, including most of the emerging markets don't meet them, it's not going to be of any -- of any purpose. We need to get out of this altogether.

So because of emerging markets needing a lot investments for that transition to happen, there are actually going to be significant recipients of investments, because as Greg and Pramol correctly pointed out, that's where there's more dependency on carbon. So we understand the huge challenge that emerging market economies face, but we also look at it from the perspective of the opportunities of investment.

They will need investors -- long-term investors, such as yourself, to help them in that transition to meet those net zero commitments that they've made. And that's not no small amount of money. We actually think that if we can -- and it will require probably the cooperation of the private and public sectors altogether, including, you know, the multi-laterals. This will be a very, very challenging endeavor to fund the investments needed for this to happen.

So it's a challenge, but it's also probably -- I would want to say probably the investment opportunity of a generation in terms of the size, but the complexity as well. It's not going to be easy. There's several issues that we're brought, Greg and Pramol. It's not easy, but definitely the opportunity is there.

MR. OLAFSON: Yeah. And there are good examples. I mean, we started a solar and wind, so an alternative energy business in India called ReNew. And obviously India has a huge dependency on coal -- on coal-fired power. The -- they have this production deficit. With the kind of decline in the cost of photovoltaics and, you know, the increased efficiency of wind, we were able to establish what became the largest renewable energy company in the country and then successfully listed it.

Now once it lists, it sort of trades down, because, you know, it's -- emerging markets were selling off, and maybe there's some uncertainty about kind of the future opportunity, and what those rates will be.

But if you take a very long-term view, the fact that it's down a little bit from where it listed, it doesn't matter. We demonstrated you can start this business, scale this business, list this business. And that opportunity continues to be enormous.

So look, one of the things you're hearing us say, I think if you're going to invest in these other markets, I think you need to be very committed to it. You need to be very prepared for the volatility, which again, you're -- the plan you manage certainly can tolerate. You're going to have to be prepared for, you know, some things where you -- you know, as was said, even if you want to get out, you won't be able to get out. So again, manage size and be prepared for that eventuality. Hopefully, it doesn't happen very often.

And I would say, you know, you don't -- like anything, when -- whenever we would start a new business, we would start quite progressively. I think it's good to learn. It's good to get comfortable. These are very -- it's a very complex -- which is why answering the question what would you -- like where would you go, where wouldn't you go. I don't think it's lie that. I think you just learn and you say where does it fit in our -- in our -- in our plan.

And I think just you require just - and we keep coming back to this - just extra vigilance, because, you know, the institutions are not as strong in many of these places, and so -- and we don't know our way around as well, as you do, you know, in this great country.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Hey, Greg, you mentioned commitment there. And the old saying, you know, be scared when others are greedy, be greedy when others are scared, what is the experience -- your experience with investor's ability to stay the course and how does it play out if they're unable to or unwilling to?

MR. OLAFSON: It's essential. It's always essential. And this is why I think it's -- you know, you're being very thoughtful. You're -- you know, the timing is a little, as we said, uncanny that we're having this discussion now, but that's just a demonstration of how thoughtful the plan and the Board is.

You don't -- certainly don't rush in now or at any -- but if you're doing your work and you've -- you know, you're prepared, then I do think there -- there's a great benefit to being dynamic in these markets, because they will provide that opportunity. And, yes, it's always hardest to invest at the best moment, notably because you don't know it's the best moment. If you did, it would be -- it would be easy. But I think you have to have the -- you know, the courage of your convictions founded on being prepared and having the right relationships, the partners, in place, and, you know, that I think will create enormous opportunities.

MR. DHAWAN: Yeah. We used to do -- use this maxim in saying that emerging markets is not a trade, it's an investment, and I really believe that. I mean, it's meant to be a for longer term orientations. And you kind of see that a little bit in terms of flows in and out of the asset class. They really are bifurcated between retail and institution.

Institutional flows have been steadily increasing to this asset crass over the past decades, and really use the market drawdowns as ways in which they can dollar cost average into what they think is a long-term orientation towards harvesting risk premium.

On the other side of ledger is much more of the retail flows. Your kind of traditional 401(k) type investors, but global -- globally. And they tend to be much more sensitive to, you know, headline risks or news events. And that propagates market flows. And both can be powerful, but what I -- what I would say is that you know this is an asset class that does have over time more institutional demand that wants to look to reallocate to it.

Therefore, I would expect in bouts of volatility that those drawdowns are opportunities for people with a longer term orientation to, as Greg said, mindfully, intentionally gradual build their positions.

MR. CHRISTENSEN: Yeah. I'll probably add, you know, sometimes the lack of liquidity can be a blessing. And what am I talking about? Is that you're forced to be much more active in your investments. Sometimes too much liquidity can make you lazy as an investor. If you make a wrong decision, you just sell. If you have to invest in liquid investments, it makes -- you have to be much more rigorous. At the end of the day, you kind of are forced to live with your mistakes, right? So you have to be much more rigorous in terms of investment. And this is more coming from my personal experience before joining BlackRock is you actually have to get involved with companies.

If you want them to change, it might be in terms of their strategy. It might be them nowadays in terms of embracing sustainability. You cannot just, you know, be an observer as an investor. You have to get involved. You have to be much more active as a shareholder. In many parts of the emerging market world. You'll probably have to engage with the controlling shareholder to have those changes happen, to allow for your investment to, you know, generate value. So it's certainly a challenge. I think for larger investors as yourself, I think that is certainly something that you can do. Certainly, in my part of the world, you've seen other pension funds, you know, some Canadian pension funds come to mind that have been actively engaged in the investments and do not look the lack of liquidity, so much as a problem, but actually as a way of them to be very rigorous and to get involved in terms of making the changes a lot of these companies have to put forward to create the value or manage the risk that they're facing.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS: So, Mr. Miller, maybe I'll close with one last question and then see if there's any questions on your side. So internally, we're assessing whether, you know, the events of the past few weeks are moving us to sort of a new world order. We certainly acknowledge it's clearly too early to tell that at this point, but certainly interesting how quickly the west and partners came together, interesting on a number of countries have not publicly, you know, stated anything at this point.

So we're really doing analysis to see if -- you know, what this impacts our historical looking view. So as we test our thesis, you know, on all markets, I'm curious if the three of you maybe could comment on any lessons learned from the past few weeks, and what it means in what appears to be a more volatile world, at least for the coming time.

MR. OLAFSON: So let me start. I mean, it's -- so I was in -- that's why I said, I said I spent a lot of my life in Europe, not because -- just sort somehow I wound up there. So I was in France in November '89 when the Berlin Wall came down. I didn't actually have the foresight to get up to Berlin to have -- it would have been a good party I guess, but I was there, and then these events happened. And that feels like -- and, you know, I'm -- you know, that's most of adult life, and that's tragic. I'm not going to sit here and give you any prognostications on what that means and where it -- but it doesn't feel like progress and I think it's tragic.

The -- I think we should not ignore what's going on. You should -- obviously, you have to factor that into your thinking. And maybe people can say after the fact, oh, that was obvious. You should never have had exposure to Russia or the former Soviet Union. I don't believe that. I think there are great people. There were great opportunities.

Same with, you know, clearly, the world is -- you know the -- and I don't want to stray into political things, but like the rise of China is an extraordinary event in both economic and in geopolitical terms. So thinking all of this through is complicated. If you look at returns, just our Chief Investment Strategist for the GSAM side, a very astute woman, has had this bias for, you know, America for well over a decade and it's worked incredibly well. The innovation that comes out of this country, and -- Sharmin is her name. And I just think that it's very hard to know where this is going. They do feel like big tectonic plates shifting. You will be very well advised and think this through.

But I think what we're seeing here is that, not withstanding all of that, we -- you know, we have been able to find great investment -- investing opportunities. Sometimes it's factored through the price, which is maybe where this adjusts now, so you find your opportunity, but always -- you know, at least from where I've operated, with that maniacal focus on who is your partner, and that's your investing partner who's taking there, and then who are they working with. And it doesn't matter whether you're doing that here or there. You've got to choose your partners well. There's just a greater premium on there. Maybe I'll stop there and pass it back to you.

MR. DHAWAN: Yeah. I think Greg mentioned a lot of really interesting points there. I think we have kind of shifted a little bit into a so-called new order or new world order, one in which, you know, we haven't really full internalized what the consequences are, but just to offer some high level thoughts more so than any kind of diagnostics.

You know, I think we really have to question supply chains now. I think COVID was the first manifestation of it and this is the second. Thinking through about just-in-time production being, you know, quite optimized in terms of deliverance of goods and working into a global ecosystem, you know, we had conditioned ourselves for a number of years on really trying to optimize and cost crunch on supply chains.

Now, I think there's a lot to be said for building and producing domestically or within your domestic sphere of influence, not just because of the cost of doing it, but just the availability of those goods, and the need of having those goods versus just not having them as is the case quite often right now on the semiconductor side.

I think in terms of sanctions -- economic sanctions and economic warfare, Russia is the most sanctioned country in the world now, far supersedes Iran and North Korea. It's not just the number of sanctions, but the speed of which we've gone through the gears on sanctions, which I think is going to set a new normal for future activities.

You've really raised the bar in which this administration, in coordination with the Europeans, has moved to the most severe forms of sanctions in just an expedited time period.

And I think that that's going to change behavioral characteristics, especially if you're thinking about where you have your reserve assets. It never used to have to be a thought that you have your reserve assets domiciled in a specific currency parked out either the New York Fed, or the Bank of England, or the BIS. Those assets are attachable now. We've created precedent to attach reserve assets.

And I think that when countries are thinking about -- through about where they want to put those assets in which countries, or currencies, or crypto, or physical assets, you know, those things will need to be thought through going forward.

I think inflation is a natural by-product of this. On, you know, almost any which way you slice and dice this, it becomes more inflationary through the supply-side dynamics, which I said before where people are just less price sensitive on goods and focused more on the -- you know, just the need of the good versus the cost of the good, through the expansion of deficits in Europe, and the move to a two percent military spending across Europe. It's going to be inflationary.

The commodity price squeeze is, you know, very much supply-side driven, given all of the shortages and the difficulty in terms of shipping. Ten percent of global maritime staff are Russian, five percent are Ukrainian. It's not just the difficulty shipping, but getting personnel to operate those cargo ships.

But there is a significant demand-side pressure to inflation as well, as we see in this country where the labor market is very hot. Any which way you slice and dice the labor market, we're at or through full employment.

And then finally, I would just say, and again these are just more kind of stream of consciousness of thoughts. You know, choosing partners, we talk about it, or Greg has spoken about it at a corporate level, I think it's going to become increasingly more important which side of the divide that countries are on. And I don't think you're going to get to sit on the fence for much longer. I think such is the acuteness of this particular crisis, and this is a very acute crisis. I'm not trying to belittle it. But I would say that, you know, in the past six years, Europe has had six different wars. Russia has been involved in all six conflicts. This is the sixth conflict. So there is a center point of an issue across Europe and it tends to revolve around Russia.

But I think that when you go through these kind of, you know, momentous or tectonic type shifts, then you have to force to pick sides. And countries that have sat on the offense will perhaps not be able to sit on the fence any -- for much longer.

MR. CHRISTENSEN: Arnie, I think that -- the question in terms of if there's any lessons learned, I think a lot of what professionally I would think and want to share with you have been, you know, very exceptionally laid out by Pramol and Greg. But I have to kind of share with you personally, it's very hard because to think about, you know, just on the professional side, understanding how deep a humanitarian crisis this is, there -- and it brings me to -- you know, and I see that you probably face this as a Board as well, understanding that there are actually people at the end of what one does and in the decisions that you make. And our investments in the region, in Russia and Ukraine, there are people that get impacted by the investments we've made or perhaps at the investments we are not making anymore.

And in the same amount, the impacts on the final beneficiary of who trusts the savings to, you know, these exceptional, you know, institutions that I share with really kind of, you know, I think forces us to bring back -- it's not just numbers and it's not just returns, it's actually people. And that -- it's very important that we not, you know, forget that.

If anything, you know, there are experiences in the past of countries that were very important that suffered sanctions. In my place of the world, probably Venezuela is the best example of that. And it definitely, you know, made the richest country in the region -- Venezuela was by far during the 80s, you know, my image -- it was -- Caracas was the only capital where the British

Airways Concord flew in the region. It was that rich. And now it just has just surpassed Haiti as the poorest country in Latin America.

So these type of decisions have very long-term impacts that affect people. The immigration out of Venezuela to the rest of the continent has been substantial. It has been a challenge for a lot of the countries to accommodate a lot of these people. It also brings, believe it or not, opportunities. In Colombia, several engineers that used to work at the Venezuelan oil company were able to set up businesses that started to pump oil out of Colombia next to the Venezuelan border. And they did not do that before, because they didn't have the human capital that the migration from Venezuela brought.

So this is a tragedy. I think it would be very, very difficult not to acknowledge it. I think it -- at least for me, you know, that my kind of day to day is on the returns and what happened with markets. That's important. But I think it is a very, very strong reminder that at the end of the day, definitely for me and hopefully for you, there are people that we have to never forget that are affected by decisions we make. And certainly emerging markets, maybe those impacts or those effects are going to be much more significant than in developed markets.

Thank you.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Thank you for those final thoughts. Mr. Miller, back to your side before I close, if you have anything.

CHAIRPERSON MILLER: Great. Yeah. Thank you. And thanks to the panel. I mean, this has been so timely with everything going on. And with us grappling with, you know, what's a tactical level change, what's mid-term, what's really suddenly now become more of a strategic issue with all of this, especially with the Russian invasion of Ukraine brings it all home to us as we grapple with this.

And I do have some questions from the Board. So I'll start with Theresa Taylor. Let me see if I can make this work.

COMMITTEE MEMBER TAYLOR: There we go.

CHAIRPERSON MILLER: Oh, wait a minute. I turned them all on. Okay. Let me go back up to Theresa Taylor and see if I can get her.

COMMITTEE SECRETARY HOPPER: She's on, David.

COMMITTEE MEMBER TAYLOR: I am on. Yeah, pretty sure.

CHAIRPERSON MILLER: I think I've got everybody else too, but...

COMMITTEE MEMBER TAYLOR: Thank you, Chair Miller. I just wanted to thank you all for -- this is a very fulsome presentation and I took a lot of notes, and it was really, really good. I also appreciate very much that you brought in the ESG strategy and making sure to, you know, let us know that these emerging markets also need the capital to expand into ESG. We often forget about that, right, that we have capital here in this country and we think about just this country. We don't understand that to make this a worldwide success, these other countries have to take part in it.

I guess I wanted -- so there was a couple of questions I had. At the end here, and I don't remember which one of you said it, you talked about the expansion of inflation, because of several fact -- oh, that's right. It was you Mr. Dhawan -- with the several factors. Could you expand on that just a little bit for me.

MR. DHAWAN: Yeah. So firstly, from a supply chain side --

COMMITTEE MEMBER TAYLOR: Right.

MR. DHAWAN: -- we're seeing all sorts of logistical back-ups. You know, you see it in the Ports in Long Beach and across the world. You know, difficulty to get goods. When those goods do come, it's difficult to get workers to operate them, given that, you know, fifteen percent of the maritime staff are from Russia and Ukraine. Emerging markets in particular, they have a slightly different composition of CPI and the way that they construct their baskets. About a third of their CPI baskets come from food and energy.

So when you have these kind of supply-side shocks, then typically inflation manifests in a much more acute fashion across the emerging world, and that propagates Central Bank reaction functions. So much of last year, I know we haven't -- we're on the eve of a Federal Reserve tightening cycle this year, but for much of last year, it was a year that EM Central Banks did a significant amount of adjustments, taking nominal policy rates to multi-year high levels to try and fight some of those inflation trends that we're seeing here in the U.S.

COMMITTEE MEMBER TAYLOR: Thank you. I appreciate that. There was -- then the other thing that you had mentioned was that the wealth that's seeded outside the country, right, because it's in dollars or whatever, that has now become attached, I guess, for the first time at least in Russia, so -- and that has an impact worldwide. Is that something you foresee us, and Europe, or others using maybe even against us in the future, so that this kind of wealth gets attached and can't move?

MR. DHAWAN: Yeah. I think it's a major source of debate right now as to how much of these sanction actions will impact the future value of the dollar as being the world's reserve currency. And SWIFT being the predominant payment mechanism for financial transactions. I think the reality is none of us really know. We can kind of speculate as to what alternative sources are out there. But I would -- I would venture to guess it's going to be a very, very long time before any real alternative can come from both the reserve currency being the dollar or SWIFT from a payment system.

The Chinese alternative of the payment system has one-fiftieth of the number of participant financial institutions and most of those are Chinese banks. So it certainly doesn't have the worldwide recognition that the SWIFT has, which is 11,000 financial institutions globally.

On top of that, if you think about the dollar as being a reserve currency and the assets -- the commodity assets they're traded in the -- in the dollar, it still becomes incredibly difficult for the global financial ecosystem to move away from that just based on these sanctions. What you may find in the interim part is that energy will be traded amongst people that are on the other side of the debate, the people that don't chose to follow the western side. And those transactions may be settled out -- out of U.S. currency. We had already started seeing this prior to the Ukraine invasion, where China and Russia were settling transactions in Renminbi and in Russian rubles. I think that that's likely going to amplify the seeking for alternative sources of non-attachable currency transactions.

COMMITTEE MEMBER TAYLOR: And then finally, and I'm sorry for taking up so much time you guys. I think -- as we move into this emerging market space, and you talked about, you know, making sure that we're, you know, giving opportunities, but at the same time doing our due diligence, but how do we not do our due diligence and look at the geopolitical affects of say a China, or a Russia when they -- as we saw this happening, right? So it's the same thing with China, they've become entrenched autocrats, right, so -- and they made their power longer. I think China has made their leader power -- in power for life, as I understand it.

How do -- how do you continue to invest in these markets knowing -- and they've made -- they've made the same kind of noise that Russia has made and done the same kind of thing. So how do we continue to take these markets and invest in say China right now when we know that a war could start over Taiwan, right?

MR. DHAWAN: Maybe I can start on that.

(Laughter.)

COMMITTEE MEMBER TAYLOR: It's a tough one, guys. Sorry.

MR. DHAWAN: Well, I think that this goes back to the point about the indices and diversification, the 75 countries in the indices. And right now, two of them are hot topics and they tend to be two big ones right now. And, you know, Russia is very clear. And it's TBD on if China does do something in Taiwan or doesn't. I would suspect that the probabilities of them doing it have probably gone down since these very aggressive sanctions have been put into place. And, if anything, you know, you take a look at the Russian economic fallout, whereby you're having two percent week over week inflation on food baskets. We're projecting somewhere between 12 and 15 percent economic contraction this year. Probably likely to be on the conservative side. Probably going to be much higher than that. There's an outright ban for people to get dollars out of the country now.

So you really -- sadly, you know, these types of sanctions, these types of regimes tend to hurt the lowest and the working class, and the middle class, not the autocrats that run the country as you said. But I would -- I would go back to saying that it is a big, diversified, complex. With more countries coming into these indices, it dilutes out the concentration for some of the bigger names. And I think that over time, you can harvest those types of premia. And as more countries come in, just by definition, you're minimizing those idiosyncratic risks.

COMMITTEE MEMBER TAYLOR: Thank you very much. Thank you, gentlemen. I appreciate the presentation.

CHAIRPERSON MILLER: Okay. Next, we have Controller Yee. Let's see if we can get the --

COMMITTEE MEMBER YEE: Great. Thank you very much, Mr. Chairman.

Really appreciate the presentation and both really trying to have us view this at a macro level relative to having our eyes open going into EMs, but also the very real present day experience that we're all reading about and experiencing here at home.

A couple questions. One is I really appreciated, Axel, your comments about, you know, just the almost, you know, kind of built in commitment to looking at how you build resilience and, you know, kind of sustainability over time and was very heartened to hear about some of the corporate governance policies that are actually taking place and certainly appreciate your on-the-ground perspective of that as well.

And -- but I guess when I kind of look at this whole kind of ESG kind of body, you know, it seems that we have a real potential here with emerging markets to be sure that the one capital -- source of capital you talked about, human capital, that we have a tremendous potential of trying to drive Creating value for human capital. And I raise that only because we're a public fund and we're highly scrutinized. We take out a lot of reputational risk, earner or unearned, mostly unearned. And I just wanted to kind of get your sense about whether that is an area of focus. And certainly when we look at, you know, a lot of global events around migration and, you know, and climate change, and pandemics, but kind of your thoughts about that, whether that is a potential, whether that's a current area of focus, and whether we can actually help drive that.

MR. CHRISTENSEN: Sure. And I appreciate the question. I think it's a very important question. And I want to go back to something I mentioned before that maybe you want to leverage the fact that emerging markets are less liquid.

COMMITTEE MEMBER YEE: Um-hmm.

MR. CHRISTENSEN: And why is that? Because again you have to be part of the change. Divesting is kind of a luxury you don't have in a lot of emerging markets. You just can't vote with your feet. You just can't kind of, you know, go -- just run away. You have to be involved. And so -- and that -- that is something that I've been able to experience personally at a pension fund in Chile, but also in terms of what -- how we've kind of faced this issue at BlackRock is, you know, probably there are many ways to get to the objectives, and we don't want to say this is the only one, but we do think, and this might be the case for larger investors as ourselves and perhaps your case, it's -- divesting is not an option. You have to get involved in being an agent of change, and using your powers as a shareholder or as creditor to convince other shareholders and management of the benefits of this -- of making those changes.

And it's not easy and it's certainly -- you know, public opinion has different, I would say, sensibilities about them, some want you to go super fast. Some are still skeptical about climate change. And you have to find, you know, something that kind of addresses all of the different perspectives on this.

But definitely, if anything we can bring from emerging markets, you want to be -- and if you -- and this is especially the case if you're an investor with public scrutiny, because think about what would happen if you divest. Chances are, you know, someone will invest, probably someone who is hot under public scrutiny, and probably will not be as active in promoting the changes that we need.

And as we -- you know, I think the important part is also to understand, you know, being active in promoting sustainability in a company's investments is not disaligned with, you know, greater return objectives.

COMMITTEE MEMBER YEE: Um-hmm.

MR. CHRISTENSEN: It's -- you know, as well as managing your risk in an appropriate fashion. I think, you know, it's quite obvious by now, and I think California you know it better than anyone, climate risk is investment risk. If you don't understand it by now, you're not meeting your fiduciary responsibility, if you're an institutional investor. So, you know, we think that emerging markets in that perspective kind of, you know, makes us whole in terms of being involved as an investor, being an actor of change. So we think that that is the way that we would approach it. Again, there are different profiles of investors, some are larger, some are -- I guess have different commitments from their final beneficiaries.

But at the end of the day, we are committed to -- most of the money that we manage as a manager is long-term investment and people are, you know, trusting that we make the right decisions. And promoting change in terms of sustainability we think is in that direction.

COMMITTEE MEMBER YEE: Um-hmm. And I appreciate that. Yeah, very much top of mind with most everything we do here, so appreciate the response.

We talked about lessons learned. And I was curious about lessons learned pursuant to the COVID pandemic. I mean just what did you see across emerging markets relative to the resiliency and where were some trouble spots?

MR. OLAFSON: I mean, look, COVID was an extraordinary challenge for every society and economy, and it isn't finished. I mean, you see the events in Shenzhen over night that were referenced. I mean, they're shutting down factories there.

I would -- look, the -- we talk about the, you know, in some level the fragility, or the lack of depth, or the institutions, but at the -- at the level of the people, what Axel said before, when you go to these places, they're incredibly resilient countries and societies. And it's not to diminish the human toll of COVID as well, but I -- but I think they -- you know, we have quite large offices in India. I remember, you know, in -- you know, in the very early days when I was -- I was in Manhattan and it felt -- it felt quite frightening, but quickly I think, through the extraordinary innovation and response, you know, our societies were able to handle that.

The scale of the challenge -- I mean, you remember those images of the -- I mean, they didn't have the oxygen and things for these hospitals, so -- and when we were speaking with our colleagues there and the impact so them and their families was tragic. Now -- but they -- they're resilient. They worked through it at great cost. So I think it gets back to these places are very resilient, I would say.

COMMITTEE MEMBER YEE: Any other thoughts from...

MR. CHRISTENSEN: I would just add that probably remember just the diversity that we find within the emerging market space. Different countries took different routes. Some were very strict on confinement and we're still seeing the results of that. Some other countries were really focused on getting vaccine programs in place with all the challenges that that had in terms of -- you know, you were definitely not at the top of the line of countries getting vaccines, so you had to adjust to whatever you found.

Certainly the resilience that Greg mentioned. In many emerging countries, staying at home was not an option. Most families if -- you know, if they don't go out and, you know, do whatever they do, you know, on their shop, or, you know, on a food cart in the street, they won't have, you know, food on their table that night. So definitely they had to find ways of adjusting to this in the best fashion, same governments. A lot of countries, central banks did not have the tools that developed central banks have, like the Federal Reserve or, you know, the balance sheet and being able to, you know, reduce rates to zero.

So they -- again, resilience in, I guess, just in ingenuity in finding ways to address this. It has not gone without an impact. The emerging markets will have a delayed recovery compared to most developed countries.

But definitely -- I guess, you know, if we want to find the class half full in here, I guess resiliency comes through, also understanding how much more investment - and this is not just emerging markets - we'll have to see in terms of the health care infrastructure, but -- and finally, I do see as a positive outcome, if we can find one, is actually there was some degree of global coordination on this, in terms of least getting vaccines out. And the rollout has not been, by any case, you know, equal among countries, and far from that, but, you know, we're getting there. And again -- and excuse me for perhaps on the fixation on the climate aspect, I see it as a very good rehearsal towards the challenge that we're going to be facing in terms of climate change, if anything, yeah.

COMMITTEE MEMBER YEE: Yeah. I appreciate that. Great. Then, Mr. Chair, just one last set of questions, if I could. Following on Ms. Taylor's comments, and that is so how do you price the risk of having to liquidate investments in the wake of, you know, just sudden acts of aggression and -- or other kind of objectionable actions by sovereign states?

MR. OLAFSON: I mean, I don't think you can really price for something like that. You can start to anticipate perhaps when, in this case, the buildup, when we were -- there were ways to put the hedge into that, but I don't think you can really price for it. So then it's just portfolio construction. And it's just like, you know, you have to be prudent or you choose not to have exposure, if you think that that can happen.

But that certain things are really tail events, and especially -- now, there's a whole new, you know, kind of thought you have to have. I don't think there was this anticipation that the dollar could be effectively, I don't know -- that the reserves could be expropriated, or taken, or frozen, or whatever the right --

COMMITTEE MEMBER YEE: Um-hmm.

MR. OLAFSON: -- you know, description of what's happened is. And that was a watershed moment.

MR. DHAWAN: Yeah. And I would just -- I would just add that, you know, we need to discern between risk and uncertainty. And, you know, in markets we can put a price on risk. We struggle to put a price on uncertainty. And, you know, heading over the weekend when the sanctions came out into March the 1st, March the 1st when MICEX was closed and capital controls were put in place, instantaneously you saw a 99 percent drop in value for local currency bonds in dollar terms, 90 percent in hard currency bonds and 85 percent in corporate bonds.

So there's just no way in which you can trade out to that or do anything. It was an instantaneous drop in price and then, you know, from -- in the subsequent weeks, you know, we've seen a lot of deleveraging of assets at these sorts of values as people are looking to remove them from portfolios.

COMMITTEE MEMBER YEE: Yeah. Okay. I think that's it. Thank you, Mr. Chair. Thank you very much.

CHAIRPERSON MILLER: Okay. Thank you.

Next, I have Director Middleton.

COMMITTEE MEMBER MIDDLETON: All right.

CHAIRPERSON MILLER: What did I do.

Let me try it again. Let's see. Maybe hit your mic button again and I'll see if I can --

COMMITTEE MEMBER MIDDLETON: There we go. Thank you.

CHAIRPERSON MILLER: Operator error here.

COMMITTEE MEMBER MIDDLETON: All right.

Gentleman, thank you. This was really interesting and I made a tremendous number of notes. My only complaint is I'm never going to be able to listen to Hotel California quite again --

(Laughter.)

COMMITTEE MEMBER MIDDLETON: -- in exactly the same way. I don't want to try to pick over all of the questions that have already been asked. One of the things that emerges from this conversation is that we make investments in organizations and in countries expecting that they have at least a reasonable level of shared commitment to a ruled space system and order. And what we find is frequently that's wishful thinking on our part. And what -- I find myself looking at two different countries that were mentioned today, Russia and Venezuela, two very, very different countries, but in both instances in very dramatic ways, the leadership of those countries have acted very irrationally based on a commitment that each one of them has to some kind of system of order very different than what most of us.

For an entity like CalPERS, that commitment to rules and to good governance is one of the motivations for us to get into emerging markets. And what I am struggling with is when do we make the decision that we need to step way, even though we've been told you can't leave sometimes? But at some point, we do need to make that decision. And the one that's emerging for us is our commitments in China, where it -- they have taken and shown both actions that would justify that they are going to act rationally and others that would cause you to wonder how deep is that commitment.

MR. DHAWAN: Maybe I can offer a start just more from a mathematical or empirical perspective. There's been quite a lot academic research over time that shows to your notion of a rules-based system. If you adopt the same sorts of western rules or governance, focus on rules of law, quality of the institution, property rights adherence, over time -- there was a paper written called, "The Australian Dream", which basically looked at Australia's migration over the past 50 years and to adopting these types of systems.

But over time, we can -- we can empirically show that if you do that, your cost of borrowing does come down and your ability to be able to attract foreign investment does go up. So as an entity, you are better off adopting that system that you very nicely articulated is the norm of what public pension plans want to try and invest in.

And across emerging markets, and I'd love to get Axel's thoughts as well, because, you know, he comes from a country that, you know, after a benevolent dictatorship adopted that same system and went through a period of building up its pension system, went through a period of de-dollarizing its economy, went through a period of really having probably one of the most pragmatic and to the book central banks into global economics, and really benefited very well for the last 20 or 30 years in terms of the rest of the middle class.

So I think -- I think there's a broad realization amongst emerging market countries, both on the frontier space, as well as the more developed, that if you do travel over or through the system that the rewards are there at the end. I don't think what we can legislate for is those that want to derail that. And it again comes again into the uncertainty element.

I would just raise to any investor that the concentrations amongst countries that you had mentioned, particularly China, need to be tapered, need to be managed, being mindful of the fact that potentially that there are conflicts down the line, as they maybe don't choose to follow that same rules-based order of governance.

COMMITTEE MEMBER MIDDLETON: All right.

MR. CHRISTENSEN: I think this is a key question. And perhaps it might help in answering the fact to understand that emerging markets, in terms of their country composition has evolved over time. We look at certainly the indices at the -- when, at least on the equity side, MSCI started to kind of, you know, structure a very smaller number of countries. It was primarily concentrated in Latin America and in Europe. And Asia was quite small back at the time.

So eventually capitals find a way of -- in the case of, you know, having Asia increase in its allocation, it had to do with the growth aspect. Most Asian economies embraced, you know, a higher focus on technology. So eventually, you know -- and probably the -- you have to struggle with the pace of that adjustment, but definitely markets find ways in terms of reassessing those risk -- political risk.

I have to say that sometimes it's not just on authoritarian regimes. Sometimes countries choose democratically to change the rules as well. And as an investor you have to, you know, withstand that of -- and I'm talking very closely here. My country has chosen to renew its constitution. As an investor, you get nervous, because that means reviewing all the rules again.

COMMITTEE MEMBER MIDDLETON: Right.

MR. CHRISTENSEN: But they've done it democratically. That's what most of the people have chosen. And as investors, it's our -- you know, we're -- it's not a right for us to invest. It's actually something that we earn and we have to appreciate political changes, especially if they come in democracies in -- you know, in open decisions from the people.

So at the end of the day, political risk is part of the landscape and you have to understand it. Markets will evolve in terms of how they -- how they address the risk and opportunities. It's not just again the authoritarian governments that you want to be mindful of. Also, very democratic governments sometimes decide on terms of changing the rules, and that's okay.

COMMITTEE MEMBER MIDDLETON: Thank you. Let me change the subject just a little bit. One of the comments that was made had to do with just-in-time supply chains. And we've had just over 40 years of just-in-time supply chains clearly being the leading model throughout the world.

And between COVID and the wars breaking out, we are now seeing very dramatically the limitations to this kind of approach. What should that mean to us in terms of investment strategies moving forward?

MR. DHAWAN: Well, I think, you know, a natural beneficiary would be Mexico, in the sense that it's within America's sphere of influence, it has cheap production from a labor perspective. You have the updated NAFTA agreement which was signed in the last administration for typical car production, goods cross the border 15 -- around 15 times back and forth between the U.S. Mexico.

So this fluidity is already there. And I think what we will start to see in the U.S. would be trying to make sure that we have much more security around essential production items, essential goods. I don't think we need to -- we're going to want to be in a situation again where we just left -- were left with too much uncertainty around the procurement of goods and services.

And I think if we're thinking that way, then the European Union is also thinking that way, and China is thinking that way, and then you start to regress a little bit the global order that we've put in place in the last 40 years. And I think that that means more onshoring and that means building, you know, more niche regional trade agreements and more niche regional partnerships, so winners on one side, where you strengthen the cords, and losers on the other side where you unfortunately loosen them.

COMMITTEE MEMBER MIDDLETON: All right.

MR. OLAFSON: Look, I think it's a real -- it's real. This and energy transition are probably the two big themes running through a lot of what, you know, portfolio managers, I think investors, are looking at. And, you know, back to what Pramol said earlier, this is all inflationary. It's not just Mexico. I mean, you'll have more production in this country. Like, I mean -- and I think it may be the auto industry. It may be life sciences. It may be semiconductors. Like, all -- I think all elements of industry will revisit this, because it was -- I think it just became too stretched. But there will be a cost. I mean, it was a great -- it was a great benefit to the consumer -- the American consumer of being able to acquire all these goods from what were pretty effective global supply chains, but I think that needs to -- it probably swung too far --

COMMITTEE MEMBER MIDDLETON: Um-hmm.

MR. OLAFSON: -- and so it will come back and there will be opportunities for you and investors like us to participate in that.

COMMITTEE MEMBER MIDDLETON: All right. Mr. Chairman, let me just finish with a comment and I know it's one shared by everyone. What Russia is doing in the Ukraine today is horrific and all of us want not just simply to take responsible financial actions, but we also want to find some way to punish the Russian regime and to support the Ukrainian people. And what that's going to be I think is a difficult choice, but it is one that we want to make.

CHAIRPERSON MILLER: Thank you.

Next, I have Director Pacheco.

Oh, let's try it again. Just push your button, then I'll turn you back on, I think.

There you go.

COMMITTEE MEMBER PACHECO: Is it on?

CHAIRPERSON MILLER: Yes, of course, sir.

COMMITTEE MEMBER PACHECO: Very good then. Thank you. Thank you very much, gentlemen. I really did appreciate this panel discussion on emerging market. And what our -- my Board Member Mrs. Lisa Middleton mentioned about globalization, I wanted to actually elaborate more about that. I know that, you know, over several decades, we've been moving towards globalization. For instance, with NAFTA, for instance, we had that model that we had. I believe it was under the Clinton Administration where they had Canada, United States, and Mexico. And I remember reading about it and study -- actually studying about it where Canada was a -- had the competitive advantage of the natural resources, the United States has the higher education, and the capital -- the money capitals, and then Mexico was considered the labor, their competitive advantage.

And in this new order as has come out, do you see us -- and I think that's what you're alluding to, you do see us moving back where essential -- essential industries will need to be internalized in our country and so forth. But in terms of how is that going to -- in terms of how that's going to affect the inflation supply and also just the cost of doing things. I mean, like for instance, it's now six or seven dollars now to fill a gas tank. Is it going to get higher? I mean, those are the kinds of questions that are -- you know, obviously there is a cost of going back, but, you know, how are we going to address that?

And also, not only that, if -- you know, by moving that direction, policies have to move, right? So the United States government has had this robust policies of globalization for several decades. It will take time to bring all that back, all that alignment back. And I wanted your thoughts, all three of you, on what you all thought about -- think about that.

MR. CHRISTENSEN: So let me give you a first approach to this. So definitely, you've probably heard that we're shifting from this just-in-time global structure to one just-in-case, where we're going to get much more levels of redundancy in the supply chain, so -- and this is something that was already happening when we saw the -- you know, the trade war between the U.S. and China. It was only amplified during the COVID as a lot of supply chains were put to pressure. And kind of the cherry on top, right, has been the recent conflict in terms of -- you know, making that even more prevalent in energy and other commodity prices.

So this poses a lot of challenges and certainly one -- many come in the direction already mentioned of nearshoring and onshoring, bringing closer, perhaps running higher levels of inventory as like shock absorbers, if you will, it -- but it also could have much more structural type of decisions that -- you know, it's quite wide the range of implications. Think about if oil prices continue to be high --

COMMITTEE MEMBER PACHECO: Um-hmm.

MR. CHRISTENSEN: -- people will probably want to live closer to where they work, or the pressure of remote working will continue to be there for longer. In terms of, you know, the type of real estate, for instance, that has more development. If we have more inventory closer to the final consumer, you will see, you know, storage type of real estate probably be very interesting. So I'm just kind of mentioning some of the longer term implications of this.

Now, from a more kind of investment portfolio construction -- and it's interesting, because at least in my part of the world, inflation never went away. I mean, if you talked to someone from Argentina, they're living with 40 percent inflation this year. But here in the U.S. and Europe, inflation was definitely not a concern. I think -- you know, I might have come across several academic papers calling for the death of inflation and central banks to worry about something else. And suddenly inflation is certainly back.

And that also makes us rethink what type of decisions we have to bring into our portfolios that have a better chance of mitigating inflation, you know, real assets, infrastructure, certain sectors that have better ability to address inflation. So it's -- it affects us in our daily decisions that -- you know, that gas tank that you mentioned that -- but it also is going to be affecting us in terms of how we look at portfolios where definitely for U.S.-based investors as yourselves protecting inflation, which is very important, because at the end of the day, you have to commit in terms of funding those pensions for people that will have to be facing that higher inflation, is going to come with a much, I guess, greater focus than it has in the past.

MR. OLAFSON: Look, it's -- the bottom line is it's never that easy, I guess, to invest, to run a plan like you do. In one -- in one sense, you know, the kind of monetary repression that you've been suffering, you know, zero rates, and -- that hasn't been easy. But on the other hand, your liabilities are probably going to -- well, they will in this environment -- also inflate.

I think it will -- it will be challenging. There will be opportunities. I think the bigger thing is inflation per se. I mean, some of it's -- some of it would be fine. The fact that the factors of production, workers, can, you know, have a little bit of pricing power isn't per se a bad thing. Maybe a good thing.

It's really just about how these feeds through into growth. I mean, that's always the issue. We started here, you know, the end of last year, the beginning of this year with high valuations. It felt like the Fed felt a bit behind the curve. Now, we have this extra dose of I think inflationary pressure. And so it's a complex environment to navigate, but markets adjust. Prices adjust pretty quickly.

And then, you know -- and while we're talking about it, you know, maybe it starts to be a buying opportunity. We've had a pretty good correction in some of the broader markets, notably the public side. The private side always moves a little slower, because you don't see it every day, but I think there will be opportunities in all of that. And again, it just puts a premium on, you know, the manager selection, the strategy that you put in place.

COMMITTEE MEMBER PACHECO: Thank you very much.

CHAIRPERSON MILLER: Thank you. I'm not seeing anymore questions from the Board.

We could go on all day. I mean, there -- this is such a fascinating topic and such a fantastic expertise and sharing from our panel, but I think we'll wrap that up. And I do think we have a public comment on this subject as well before we move forward from this.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Yes, thank you, Mr. Miller. I'd just like to thank the three panelists for their generosity today. Just very good discussion and very timely, so thank you.

(Applause.)

CHAIRPERSON MILLER: Anything else, Dan, before we call for our public commenter?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: No. I think we're ready for public comment. I would just echo Arnie's just appreciation for our panelists and their organizations for making them available. But with that, I think we can move to public comment.

CHAIRPERSON MILLER: Yeah, I agree. Thank you so much.

Okay. We have Mr. J.J. Jelincic for public comment. Come on down, sir.

MR. JELINCIC: Dave, as I said in my comment, I wanted to talk specifically about Russian divestment. And I will take your guidance as to whether this is the best point to do it.

CHAIRPERSON MILLER: Yeah, I think so.

MR. JELINCIC: Okay. J.J. Jelincic speaking for myself. You've all had your mortgages sold by the originator. When your original lender sold off that loan, it did not put any economic pressure on you. If it created any pressure at all, it was to remember the new name to write on the check. That is the effect of divestment. You are divested.

Politicians make political statements. The Governor wants to make political statements, he should use his own money. If the Legislature wants to use -- wants to make political statements, they should use their own money. If you want to make a political statement, use your own money. In this room, at that dais, you are fiduciaries. Your job is to pay beneficiary -- pay benefits and not make political statements.

If you believe Russian assets are currently overvalued, you should make an economic decision to sell. The largest single Russian asset the fund owns is a mall in Moscow. If you have decided that hurting the economy of Russia helps you pay benefits, you should not sell it. You should implode it, thus denying Russia the economic benefits that that activity creates. You should also do that, or the equivalent, with all of your other hidden Russian assets.

Again, in this room, at that dais, it's your job to grow assets and pay benefits, not make political statements. Thank you.

CHAIRPERSON MILLER: Thank you.

Okay. I think that now we'll be adjourning into closed session. And, let's see, it's 11:30, so I guess we'll be returning at about two o'clock. Does that sound about right?

It looks like --

COMMITTEE MEMBER TAYLOR: Well, we've got to take lunch in between.

CHAIRPERSON MILLER: And we've got to take lunch as well.

So do you have a recommendation?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yeah. Is -- you're looking for a guess for when we'll return in open?

CHAIRPERSON MILLER: Um-hmm.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yeah. It looks like we have about two and half hours in closed, Mr. Chair. So, yes, I think throw in lunch. I think 2 to 2:30 is probably a good guess.

CHAIRPERSON MILLER: Yeah. Why don't we say 2:30 then. Does that sound right?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Should we set it for earlier and that way in case -- because I think we can go over rather than --

CHAIRPERSON MILLER: Yeah, that way -- yeah.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: So maybe we should say we'll try to adjourn around 1, but we'll see if we make it. One, 1:30.

(Laughter.)

CHAIRPERSON MILLER: I'm thinking more like two.

CHIEF EXECUTIVE OFFICER FROST: Yes, Mr. Miller, 2 o'clock.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Two o'clock, okay.

CHAIRPERSON MILLER: So let's stick with 2 and that's -- we'll see how we do with that guesstimate.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Sounds good.

CHAIRPERSON MILLER: Okay. Thank you. So we will adjourn into closed session now.

COMMITTEE MEMBER TAYLOR: Can you recess for 10 minutes for a break too --

VICE CHAIRPERSON FECKNER: Yes, recess.

COMMITTEE MEMBER TAYLOR: -- because they may --

CHAIRPERSON MILLER: Oh, yeah. Yeah. Let's recess for 10 minutes and then return for closed session.

Thank you all.

(Off record 11:27 a.m.)

(Thereupon the meeting recessed into closed session.)

(Thereupon the meeting reconvened open session.)

(On record: 2:15 p.m.)

CHAIRPERSON MILLER: Okay. Let's reconvene with our open session of the Investment Committee and welcome back, everyone.

We're on Item number 4, the Executive Report, from our Interim Chief Investment Officer, Mr. Bienvenue.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Thank you, Mr. Chair and good afternoon, members of the Investment Committee. I guess we were surprisingly prescient with our -- with our timing estimate finishing close session right at two o'clock.

Part of my opening comments here are going to be to address some of the current market events and potential impacts on the portfolio. But before we get to that, I'd like to highlight a couple of key themes that you see on the agenda before us today. Those two key themes are first the importance of our perspective as a long horizon investor, being primarily interested in outcomes over decades and generations, as that's the horizon that aligns with our liabilities; and secondly, the importance of a healthy governance model and the stewardship of these funds -- or in the stewardship of these funds, which we together are responsible for managing.

These two taken jointly give us confidence in both the ability and actually just the confidence itself to stay the course through periods of short-term volatility. And really you can see examples of both of these on today's agenda. First, the ALM process for both the PERF and the affiliates are before us today. And these reflect the long horizon of both the PERF and many of the affiliate trusts.

And in terms of governance, we have -- we have a couple of items. First, an action item for the Committee to select a Board investment consultant for a new allocation to private debt. And then secondly, an information item requesting Committee feedback on potential changes to the total fund and the global fixed income investment policies that execute on the long-term strategic asset allocation.

So as the investment landscape continues to evolve and change, be it due to geopolitical risks, macroeconomic conditions or other factors, we can really move forward leaning on our governance and staying focused on the long term.

Now, we certainly do that through navigating short-term events using our team and our systems and processes to remain vigilant and aware of current circumstances to understand implications of market dynamics on the portfolio, to manage our leverage and our liquidity across the total fund, and to stay laser focused on our investment strategy and the execution of thereof, all despite periods of short-term volatility.

So with that in mind, let me share some context on some of the recent events and the impacts for the portfolio. Since the end of the calendar year, we have experienced heightened market volatility in both equity and fixed income markets. This was first driven by inflation numbers and then concerns over the upcoming tightening of monetary conditions by global central banks. Of course, more recently, the volatility has been driven by the disturbing events in the Ukraine that we talked about earlier today.

And these have led to market action that exhibits traditional risk-off dynamics with volatility elevated, U.S. treasuries rising when risks appear to be especially acute, U.S. dollar appreciating, and then equity and credit markets coming under pressure. And this has resulted in our portfolio giving back some of the recent gains.

Now that said, this backup is relatively small when compared to the significant gains experienced over the last few years and performance is still very strong over long horizons. And it's also worth noting that fortunately, or maybe I should say foresightedly, our strategic asset allocation has been set with these kinds of periods in mind. Together, and as we've discussed in the past, we have intentionally built diversification and defensiveness into the portfolio with a specific allocation to U.S. treasuries, and defensive sleeve as part of our equity exposure, and then our predominantly core and mature income-producing real assets allocation. And this positioning has and should continue to serve us well, as we know that drawdowns and risk-off events are inevitable in markets.

And this takes us back to the need to keep our eyes on our long-horizon liabilities, to lean on our governance, and to stay laser focused on managing the portfolio and executing on our strategy through these periods of market volatility.

And that concludes my opening comments, Mr. Chair. And with that, I'll turn it back to you.

CHAIRPERSON MILLER: Great. Thank you.

And with that, we'll move to our action consent items, 5a, approval of the --

COMMITTEE MEMBER TAYLOR: Move approval.

CHAIRPERSON MILLER: Okay. Moved by Ms. Taylor.

COMMITTEE MEMBER PACHECO: Second.

CHAIRPERSON MILLER: Second by Mr. Pacheco.

So I call for the question. And is electronic, Ms. Hopper?

COMMITTEE SECRETARY HOPPER: No.

VICE CHAIRPERSON FECKNER: No.

CHAIRPERSON MILLER: No. Okay. So all in favor?

(Ayes.)

CHAIRPERSON MILLER: Any nays?

No abstentions.

The ayes have it, so the motion passes.

So on to 6a, information consent items. I haven't had any requests to pull any of these items. I don't see anybody with a last minute objection, so we will move on to 7, our action agenda items. And back to you, Mr. Bienvenue.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: All right. Thank you, Mr. Miller. And we have Matt Flynn who leads our Investment Services Division joining us to walk us through this item. This is the item on the selection of a consultant -- Board investment consultant for private debt -- the new allocation to private debt. So, Matt, over to you.

INVESTMENT DIRECTOR FLYNN: Thank you, Dan. Good afternoon. You pretty much stole my thunder.

(Laughter.)

INVESTMENT DIRECTOR FLYNN: Item 7a is an action item asking the Committee to make a selection for an investment consultant for the new private debt allocation. The selection for the -- before you today is from one of the two Board consultants that we have currently under contract, that would be Wilshire or Meketa.

Current practice is for the Board to have independent investment consulting services for each of our private asset classes. With the new approved strategic asset allocation, we now have an allocation to private debt.

Given both firms are capable of performing the private debt consulting work, the action requested today is for you to select Meketa or Wilshire as your private debt consultant. Following that selection, staff will complete the necessary contractual actions to effect that those services for you.

With that, I'm happy to answer any questions and it's back to you, Mr. Chair.

CHAIRPERSON MILLER: Okay. I have a question from Director Feckner.

VICE CHAIRPERSON FECKNER: Yes. Thank you, Mr. Chair. Matt, can you explain -- I'm sure this isn't your answer, but maybe you know the background information. Why such a disparency in the bids? Is one going to do more of something than the other is? I just kind of find it hard to grapple with almost the double the price.

INVESTMENT DIRECTOR FLYNN: I can't speak to the analysis that each firm put into their proposals. The request was for the services that we are -- that are attached to this item. So the services are nearly identical to the services provided to the private equity book of business from a similarity standpoint, clearly smaller scale, but that's as much as I can speak to. I know certainly Wilshire and Meketa are here. Perhaps, they could provide some insight into their analysis.

VICE CHAIRPERSON FECKNER: Meketa, you want to come up and tell us why such a big difference, please?

MS. FIELDS: Christy Fields, Meketa. We priced these service -- we are the private markets consultants for the other asset classes. And so we priced these kind of in relationship to the expected size of the asset class at full implementation similar to -- similar to the services that we provide to real assets and private equity. That's how we thought about it.

VICE CHAIRPERSON FECKNER: But it's going to be the same scope of business, just the way you priced it is a lot different than what Wilshire did. Okay.

MS. DEAN: So Rose Dean, Wilshire Advisors.

Our pricing was predicated on the fact that we are performing some of the services that are listed in the scope of services for this particular mandate at the current time. Also, there is some benefit to scale in terms of our responsibilities of overlooking the portfolio as a whole already. So this would be just an additional service, but the actual items of -- within the scope of services will be the same and we'll be providing the same type of services obviously requested by the Board whether it's Meketa or us.

VICE CHAIRPERSON FECKNER: Okay. Thank you.

CHAIRPERSON MILLER: Okay. And I'd say feel free to remain because I've got a few more Board members that have questions, so perhaps you'll be able to illuminate us.

Okay. Ms. Ortega.

COMMITTEE MEMBER ORTEGA: Thank you. I think my question follows nicely on the remarks about is there any concern about having Wilshire have that kind of be the general consultant but then be consulting on this individual item too?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Not really. I mean, we separated private assets and general pension in the aftermath of the financial crisis, call it 12 or 14 years ago. And we had a completely different governance model in place. We had completely different series of checks and balances and the like. We think that that is a dated model, and that between having the consultants, and IRCs, and many of the different governance structures that we've built over the past, you know, 10, 12 years, we don't think that separation is necessary. We think that either one is a reasonable choice for the Board.

COMMITTEE MEMBER ORTEGA: Okay. Thank you.

CHAIRPERSON MILLER: Okay. Thank you, Director Ortega.

Next, I have Controller Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman. Following on Ms. Ortega's question, because I thought that was one of the stipulations with the Wilshire general consultant contracts, so -- or was -- yes or no?

INVESTMENT DIRECTOR FLYNN: Pardon me. What you're recalling is during the solicitation phase --

COMMITTEE MEMBER YEE: Uh-huh

INVESTMENT DIRECTOR FLYNN: -- of the procurement, the RFP had an artificial barrier put into the criterion, which said the general pension consultant was not going to do private asset consulting work. That was a component of the solicitation, not a component that's currently within the Wilshire contract.

COMMITTEE MEMBER YEE: I see. Okay. Got it. Got it. And I understand that there's no RFP process that's planned now, because of the length of time that that would take. So when is another RFP process contemplated today?

INVESTMENT DIRECTOR FLYNN: We have the opportunity to come back around in 2023, end of the year, if I'm not mistaken, for the next solicitation. The consulting contracts again, based on a decision made with different leadership group candidly --

COMMITTEE MEMBER YEE: Um-hmm.

INVESTMENT DIRECTOR FLYNN: -- in the Investment Office was a three, plus one, plus one contract structure.

COMMITTEE MEMBER YEE: Yes.

INVESTMENT DIRECTOR FLYNN: The initial three years is nearly due. So if we chose not to authorize the additional plus one, we would start the solicitation -- we would start planning for the solicitation ASAP.

COMMITTEE MEMBER YEE: Okay. Mr. Chairman, I'd like to, if we -- well, when we take action to request that we do have staff undertake an RFP process for the next year. So looking at exercising the plus one, but I really would like to see an RFP process going forward, when we have a little bit more time to get that process going.

CHAIRPERSON MILLER: Yeah. Can we have that be a direction from the Committee.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

We'll take that as direction that after we settle this --

CHAIRPERSON MILLER: Right.

COMMITTEE MEMBER YEE: Yeah.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

-- we'll kick off the RFP process as of the three.

CHAIRPERSON MILLER: Yeah. Okay.

Director Rubalcava.

COMMITTEE MEMBER RUBALCAVA: Thank you.

Yes, I do appreciate Controller Yee's comment, because there's an abbreviated procurement process, the

Board letter says both are clearly qualified, but it would have been good to seen like --

COMMITTEE MEMBER YEE: Yeah.

COMMITTEE MEMBER RUBALCAVA: -- some sort of presentation or something to summarize what they bring to the table to to speak. So I know that would be nice to do a --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: That makes perfect per --

COMMITTEE MEMBER RUBALCAVA: -- procurement next time. Thank you.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

-- perfect sense from our perspective that we -- you know, this was a function of adding the private debt allocation, that we need to get someone in place. And as Ms. Dean just mentioned, they are currently doing this as part of the opportunistic strategies, but it does make sense to do a full RFP as soon as -- as soon as practical.

CHAIRPERSON MILLER: Yeah. Director Feckner.

VICE CHAIRPERSON FECKNER: I'm assuming we need a motion on this?

CHAIRPERSON MILLER: Yes, I would entertain a motion.

VICE CHAIRPERSON FECKNER: Then I would move that we give the contract to Wilshire and then pick up Ms.

Yee's comments at the end of that period of time, so that we can have a procurement and see where we end up and really put things on paper and perspective.

COMMITTEE MEMBER TAYLOR: I second the motion.

CHAIRPERSON MILLER: Seconded by Ms. Taylor.

Any discussion?

Okay. I'll call for the question.

All in favor?

(Ayes.)

CHAIRPERSON MILLER: Nays?

No nays. No abstentions. The motion carries. The ayes have it. So thank you all for coming up and we will move on to our next action consent item, 5b[SIC], Review of the Investment Committee Delegation.

Mr. Bienvenue.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Mr. Chair, I think we're on to Item 7b, which is the --

CHAIRPERSON MILLER: Sorry.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

-- which is the -- which is the affiliate funds, health, defined benefit, and prefunding trusts.

CHAIRPERSON MILLER: Right you are.

(Thereupon a slide presentation.)

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: All right. Excellent. So we have Christine Reese joining us.

Recall that the -- you know, we went through the allocation, the ALM for the PERF. That landed in November. Now, we're back with an action item in March for the -- most of the affiliates. Although the glide path funds, the target date funds, those will be back in June. So with that, I will turn it over to Christine Reese to take us through the item.

INVESTMENT DIRECTOR REESE: Thank you. Good afternoon. Christine Reese, CalPERS team member.

I'm here today to present the asset liability management review for certain Affiliate Funds. This ALM review utilizes the same methods as were used for the ALM for the Public Employees' Retirement Fund, which was presented to the Investment Committee in November.

Before I begin, I would like to acknowledge and thank the team members in the Investment Office, actuarial office, and Financial Office for their collaborative partnership and contributions to this review. For this review, I'll walk through the purpose of each of the Affiliate Funds to provide context for the candidate and recommend portfolios. I'll then discuss our findings on adding private equity as an asset class and the fixed income benchmark modification.

Then we'll turn our attention to the portfolios, starting with the sample 60/40, followed by the single allocation funds, and then the multi-asset class funds. And I'll close out the presentation with a comparison of the recommended portfolios and our recommendations and next steps.

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INVESTMENT DIRECTOR REESE: So on slide 3, you'll find a table with the listing of Affiliate Funds that we're covering in today's review. I'm just going to walk through them one by one, give a short description, and discuss kind of their investment strategy.

So the Health Care Fund is a reserve fund for our self-funded health care plans. There are no defined cash flows, but withdrawals can occur at any time, depending on the need of the Health Care Program. As a reserve, this fund is invested very conservatively in bonds.

So we have three defined benefit plans. The Legislators' Fund is closed. It's cash flow negative and has just a few active participants. This fund is invested across five asset classes with a moderately conservative investment strategy.

The Judges' Fund, like the health -- like the Legislators' Fund, sorry, is also closed, but this is a pay-as-you-go program. The part that we invest is a reserve to ensure that we can pay two to three months of benefit payments should there be a State budget delay. So this fund is invested in very short-term cash equivalent securities.

The Judges' Fund is our third defined benefit program. And this was opened when the Judges' Fund was closed. It's a relatively young program and is cash flow positive. This fund is also invested in five asset classes with a moderately aggressive investment strategy.

So that brings us to the prefunding programs that we're covering today. The first is the California Employers' Retiree Benefit Trust Fund, which I am going to call the CERBT. This is a program for employers to voluntarily contribute and pre-fund their, what's called, other post-employment benefit liabilities, also known as OPEB. These are primarily health premium related liabilities for retirees.

So this fund we offer employers three strategies with distinct asset allocations with a moderately aggressive, moderate, and moderately conservative investment strategies.

And then lastly, the California Employers' Pension Prefunding Trust, the CEPPT. This is also a program for employers to prefund liabilities, but in this case it's their future pension payments. This fund offers two strategies, one moderate and one conservative across four asset classes versus the five for the other funds, and we'll get into why.

So with that background, I'll move on to cover our findings related to private equity and the fixed income long liability benchmark.

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INVESTMENT DIRECTOR REESE: So with regard to private equity, we worked with our research team and the private equity team to determine if adding private equity would be appropriate for the Judges' II Fund. So we just reviewed and that this is a young, cash flow positive, defined benefit fund. And our analysis shows that while the Judges' II Fund does have a good liquidity profile for private equity, the implementation is complex and the fees are high.

As we are not structured in a way to have the Affiliate Funds participate in the PERF Private Equity Program, the implementation would need to be via fund of funds. This option adds significant costs in the manager fees and operational management. We found fees alone to be approximately one and a half percent higher for fund of funds than for direct lending.

Another possible complexity is that the ramp-up period, wherein returns are often negative for five to seven plus years, could be -- could be a difficulty with some of how the benefits are structured for that particular program. So for these reasons, we are not recommending adding private equity as an asset class.

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INVESTMENT DIRECTOR REESE: Moving into the fixed income benchmark, we have modified the weights to increase the projected risk and return profile. This modification is in alignment with a similar modification made for the PERF. And we've tested it for the Affiliate Funds to ensure that it is a reasonable change. And those tests were successful and it does improve the risk return equation for the Affiliate Funds, and we are recommending to adopt the new weights.

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INVESTMENT DIRECTOR REESE: So let's move into the portfolios. I'll start with the 60/40 portfolio as a frame of reference. This portfolio is 60 percent global equities and 40 percent U.S. Intermediate bonds. In the chart on the right, we can see that from 2019 until now that the projected returns, which are the orange line, are down, and projected risk, the gray line is up.

In looking at the table, more specifically, we see that the 20-year projected return decreases almost a half a percent from 5.8 to 5.4 percent and volatility nearly increases three and a quarter percent from 10.1 to 10.8.

I'd like to note that drawdown is a new risk measure for this ALM review. We included it in the PERF review in November. And just as a -- to go over it in summary again, this is the average of the worst 10 percent of losses during any three-year period across 5,000 simulations.

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INVESTMENT DIRECTOR REESE: So in this page, we have the single allocation funds, the Health Care Funds, and the Judges' Fund, which are both reserves. And our recommendation is to maintain their current investment strategies, so the Health Care Fund would remain in U.S. bonds and the Judges' Fund would remain in cash equivalents.

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INVESTMENT DIRECTOR REESE: Moving into the multi-asset class portfolios, these portfolios have been constructed from the asset classes that are currently held. For each of these portfolios, we show prior ALM projected risk and return and the asset allocation and statistics for the current portfolio and the two candidate portfolios. Although the change in allocation from the current portfolio to the candidates differs by fund, in general what we see is that the candidate portfolio have a higher allocation to real estate investment trusts known as REITs and a lower allocation to either global equity or fixed income just kind of depending on the individual trust.

In each case, as we look at these portfolios, our recommendation will be Candidate A. And we also provide a higher projected risk and return portfolio as Candidate B. In building the candidate portfolios, we focus on balancing risk and return to provide a well diversified portfolio that matches each fund's intended investment strategy.

So looking more closely at Legislators', this is a closed, cash flow negative fund. Candidate A, our recommendation, aligns with lowering the discount rate to 4.5 compared to the current discount rate of five percent. With a funded ratio well above a hundred percent and a very small payroll, taking on any additional risk is not seen as a benefit, given that the fund is very reliant on investment earnings. Candidate A results in an estimated funding ratio of almost 130 percent for June 30, 2021, and an employer rate of approximately 32 percent, which is higher than the current rate but does not represent a large outlay given the small payroll.

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INVESTMENT DIRECTOR REESE: For Judges' II, the young cash flow positive fund, Candidate A also aligns with a lower discount rat of six percent compared to the current discount rate six and a half percent. With the funded ratio also well above a hundred percent, Candidate B with an additional 2.2 percent in projected return and approximately three percent added drawdown and one percent added volatility, increases risk without much return benefit.

Candidate A results in an estimated funded ratio for June 30, 2021 of almost 123 percent and an employer rate of approximately 23 percent, which is slightly lower than the current rate of 24 percent. This also maintains the PEPRA rate at 16 percent.

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INVESTMENT DIRECTOR REESE: So for CERBT and CEPPT, I am not going to spend time on each slide. I'll just sit here for a moment on CERBT Strategy 1. So this is the voluntary OPEB prefunding program. So for each of these portfolios, the projected returns for Candidate A are six percent, five and a half percent, and five percent, all with somewhat higher risk profiles than the current portfolios.

The Candidate B portfolios follow the same pattern we see with Legislators' and Judges', wherein the increased to project risk is proportionally higher than the increase to projected returns.

For these programs, the employers contract with their own actuaries to determine their OPEB liabilities and funded status, so we do not have a table or statistics similar to what we showed for Legislators' and Judges'.

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INVESTMENT DIRECTOR REESE: For CEPPT, the voluntary pension prefunding program, Strategies 1 and 2, we see all of the same patterns. Although for this particular trust, the time horizon is 10 years instead of 20. For the CEPPT, we use intermediate bonds versus long liability bonds and we do not have commodities as an asset class due to the higher volatility and longer recovery cycle for this asset class.

For Strategy 1, Candidate A has a projected return of four and a half percent and Strategy 2 projected return of three and a half percent. Again, Candidate B risk rises disproportionately to the increase in projected return.

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INVESTMENT DIRECTOR REESE: So we've reviewed nine portfolios in not a lot of time, so for ease of comparison, we've build this chart, which places all of the recommended portfolios side by side in order of drawdown risk, lowest on the left, highest on the right. And that's represented by the dashed line.

So what we see are that the results match our expectations, and that the portfolio profiles align with our intended investment strategy for each fund conservative on the left to more aggressive portfolios on the right. And then just note that we carved CEPPT out individually, because comparing the two time horizons on one scale would be apples and oranges, so we compare CEPPT just to itself.

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INVESTMENT DIRECTOR REESE: So wrapping up with our recommendation and next steps. We recommend to adopt the new weights for the fixed income long liability benchmark and to adopt the recommended portfolios for each of the affiliate funds as the policy portfolio for each of those funds. And if the recommendations are adopted, we will communicate with our stakeholders. The experience study and discount rate will be brought forward in April for Legislators', Judges; and Judges' II in the Finance and Admin Committee. And in June, we will bring the implementation plan for these trusts to investment committee as well as the asset allocation review for our final trusts, which are the Supplemental Income Plans, the 457 and the Supplemental Contribution Program.

That concludes my remarks and I'm happy to take any questions.

CHAIRPERSON MILLER: All right. Thanks for your remarks and all the hard work of yourselves and the whole team. I know this is -- clearly represents a lot of information and you've presented it very succinctly. So I don't have any questions from any of the -- oh, I do.

There we go. Director Pacheco.

COMMITTEE MEMBER PACHECO: Yes. Thank you. So my question is I want to go back to page 8 of 32, the sample 60/40 portfolio. So I just want to understand, can you just give me that foundational understanding in this particular chart? And if you can just elaborate one more time on it, just in terms of the returns and the volatility, I saw that, and I just wanted to get an understanding of that more clearly and how that relates to the Candidate A's.

INVESTMENT DIRECTOR REESE: Yep. So the 60/40 portfolio, it's not directly relational, but what it is is it's a sample portfolio that is commonly thought of in the industry and it's just a starting place basically. And what makes it nice is that it's just two asset classes, equities and fixed income, which are our primary asset classes, so it kind of simplifies the equation and it makes very clear that you can see that the returns are going down, risk is going up, and just this very basic two asset class portfolio.

So that's the reason for including it here, partially to just kind of look at a sample portfolio to get kind of comfortable with the -- what we've been talking about for, you know, this entire ALM, including the public employee retirement fund is that return -- projected returns are down and risk is up --

COMMITTEE MEMBER PACHECO: Right.

INVESTMENT DIRECTOR REESE: -- as well as to kind of walk through -- I think walking through the example, the intent was also to kind of get a feel for the following pages in terms of how it would be structured.

COMMITTEE MEMBER PACHECO: Okay. Very good then. Thank you very for that comment.

INVESTMENT DIRECTOR REESE: You're welcome.

CHAIRPERSON MILLER: Okay. Thank you, Director Pacheco. Next, we have Controller Yee.

COMMITTEE MEMBER YEE: Great. Thank you, Mr. Chairman. Really appreciate all the work on this and obviously, really staying on top of the market volatility. And I think this makes sense in terms of just looking for meaningful risk reduction strategies for all these funds.

My question has to do with the Judges' Retirement II Fund. And I know you spoke about the fees being prohibitive relative to looking at kind of the fund of funds strategy, but is the prohibition of, I guess investing private -- that fund in private equity through the PERF is that a prohibition under law or I guess what -- is there -- are there any other kind of hurdles besides just the cost.

INVESTMENT DIRECTOR REESE: I'm going to let Dan speak to that.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Yeah. It's something that we've looked at over the years. There isn't really a clean way right now for to --

COMMITTEE MEMBER YEE: Yeah.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

-- you know, kind of sort of unitize the private assets, specifically private equity, and they have pro rata ownership. It is something that you're seeing the industry make progress on --

COMMITTEE MEMBER YEE: Yeah.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

-- as you're looking at, you know, retail investors and defined contribution plans looking to invest in private assets, but it's not something that's made a lot of traction. It's not something that there's a lot of sort of well thought out structures for.

COMMITTEE MEMBER YEE: Yeah.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: So as of right now, it's not really -- like I said, it's something we've looked at, but we don't have a good clean answer to that.

COMMITTEE MEMBER YEE: So it's really more of an economic feasibility problem rather than an outright prohibition of being able to go through the PERF?

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Economic and then structural challenges --

COMMITTEE MEMBER YEE: Yeah. Yeah.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: -- with legal implications and the like.

COMMITTEE MEMBER YEE: Yeah. Got it. Okay. That makes sense. Hopefully someday we'll get there. On your last slide, 18, thank you for including the communication of the changes to stakeholders. The word "potential implications" just kind of caught my eye and just want to know if there were other implications that we didn't hear about today that you're going to be communicating with stakeholders.

INVESTMENT DIRECTOR REESE: No, I think the potential implications particularly have to do with the defined benefit programs in terms of the employ -- expected employee rates and the employer rates as well, so -- yeah.

COMMITTEE MEMBER YEE: Yeah, that makes sense.

Good. Thank you.

INVESTMENT DIRECTOR REESE: You're welcome.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman.

CHAIRPERSON MILLER: Okay. Thank you, Controller Yee. I don't have any other requests to speak. And so, at this point, is there a motion?

COMMITTEE MEMBER TAYLOR: I'll make the motion.

CHAIRPERSON MILLER: Okay. Director Taylor makes the --

COMMITTEE MEMBER YEE: Second.

CHAIRPERSON MILLER: And seconded by Controller Yee.

Discussion?

I'll call for the question. All in favor?

(Ayes.)

CHAIRPERSON MILLER: Any opposed?

It's unanimous, ayes. The motion carries.

And we'll move on to our information agenda items. Thank you very much. And thank you to the whole team.

So information Item 8a, Revisions to the Total Fund and Global Fixed Income Policies, the first reading.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Thank you, Mr. Chair. And for this item, we have Amy Deming, who you may recall we were able to, I think, introduce virtually but not in person. But Amy is our -- actually not that new. I think she joined in August as it turns out, but I guess it's the first time in front of this committee in person. Amy Deming is our Investment Director and Program Head of our Investment Controls and Operational Risk Team.

(Thereupon a slide presentation.)

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: So as mentioned, this is a first red. The idea is to get the Committee's feedback on policy changes needed to implement the strategic asset allocation. So with that I'll turn it over to Amy to take us through the item

INVESTMENT DIRECTOR DEMING: Thanks, Dan. So as you will probably recall, the Board approved the strategic asset allocation in November. And we are proposing the policy changes that we think that we need to accomplish this. But as Dan mentioned, we really -- we really want to hear your feedback today.

As a reminder, the new strategic asset allocation has several new features, the addition of private debt as a new asset class, increased allocations to private equity and real assets, the introduction of strategic leverage, and last but not least, the adjustments to public market exposures.

With this agenda item, today you will have received a summary of inventory -- and inventory of policy changes, which is just a summary. You will also have received the red-line and clean versions of the policy changes. And with that, let's start with an overview.

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INVESTMENT DIRECTOR DEMING: So we thought it would be helpful today to take a step back and think about the total framework and taking a look at the framework overall of all of the policies. So we have two areas of policy. We have the Total Fund Investment Policy and we have asset class investment policies. On the top, you'll see all of the components and objective of the total fund policy with the inclusion of private debt, which is a new asset class.

Note that we also have separate and distinct documents for the rest of the asset class policies. Wilshire has recommended that we sort of close this gap. And that -- and when I say that I mean incorporate the asset class investment policies into the Total Fund Policy.

Staff actually agrees with this proposal, because it would improve the consistency and readability of these documents. That being said, today we're going to discuss the policies that we are proposing to make, the policy changes that is. All of the policy areas are in -- that are in bold on this slide are where we are making -- currently making recommendations. That being said, private equity and real assets do have substantial increases in their asset allocation, so we are also reviewing that policy as we speak. We would like to wait until our new CIO arrives, so that we could review it with her. And the idea would be to bring it back to the Committee for a first read in June.

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INVESTMENT DIRECTOR DEMING: So first off, the Total Fund Policy changes. There are two key areas in which we would like to propose changes. First, asset allocation. So you might have noticed we've updated all of the target weights and ranges for the new allocations to drive private debt, strategic leverage, the fixed income segments, which includes the new emerging markets sovereign, as well as update the Board-approved benchmarks for each new segment.

Next is investment leverage. At the request of the Board, active leverage was reduced from 20 to 15 percent, such that with the introduction of strategic leverage, the effective limit remains at 20 percent.

We've also looked to simplify, you know, the language around strategic and asset -- strategic and active leverage. This will ensure that, you know, our wording and our language is consistent with prior communications with the Board and how we plan to, you know, report it in the future.

Additionally, we've found certain of the language to be really a bit too granular and detailed for policy, and it's much more consistent with the level of detail in the policy-related procedures, which is overseen by the Board's consultants.

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INVESTMENT DIRECTOR DEMING: Next, are the program area policy changes. There are two areas of policy in which we have proposed changes today. First up is the Global Fixed Income Policy. This ALM cycle we have continued to look at income in a more granular way. We've separated out components of the spread segment. The spread segment consisted of investment grade corporates and mortgage-backed securities and emerging market sovereigns. So with those separated out of the spread segment into the, you know, overall fixed income portfolio, that plus the treasuries and high yields form all five components of income, we've added duration limits for each of these individual segments.

And then private debt, so private debt is new to the Total Fund Policy. It is -- you know, it comes out of the opportunistic strategy, which is where it incubated in the last couple of years. And the policy changes are very much emanating from the opportunistic strategy in the Total Fund Policy.

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INVESTMENT DIRECTOR DEMING: And so lastly, you know, we're here to share the policy changes that we think we need to the carry out the Board's decision. We real -- would really like to hear your thoughts on these changes. The plan would be to incorporate any of your feedback and then bring it back in June for a second read and your approval, and that concludes my remarks.

CHAIRPERSON MILLER: Okay. Thank you for the presentation. I'm not seeing any questions, but I'll give people a second if they want to hit their button.

Okay. Oh, Controller Yee.

COMMITTEE MEMBER YEE: Just a note of general feedback. Thank you for incorporating the suggestions from Wilshire. I think it will make the policies definitely much more robust, but overall just carry on.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: And, Ms. Yee, when you're referring to the suggestion from Wilshire, you're talking about consolidating all of the asset classes.

COMMITTEE MEMBER YEE: The consol -- right, right. So to the Total Fund Policy, and then --

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: We can take that as direction to --

COMMITTEE MEMBER YEE: Oh, okay.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: -- consolidate into a --

COMMITTEE MEMBER YEE: Okay. And then just with the -- with -- as the private debt asset class evolves to be sure that we're establishing specific targets as we do for each of the strategies. Yeah. I -- and that will be something that we already have in place for the Private Equity Policy, so just some consistency there.

CHAIRPERSON MILLER: Yeah. And everything seems comprehensive and consistent with what we've been talking about, and we certainly want to make it so that our policies support the implementation that we're anticipating, and allow you to execute, you know, effectively and efficiently as always.

And when those are combined, if there's any place that it might be not apparent to us what got put where, if there's anything, you know, presenting in a way that it's clear to us what the policy changes are versus what was just consolidation would be helpful for me, because I, you know, may be easily confused by that.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: We tried to have an inventory this time of the actual changes, and next time you'll see a lot of, you know, strike-through and the like, because it will be repealing all of these individual asset classes and putting everything in total fund. But, yes, the idea will be to basically port all of the -- substantially all of the language over except with minimal changes and we'll try to make that as clear as possible to your -- to your point.

CHAIRPERSON MILLER: Great. Thank you very much and thanks for all the work all the team members that contributed.

COMMITTEE MEMBER YEE: Mr. Chairman, can -- I just wanted to comment on the second suggestion by Wilshire, in terms of the targets for each of the private debt asset -- I mean, I'm sure that will be a work-in-progress for some of the areas. And so -- but I do think just to arrive at consistency with what we do for in the Private Equity Policy, okay?

CHAIRPERSON MILLER: Okay. I think that does it. Thanks for that.

Okay. So summary of committee direction and then we have some public commenters as well after that.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Yeah. So I think Arnie, tracked Chair direction for us, so I'll ask Arnie to go through the two.

INTERIM DEPUTY CHIEF INVESTMENT OFFICER PHILLIPS:

Yes, I have two today. The first one referring to the consultant contracts after we consolidate or move the private debt into the Wilshire, we will kick off the RFP process to look at it holistically, and then the second one that just came up would be to consolidate all the asset classes policies into one Total Fund Policy to make it read easier. And that's what I had on our side.

COMMITTEE MEMBER TAYLOR: And the target -- establishing specific targets I think was in the Wilshire thing from the private debt.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE:

Yeah, similar to private equity.

COMMITTEE MEMBER TAYLOR: Right.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Yes. Yep, we'll take that.

CHAIRPERSON MILLER: Okay. I think that will do. And now on to our public commenters.

We have, it looks like, five on my list. So first I'd like to welcome down Sheila Thorne. Is Sheila here. Yep. Come on down. And we will have a clock ready, and we'll -- what, there's a three minute -- three minute clock. And whenever you're ready, we'll have the mic on so you can begin.

MS. THORNE: Start?

CHAIRPERSON MILLER: You have the floor.

MS. THORNE: Hi. I'm Sheila Thorne from Fossil Free California and I'm a CalPERS beneficiary.

Over the past year, I've been following an undergraduate economics research group from UC Berkeley led by Professor Clair Brown. One of the focuses of the research group was potential stranded fossil fuel assets in CalPERS investment portfolio. And we were therefore particularly excited to see stranded fossil fuel assets mentioned in CalPERS sustainability report prepared for the January 18th Board education day.

In this report, CalPERS reiterated their commitment to the Net Zero Asset Owner Alliance, which pledges to tailor investments to meet a 1.5 degree Celsius global warming target. However, CalPERS did not seem to acknowledge the difference between the financial risk from the transition risk associated with stranded fossil fuel reserves and the physical risk from climate change events that will destroy physical capital and real estate. Meeting a 1.5 degree target means that 90 percent of coal, 60 percent of gas, and 60 percent of proven oil reserves owned by fossil fuel corporations must remain unextracted.

CalPERS is invested in 125 of the 200 fossil fuel corporations with the largest proven fossil fuel reserves, which means that CalPERS has partial ownership of these reserves. Based on CalPERS percent ownership of these companies, students Sindre Carlsen and Jonathan Lee calculated the financial value of CalPERS share of these fossil fuel reserves.

Based on CalPERS June 2020 investment portfolio, CalPERS ownership of coal, oil, and gas assets that must be stranded equates to a total value of almost $45 billion, and the market value of stranded reserves is predicted to increase in the future. Financial losses from stranded fossil fuel reserves could very likely translate into declining stock prices for major fossil fuel corporations resulting in major financial losses for CalPERS.

CalPERS continuing investments in fossil fuel producers contradicts their commitment to a 1.5 degree warming target. If CalPERS truly believed in the 1.5 degree Celsius mandate, they would divert their investments away from fossil fuel producers, because these companies rely on exceeding this warming target to profit off of their unextracted reserves.

In light of these findings, we ask for CalPERS to have a more honest goal-setting process when it comes to climate change where warming targets aren't just numbers put into sustainability reports, but are actually reflected in the investments that the fund makes.

Thank you.

CHAIRPERSON MILLER: Thank you.

And our next public commenter is Sandy Emerson. Hopefully, I didn't mangle that pronunciation, and welcome. And you also have three minutes and the clock will start when you begin speaking.

MS. EMERSON: Hi. I'm Sandy Emerson. I've been a long-time volunteer with Fossil Free California.

The sudden loss of value of investments in Russia shows how quickly assets can become stranded. Outrage over Russia's unprovoked attacks on Ukraine caused canceled projects, loss of business, frozen assets, and even a change in underlying indexes so that passive investments have already divested from Russia. The fact that the Russian economy depends so heavily on fossil fuels has thrown their economy into chaos with astonishing swiftness.

The economic fallout of the war in Ukraine heightens the urgency of winding down investments in fossil fuels in an orderly fashion. The climate crisis will cause standing of fossil fuels and pension funds should not be the holders of last resort for toxic fossil fuel investments.

As Governor Gavin Newsom said in his State of State address, we must end our dependence on petrostates, including the planet-sized sphere of influence of the oil majors who seek to perpetuate their destructive business as long as possible.

Shareholder engagement is not likely to be effective against an industry that seeks to grow endlessly and relentlessly lease and is as deadly as any dictator. Asking fossil fuel companies to stop producing fossil fuels is not going to get us where we need to be.

Both CalPERS and CalSTRS have pledged to achieve net zero by 2050 to limit global temperature rise to 1.5 degrees Celsius. But meeting that carbon budget means that 90 percent of coal and 60 percent of both oil and gas has to stay in the ground. You can't sell it and our pension funds shouldn't get stuck owning it.

When fossil fuel investments become stranded our pension funds and their beneficiaries will lose billions. Investments in Russian companies were stranded literally in a matter of days through sanctions, imposed not only on active investments, but also implemented for passive investing through changes in the index. Just like that, the investment landscape changed.

CalPERS enjoys huge financial leverage and can take thoughtful action or external events can change the investment landscape in an instant.

Thank you.

CHAIRPERSON MILLER: Thank you for your comments.

Our next commenter is Tammy Dhanota, and come on down. And like the other commenters, you'll have three minutes and your time will start when you begin to speak.

MS. DHANOTA: Good afternoon, Chair Miller and members of the Investment Committee. My name is Tammy Dhanota and I'm a member of Service Employees International Union, Local 521 and a CalPERS plan participant for 27 years.

SEIU 521 members very much appreciate the work you do as fiduciaries to identify and manage systemic risks that can threaten pension plan participant's retirement security. For several years, SEIU members have been working to address one of those systemic risks in a comprehensive manner, the risk of structural racism to our members' retirement security.

SEIU members applaud CalPERS's long-standing efforts in this area, including hosting major investment conferences on the issues and establishing important policies and programs to incorporate diversity, equity, and inclusion into the work of the fund.

CalPERS Diversity, Equity, and Inclusion Report 2020-21 reflects many of the important actions taken and work -- and work still to be done. The workplan is timely and in line with the steps many major institutions are taking to begin the -- to address historic inequities and to position themselves for sustainable success in the future. You may be aware wear that in the last year, both BlackRock and State Street, two of the world's largest asset managers agreed to conduct independent audits to uncover possible racial bias in their business operations and policy, and position themselves to make changes.

And just last week, Bloomberg reported that 50 percent -- 54 percent of Apple's shareholders supported a shareholder resolution at Apple calling on the company to conduct a civil rights audit. These are very positive steps, and yet we know there is so much more work to do to undue centuries of structural racism embedded in our Economy.

A Citibank September 2020 report shows why universal long-term investors like CalPERS must continue to aggressively manage the structural -- the risk of structural racism. The report stated the analysis in the report that follows shows that if four key racial gaps for blacks, wages, education, housing, and investment were closed 20 years ago, 16 trillion could have been added to the U.S. economy. And if the gaps are closed today, five trillion can be added to the U.S. GDP over the next five years.

Thank you again for all you do to protect CalPERS members' retirement security and thank you for the opportunity to share these comments today.

I'm going to turn it over to my SEIU 521 sister to share some further comments about the need for CalPERS continued leadership in this area. Thank you.

CHAIRPERSON MILLER: Thank you for your comments.

Next, we have Mullissa Willette. And you'll have three minutes and your time will start when you begin to speak.

MS. WILLETTE: Good afternoon, Chair Miller and members of the Investment Committee. My name is Mullissa Willette and I'm a member of Service Employees International Union Local 521 and a CalPERS plan participant.

Following up on the comments of my SEIU sister Tammy Dhanota, the global leading consulting firm McKinsey in its May 2020 report Diversity Wins stated that quote, "The business case for gender and ethnic diversity in top teams is stronger than ever. Since we first published why diversity matters in 2015, the likelihood of diverse companies outperforming industry peers on profitability has increased significantly", end quote.

In spite of this clear data showing the need for diversity, equity, and inclusion in finance, a recent Knight Foundation report states that as of September 2022, only 1.4 percent of total U.S. based assets under management in our sample is managed by diverse-owned firms. CalPERS, given its significant history of work and leadership in this area, is positioned to benefit plan participants and all CalPERS stakeholders by continuing to deepen and widen your work for diversity equity and inclusion.

We ask you to continue to lead in the following ways: read and act upon the key findings from SEIU and Majority Actions report, "Equity in the Board Room 2021"; continue to engage with major corporations and your asset management partners and encourage them to, one, carry out racial, equity, audits, and two disclose their lobbying and political contributions, so that they and their stakeholders, including CalPERS members, can understand the impacts of their business practices and policies, and make needed changes to dismantle inequitable practices including lobbying and political contributions that may threaten democratic rights and the rule of law that investors count on for a stable and secure investment environment;

Continue your corporate governance programs leadership through proxy voting, company engagements and director accountability work on diversity; continue to engage with your investment consultants and managers, and encourage them to disclose their workforce demographic data, and their diversity, equity, and inclusion policies; continue to fortify your efforts to build a diverse team in the CalPERS Investment Office, and with your contracted investment partnerships to ensure CalPERS has access to all of the world's best investment, talent, and opportunities; and continue the proactive steps you are taking to incorporate gold standard policies and practices across the enterprise to position CalPERS to remain a leader in diversity, equity, and inclusion practices.

We thank you again for all you do as fiduciaries to facilitate our retirement security and we look forward to working with you to dismantle systemic risks like structural racism that they're in the retirement security we are all counting on.

Thank you.

CHAIRPERSON MILLER: Thank you for your comments.

Next, we have Michael Ring, and you'll have three minutes from when you start speaking.

MR. RING: Hello, Chair Miller, members of the Board. Good to see you all here. Very fortunate after two years of pandemic time. It's good to see you all. Michael Ring with Service Employees' International Union. I want to thank you for the opportunity to speak to you today.

I'm really just here to read some comments from members Connie Chew who's a member of SEIU 521 who unfortunately could not make the meeting today, so she asked me to read her comments into the record.

"Dear, CalPERS Board. My name is Connie Chew and I'm a retiree of the County of Santa Clara, California. Thank you and your staff for all the work you do to help ensure secure retirements.

"There is extensive data showing that racism is one of the system risks that fiduciaries must begin to address proactively to meet their obligations to prudently manage investment risk and facilitate their staff in identifying the most sustainable investment opportunities.

"In September of 2020, Citibank released a report quote, 'Closing the Racial Inequality Gaps: The Economic Cost of Black Inequality in the U.S.', which stated in part quote, 'If the four racial gaps for Blacks, wages, education, housing, and investment were closed 20 years ago, $16 trillion could have been added to the added to the U.S. economy, and if the gaps were closed today, $5 trillion can be added to the U.S. GDP over the next five years', end quote.

"It is essential that the finance industry intentionally and proactively turn away from a model of wealth creation that has historically been built upon racist structures. Conducting racial equity audits need to become the new normal in business and finance to provide a baseline understanding of the racist structures that have been build over decades or centuries and if left unaddressed, increase risk and limit opportunity.

"Please ask your asset management partners and major corporations to carry out racial equity audits and disclose their lobbying contributions. Furthermore, younger con -- younger generations seem more in tune with trustworthy environmental, social, and governance protocol, and in turn funds that follow that such protocol may be more viable in the future. Thank you again for all you do as fiduciaries to facilitate our retirement security, and we look forward to working with you to dismantle systemic risks like structural racism that threaten the retirement security we count on".

Again, those are the words of Connie Chew, CalPERS member and retiree from San -- County -- Santa Clara County.

Thank you all. Have a great day.

CHAIRPERSON MILLER: Great. Thank you for sharing those comments with us. I don't we have any more commenters, so I think that concludes that. So with that, I believe we are at the point where we will adjourn.

INTERIM CHIEF INVESTMENT OFFICER BIENVENUE: Correct and we don't need the second closed session, so I think we're good.

CHAIRPERSON MILLER: Okay. So seeing no objections, we will stand adjourned.

(Thereupon, the California Public Employees' Retirement System, Investment Committee meeting open session adjourned at 3:14 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 21st day of March, 2022.

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