NEW YORK CITY TEACHERS' RETIREMENT SYSTEM
INVESTMENT MEETING
Held on Thursday, October 5, 2017
at
55 Water Street
New York, New York

ATTENDEES:

JOHN ADLER, Chairperson, Trustee, Mayor's Office
DEBRA PENNY, Trustee, TRS
THOMAS BROWN, Trustee, TRS
DAVID KAZANSKY, Trustee, TRS
RAYMOND ORLANDO, Trustee, Department of Education
SUSANNAH VICKERS, Trustee, Comptroller's Office
PATRICIA REILLY, Executive Director, TRS
VALERIE BUDZIK, TRS
LIZ SANCHEZ, TRS
SUSAN STANG, TRS
RENEE PEARCE, TRS
DAVID LEVINE, Groome Law Group
SHERRY CHAN, Chief Actuary
SCOTT EVANS, CIO, Comptroller's Office
CHRIS LYONS, Rocaton
MICHAEL FULVIO, Rocaton
RONALD SWINGLE, TRS
ROBERT RAUCCI, TRS

P R O C E E D I N G S

(Time noted: 9:57 a.m.)

CHAIRPERSON ADLER: Good morning, everyone. Welcome to the Teachers' Retirement System New York City investment meeting for October 5, 2017.

Patricia, would you call the roll?

MS. REILLY: John Adler?

CHAIRPERSON ADLER: I'm here.

MS. REILLY: Thomas Brown?

MR. BROWN: Here.

MS. REILLY: David Kazansky?

MR. KAZANSKY: Present.

MS. REILLY: Debra Penny?

MS. PENNY: Here.

MS. REILLY: Raymond Orlando?

MR. ORLANDO: Here.

MS. REILLY: Susannah Vickers?

MS. VICKERS: Here.

MS. REILLY: We have a quorum.

CHAIRPERSON ADLER: Thank you so much.

I'll turn it over to Rocaton for the public agenda.

MR. FULVIO: Good morning, everyone.

The public agenda is comprised of a performance update for the Passport funds during August 2017; and then we'll give highlights of the markets performance so far -- what the September returns were. And I will kick off August.

So, August was kind of a quiet month in terms of performance. If you were to look back and see where the month ended, the markets did certainly move around quite a bit, particularly in late August you did see a little more volatility.

But when you look at the month as a whole, sort of an uneventful month for performance. The U.S. market was very modestly positive of about 20 basis points. Developed non-U.S. markets roughly flat, slightly down. And then, emerging markets were up about 1.2 percent. So we did see stronger absolute returns there.

The Passport funds fared largely in line with benchmarks. So the diversified equity fund in August was up about 13 basis points, slightly lagging the Russell 3000, but in line with the hybrid benchmark.

And year to date, that brought the fund's return to positive territory -- it's already in positive territory, but added to the return so far. Total return year to date was about 12.3 percent. That is ahead of the Russell 3000 index, but a little over 1 percent.

And really what is leading that outperformance relative to the U.S. market is the contribution from non U.S. markets. So the non U.S. equity or international equity composite was up about 19 percent year to date. Obviously having a notable effect on absolute performance, return performance of the composite fund as a whole.

And as you might expect, the defensive composite did not keep up with the broad U.S. market's returns, extensive composite; still up almost 9 percent versus the U.S. of about 11.2 over that time period.

So, still getting about 80 percent of the up market from the defensive composite, we're happy to see. But obviously that offsets some of the outperformance that we saw from the non U.S. portion of the fund.

As I mentioned before, that 12.3 percent return is enough to outpace the U.S. equity market year to date, which was up about 11.2. The hybrid benchmark was up about 12.5, so a little modest underperformance relative to the hybrid benchmark year to date.

When you look at the relative performance of the underlying composites, underlying equity composites, the active U.S. composite was up very slightly net of fees by about 20 basis points.

And not only were the international strategies up in aggregate 19 percent, but they also outpaced their benchmark, only 18.4 percent. So relative returns from the active equity strategies adding value so far this year.

The bond fund at the end of month had about $390 million in assets. That fund had modestly positive returns to the tune of about 30 basis points; and year to date that fund returned about 1.7 percent, slightly lagging its benchmark of 1.8 5 percent.

The international equity fund, as you recall, is essentially implemented the same way as the international equity composite within Variable A. That fund as a whole was up about 13 basis points for the month, and the year to date return there is about 18.7 percent.

Again, some outperformance from the active managers in that composite contributing on a net basis about 25 basis points of outperformance.

The inflation protection fund during the month of August, we actually saw the strongest returns here in absolute terms. That fund was up about 60 basis points, enough to outpace both CPI and its custom benchmark. The year to date return on that fund is approximately 2.2 percent; again, both CPI and its custom benchmark, but over 1 percent.

The socially responsive fund with assets of $170 million, that fund lagged the S&P 500 for the month, a return of negative 1.2 percent. And year to date that fund is up 10 percent, 9.8 percent, and that lags the S&P over that time period, which was up 11.9 percent.

Any questions on the performance of the Passport funds?

CHAIRPERSON ADLER: Questions?

(No response.)

MR. FULVIO: We will switch gears very quickly, touch upon September. There's a separate handout for that.

We saw notably stronger returns, roughly across the board in the month of September. The U.S. equity market as measured by the Russell 3000 was up by 2.4 percent. In the non U.S. markets the develop market index, the EP index, halfway down the table you can you it was see up about 2.3 percent.

Emerging markets in September were reversed somewhat, down 1 and quarter percent. And the defensive strategies composite benchmark up about 1.6 percent. So still contributing a positive return in a notably strong up market for the equity markets.

The diversified equity fund hybrid benchmark for the month, all told was up about 2.3 percent. So we expect the fund's return to be somewhere in that range.

Below that the bond fund benchmark was down about 27 basis points. I mentioned before the performance of international markets, all told the international composite benchmark was up about 2.14 percent. So we would expect somewhat similar return there for both the international composite and Variable C.

The underlying strategy for the inflation protection fund was modestly negative, negative 23 basis points. And the underlying strategy for the socially responsive equity fund was up about 2.2 percent, outpacing the S&P 500 by a margin there of about 15 basis points.

CHAIRPERSON ADLER: Any questions about the benchmark report for September?

(No response.)

Anything else for public session, Michael?

MR. FULVIO: That's it.

CHAIRPERSON ADLER: Does anyone have anything else for public session right now?

(No response.)

I think a motion would be in order to exit public session and enter executive session.

MS. PENNY: I move, pursuant to public officer's law Section 105, to go into executive session for discussions regarding specific investment matters.

CHAIRPERSON ADLER: Is there a second?

MS. VICKERS: Second.

CHAIRPERSON ADLER: Any discussion?

(No response.)

All in favor of the motion to exit public session and enter executive session, please say "Aye."

(A chorus of "Ayes.")

All opposed say "Nay."

Any abstentions?

(No response.)

Motion carries. We'll go into executive session.

(Time noted: 10:32 a.m.)

(Discussion off the record.)

(Time noted: 11:25 a.m.)

(The Mercer people entered the room.)

CHAIRPERSON ADLER: Welcome back to TRS. Take us away.

MS. AMBACHTSHEER: Good afternoon, thank you for having us here. We're looking forward to this conversation to talk about the next update on the climate risk assessment journey and discussion.

Climate change of course continues to be a hot topic.

(Laughter.)

We have seen two of the most horrific hurricanes recorded, driven partly due to the rising sea level temperatures, which is very much in the news, and I think fueling additional discussion on the topic.

At the same time we see some good news. I read recently that Japan now has more electric vehicle charging stations than gas stations. We've seen a lot of developments around electric vehicles, commitments from different countries, big moves from different auto manufacturers. So we're seeing a lot of increased and ongoing development.

We've seen commitments from many of your peers who are also working on their climate risk strategies. New Zealand Superfund recently published a very comprehensive climate risk strategy. You may have seen that Swiss Reade moved all of their benchmarks actually to an ESG enhanced benchmark.

So we're seeing a lot of varied approaches. There's no right way to do this, but we're seeing a lot of innovation and continued focus in the field.

I was at the Principles for Responsible Investing annual conference last week in Berlin. And some of you may have read, Christiana Figueras, who led the climate negotiations in her role as head of the United Nations framework convention on climate change, addressed the crowd, and basically but out a challenge to all PRI signatories that they should allocate 1 percent of their funds towards sustainability themed investment and renewal energy technology. Given the demands and the needs for those type of investments and the size of the total signatory base, that was the challenge that she put out.

So we're seeing a lot of continued focus. And you might have noticed the TPG Rise Fund just closed with $2 billion in commitment, which is an insanely large number, which will be focused on sustainability themed investments in the private equity space. So a lot of continued momentum.

In terms of the agenda for today, moving into the deck, we're going to do a bit of a refresher on where we've been so far with the project. We're going to present some of the new analysis that we've done in terms of potential risk management approaches. Then we'll have a discussion about next steps and how to move things forward from here.

So, we have a look at slide 3 around the approach we have taken. We did the original risk assessment. We met with you in June where we did a presentation of the total fund risk assessment, as well as the carbon footprinting analysis and results.

Then we went away. We had a number of different conversations, and have done some additional analysis which we're here to talk about today. And then over the remaining two months will be a chance to conduct additional analysis which is desired, and to think about how to formalize next steps and strategy from here.

So, just a little bit of a review on the background and definitions on page 4. So, the analysis that we presented in June looked at your existing asset allocation under a few different climate scenarios.

And the way that we model the potential impact of different scenarios is looking at the impact of different transition risks and physical risks and how those might influence asset classes and sectors over time.

So, if we look at slide 5, you can see really a range of potential outcomes in terms of where the world goes from a climate perspective. So, the Paris agreement of course talks about 2 degrees or lower, which is really the ambition that countries signed up to.

The current commitments get us closer to 2.7, 2.8. And then business as usual, if the countries don't actually implement the various commitments, takes us to 4 or higher from a warming pathway.

And those different scenarios of course will have different implications, both in terms of the transition, the potential influence of technological advancement, different policy instruments being introduced, and different physical impacts over time.

So today we're going to focus on the impact of the 2 degree scenario, which is really in line with the Paris agreements, and a 4 degree scenario, which is more consistent with business as usual.

From a fiduciary perspective, many of us want to look for that 2 degree pathway and would like to see that happen, it's also prudent to think about, okay, how would our fund and different approaches be impacted under a higher warming scenario; because, of course, unfortunately, that is also possible.

So slide number 6 gives a little more background around the different scenarios. So the transformation scenario, which is the 2 degrees or below. It's consistent with emissions peaking in 2020, which is three years from now, which of course is ambitious. And the fragmentation scenario, the 4 degree scenario, the emissions peaking in 2040, much later.

If you have a look at the next slide, again, as background, the four different risk factors that we have in our model. Technology and policy relate to the transition risks, which of course are more present in that higher transition, the 2 degree scenario. And then the resource availability and the physical impacts are the physical risks that we see in the different scenarios.

And then the final slide by way of background, number 8, is an update on the task force for climate related financial disclosures. And I think we talked about this a little in June, and some of you will be aware of it and some of you probably less so.

But the financial stability board is the up this task force around COP 21, end of 2015 in Paris. And it was really instigated by Mark Harney, the governor of the Bank of England and the chair of the financial stability board. And it is chaired by Michael Bloomberg. It has 32 members, I believe. I'm one of the members representing Mercer, and all of the other members are industry representatives. So you have BlackRock, Moody's, S&P, Canada's pension plan, as well as different companies, Dow Chemical, Unilever.

And the task force came up with these recommendations, which were finalized and published in June; and really put forward this framework for organizations such as yours to begin to disclose on an annual basis on how you're managing climate risk. So, everything from the governance, what is the board process around this, what are management responsibilities around climate, the strategies.

So, have you thought about the impact of different climate scenarios, which you can now say you have. The risk management approach, specifically it asks for reporting of carbon footprinting on an annual basis. And then, any metrics or targets that you decide to adopt.

So, a number of your peers have things like decarbonization target, where you say you will seek to be X percent lower carbon than the benchmark by a certain date.

So, the framework asks for regular disclosure on those different types of questions, and the Principles for Responsible Investment have an annual reporting platform that all signatories participate in. And they have committed to integrate all of these task force recommendations into their annual reporting, to make it easier and arguably it's still more work, but integrated in one place where you'll do your annual reporting.

So that will be available for year end this year.

So this process that you are undergoing is very timely, so that you can think about these questions and having the answers to these questions to be prepared to make those disclosures for the end of this year. So you still have some time before you will be asked to make those disclosures.

With that, I will hand over to Alex, who will talk through the different risk management approaches that had been modelled for discussion today.

MR. BERNHARDT: After our meeting in June we went back and came up with a couple of alternative asset allocations for both the pension fund and Passport funds collectively, which were intended to help us and help you to stress test the sensitivity of the alternative asset allocations and your current asset allocation to certain climate change scenarios.

In designing these alternative asset allocations we had a couple of parameters in mind. Primarily we wanted to make sure that the risk return profiles of each approach were equivalent in a base case scenario where we don't apply our climate change overlay. And we achieved that in both these cases.

We wanted them to show demonstrable climate change risk mitigation benefits. And I see think you'll see we achieved that to an extent in the next pages. We also wanted the implementation of asset allocations to be achievable, and over a long enough period of time, three years plus perhaps, we think that -- over a long enough period of time we expect that these allocations are certainly achievable, given that some of them are potentially ambitious.

With that in mind.

MS. VICKERS: I wanted to make sure going into the discussion this is clear in my mind. Something like the U.S. carbon equity index that's the main part of some of these scenarios. Going into that at a 6 percent level is only from a certain slice of the portfolio.

So currently we have 29 percent in U.S. equity, give or take, a tiny part of that, and turn it into a low carbon index. So it's not the entire public equity portfolio.

MR. BERNHARDT: Six part of 29, low carbon.

MR. EVANS: Eleven billion dollars.

(Laughter.)

Across all five systems.

CHAIRPERSON ADLER: Eleven billion across the five systems.

MR. EVANS: Across the five systems.

MS. VICKERS: I just wanted to, in terms of discussion points --

MR. EVANS: It's $3.6 billion for this one, still big.

MS. AMBACHTSHEER: That was partly driven by a walk before you run philosophy. And it's still a sizable allocation, and I think if you were to go down that road you would over time get more comfortable with it or not, learn how it performs, et cetera.

And it certainly could be increased over time, but we really wanted to focus on things which I think are possible choices in the near term in terms of things that might get --

MR. BERNHARDT: And notably, a couple of your direct peers in the U.S. have already made low carbon allocations of similar magnitudes, but slightly smaller intentions to ramp-up those allocations over time. So this has public pension plans in. The U.S. It also has the added benefit of potentially going low carbon, in portfolios that have the added effect of reducing your overall portfolio of carbon emission footprints.

If you recall in the last presentation the pension fund is slightly above benchmark in terms of weighted average carbon intensity. And so, having an allocation this size to low carbon would certainly reduce the total portfolio weighted average carbon intensity by a fairly significant margin. We haven't actually calculated that number, but it would get you more in line with being under the benchmark.

One other thing to mention too about the low carbon allocation is that, these are typically relatively low tracking error solutions. They're built on carbo data, try to reduce exposure to high carbon emitters and reduce exposure to fossil fuel reserve owners, while maintaining a tight tracking error band around the index that they track.

Approach number 2 is the same as approach 1, with 4 per additional allocation to active sustainable asset classes. So sustainable asset public equity, sustainable private equity and sustainable infrastructure, with a 2 percent, 1 percent and 1 percent allocation respectively to those three asset classes.

CHAIRPERSON ADLER: In terms of the numbers for Teachers, so I'm clear. That 10 percent would be 10 percent of the $64 billion; right? And then the 6 percent is 6 percent of the $64 billion?

MR. BERNHARDT: That's correct.

CHAIRPERSON ADLER: It's not 6 percent of the --

MR. BERNHARDT: You're right. What I said was misleading. We took out the low carbon -- the U.S. low carbon equity was taken out of the 29 percent for U.S. Equity. So that's how we kept the portfolio's exposure the same exposure. So your exposure in approach 1, your exposure to U.S. equity, standard U.S. equity, would be 23 percent, 6 percent to low carbon.

CHAIRPERSON ADLER: Got it.

MR. BERNHARDT: I'm going to skip over slide 11 and work with digitals, easier to convey the messaging this way.

So, what we're showing here is our 2 degree scenario results, aggressive transition scenario where the policy factor, technology factor have the most influence on the outcomes. And we're looking at a ten year horizon. And the return values seen are annualized return over that ten year time horizon.

The left hand circle is your current portfolio. And so, I'll spend a minute talking about that. In this current portfolio allocation we would expect to see your real assets and your emerging market equity exposure to have a slight return bump increase from the 2 degree transition.

Whereas, the majority of the rest of your asset classes, notably U.S. developed market equity exposure would see a decline in annual returns.

On a total portfolio basis, this results in about a 24 basis points drag over a ten year period, which we calculated on a purely linear basis, nothing fancy here, equals about $2.5 billion in cumulative losses over that ten year time frame; just to put a number on it, for easy comparison purposes.

Approach 1 and Approach 2 by design perform better in a 2 degree scenario. So Approach 1 you've got the low carbon equity allocation, you can see it's circled there in red -- or squared, whatever that shape is -- in red -- rhombus --

(Laughter.)

Get a 30 basis point increase in the 2 degree scenario, which is actually 90 basis points better than the U.S. equity performance. So you're swinging a good portion of that exposure into the positive.

Overall, that has the impact on the portfolio of improving your annual returns by about 6 basis points. And that results in about half a billion dollars cumulative gain versus the standard portfolio allocation; again, in the 2 degree scenario.

CHAIRPERSON ADLER: That's half a billion over ten years; right?

MS. STANG: You lose less.

MR. BERNHARDT: You're still losing money to climate change overall, but it's less than you would in your current portfolio.

Questions?

MR. EVANS: So, the annual return of minus 24 basis points for the current portfolio is just the incremental effect from the climate change.

MR. BERNHARDT: Climate change risk.

MR. EVANS: Climate change in this

scenario, a static analysis. Assuming that nothing changes, behavior of the different players in the industry don't change, nobody reacts to changing costs, changing regulations.

MR. BERNHARDT: Everything static, and then run out the future exposure --

MR. EVANS: So it's more designed to look at the size of the exposure rather than expected returns.

MR. BERNHARDT: Good point.

MR. EVANS: We should not consider this to be a projection on Mercer's part. It's a way of sizing how big these things are in terms of their impact on the overall portfolio.

MR. BERNHARDT: Very well said. We want the model to be useful, but we don't want to imply a false precision in what was meant to be a relative indicator of risk to climate change; because there are so many underlying variables, it's hard to isolate the impact. So we tried to isolate the impact of climate change from other risk factors, holding other things constant.

Approach 2 is slightly improved performance over Approach 1 and the current portfolio allocation; about 13 basis points over the current allocation, and $1.3 billion cumulative return benefit versus the current allocation as well. And that's due largely to, you can see the sustainable global equity and sustainable private equity and sustainable infrastructure allocations, significantly outside of the circle.

There's a pretty significant return benefit expected from the active allocations if a 2 degree scenario takes place; because those particular active portfolios are heavily tilted towards climate solutions providers, energy efficiency, sustainable agriculture, sustainable timber, whatever the case may be.

MR. EVANS: When you gauge the current private portfolio, you looked inside the partnerships to see the degree of sustainability that's in them already?

MR. BERNHARDT: Yes, from a high level. And what we found is, your current infrastructure portfolio is basically in line from an industry exposure perspective to renewable energies. And so, our assumptions for standard infrastructure apply broadly to your current allocation.

MR. EVANS: Real estate is based of certification of buildings or?

MR. BERNHARDT: The main driver for real assets in general is their vulnerability to physical risks for climate change is diminished in the 2 degree scenario.

MR. EVANS: I see.

MR. BERNHARDT: Has a return benefit.

CHAIRPERSON ADLER: Question. So I understand this. What you are saying is the 2 degree scenario on the risk, the 2 degree scenario you calculate increases our annual volatility by 15 basis points on the current portfolio.

And then under the two alternative approaches, the effect of the 2 degree scenario on our volatility increases by 14. So they represent a 1 basis point improvement in relative volatility?

MR. BERNHARDT: I'd say they're the same, functionally the same.

CHAIRPERSON ADLER: No impact.

MR. BERNHARDT: Basically no impact on risk. We had a return to risk ratio in here at one point and took it out through one of the iterations, but you would have seen, as you can tell, the return to risk ratio improves as you go to the right.

CHAIRPERSON ADLER: Since return to

improvement of risk is unchanged.

MR. BERNHARDT: Exactly. That's more the directional impact that we would expect. We don't want to overly focus on the specific values, but the directional and relative impacts are --

MR. EVANS: But it's all extremely modest, both return and the risk --

MR. BERNHARDT: In line I think with the modest --

MR. EVANS: Within a degree of uncertainty of the calculation.

MR. BERNHARDT: And considering that we're only moving 6 and 10 percent of the total portfolio --

MR. EVANS: Understood.

MR. BERNHARDT: Into -- asset classes -- if you were to increase the size of the allocations you'd see increases in the return differentials at the portfolio level.

CHAIRPERSON ADLER: And would you see increases, given that there's a change of risk if we were to do that, would you anticipate seeing increases in the risk volatility of the portfolio, or not? In other words, my question is, and maybe you can calculate this:

Instead of 6 percent to low carbo -- if we were, say, 12 percent, would you then -- I presume see an increase in expected return; would you see an increase in risk?

MR. BERNHARDT: No. I think the answer is no. Our presumption with the low carbon equity allocation is that the long term risk adjusted return -- for that allocation, versus your standard -- allocation is functionally equivalent; especially since -- it will increase tracking error if you start tilting on a variable like carbon. But if you optimize after that tilt to minimize tracking error the risk-return performance shouldn't be material, unless of course a climate change event takes place. That is our presumption.

MR. EVANS: In your annual risk measure is total volatility of the fund --

MR. BERNHARDT: Yes; standard deviation.

One other thing to mention about lower carbon equity. So, we have also in our arsenal of asset classes we can use an ex-fossil fuel asset class. A U.S. low carbon equity allocation, you see about a 30 basis points increase in the 2 degree scenario here -- an asset allocation would have a similar return benefit, maybe slightly smaller -- I'm guessing, because we didn't run these numbers yet -- but a 20 some odd basis point benefit.

And the reason why we think the ex-fossil fuel allocation would have less of a benefit versus the U.S. low carbon allocation is, because when you're excluding fossil fuel reserve owners from your portfolio, which is the typical negative screening approach, you're reducing your exposure to reserve owners to zero.

However, in a low carbon equity allocation, you're reducing your exposure to reserve owners to 10 percent of the normal 100 percent exposure, and you're also tilting away from carbon emitters -- in every sector.

So it's not, in many ways a low carbon equity allocation is actually a better risk hedge from a financial standpoint against climate change transition risk than full divestment. There are pros and cons to both approaches which we haven't fully analyzed, I won't pretend to summarize here today. But that's something I wanted to highlight.

MS. AMBACHTSHEER: The other thing, on that note, worth mentioning, is on slide 6, where I talked about the characteristics of the different scenarios. You can see in the 2 degree scenario that the percentage of fossil fuels in the energy mix at 20/50 is lower than 50 percent, but it's not zero.

So, if you're thinking about having a 2 degree aligned portfolio in the investment strategy, that means tilting towards the reserves which are lower cost in reducing your exposure, but it doesn't necessarily mean having zero exposure.

MR. BERNHARDT: Before I move on to the 4 degree scenario on slide 13, any other questions?

(No response.)

A big, meaty slide. So, the primary takeaway on slide 13 is that while you can see at the asset class level there are some nominal return differentials amongst the green or low carbon sustainable asset classes, you can see in Approach 1 U.S. carbon equity basically has no effect; whereas U.S. equity has a negative 10 basis point drag.

The total portfolio impact is basically nil, in part because we see in a 4 degree scenario the technology and the policy factors are much less pronounced, more or less negligible over a ten year time horizon. So any of the insulation we see in these asset class allocations in the 2 degree scenario disappears. What we also don't see is any sort of return penalty from allocating to low carbon sustainable equity asset classes.

MR. EVANS: It surprises me that you don't pick up a negative impact from private real estate, whereas you were explaining before the negative impact is basically buildings get affected by storms, hurricanes, mud slides, et cetera. I would think it would be worse in those situations.

MR. BERNHARDT: It is negative.

MR. EVANS: Not any more negative --

MR. BERNHARDT: Positive in 2 degrees and negative in 4 degrees --

MR. EVANS: My mistake -- withdraw the question.

MR. BERNHARDT: Because of the inverse nature of transition risk, which was described on slide 6, the transition risk and physical risk, you would expect the signs to change on some of the asset classes.

Fragmentation os one of those scenarios that in general are hard to look at over a ten year horizon, because while we are seeing physical impacts change already, the worst impacts from climate change aren't expected for many, many more years. That's just something to keep in mind.

CHAIRPERSON ADLER: So, the takeaway from this is that in a fragmentation scenario, as far as the ability insulate our portfolio or mitigate the risk of climate change over ten years, is essentially negligible. Is that an accurate statement?

MR. BERNHARDT: I will state it another way. If you were to adopt Approach 1 or Approach 2, there is no downside regrets if suddenly we end up in a 4 degree scenario. But you could have some pretty good portfolio risk protection in a 2 degree scenario.

So, basically our analysis does not show much reason against moving in this direction.

MS. AMBACHTSHEER: To the question of what can you do in 4 degree scenario, specifically looking at real estate and real asset exposure and working with your real estate managers, your infrastructure managers, to make sure they have the physical risk processes in place, specifically would be something -- I know actually the team is already having those kind of discussions -- but certainly that is a very specific risk management focus in higher warming scenario; which is not an asset allocation or portfolio construction question, it's more making sure that's something that your managers are very focused on.

CHAIRPERSON ADLER: And it's not just managing existing assets, but when they're considering new investments they take that into account, and maybe not be buying Miami Beach, whatever, beach front exposure.

MS. AMBACHTSHEER: We have a number of clients who are actually doing specific physical climate risk reviews of their real asset portfolios right now. It could be interesting to have a map of the U.S. and see where your concentration exposures are, and how much coastal exposure do you have versus other types of exposure.

So, building that into the kind of risk management process of real assets is something -- we're seeing more and more of those type of tools becoming available.

MR. BERNHARDT: I'll talk about the Passport funds for a minute. Similar messaging for this particular location -- Approach 1 and Approach 2 on slide 14 for the Passport funds are similar in that Approach 1 is purely a beta allocation to U.S.

low carbon equity, in this case its' 12 percent of the total portfolio going into low carbon; and that's coming out of the U.S. equity exposure, 72.6 percent.

And then Approach 2 increases the total allocation to sustainable or low carbon asset classes to 18 percent; and 6 percent of which goes into sustainable equity, which is allocations to sustainability themes, opportunities in the public markets.

As you can see on slide 16 here, the relative impacts are somewhat similar from the Passport funds 2 degree scenario as we saw on the pension funds. Approach 1 has about a quarter billion dollar benefit versus the current portfolio; and Approach 2 has a half billion dollar benefit versus the current portfolio. And those are driven of course by the low carbon equity and sustainable global equity allocations as you can see, based on their positions around circles.

CHAIRPERSON ADLER: Is this across all of the Passport funds?

MR. BERNHARDT: We just treated the collective Passport funds as a single portfolio, and yes, on a weighted average basis.

CHAIRPERSON ADLER: Okay. One other question. You talk about sustainable global equity, but don't actually have an allocation to global equity. We have U.S. and international, on Passport funds and on the GP side. So, how would that work?

MR. BERNHARDT: We've calibrated this so it's regionally neutral, and the global, as shorthand for the demonstration on the circle chart, so it would be regionally neutral. We just stated it as global equity.

MS. AMBACHTSHEER: We could split it into an international mandate and a U.S. There's different ways --

MR. BERNHARDT: It would have been too many lines on the circle chart.

We think there are potentially more opportunities to allocate to sustainable equity in a global context. There are a lot of managers that are focusing on the global opportunity set rather than the regional opportunity set; in part because they see solutions to climate change, for instance, coming from all sorts of different jurisdictions.

But that's the more practicable implementation consideration, which we think can be addressed.

So, 2 degrees, similar story. As you move from left to right the degree of climate insulation in the 2 degree scenario improves. And then, in 4 degree scenario, similarly we see basically no difference to the portfolio level for these allocations.

MR. LEVINE: Question. When you say 4 degrees, is that 4 degrees longer term or ten year results? Trending towards 4 degrees?

MR. BERNHARDT: Trending, yes. 2100, we're using the climate lexicon of the typical terminology.

MR. LEVINE: I assumed.

MR. BERNHARDT: Good question.

CHAIRPERSON ADLER: Remember, it's centigrade.

MR. BERNHARDT: Close to 2 degrees Fahrenheit.

MS. AMBACHTSHEER: We'll move to the next section. Just to recap, those alternative allocations were designed to be an illustration of something which we think would be practicable step to take, and to look at how they perform under a 2 degree and a 4 degree.

And what we found was that each of the different approaches were beneficial under the 2 degree scenario, and basically neutral under a 4 degree scenario. So kind of a no regrets option from that perspective, implementation considerations aside.

If we move into the next section and talk about climate risk management options, of course thinking about what we just looked at, but also from a fuller perspective of all of the different things you are doing.

So three categories of activity we also caulked about in June. So engagement, the strategy around this, encouraging disclosure, encouraging companies to manage the policy and physical risk; hedging in terms of thinking about allocations to a low carbon index, which would be hedging exposure to reserve owners and high emitting companies; and then reallocating, taking some of your investments and allocating those to managers who are building strategies focused on that kind of sustainability theme.

So, if we look at the next slide, 20, which the yellow circles around it, all of the things you are already doing. So, just a reminder of how this map works along the bottom hand side. We saw on the left, kind of lower impact issues from a cost or disruption perspective in terms of impact on the current process; engaging with policy makers, signing on to collaborate letters, et cetera, a lighter touch in terms of impact on staff and implementation. Some different things in the middle that take more work and then allocating to sustainable assets is a deeper, more time-consuming more challenging approach.

And then in terms of climate impact on the left hand side axis, you've got indirect actions. So, your exclusions, divestment from thermal coal. On top you've got more direct impact. So, things like co-filing resolutions, engaging with companies very specifically encouraging them to change their business models.

So these are all of the different things which are ongoing, and certainly where you are very well regarded, for example, around your climate engagement efforts.

And the next slide, we have potential next steps here, with red circles around them. So the group at the top, the risk management actions that we have just talked about today. So that includes allocating to sustainable public assets, allocating to sustainable private assets, the additional allocations we were talking about; and then the low carbon passive index fund, which would again significantly reduce exposure to reserve owners and high carbon companies.

And it's also complimentary to your current focus on engagement. You'll still have investments in a number of different companies you engage with.

So that's from a portfolio perspective, and your decision to do some or all of those really is based in part on the analysis that we've shown you today, but also around your conviction and focus on this topic from a strategic perspective.

Then we also added these other elements on the bottom hand right, to determine and document your board conviction and climate actions. And that really can be reflected in a couple of ways.

First, integrating climate into your overall governance documents and beliefs and investment policy. And then from there, integrating them into what you're asking managers to report on, how you're evaluating managers. For example, some of the stuff we just spoke about around asking for reporting on physical risk. But we have a number of clients also who are asking managers to regularly report on carbon footprint information, for example. So, rolling that out potentially over time.

So that would be kind of the range, the complement of different types of things that are involved in your overall approach.

If we look at slide 21, if you did all of these things, this is a very comprehensive approach that really has the beliefs and the structure and the governance, the engagements, the exclusions away from thermal coal; so divesting from the highest emitters, tilting other parts of the portfolio away from the high emitters. And then allocating intentionally toward some of the solutions which need investment in to help transition to a low carbon economy, where those are attractive from a risk return perspective. So, it really has the full suite of different activities.

If we move into the next section and where we think you need to go from here, slide 23 sets out our framework for sustainable growth. And it's really our recommendation in terms of how you can develop an approach to climate and ESG issues more broadly, which is really a three step process around enshrining your beliefs and developing those beliefs, making sure your processes are incorporating the different elements you think are important, and evolving your portfolio to reflect that.

So, really making sure you do those different steps will make sure over time the extent to which you want to focus on a topic like this and integrate it into your ongoing process, that you build those processes structurally over time so that you are going to end up with the portfolio and different actions from an engagement perspective and communications perspective that you want, that are best for the fund and stakeholders would like to see.

So, in terms of what that means for immediate next steps, I understand that your investment policy statement is currently being reviewed from that perspective, perhaps a nice opportunity to add something in from a climate perspective.

We in our June presentation, I believe there was an appendix with examples of other investment beliefs that other investors have around climate. And in our final written report we can also make sure those are there from an example kind of perspective.

Thinking about beliefs, the investment processes, I mentioned the FSB task force on climate related exposures, and those will be included in the annual reporting requirements from the PRI. That will include things like asking you to report your carbo footprint.

So, what would the process be for making sure that you have access to that information. Is that something than can be integrated into your other monitoring reports that are provided from you, so that we start normalizing these processes, making sure that you have that information in an efficient manner?

Of course, think about publishing that information. You will have questions around, do you have targets around emissions, et cetera, et cetera, over time. So thinking that through and understanding where you are now and where you might like to go and how you get there of course is an important part of having more disclosure on that.

And then determining the decision making process around having these climate aligned allocations. So, the analysis that we presented today, is the low carbon index of interest, what about some of the second scenario where we have the 10 percent allocations, including the sustainability themed assets. And what are the additional pieces of information or different strategies that you would like to see tested or considered in helping you get to the end goal of figuring out what your strategy and the process will be.

And just given the kind of current environment around climate and what different investors are doing, we also think it might be nice to think about developing a public climate strategy document, where you talk about the analysis that's been undertaken, the research that you've done, your philosophy on the issue, and the full complement of the different approaches you are taking and how they work together towards having a 2 degree aligned portfolio, if that's something you would like to put out there as an ambition.

So I think that might be a nice way to pull some of that together and communicate with your stakeholders on that.

With that, we'd like to move to

discussion and take questions and comments and talk a little about what all should be included in the next phase of the analysis.

CHAIRPERSON ADLER: Comments? Questions?

MR. KAZANSKY: We're dealing with some of these rather large companies, energy companies; Exxon Mobil and whatnot. I guess what I'd like to get a sense of from you is, especially in your role going to Berlin and things like that is: It doesn't seem to me it's in their best financial interest to continue to live in the past as far as services they provide and the things they dig up from the ground. In order to keep their businesses moving forward they have to have a strategy for the future that involves less carbon and less climate change producing materials.

Is that the sense that you get from these larger companies, that they realize if they want BP or Exxon Mobil to exist in fifteen or twenty years, they're going to have to -- they may not say it publicly, they have commercials that talk about it -- are you getting a sense there's a general move towards understanding that, they may not want to say it outright, that the future is definitely not where they're at right now?

MR. BERNHARDT: There's a spectrum, definitely a spectrum of behavior. And within the large oil and gas production field in particular, there's a perspective. Some companies are really aggressively putting out 2 degree strategies and aligning their business models, attempting to align their business models with that 2 degree transition. Others are not addressing it, at least not in a forthright way. And so, some of them are outright heads in the sand.

You have to differentiate between those different stances. And an important thing, some of the low carbon industries that are coming out now in the marketplace, a lot of them, the first generation will tell them carbon indices were -- they took carbon emission data and used that as the sole basis for determining a tilt in the portfolio.

Now they're starting to use that data, but also look at the adaptive capacity of the underlying companies, and which ones are leading on things like climate risk management and have put out business plans which are effectively aligned with the 2 degree scenario; things of that nature.

MS. AMBACHTSHEER: Because Exxon Mobil,

for example, was the largest holding in one of the most popular low carbon -- because they're based on optimizing around spoke 1 and 2 emissions. So they're efficient in extracting oil from the ground.

And so, but not taking into account the fact that they're less progressed than other large integrated oil companies on transitioning.

MR. KAZANSKY: I'm just concerned about baby with the bath water mentality, where assume they may have been bad actors and continue to be bad actors at the moment, but that the expectation is that one way or another some of the more progressive folks will be worth staying with and working with as we move forward.

MR. BERNHARDT: We have in the appendix -- slides 26 through 28, about how we would look at making a low carbon index allocation decision. And there are all sorts of different dimensions of that decision which you would want to evaluate.

In particular, like the index characteristics are very important, they are all very different. Some are very similar, have Exxon holdings. Some are more complex and use all sorts of different data points and try to get you more exposure to the leaders in certain sectors and/or encapsulate an engagement approach.

Certainly when you're evaluating the index that you want to follow or looking to develop one yourself, you want to make sure all those considerations are out there, and it's not just a blind tilt, if you will.

MS. AMBACHTSHEER: Schroeder's recently published an interesting climate dashboard, where they look at 16 different metrics to try to estimate what temperature change we're tracking towards, based on the 16 different areas.

So they look at renewal energy investment, for example, which is pretty positive, I think it takes it to 2 and a half degrees. They looked at the focus companies are putting on carbon capture and storage, which is significantly lower than we need to see, according to the international energy agency. That's a 5 degree or 5 1/2 degree temperature pathway.

And if you look at oil and gas exploration and production for investments, it's over 7 degrees. So certainly if we are going to transition to the lower temperature pathway, there will be oil and gas companies that are definitely still around, and there will be others that will significantly need to reduce the current production levels.

So, to your point, you can't throw all of it out, but you can kind of look at the difference within sectors and see where companies are. And some of the newer indices are trying to do that.

MR. KAZANSKY: Thank you.

CHAIRPERSON ADLER: A follow-up. Is one of the factors with regard to the fossil fuel companies, is one of the factors sort of how easy their reserves are to extract?

MS. AMBACHTSHEER: The cost of reserves.

CHAIRPERSON ADLER: The carbon cost. In other words, if you have reserves in the middle of the ocean, they're obviously much harder and more costly and --

MS. AMBACHTSHEER: And Canadian oil has a much higher cost per unit.

CHAIRPERSON ADLER: Is that one of the factors that gets considered in terms of what the quality of the reserves --

MS. AMBACHTSHEER: So, the first generation indices, no. Reserves generally. Some of the newer approaches. So, impacts, working with the Imperial College of London have come up with a methodology basically to optimize around reducing exposure to companies that have higher cost reserves; because naturally, those are least likely to be developed. You want to keep exposure to the lower cost reserves, which are more likely to be developed. So that's definitely something to think about.

MR. ORLANDO: The report doesn't super address this. I get why. Isn't the biggest risk of climate change the sort of cosmic death of civilization, the ability for societies to deal with a changing environment? Isn't that in many ways a much more pressing risk than whether in fact Exxon is drilling in the Arctic National Wildlife Refuge? Is that a big risk? Society's inabilities to function? Is a country in Asia or Africa or Europe in better or worse position than this country with political dimension of the dysfunction prevalent across western societies, the big risk of climate change?

MS. AMBACHTSHEER: I will take this one first.

(Laughter.)

In our first report where we published this model in 2015, we introduced the concept of investors as future takers or future makers. Right; so we're all at a minimum, we're all future takers. We're all going to be impacted by whatever happens.

So, as good fiduciaries, you think about different pathways, 2 degree pathway, 4 degree pathway, how can we optimally position our portfolio under those potential pathways? And that's what we've done today.

A smaller group of investors are also self-declared future makers, where they say, "Hey, we're a key stakeholder group alongside business and government and civil society, and we can use our influence to help shape which pathways we go down, to influence whether a 2 degree outcome or 4 degree outcome."

Because our long term ability to pay pensions relies on achieving the Paris agreement. Because if we have civil unrest and widespread famine and wars over lack of water, we're not going to be able to do a good job, we're not going to have economic stability or growth.

From that perspective, we see more

investors also saying, "Look, I'm going to take these portfolio activities, because from a fiduciary they make sense perspective make sense, and because longer term, as a longer term fiduciary, I'm going to use my influence to help make sure we achieve that 2 degree outcome."

And I think you guys have already taken that position in your engagement work, both with policy makers and with companies. And through taking Approach Number 2, where you would be allocating more assets more intentionally to the low carbon transition, you could also frame that activity as being future maker activity, where you're trying to contribute to that transition.

MR. ORLANDO: I was thinking of selling Holland and buying Nepal.

MS. AMBACHTSHEER: And the Dutch Central Bank has been actively reviewing how all of their pension funds are addressing climate risk -- because they're underwater.

MR. ORLANDO: They should build a wall.

(Laughter.)

MS. AMBACHTSHEER: They're working on building floating communities.

MS. VICKERS: Jane, can we talk a little

about the charts on page 20 and 21, the climate impact versus additional cost? Can you guys talk a little bit about what you mean by climate impact? To Ray's point, sort of how would these actions actually impact whether climate or warming or something else, what do you mean and what are the inputs that went into those different metrics?

MR. BERNHARDT: Really what we mean by that is -- emission reduction effect, that might be a more appropriate label now that I think about it. The amount of effect your actions will have on the real economy and causing it to transition more towards a 2 degree outcome.

MS. VICKERS: Those are two different things. The first thing you said, it should be titled emissions reduction effect --

(Talking over each other.)

That's the direct impact. The more indirect impact would be what you said secondly. It's not the same thing.

MR. BERNHARDT: Rephrase.

MS. VICKERS: Emission reduction is a quantifiable clear impact, the carbon emissions go down from one number to another.

MS. AMBACHTSHEER: Not in you portfolio,

in the economy.

MS. VICKERS: Yes. But the indirect effect of that in the real economy is sort of pushing towards this transition to --

MS. AMBACHTSHEER: Right. Like investing in a low carbon index fund, on the one hand you could say, what are we doing really, are we having a direct climate impact?

No, you're not really having a direct climate impact. I think you're having indirect impact, where a number of policy makers and others are using the commitments we're seeing from investors to help build momentum and create legitimacy for implementing different regulations around implementing the Paris agreement, for example. So it's still having an impact, but it's less direct.

MS. VICKERS: Are some of them direct and some indirect?

MS. AMBACHTSHEER: Yes; on the spectrum, from indirect to direct.

(Indicating.)

MS. VICKERS: Got it.

MR. BERNHARDT: The engagement we have is the most direct impact, because you can potentially through your resolutions or private engagement with companies get them to change their practices and reduce their emissions. They're actually working on -- and same thing with sustainable private assets, you're owning, direct ownership of a tangible asset or a company, and you're able to able to influence the manager's direction of those assets -- degree aligned.

MS. VICKERS: So we want to be in the upper left hand box.

MS. AMBACHTSHEER: Arguably you want to be everywhere. You want to have indirect influence. You want to help push toward the political process, to the point around helping the world move towards the 2 degree aim -- if you want to be a future maker.

You're not going to do that through your own portfolio because it's just not big enough. You also need to encourage policy makers to make progress. And by signaling a climate risk strategy arguably you're contributing to positive momentum. So I would think that you would want to have some --

CHAIRPERSON ADLER: Other questions or discussion?

(No response.)

Should we go to next step processes?

MS. AMBACHTSHEER: We will be providing a written report which summarizes the information and the discussions we had from the first June meeting, as well as this more recent analysis.

And to the extent to which you would like provide us with direction on some of the steps you would specifically like to take, we can frame those in the report, and I think that can be useful for you, in terms of some of the takeaways, if you think you would like to develop a climate risk strategy, for example, as a public document and how some of these things work together.

Or if you don't want to give us more direction, we can come up --

CHAIRPERSON ADLER: I think we do.

MS. AMBACHTSHEER: Now would be a good time to do that?

CHAIRPERSON ADLER: I think we need to think and digest some of this and then come back to you, presumably through the staff. And I think what we're probably looking for is an iterative process where we say, Let's take a look at this, and then you get back and say okay. This where we want to go, right? Does this make sense? I'm looking at the staff.

We're not talking about stretching this out for months and months, but we do need to take this into account and have some internal discussions and then give you more direction.

Make sense?

MS. AMBACHTSHEER: Great. We want our final deliverables to be as useful to you as it can be, so that works for us.

CHAIRPERSON ADLER: We do too. Thank you.

MS. BUDZIK: Would the Board be interested in some education around the low carbon index? See if we can put that together for the next Board meeting?

MR. KAZANSKY: Yes.

MR. ORLANDO: Sure.

CHAIRPERSON ADLER: Yes, that would be great. I think we definitely want to do that. There may be other potential action items that we want to do as well. In other words, there are other things that the scenario suggests.

So, for example, there is this sustainable private equity -- I know that a lot of the private equity we have in our portfolio now is sustainable. And it might be worth a discussion with the private equity -- I really mean infrastructure.

MS. AMBACHTSHEER: Forty percent of a typical infrastructure portfolio will be around renewables already.

CHAIRPERSON ADLER: So, let me ask the question, in terms of your thinking. Right now we have 2 percent allocation to infrastructure? Can anybody fact check that?

MS. AMBACHTSHEER: Yes; the last slide.

CHAIRPERSON ADLER: Infrastructure is 2 percent. And I don't know if ours is 40 percent or not. It might be more.

MS. AMBACHTSHEER: I think it's 25 percent --

CHAIRPERSON ADLER: Part of the question is, do we want to make a conscious effort or direction to our infrastructure team to increase our existing allocation to sustainable infrastructure? And I think, in terms of thinking about education, it might be worth the Board having discussion with the infrastructure team and maybe with StepStone, our consultant, about both what we have now and what is possible, what they view as possible, doable, within the current allocation.

MR. BERNHARDT: Fair enough. We'd be happy to be part of that conversation as well. There's lots of varying views about what is possible in the infrastructure class in particular right now. So a diverse perspective, basically, would be useful.

CHAIRPERSON ADLER: In other words, I think what I'm saying is, clearly the first step, both because the largest recommended allocation is low carbon index, and probably the easiest thing to take action on would be for us to have an education on low carbon indices.

MS. AMBACHTSHEER: And some of the different approaches.

CHAIRPERSON ADLER: Right. Then, I think after that we might want to talk about what the possibilities are. In other words, I don't think we should make our final decision in a vacuum; to say, let's do X percent to low carbon and Y percent to the other impact allocations here. We should have discussions at least with our BAM staff and our consultants, including Rocaton, about that stuff as well.

But I agree with doing low carbon index as a first step in terms of thinking about implementation. At the same time we're thinking about our overall low carbon or climate risk strategy.

Does anybody think that makes sense? Or, does anybody think that doesn't make sense?

MS. VICKERS: I would just say, everybody loves the idea of green infrastructure. I see that you pointed that out. The sustainable, I think the other -- we're talking about the index, and then would we have a conversation around sustainable private equity as well?

CHAIRPERSON ADLER: Absolutely.

(Talking over each other.)

CHAIRPERSON ADLER: And have a discussion with BAM's team on each of those. In fact, I think it would also be useful to discuss the real estate risk management stuff with our real estate consultant and with our real estate team at BAM, and ask, What do we have in place? And they may, again, what discussions have they had with our managers about the risk management approach they take with regard to climate change as you guys talked about.

MS. AMBACHTSHEER: Can they give you a map of your holdings across the U.S.?

MS. VICKERS: And would all of this have to take place before the final document that we're talking about, the strategic document?

MR. BERNHARDT: Depends on how granular.

MS. AMBACHTSHEER: You guys developing a final analysis report or a climate risk strategy?

MS. VICKERS: Two different.

CHAIRPERSON ADLER: Yes.

MR. KAZANSKY: The report's going to help us get to where we want to be.

(Talking over each other.)

MS. VICKERS: The report is fine, but when we develop the document we want to have all input from the asset classes.

MS. AMBACHTSHEER: It depends how granular you want to be. You could say something broadly, like "We want to make more sustainable allocations," but not be specific about asset classes.

MS. AMBACHTSHEER: It could be a living document too, depending also on your stakeholder interest. Maybe it would be useful to put something out there saying we've been working on this, we've done the analysis, we've come at it from all different ways, with priorities. And then we'll give you annual updates on how we're tracking and whatever you want to say.

MR. KAZANSKY: That's great.

CHAIRPERSON ADLER: Sounds good.

Being cognizant of the time.

MS. AMBACHTSHEER: We're fine.

CHAIRPERSON ADLER: Anything else for Mercer today?

(No response.)

Thank you so much.

MS. AMBACHTSHEER: Thank you all.

CHAIRPERSON ADLER: We look forward to this continued interaction.

(The Mercer people left the room.)

(Discussion off the record.)

CHAIRPERSON ADLER: Bring in Jackson Square.

MR. LYON: So, while Mike's passing out Jackson Square materials, I wanted to start with a quick minute in terms of reminding everyone why they're here today.

So, this is a pretty active all cap growth strategy that's been in the portfolio that's coming up on its four year anniversary. It has a long successful track record --

And it's been a significant underperformer on a relative basis, although the absolute returns have been stronger than the market environment.

And really this is a judgment call. There's no formula to this, but unlike some other strategies we talk about, the fundamental story, the team and the other metrics that you think about in terms of the process are still intact, and on paper compelling, and in person compelling. But the increasing -- of performance hasn't been there from this.

And so, I think listening carefully and consider their explanations for the performance, their conviction in the strategy going forward, have them refresh us on the firm and so on.

But if we ignore our recent experience and we think those are some costs, and we think about this prospectively, this is an organization that checks a lot of boxes that our research team would be comfortable using for a new account today, it's still so well regarded from all the qualitative perspectives.

But the performance has been underperforming for longer than we would expect, even though we know in general an active manager performance is typical.

And even if you are inclined to move away at some point, although we cannot call the bottom of a relative performance cycle, given how long it's been and how pronounced it's been, but these seem to be skillful people and process in0 place, it seems that there may be opportunity -- again, no one can forecast the future -- but there may be an opportunity to ride the cycle back the other way.

And so, that's what we want to assess, the Board's conviction around being more patient or not with this strategy. We don't have to commit for another full market cycle, but it's really a question of do you want to take action today, or revisit at some later point?

That's kind of the setup.

The other relevant thing you should have in mind when they come in. This manager has moved to a performance based fee structure, and we're also on essentially a holiday because of some underperformance. So it would be some time before you actually have a fee to pay if you choose to retain them. We know that fees in general are a headwind for active strategies, at least a headwind, to the point that position -- a headwind move for the next period of time.

MS. STANG: They won't pay a fee until their since inception performance is flat. When they signed the performance based fee, we made them look back to the since inception funding date. So they're not going to get paid for a long time.

MR. LYON: So, if you did replace them with another strategy, of course has a fee from day 1, you'd have to have that much more conviction prospectively in the new strategy.

So this is really a question of how long can we go before we feel we're wrong or something has fundamentally changed there, and there's room to potentially be more patient. But we want everyone to have a chance to assess that for themselves.

Please ask them a lot of questions, and they'll come in.

CHAIRPERSON ADLER: One question before you bring them. In looking at the performance sheet you handed out today, there are these two active all cap growth managers; these guys in Clearbridge, they manage certainly a little more money. And Clearbridge is underperforming the benchmark. I guess we hired them roughly the same time, right? And Clearbridge's performance is actually even worse than Jackson Square.

Am I wrong about that?

MS. STANG: Not since inception. What you are referring to on page 3 Jackson Square is actually somewhat -- surprise, surprise -- gotten their act together over the last month, maybe three months, they're looking not so bad year to date. But here we are in August.

What you really should look at, I think, you go to the since inception number on page 9 --

CHAIRPERSON ADLER: Page 7.

MS. STANG: Since inception numbers. Jackson Square now is only down -- only one point in the not so recent past. It was like 700. It had a 7 since inception drag. And yes, Clearbridge is not great. That's another problem. Today's problem is Jackson Square, which has done a little better.

MR. FULVIO: Their strategy is a bit more active on a respective risk basis, more tracking error involved, more concentrated. And their underperformance is more episodic. So their underperformance comes from more recent time periods rather than a sustained period of underperformance during each of the last three or four years.

So we've seen Clearbridge move around more. Clearbridge has done a lot better job explaining their mistakes. So that's one the things -- again, as Chris mentioned, nothing has thematically changed about why we like the firm. But they've had a couple of mistakes where they didn't do the best job explaining them.

MS. STANG: I think it's also the risk controls, like if you are a growth manager it becomes a valuable stock and doubles down; which is not really what you want your growth manager --

CHAIRPERSON ADLER: Question -- not to be decided today. But I am a skeptic about active management. Here we have two active all cap growth managers, both of which have underperformed since inception, substantially, not a little bit. And I understand Clearbridge is more variable.

But it raises the question for me about active management, certainly in the large cap and in all cap space. That's all. Put that out there for consideration.

MR. LYON: That's a relevant consideration, and the larger the cap in the U.S. in particular, the tougher the space. And that's part of why these strategies were structured as all cap, because it provides them more degrees of freedom to be able to shift around their approach and where they're finding opportunities.

But it's more active strategies also, the more patience that's required, the longer the cycle of underperformance might be. And some of it also be reassessing what's the fit? Does it fit with our objectives?

We'll talk a little about the objectives of the overall composites we are in, after the manager comes in.

The only other thing to mention, there has been a positive development along the way, organizationally as well as this team became an employee owned firm and had an amicable split from its former parent company. So they really have a lot of skin in the game --

CHAIRPERSON ADLER: Thank you.

(The Jackson Square people entered the

room.)

CHAIRPERSON ADLER: Welcome to the TRS investment meeting. Please introduce yourselves for the record.

MR. REXFORD: I'm Jeff Rexford, director of sales and marketing at Jackson Square. I'm also a partner in the organization. To my left is Chris Bonavico, an named portfolio manager at the firm. He's also a partner and our second most tenured partner as well.

We have twenty minutes to discuss the product, or longer, whatever works for you.

CHAIRPERSON ADLER: Twenty minutes sounds good.

MR. REXFORD: There's been no changes to the organization. We haven't had a departure. That was very unusual for us. We're still the same organization that you hired years ago. I think we'll probably, unless there's questions on personnel, there hadn't been any changes, I'll turn it over to Chris to discuss portfolio questions that you have.

Any particular point to start, or?

CHAIRPERSON ADLER: Feel free.

MR. BONAVICO: So, people can jump in at

any time with questions.

As you can see in recent months and quarters, we've clawed back some performance, doing a little bit better. I want to say that the process and philosophy are exactly the same as I've been doing for 25 years in this firm.

And we certainly can go into the new names and how excited we are about them; and describe some of the factors that led to us underperforming since you guys started.

Clearly I've got a lot of my own money in this product, so there's a lot of alignment of incentives. But I think it's also worth pointing out that in '15 there were some headwinds in energy and materials. Last year the Trump trade and the rotation into banks, that sort of thing hurt us at the end of the year.

So while there were definitely some stock picking errors, in recent quarters we back numbers on the board, and we're pretty excited about the portfolio and some of the new ideas.

Process is still the same. Team is probably better than ever. The fact that we are on our own as Jackson Square is a relief, but very exciting. We're one of the premier shops and obviously attracted a lot of attention from potential new clients that want to work with us.

So we'd love to take any questions.

CHAIRPERSON ADLER: I would like a little more detail about why -- I understand the last three months you're doing better; but what you attribute the sustained underperformance to, and why we should expect you to outperform going forward?

MR. BONAVICO: Really across our complex we have outperformed with this process in all products. We did start at high performance with you guys. That's not an excuse, but it's a fact. And we are still, because we're concentrated long term, low turnover, we need to come up with a new ideas a year that can differentiate us from what the benchmark is doing, number 1.

And number 2, we think we are looking at the right value drivers and businesses; looking at change and getting ahead by looking at the right value drivers, what the consensus thinks about a business.

Love to talk about some of those new ideas. A couple of years ago we initiated Electronic Art, a great example, a gaming company.

And Wall Street was, same old game company, we were only talking about what games were rolled out, what ratings were received. Completely missed the fact that they were shifting their distribution model from selling to retail stores to selling online. That led to not only much higher margins, but more opportunities to sell. So that completely changed the cash flow characteristics and the risk of the business, and Wall Street missed it. That performed well.

So that's an idea that we can keep using, that type of process. What's our edge? What are we seeing that Wall Street doesn't see? And why can we take a meaningful position, because it is generating a lot of cash, there's a lot of downside protection.

We recently initiated in the same space a company based here in New York City called Take 2 Interactive. They are on the verge of making the same shift to digital; and again Wall Street is behind that. That's been performing in recent months.

Other ideas out there. You maybe have seen in the news today that Amazon is going to try to get into the Fedex and UPS business. We really lean against that. We think that will have marginal impact. You can buy a franchise like Fedex at a very attractive valuation.

We think Fedex is very superior to UPS. They don't have the union issues that UPS has, and they are much further down the modernization road than UPS is. And they are on their way to becoming higher margin. And now they're done with this capital plan, essentially higher margin over flat cap X.

So there's a nice free cash flow wedge coming out of this business, and the Amazon Cloud is creating an opportunity in the stock.

So names like that we think we can keep finding that type of idea, and that's going to drive alpha. And while we have to own up mistakes in recent years, part of it, essentially half of it was stock picking mistakes, and the other half was style headwinds, whether it was the Trump trade or folks a year earlier being in energy and materials.

CHAIRPERSON ADLER: Questions?

MR. ORLANDO: Thanks for coming. You seem like a small shop. Can you talk a little bit about what you see as the future of the firm? I notice not an extraordinary number of women. And

I'm sort of wondering how important that is as a core value, a broad range of diversity, and what you think the next five or ten years of the firm will look like?

MR. BONAVICO: Our head trader is female. Client service folks certainly have several women. We're not going to be a large firm. We think small teams make better decisions. We like to get around a table, smaller than this one, and debate a stock idea where everyone has a voice. You get too many voices and side conversations, you lose focus. And we want everyone to have a real voice, if they have an opinion, to speak up.

So right now we are 12 investment professionals. Maybe in the future we'd be 13, maybe 14, but we'll never be 20. We think that's too big.

We do think, given the math of concentration and low turnover, we are seeing a lot of ideas and only deciding on a few, and that's the right way to do it. Again, we think small teams are much more focused.

If a person comes in and they're the right candidate and they happen to be female, all for it. So we are actually, within the past year we were going to make an offer to someone who actually within a few hours of having an interview with us accepted an offer at a spin out of SPO Partners in the Bay Area, which was bad luck. She was great.

We have no biases on orientation. But again, I want to make point that you're going to see this be a small focused team. The whole firm is 27 people, so we actually think smaller, more controllable and focused. And given we're only doing long only equity, that's what we're going to focus on, we think that's the best way to run the business.

MR. ORLANDO: I always worry about group think in small groups. I feel in some ways larger groups are more able to knock around more ideas. So I'd say a profile like this, it's not at all the team been together, while sharing the same characteristics, you start to wonder about the openness to blue sky world, writ large.

MR. BONAVICO: We're definitely open to that, and some of our best performers in recent years have been undiscovered platforms in Japan that added a lot of value here.

So we are not only open to that, but

people are really encouraged and compensated for speaking up, even if you're negative, you disagree with somebody else's idea. The worst thing you could do is stay quiet and later say, "Oh, yeah, I was worried about that." You're going to hear it.

The good thing about small teams is that, it's pretty clear who's thinking what and who's contributing, and that would get lost in a larger team, I believe.

Second, everyone has the right incentives. We only succeed personally if everyone else succeeds. You have to care, make sure someone else doesn't make a mistake. Of if someone has a great idea, the rest of the team pushes them. Do you have a meeting yet? Can we meet the CEO? Have you have a model built? The rest of the team wants to make sure that those best ideas float up to the top of this portfolio, which the sleeve characteristic does make that happen.

So people are economically aligned with making those right decisions, and getting the right stocks in the portfolio.

MS. PENNY: Again, I want to focus on employees. You do have a small team, and that's great. And we're faced with, do we keep you or do we not? So, what is going to look different? The same people, are they now going to be thinking differently? Or are you adding on? How can we -- help us make that decision. What will look differently?

MR. BONAVICO: We do have four hires in the past three and a half years, and they have been -- one of our best stocks year to date is Lending Tree, which came from one of the newer hires, Greg Chory. There is energy from these folks, and they are contributing new ideas to the portfolio, for sure.

What's different, I'd say it's more of that focus on the process, making sure those best ideas rise to the top. I'd say it's more of us making sure we don't have mistakes, number one; but really pushing the process and making sure the best ideas are weighted higher.

We have had some good ideas, not more broadly, and that's a criticism we should take. And the net of this product is to deliver the best ideas at the top. And we think we can do that. And clearly, as recent periods show, whether it's Lending Tree or Logitech or Electronic Arts, these are names that are performing and they were at the top of the portfolio, so that matters.

MS. VICKERS: Can you remind me of your fee?

MR. REXFORD: Right now it's zero. Performance based fee.

MS. STANG: Retroactive since inception. So they won't make a fee until they outperform.

MR. REXFORD: For a period of time.

MR. BONAVICO: A rolling three year period.

MS. STANG: Exactly.

MR. KAZANSKY: Going back, obviously you guys aren't BlackRock, you don't have that kind of leverage. So everything is based on how your team works together and the quality of the team.

And Ray addressed a piece of it before, as far as gender is concerned. But I'm interested in over all, what's the diversity like on your team?

MR. REXFORD: As far as age or how they approach investing? All the above?

MR. KAZANSKY: Age, race, background, the whole deal. Because what we constantly hear diversity among the whole spectrum improves decision making. And that's what we're looking for.

MR. BONAVICO: People have different areas of expertise, people have biases. One of the good things about being a small team is you know someone's biases. You know they tend to be conservative when they model or they tend to like businesses that have a wider range of outcomes, you know that about the person.

Throughout our history, we compensated people for finding a differentiated investment opportunity, and does it add alpha? So regardless of whether they are young or old or of any background, that's what we pay for, that delivers performance.

We don't think we're missing diversity of thought. Look across the list of holdings, you can see things ranging from a Japanese e-commerce company to Fedex. There's a real diversity in type of business. The focus is on what are the value drivers?

Everyone knows for every stock in every portfolio, that story is about higher asset utilization, free cash flow. That story is about margin increase. This story is about revenues and margins.

So everything ultimately leads to free cash flow stream and what are the returns we can make at this price? So, we could do that, I believe, we do have a very diverse set of skill sets and experiences; obviously a wide range of ages. Our youngest analyst is 25 Jeff is 59. So you have range of experience and, like I said, we tried to hire a female -- the fact that we don't have one now I don't think is affecting the fact how we are sourcing ideas.

MR. REXFORD: Van Tran, our CEO and COO used to on the team, and when we spun out she became our chief operating officer and chief financial officer. She was one the portfolio managers on this product a few years ago, actually hired us.

CHAIRPERSON ADLER: What about the non-whites. Do you have any non-whites on the team? I'm just trying to be direct here.

MR. BONAVICO: No, not currently. Obviously you interview who you interview, and the best candidates win. So when we added to the team a few years ago, we hired someone who had experience in private equity and another one in venture capital. The fact that they both happened to be white has absolutely nothing to do with the fact that we think they think about being owners of businesses, not traders of stock. It's very important. So they understand how to identify why is this a good business, why is it undervalued? And they've worked out very well and have been great additions to the team.

Now, if we were going to try to force a decision, say it has to be someone who's not white, then that wouldn't be optimum if they weren't the type of person who knew how to create this value that these guys have. We obviously are super open to that, but it just hasn't worked out that way.

CHAIRPERSON ADLER: Follow-up.

You said not right now. Have you ever had a non white --

MR. REXFORD: Van Tran is Vietnamese; that's Asian, not Caucasian.

CHAIRPERSON ADLER: Thanks.

Any other questions?

MR. BONAVICO: Just another reminder. Everyone that's a named portfolio manager on this product has a lot of their own personal money in it. So we are aligned that way. And just as we like to look at businesses that have managers we believe in and value creating histories, and we buy them when they're down. We hope you consider the same.

MR. FULVIO: In the book you referenced your management through June, page 3. You mentioned there's been interest in the strategies. Were there any new accounts in the third quarter you wanted to reference?

MR. REXFORD: In the third quarter there were existing funds and a couple of new accounts, about a billion dollars in new assets.

That's about net, and then we also have some accounts that are funded in very different strategies, funding the next couple of weeks here. But asset growth has been for us pretty reasonable, given -- I can get you the exact figures.

CHAIRPERSON ADLER: Anything else?

(No response.)

Thanks very much.

(The Jackson Square people left the room. Discussion off the record.)

CHAIRPERSON ADLER: Back on.

MR. LYON: Now is a great time for the Board to ask any questions or share any observations about the Jackson Square presentation.

MS. PENNY: Forget about diversity and all of that. That certainly is important. I'm trying to think about being responsible with the money. No fees -- we cut down -- someone else take their place, do we think we'll be in the same position, not knowing if they make money not make money?

MR. LYON: Incremental, assuming recommendations for an active manager, on an interim or longer term basis. But if you're reallocating to an active manager you'd have to have incrementally more conviction in the active manager to cover the transaction costs and incremental fees.

MS. PENNY: They're still on your list that you're advising people to hire them. So what do you see that we don't see?

MR. FULVIO: One of the things that was missed was, he was trying to talk about what they see as potential opportunities today, they seem to be more excited about than a couple years ago.

All that said, when they saw opportunities that they thought -- a couple years ago, they made significant mistakes. So, Susan alluded to them buying what many people perceived as a value company, Valiant --

MS. STANG: Growth --

MR. FULVIO: Growth at the time they bought it. They continued buying, they didn't see an opportunity there; they were incorrect. I think if they'd done a better job trying to explain it, I think he did very poor job --

(Laughter.)

But I think what he was trying to accentuate was the fact that they experienced some of this underperformance, yes, you'd be locking in losses if you sold their company today. But I think they still see continued upside, but that upside has not been realized, you have the ability to participate in that. I think that's where he was trying to go.

On top of that, they do see some new opportunities, as mentioned, a couple other stocks. I think he wanted to cut stocks, less about making the case for why they continue to see opportunities, why they think their approach is sound.

MS. VICKERS: On that last point, what do you guys think about their style and timing of the market? If we sold their stocks and then we parked it in an index we'd have to buy at a very high point.

MR. FULVIO: What I'll say is, they're what we call growth at a reasonable price. So they're trying to find value among growth companies; companies that have potential to increase earnings growth over time. When they think those companies are undervalued, they try to play in that space.

So it's not a surprise where you've got a situation like this here, growth markets, growth is really in favor of high fliers flying high. They might own a couple of those stocks, but they're not going out to buy big names in the Russell 3000 growth index, hold them, because see opportunity there. They will focus on where they're finding undervalued ideas. So we would expect them to lag in areas such as that.

Where they lagged, where we would have expected them to do a little bit better, was when value was in favor last year. They had some of these big mistakes that kind of tilted the portfolio the other way from a performance perspective. They really couldn't keep up in that softer growth environment. Last year value did a lot better than growth, and they couldn't keep up because of these specific mistakes that they did a poor job explaining.

MS. PENNY: Could we wait a little while, call them back in a couple months if we expect to see a difference in a couple of months?

MR. LYON: A few months is such a short time period for evaluating the strategy. But somewhere between six and 12 months, if you were choosing to wait, might be appropriate time to revisit, unless the performance really falls or there's a significant negative development at the firm. Then of course you could revisit.

(Talking over each other.)

MS. STANG: Or they actually super outperform. You might say maybe you don't want this ride.

(Talking over each other.)

MR. LYON: So, this is really a question of keep it going for now and we figure out our path as we revisit, re-upping, as I was saying earlier before they came in, we don't necessarily need to decide we're re-upping for a full market cycle. We if maintain that, given how they've done and the lackluster presentation, it would seem like if we revisit it again in the near future, six to 12 months.

And so that's the question. Terminate today, or do you keep it around enough to see what they have said and energy we sense when we talk to other people -- passionate for the portfolio and the current ideas -- if it's starting to trend in a different, more positive direction.

MR. KAZANSKY: Clearly we're interested in their investment performance, not their performance necessarily in front of us, as distasteful --

My issue is, if we step away and we lock in whatever losses we have and figure out something else to do with that money, that doesn't necessarily benefit; right? I'd like so see if we can recover and then make a decision, possibly by the end of the fiscal year, or something like that.

If they are able to recoup some of those losses that you're looking at, then if we walk away at that point at least we're not in bad shape as we are today.

But I'm on the fence, I don't know.

MR. BROWN: Can you review why you think it would be beneficial to us to wait six months or so?

MR. LYON: Ignoring the presentation -- first of all, we would think about the losses -- if you sold the stock today --

(Talking over each other.)

-- underperformed, you had positive performance, underperformed. And so the question is, really, How do you allocate this approximately $400 million going forward?

And we know that we have exposure to, kind of a free option to stick around really for free for a while, in a strategy that has worked for many years in it's history, didn't work the four years you owned it; where there's some explanation that wasn't clear today, but in general we spent a lot of time with them, where we understand the combination of not all strategies working in all environments, plus they made some stock-specific mistakes.

While two of them compounded the issue, either of them might have been acceptable or bought some more time --

So now, the environment changed, they've learned from these mistakes, they have a higher level of conviction and energy then they did in the past few years about the portfolio going forward. And we have a manager with experience.

And so, we know that all active strategies may be cyclical in how they perform relative to their benchmarks, and we don't know how long those cycles will last. Generally, they reverse themselves, often times after investors' patience is worn completely out.

And so, by sticking around we potentially have the opportunity to catch the cycle, that we may be on an upswing, we don't know for sure. And if you switch horses at this point in the race, either way you've got $400 million and redeploy with another strategy.

If it's passive you don't have the opportunity outperform. You will reduce the risk of continuing to underperform.

And if it's active, you may select a manager who's done well for the past few years and it goes to the same type of -- and you'd be paying fees -- and what you could say, some might say, What's your best other manager idea that's also underperforming lately, has the same kind of story, but why we think it might do well going forward. That's a tough switch, that is hard to distinguish between a different manager, a new manager on the rebound, and keeping Jackson Square.

So it's really a judgment call. We don't have a hard and fast rule to say how much underperformance you could tolerate for how long. But it's much obvious when the team changes the process -- doesn't seem have conviction, selling out.

These people, again the broader team, not necessarily --

(Talking over each other.)

MR. LYON: Our colleagues -- San Francisco. We had extensive meetings, the performance was problematic. And they are, despite that it may not appear this way today, thy are motivated to retain your assets.

(Laughter.)

MR. ORLANDO: Sorry. I don't think it's fair to discount the performance of either the public performance we all just got to witness, or the performance of the fund. We have gotten ourselves into this position because the performance of the fund has not been good.

And if the performance has not been good, and active management as a strategy is not one that is hugely in favor at the table, right? And to have these nice gentlemen come in here. You have to give me a reason to continue to reward your sucky behavior, other than the fact that you used to have better ideas.

And they didn't give us any reason. They had no intention of changing a blessed thing. I got the distinct impression they would be just as happy today if we took our money out of the fund so they could go back to doing what they do.

And I don't understand why the fact that if we were to sell this and have to buy something else, that something else necessarily would have to be an active manager, necessarily; but it doesn't, I agree.

I'm not convinced -- the no fee argument in super unhelpful to me, because I'm not making money like I should be at no fee. And I'm looking -- I got from them over the next six to 12 months that made me believe they were going to do anything but continue what they are doing.

So I sense your not putting your fingers on the scale one way or another. I'm not sure your performance is doing that. But I get your feeling to do that. But I don't feel like I would want to be in business with these people any longer than I have currently been in business with these people. Let's face it, we're in business with lots of jerks. At least Henry Kravis himself cared a little about the things we care about as this table philosophically.

MR. BROWN: You had a good point about waiting for a six month period.

MR. LYON: From our perspective, we were asked, we separated our comments from the presentation today. That doesn't mean you should factor in what you heard. You need to make sure that you trust these folks, that you understand the strategy, that you think the strategy has the ability to add value in the future.

So those are all important considerations. I was outlining really what would be the case if you wanted to contain the strategy, what those financial considerations and investment considerations might be. That doesn't mean you shouldn't consider other factors as well.

CHAIRPERSON ADLER: Question. We have $400 million with these guys in this all cap growth. The list of assets under management on page 3, they only have $800 million in all cap growth. So we are half their all cap growth; is that correct?

MR. LYON: The approach leverages the same team and a lot of ideas -- so, for example, large cap is the dominant portion of the all cap portfolio, and they separately manage many billions in large cap assets, for example. They manage mid cap standalone and in this strategy together.

CHAIRPERSON ADLER: I see that. Let me ask this question. The other funds whose boards I sit on, we generally won't consider a strategy where we are greater than 20 percent of the strategy. So here we're 50 percent of the strategy.

I hear what you're saying about leveraging other strategies. But this guy who came in today, Bonavico, is the portfolio manager for every strategy they have. So it wouldn't surprise me if he cares a lot more about his $14.6 billion in large cap than his smallest fund, I guess combined with the Select 20 Growth, whatever that means.

Isn't his energy likely to be more focused on the $14.6 fund than the $800 million fund in which we take part?

MR. LYON: The overlap, I think is a fair argument. And we're not here to really defend them, we're here to help you facilitate -- there is significant overlap in the strategies. And then we consider something like small cap, mid cap, that's where a lot of the other names come from, there's more than a billion dollars and fees are higher. Many of their other clients -- not underperformance fees, they do have revenues from those strategies as well.

I think these are all fair observations and it's helpful to bring them all out so that the Board can make a decision. As we said in the beginning, this is a judgment call, gone for a long period of time with this underperformance, both the length of it and the amount of it outside the range of expectations.

And if the Board wanted to reallocate the capital and make that decision at this meeting, we would also be comfortable with that. Make we're clear, not be in the position of defending them too much.

MR. LEVINE: Looking at the slide on page 5 of their slides, it looks they list every portfolio manager as an all cap growth manager. Is this effectively a fund of funds?

MR. FULVIO: It's a sleeve approach, where each portfolio manager has the ability to pick ideas, surface across different products. So it could be the case that multiple portfolio managers own Apple in their slice, but it's supposed to represent the insights of each different portfolio manager.

MR. LEVINE: But it's not a fund-to-funds.

MR. FULVIO: It's not, no.

MS. STANG: What are the track records of their other products in the last three or four years? Significantly better, or have they sucked across the board?

MR. FULVIO: It's interesting. Last year was a time period where we saw their mid cap growth strategy do particularly well, and at the same time their large cap strategy underperformed. This year we've kind of seen the opposite of that. Those strategies are also recommended.

MR. KAZANSKY: Before we move on to a vote, the Teachers would like to caucus amongst ourselves.

(Recess taken.)

CHAIRPERSON ADLER: Go ahead.

MR. LYON: We're back from the break. I think we've all had a little more chance to process the presentation and discussion we've been having. I think there have been helpful comments along the way.

When we started our discussion we talked about it's always a challenge when you have an underperforming manager, to figure out what to do about that.

In this case we have a manager who underperformed more than we all would have expected, and that they would have expected going into this and for a longer period of time that would have liked.

While there may be an opportunity, as with any manager, the benefit and cyclicality of their performance, I think what we're starting to hear in a consensus view is that what the manager failed to deliver on today is to really give us new evidence on why they have conviction in the underlying portfolio approach is higher and better than what it's been through this rough period of performance.

And so, given that -- need to sell and

relative performance is at this point in what could be a cycle the reverses itself, you do have other options for the money.

And the most important thing we think is that the Board should have conviction in the managers it's utilizing in the program. And so, they had an opportunity today to try to improve your confidence and help you build conviction in retaining the strategy, at least on an interim basis. And didn't seem to deliver in that regard.

And so, while they may still check a lot of boxes and our research team still likes them, they also like hundreds of other strategies and they like passive.

And so, we certainly support a decision either way. But what I'm sensing through the collection of comments and views, is that if don't have enough conviction collectively across the board in retaining this strategy, if that's the case, we should redeploy the assets elsewhere.

So what I wanted to do was pause and see if that sentiment reflects the Board's overall view. And if so, the next topic, we did contemplate, if you wanted to move away, how those assets might be redeployed, at least temporarily, and we can cover that then.

Is this a fair synopsis of what transpired as we kind of talked through this manager and this judgment call that's certainly not easy to make?

MR. KAZANSKY: I would say so.

CHAIRPERSON ADLER: Yes. So, to cement that, I think that there is consensus, I believe, that we should terminate Jackson Square; and then we'll have a discussion about what to do with the assets that they're currently --

Any disagreement there?

MR. LYON: We appreciate all of the insights. Forecasting the future is not easy, and hopefully we'll have great manager ideas so if one doesn't work out so well. We look forward to the next discussion on this.

So, unless there's any other questions, we can move on to the next topic.

CHAIRPERSON ADLER: Let's do it.

MR. FULVIO: The next discussion is one around the active U.S. composite as a whole within the diversified equity fund. And this discussion was prompted by the discussion we had at the September meeting, where we reexamined the more recently refined objectives, the active manager composite. We took that up back in the spring. And then over the summer Rocaton and staff worked together to review each of the active managers in the composite, look at them through a little of an updated lens, given the refinements that were made to the composite's objectives.

And you might recall in September the conclusion from that was the Board was in general agreement that it move away from Intech's large core account, which no longer really fits with the refined objectives for the composite, an enhanced index type strategy in terms of the tracking error, the active risk that it takes.

And so, we agreed that we would come back in October with a recommendation for reallocating those proceeds.

We also discussed the particularly disappointing performance of Jackson Square. We discussed bringing them in to present today. And we discussed how we would consider reallocating those proceeds, and how we will do that given the Board's decision to terminate them.

Slide 2 just outlines what I said. Maybe it's best to spend a minute or two on slide

3. And I will turn your attention to scenario 2, again, the reallocation of both Intech and Jackson Square's proceeds.

And what we've come up with, to think of it in a step-wise fashion, how we approached it, there was a desire to move away from Intech. So we thought initially what we would do there is reallocate assets to three of their current managers, NewSouth, Sound Shore, Shapiro; so that $270 million account would be allocated such that an additional $100 million goes to NewSouth, 100 to Sound Shore, and $70 million to Shapiro. And I will explain briefly the rationale for that.

So, with regards to NewSouth and Sound Shore, those are strategies that we continue to maintain a high degree of conviction in. And NewSouth in particular is a firm we've been having discussions with regard to different scenarios for lowering their fee to a performance based fee schedule.

In those discussions we determined there was an opportunity to lower their fees, the fees you pay them, from 55 basis points flat to 45. We saw that, adding incremental assets to an account like this where we maintain a conviction level, we could take advantage of that lower fee. So we suggest here you consider reallocating about $100 million to that strategy.

Sound Shore is another one, a very longstanding relationship with the system that I believe dates back to 1981. It's manager that like any other has had a long ebb and flow of relative perform cycle, but over the very long term has added value for the systems, and it's one we again continue to maintain a high degree of conviction in.

Incremental assets that you add to that account are essentially billed at a rate of 12.5 basis points, which is for active management a very attractive fee. We would suggest you allocate an additional $100 million to that account.

Lastly, I mentioned Shapiro. Shapiro is a manager you had since I believe 2006. A strategy that's done very well for the system over the long term. It's not often we like to buy our winners. But in this case Shapiro is also a firm that -- it's small cap strategy in particular is a capacity constrained strategy, where we feel that over time you might not have the ability to continue adding to your account to this degree.

And while we continue to maintain conviction, we would like to reallocate those assets at this time, so you can take advantage of being able to put more money in while the strategy is open.

So I will pause there. That was reallocation for Intech. And then, see if there's any questions on those particular reallocations.

CHAIRPERSON ADLER: Questions on that proposal?

I have a question. So, we hired two firms at the same time, NewSouth and Diamond Hill. Diamond Hill is large cap value, NewSouth is all cap value. And you're not proposing giving additional to Diamond Hill?

MR. FULVIO: That's right.

CHAIRPERSON ADLER: Can you explain that?

MR. FULVIO: One of the requirements, you might recall, we discussed for the composite was focusing on smaller cap, where the view is that small caps are less efficient. NewSouth has actually been managing small cap portfolios longer than they managed all cap strategy.

We think a lot of the alpha opportunity

in their strategy actually comes from small cap names within their all cap strategy. Diamond Hill today is a large cap strategy. Diamond Hill also manages a mid cap strategy that we like a lot, but that strategy closed. So in order to kind of continue with the theme of focusing on small cap, we prefer to invest in those proceeds with NewSouth.

CHAIRPERSON ADLER: That makes sense to me.

A question about NewSouth. They have underperformed since inception, 136 basis points. And I think last year they did pretty poorly, but year before they outperformed.

Can you talk about their underperformance and why Rocaton believes that it makes sense to put more money into it?

MR. FULVIO: They do have a market cap bias, I mentioned before, focusing in small cap, which has led to some of the performance dispersion over time relative to the all cap benchmark.

The other thing worth noting there, just in general, the more active strategy where though they've underperformed, it's well within the range of expectations. We actual think there's a good opportunity here to buy a strategy that underperformed and maintain that conviction level.

Does that help address?

CHAIRPERSON ADLER: Yes.

MR. LYON: If you had them come in and ask for this money, they would have a very compelling story at the valuations they're seeing with the stocks in their portfolio and how see the positions today. And they've been able to demonstrate that consistently, I think -- in our meetings with them --

MS. STANG: In ours, too. We had them in a couple times, and were more convinced when they leave that we should have them than when they came in.

MR. FULVIO: NewSouth will do well for you when the market is down. Hope that is the expectation. And they've delivered on that when the market was down. In 2015 their benchmark was down about 4 percent. They were down about half a percent.

So, the remaining piece of the asset reallocation here is the $400 million invested with Jackson Square. The recommendation at this time is to reallocate that to the index.

Again, one of the refinements we discussed with regard to the composite was considering the 15 percent allocation target -- and whereby we would fill or reallocate back to the composite as opportunities came up. And we would bring those to the Board when the timing is appropriate. But at this time we would suggest reallocating that to the benchmark.

And one of the main takeaways here, it's shown at the bottom of the page, is that this scenario is essentially a fee neutral scenario. So just reallocating Intech, their proceeds, that was a fee neutral move. And again, today we weren't expecting to pay Jackson Square much in the way of fees for the next few years. So the impacts there of moving money to the index is essentially neutral, you do pay a very modest one third of a basis point on that.

I should mention we spoke with a transition manager. And so we've spoken about Jackson Square being more active in a concentrated portfolio. The transaction costs there are estimated to be about 35 basis points, to transition that to the index.

Intech, while we didn't get an estimate

there, I would say the portfolio, because of the lower tracking error in nature, is a lot more diversified, looks a lot like the S&P 500.

Therefore, the fee costs will be expected to be a lot less.

CHAIRPERSON ADLER: The index is the S&P 500 index, or the Russell 3000?

(Talking over each other.)

MR. LYON: We're going to put it in a Russell 3000.

CHAIRPERSON ADLER: That was my question.

MR. LYON: That's what we propose.

CHAIRPERSON ADLER: Any questions for Mike or Chris before we discuss the action?

I think that the question is, Do we have consensus around the scenario 2 proposal that Rocaton is presenting to us?

Okay.

Great. Thank you very much.

MR. LYON: Eight more presentations to go.

(Laughter.)

MR. FULVIO: At the September meeting when we were discussing manager updates, we previewed the fact that one of the convertible managers, Zazove, a strategy where confidence was beginning to wane. Since the meeting, Rocaton has downgraded the strategy and we no longer maintain a conviction in their ability to continue providing similar risk adjusted results, which, given its role in the defensive composite, that's really what we're focused on for this type of strategy.

So, you might recall the defensive composite, the Board recently approved a 25 percent target to convertibles within that defensive composite. The 2.5 percent target across the entire diversified fund.

And all told, today, based on that, that's roughly $370 million. Zazove today manages about $150 million. And the recommendation today is that the Board terminate Zazove and reallocate a portion of those proceeds to one of the current managers, Advent, who also manages a convertibles portfolio.

And we would also conduct a search for the remaining portion of the assets from the Zazove account.

Maybe just at a very high level, what I will say is, Advent is a firm that we've had continued conviction in. And though I think we would like to be able to allocate all the proceeds there, much smaller firm. And the account certainly continues to grow with that firm. They were identified back in the early 2000s as a very good candidate for this composite.

As the firm has grown, your account has grown. But today, if you were to invest all $370 million with them, you would represent a large portion of the firm's assets, as well as the strategy's assets.

So, I think more into the discussion of why we continue maintain that convertibles should represent about 25 percent of this composite. We did discuss that in the spring. I'm happy to speak more about that, provide a little more detail about Zazove, which can be found on page 3. But I want to be mindful of your questions as well.

CHAIRPERSON ADLER: Do folks want Rocaton to go into more detail about Zazove or about convertibles?

MR. FULVIO: One other thing I would mention is, Advent is an MWBE firm, they're 51 percent minority owned.

CHAIRPERSON ADLER: I have a question

about the second to last point you made about Advent; which you say would be a large portion of the assets.

So, according to page 6, they have just under $2 billion of assets in the strategy, 9.2 in their AUM. And right now we have 144?

MR. FULVIO: Yes. The eventual target of their account based on how assets are being transitioned within the defensive composite, it ends up about $370 million, if you move all the convertible assets to them.

MR. LYON: Because it's not just Zazove money, but there's other money that's going to be moving towards this convertibles strategy.

MS. STANG: It's part of the whole downsizing of GMO, hiring of BlackRock global TAA.

MR. FULVIO: What's also mentioned in the footnotes is that the City systems have about $500 million today invested with Advent; about $100 million of that is in the TRS pension. At one point that was all in the TRS pension, it's been reallocated.

CHAIRPERSON ADLER: However, folks will remember that our newish strategic asset allocation eliminates convertibles. And so I believe that convertibles now in the DB system are only a placeholder for other assets.

MS. VICKERS: That's correct.

CHAIRPERSON ADLER: So presumably that amount that the systems have with Advent will be increasing as we increase the assets. For example, right now we're doing a high yield search. And high yield is one of the placeholders, one of the assets where --

MS. VICKERS: Convertibles is the placeholder.

CHAIRPERSON ADLER: Exactly.

That doesn't concern me. Honestly, putting additional assets in with Advent -- given that the assets that they have with the systems, including TRS are going down, that concentration risk doesn't concern me.

I guess I would ask you, we would be about, maybe roughly 15 percent; is that right? I'm just curious. I understand that when we did the Advent Zazove division under the original reallocation, I think the point was that they had somewhat different approaches to convertibles. And so we wanted that diversity of approach.

MR. FULVIO: That's right.

CHAIRPERSON ADLER: And so, I'm not all that concerned at being 15 percent of the manager strategy when the strategy, it's a big firm, big strategy.

If you are saying you think our approach to convertibles should include an Advent approach and an approach more similar to Zazove's but better executed, then I could understand that more than the manager concentration risk.

MR. FULVIO: There is certainly an element of looking for a manager to help complement Advent. At the time Advent's strategy, the strategy that TRS is currently invested with, was one that was less equity sensitive in the portfolio. And since we moved to one that is a little more equity sensitive, we think you could possibly find a manager that complements that approach.

CHAIRPERSON ADLER: In other words, right now we move to the more equity sensitive Advent strategy, and you are looking for another convertible strategy. And you are thinking there would be a manager out there that would have a less equity sensitive convertible strategy that would complement --

MR. FULVIO: Not necessarily. You might recall when we discussed this in the spring there was a deliberate move towards the more equity sensitive strategy, so that the composite as a whole might potentially better participate the in markets.

CHAIRPERSON ADLER: Right.

MR. FULVIO: But we might be able to find a strategy to be able to source ideas in the portfolio differently, or in some way that complements how Advent does that, as well.

In some cases convertible managers are brought over the wall to be involved in and opine on convertible ideas. And so, some smaller firms where they're not attached to very large banks are able to take part and understand deals and provide feedback on deals.

As a result they are able to get inventory in new deals that some larger firms are not able to do.

CHAIRPERSON ADLER: Like Advent?

MR. FULVIO: Advent is a firm that does that. Advent might be more focused in that arena, and there might be other firms that might source deals a little differently and provide diversification from that standpoint.

MR. LYON: They travel in different circles in terms of the investment opportunities. I would look at page 5 of this, in terms of the potential allocations.

If you were to sole source this, if you will, with Advent for the full allocation, that would look like the third box, where there's a full 25 percent target to Advent.

And so, in this composite, this would be the largest manager concentration within the defensive composite at 25 percent and $370 million estimated.

Whereas, if you look at the far right, if you were to select an additional manager, we're thinking that Advent would still take on more assets; but that we would have that second manager in there as a complement, and also to give us another place to calibrate convertibles assets up or down if we have more than one manager to work with.

So, in either case, we think Advent gets more money; it's really a question of to what sent.

One thing you could say, why not have Rocaton go off and look at the other managers and see what's working with the TRS staff, which manager or managers might be most complementary. You could consider them. We don't have to move the money that quickly. We can do that work relatively quickly, in the next few months, and come back and see if that second manager makes sense compared to the Advent strategy.

And the part we want to differentiate is how it's complementary to Advent, and if we -- them come up with something compelling and different than Advent, then why bother? We can do that work in a few months' time.

MS. STANG: The other thing is to start with the third box and potentially move to the fourth box.

MR. LYON: We're saying, with the fourth box in mind, it even starts to potentially fund Advent up to the $250 million level. And then before we get fully funded or even if we haven't moved any money yet, we decide if we want to have that 8 percent sleeve for a new manager or not. We can decide that maybe before we move any money, or move some money to Advent --

You can wait, draw down the account. You can start to take some of the money.

MS. STANG: Take some of the money, but not all of it.

CHAIRPERSON ADLER: Another question. We were moving the Advent money from one strategy to another. Has that taken place yet?

MS. STANG: The whole recombination of the defensive strategy is over a six month time period. I think it starts in June and ends in December. At the end of that -- we haven't started yet, but they know it's happening.

CHAIRPERSON ADLER: Here's my question: Might it not make sense to leave $118 million in the current Advent strategy, take the Zazove an move it to the new Advent strategy along with the other money we're going to move to the new strategy; and therefore reduce our transaction costs of going from one Advent to the other.

And in some ways what you are doing is looking to see whether there is a complementary strategy that we think is better than the current Advent strategy we're in, or than either Advent strategy.

MR. FULVIO: The idea would still be, you have to transition -- I think you still have to transition some portfolio convertibles from one place to another. I think there is some degree of overlap across the Advent portfolios. So you would save some transcation costs by continuing to move that money.

Were you suggesting --

MR. LYON: You're saying, keep both strategies. If we can fast forward to when the transition is completed, what if we woke up to two different Advent strategies, where we effectively take Zazove and make it look like what we thought we were turning the Advent portfolio into, and keep the legacy Advent strategy untouched.

CHAIRPERSON ADLER: Not untouched necessarily. The idea here is to have $250 million in the new Advent strategy. And right now we have 144 in the old strategy.

So, in other words -- and we're increasing it all together. In other words, I'm basically saying, take the Zazove money and move it to the new Advent strategy along with the new money that we're putting into convertibles, put that in the new strategy. And then essentially leave the old Advent untouched for now, until we decide ultimately what to do with the convertibles money.

So that, again, I think you're

minimizing the transition costs.

MR. LYON: The benefit of that is that we get out of Zazove faster because it's no longer as high a conviction manager. The drawback is that there's meaningful overlap between the older Advent strategy and the new one.

And so, if we didn't have concern about getting out of Zazove, converting the old Advent strategy to a new Advent strategy should be cheaper, because there's more securities overlap.

CHAIRPERSON ADLER: Okay.

MR. LYON: So what me might want to do, because there's other moving parts in the composite, is to say, we don't feel there's a fiduciary emergency by any stretch of the imagination at this point to move in with Zazove -- our conviction level has changed based on experience and research and so on.

And so, we want to do this in an orderly coordinated fashion. And what probably makes sense here is to allow time for the rest of the transition to play out; to not complicate that transition completing to year end, with trying to get these assets moved. But rather by year end, hopefully, give you an update on what we are thinking about in terms of the mix of managers and whether to add in new firms to this space. So after the rest of the money is moved around --

MS. STANG: Then Zazove -- between now and January 1 maybe find -- find them, approve them, sign them up, it will be January 1. That's how long it takes.

MR. LYON: In the meantime, all the new dollars, if you're comfortable that we're going to give at least 17 percent to Advent on the far right of page 5, new dollars that come from other places, not converts, they can go into Advent.

CHAIRPERSON ADLER: The new strategy.

MR. LYON: Advent's new strategy.

MS. STANG: We've agreed to fire them. We're not going to move the money until we find a replacement. Is that --

(Talking over each other.)

CHAIRPERSON ADLER: You guys will decide what the source is, what makes the most sense in terms of sourcing new money for Advent; whether you talked about drawing down Zazove little by little, you might start doing that, or you might do it all at one once if there's a good place to put it.

MR. LYON: We need operational

flexibility.

CHAIRPERSON ADLER: I'm fine with that everybody else?

MR. ORLANDO: About Zazove. Can you talk a little more about the four examples in the deck about what went wrong with specific companies? The concern is both the strategy as well as the execution; right? I'm a little interested in a little extra texture and color on the execution. What's wrong with -- do we know why they chose them, or what went wrong?

MR. FULVIO: They are entering bankruptcy -- in the process. And in particular this was I think the third or fourth occurrence in the past couple of years --

MR. ORLANDO: Of a company going bankrupt.

MR. FULVIO: -- of significant distress to a company and their portfolio.

In this particular instance we weren't exactly satisfied with the rationale for their suggestion that we move forward with the financing. So by participating there was some potential that you make up some of the money you lost. But that was really the only reason you might do it. It wasn't as though they were instilling confidence in the credit of the firm. So there was some concern around the rationale.

(Talking over each other.)

MR. FULVIO: When you see things go wrong --

MS. STANG: You've got to sell. You don't hold until zero.

MR. FULVIO: This is not a bust and convert strategy. The way they're holding some of these names is a little disappointing.

MR. ORLANDO: To continue in this vein. Susan's point is well taken. You sell it, and what happens? Rogue Derek on these four bankrupt companies, with the one analyst? Get rid of him? Do we have any insight as to how it is in a more functional world, or a better world, you would have gotten out of it, and instead they held on.

MR. FULVIO: It's not uncharacteristic for the companies that are issuing in this space to go through periods of financial stress, which is why they're issuing convertibles in the first place.

I think we've just seen some other managers avoid these issues, and this has become an occurrence that we've seen over the last couple of years that's starting to give us more pause.

MR. LYON: So, we're not expecting any of the strategies to be perfect in their records. But this was a disproportionate amount of things that other managers we thought of similar skill were able to avoid much earlier.

CHAIRPERSON ADLER: Other questions?

Just to summarize the recommendation. We are agreeing with the decision to terminate Zazove over time as operational requirements dictate. And then Rocaton and TRS are going to come back with recommendations about an additional or additional convertible managers that would be complementary to the Advent strategy that we're going to -- what is the strategy that we're going into in Advent? The balance strategy.

MR. LYON: And then we're also asking for flexibility for the TRS staff to start allocating incrementally more to Advent as part of the rebalancing.

CHAIRPERSON ADLER: I think we already agreed to that. That's part of the transition.

Is there consensus on that?

Great; terrific; thank you.

MR. FULVIO: There are no manager updates.

MR. LYON: We don't have anything else.

CHAIRPERSON ADLER: Any other business?

I think a motion would be order to exit executive session and enter public session.

MR. KAZANSKY: So moved.

CHAIRPERSON ADLER: Is there a second?

MR. BROWN: Second.

CHAIRPERSON ADLER: Any discussion?

(No response.)

All in favor of motion to exit executive session and go back to public session please say "Aye."

(A chorus of "Ayes.")

All opposed say "Nay."

Any abstentions?

(No response.)

Motion carries.

(Whereupon, the Board returned to public session.)

CHAIRPERSON ADLER: We're back in public session.

Susan, would you please report out of executive session?

MS. STANG: Certainly. There was a

presentation on an investment issue which was presented and discussed.

There was a presentation and discussion about an investment manager. Consensus was reached, which will be announced at the appropriate time.

There was discussion about the structure of the active composite of Variable A. Consensus was reached, which will be announced at the appropriate time.

There was also discussion about a convertible manager. Consensus was reached, which will announced at the appropriate time.

There was also discussion of the defensive composite within Variable A. Consensus was reached, which will be announced at the appropriate time.

CHAIRPERSON ADLER: Thank you very much.

Is there any other business for public session?

Then I think a motion to adjourn would be in order.

MR. BROWN: So moved.

CHAIRPERSON ADLER: Is there a second?

MS. VICKERS: Second.

CHAIRPERSON ADLER: Any discussion?

All in favor of the motion to adjourn please say "Aye."

(A chorus of "Ayes.")

All opposed say "Nay."

Any abstentions?

(No response.)

Meeting adjourned.

Thank you very much.

(Time noted: 2:23 p.m.

C E R T I F I C A T I O N

I, Jeffrey Shapiro, a Shorthand Reporter and Notary Public, within and for the State of New York, do hereby certify that I reported the proceedings in the within-entitled matter, on Thursday, October 5, 2017, at the offices of the NEW YORK CITY TEACHERS RETIREMENT SYSTEM, 55 Water Street, New York, New York, and that this is an accurate transcription of these proceedings.

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of October, 2017.

JEFFREY SHAPIRO