TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

INVESTMENT MEETING

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William Montague
Digital Reporter
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APPEARANCES:

PATRICIA REILLY, TRS EXECUTIVE DIRECTOR
BRYAN BERGE, MAYOR'S OFFICE
THOMAS BROWN, CHAIR, TRUSTEE
GREGORY FAULKNER, PANEL FOR EDUCATIONAL POLICIES
ALISON HIRSH, COMPTROLLER'S OFFICE
DAVID KAZANSKY, TRUSTEE
VICTORIA LEE, TRUSTEE

ALSO PRESENT:
STEVEN MEIER
MICHAEL FULVIO
AMANDA JANUSZ
ED BERMAN
ROY APPLEMAN
JOHN GLUSZACK
JANET LONDO-VALLE
NED STIKER, CORTLAND, SENIOR MANAGER
STEVEN DEFRANCIS, CORTLAND, CEO
MAX ROTHKOPF, CORTLAND, EVP INVESTMENTS
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BRENDAN MCDONALD, GOLDEN TREE, PARTNER
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JOHN ADLER
DEV SUBASH
ENEASZ KADZIELA
M FEAREY
ROBERT FENG
TOM CARROLL

(The proceedings commenced at 10:12 a.m.)

MS. REILLY: We'll start by calling the role. Bryan Berge.

MR. BERGE: Bryan Berge representing Mayor Eric Adams. Present.

MS. REILLY: Thomas Brown.

MR. BROWN: I'm here, Patricia. Good morning.

MS. REILLY: Good morning. Gregory Faulkner.

MR. FAULKNER: Present.

MS. REILLY: Alison Hirsh.

MS. HIRSH: Alison Hirsh representing Comptroller Bradley. Present.

MS. REILLY: David Kazansky.

MR. KAZANSKY: Present.

MS. REILLY: Victoria Lee.

MS. LEE: Present.

MS. REILLY: We have a quorum, and I'll turn it over to the Chair.

MR. BROWN: Good morning, everybody, and welcome. Welcome, Greg.

MR. FAULKNER: Thank you.

MR. BROWN: To this meeting. I appreciate it. Welcome to the first investment meeting of the school year.

We start on a sad note because TRS lost a

wonderful person, Susan Sang. She was a friend of all of ours. She taught me so much. We worked closely together so many years. She was a dynamic person, full of life, always had a good story. Everything she said, it wasn't that she said funny things, everything she said was funny and she embellished.

I always looked forward to seeing her, and I walked in today and I feel such a great loss, so I just wanted to start. Maybe we can stand with a moment of silence for our dear friend Susan Sang. Stand for a moment. Thank you.

(A moment of silence was observed.)

MR. BROWN: Thank you. First thing, we have the Passport Funds 2nd Quarter of 2023 Performance Review, and Mike and Rocaton, it's all yours.

MR. FULVIO: Great. I will share my screen to help facilitate the discussion. Hopefully folks can see that.

So I was really going to use the quarterly update to just provide a more holistic review of the prior fiscal year, at a very high level. You'll recall, it was a strong 12-month period ending June 30th for equity returns. So the U.S. stock market, as a whole, up nearly 20 percent last year, developed markets trailing very closely behind, about 19 percent in U.S.

dollar terms.

Emerging markets with a very slight positive return up about 1-and-a-half percent, and then across fixed income markets, obviously, you know, more notable, more notably different numbers, when you look at different sectors. We saw a very notable rise in interest rates over the last 12-to-18 months, and you can see that show up in the performance of the Bloomberg U.S. Aggregate Bond Index, which had a modest negative return last year of about 1 percent, and then corporate high yield with corporate bond spreads and interest rate changes. Last year, we saw a return of about 9.1 percent.

We also saw significant reversal of the rallying commodities that we saw in the prior 12-month period, and you can see the Commodities Index down about 14 percent last year.

So with that as a backdrop, I'll cover very quickly, at a high level, the returns of the Passport Funds for that fiscal year. You can see here in the one-year column on this page, the Diversified Equity Fund ended the year with assets of just over $16-and-a-half billion, with a total return of 18.2 percent. That was ahead of the Global Market Composite Index as well as the hybrid benchmark post benchmarks

you would expect to track relatively closely, as we look forward, based on how they're constructed.

We saw some value add in terms of active manager outperformance particularly in the U -- excuse me, in the international equity composite for the fiscal year and some very slight outperformance for the U.S. equity composite.

When we look at the Balance Fund last year, again a mix of stocks, a conservative mix of stocks and bonds. That fund returned about 5.1 percent last year, roughly in line with its benchmark. The International Equity Fund on its own, with assets of about 245 million, that fund was up over 16 percent last year.

The Sustainable Equity Fund, you can see, had a very notably strong return of about 21.5 percent, strong return, in absolute terms. It did trail its benchmark, which was up over 27 percent. And then for the two index options within the Passport Funds, the U.S. Equity Index option up over 18.8 percent, and the International Equity benchmark -- excuse me, International Equity Index Fund up over 12 percent.

So very strong environment for a lot of these very equity oriented funds, as you would expect, and happy to report that we saw, generally speaking, especially as it impacted the Diversified Equity Fund,

positive manager value add, contributing to that.

So beyond that, I noted what was a pretty strong environment for the 12 months and year to date period. We saw that continue into July, and Amanda is going to cover off-performance for the Passport Funds in July. Just, before we do that, just want to pause and see if there's any questions.

MR. BROWN: Any questions for Michael?

Thank you, Mike.

MR. FULVIO: Okay.

MR. BROWN: So Amanda is going to do the --

MR. FULVIO: Yeah.

MS. JANUSZ: So as Mike mentioned, the month of July was positive across equity markets. You can see, in that one-month column for the month of July, most of your equity options posting returns between 3 and 4 percent, for the most part.

In terms of the market backdrop, we saw inflation coming in lower than expected, GDP a little bit better than expected. Also, strong corporate earnings. We also had both the Fed and the ECB hike rates another 25 percent, which was in line with expectations. All of those things combined to support positive results across the equity markets.

The Diversified Equity Fund ended the month a

little over 17 billion in assets with a return of 3.6 percent, and really, pretty equal contributions there between the U.S. and non-U.S. components of that, of that fund. The Balance Fund up 1.44 for the month. That fund is more conservative with about 70 percent in short-term bonds there.

The International Equity Fund up about 3-and-a-half percent for the month of July and slightly trailing that composite benchmark at 4.3. The Sustainable Equity Fund continues to be one of the stronger performers for the year, up about 4.4 percent for the month of July and outperforming that growth index. And both of your passive options, the U.S. and international equity indices are tracking their perspective benchmarks, as expected.

In terms of the year to date period, strong double digit results across the board, with the exception of the more conservative balanced option, and the Sustainable Equity Fund continues to be the strongest performer year to date as well, with a return of over 30 percent through the end of July, continues to benefit from the current market environment, which has been favorable towards growth and particularly tech stocks.

I'll pause there to see if there's any

questions on July results.

MR. BROWN: Any questions for Amanda for the July 2023 Performance Review?

Great, thank you Amanda.

MS. JANUSZ: Thank you.

MR. BROWN: Appreciate it. And we go on to the August 2023 Market Performance.

MR. FULVIO: Yep, I'll pull this up as I'm speaking.

MR. BROWN: As good as July?

MR. FULVIO: Unfortunately, that was where the story changed.

MR. BROWN: We can stop now.

MR. FULVIO: So we did see a draw down and a lot more volatility during the month of August. The U.S. equity net, the draw down there was about 2 percent with the Russell 3000 ending down about 1.9 percent.

We saw more negative returns for international equity markets being driven by the E.M. part of the marketplace, which was down over 6 percent. Developed markets did a little bit better, down 3.8 percent.

We really started to see a little bit more, I'll say jitters in the market tied to a lot of what we we're seeing in the news cycle with respect to concerns and uncertainty around economic growth as well as

inflation being possibly a continued problem.

I think the market, in many ways, was whipsawed by the headlines that were very different from day-to-day, coming into especially the first part of August. I'll say the good news is, since then, it's starting to feel as if the talking heads in the marketplace are feeling a little bit more confident around the U.S. economy, as we look out.

Goldman Sachs lowered its probability of a recession for later this year and looking out over the next 12 months to about 15-to-10 percent, if memory serves, and you know, that's certainly expected to help with the view forward on equity markets.

You know, all of that said, there's also a strong argument out there for equity markets having, you know, rallied quite a bit this year and valuations getting a bit stressed. So, you know, we're cautiously optimistic about that, and as we look across the Passport Funds and the benchmark performance specific to those, the Diversified Equity Funds global market composite is down about 2-and-a-half percent in August, so we would expect the fund to attract that in. The International Equity Fund down probably a little over 4 percent.

And so, you know, nothing really certainly

notable there, but something we're very mindful of as we continue thinking and discussing strategic asset allocation, which will be a topic of today.

MR. BROWN: Thank you, Michael.

Any questions for Michael on the August 2023 Market Performance Update?

Thank you, Michael. Thank you, Amanda.

Next on the agenda, we have the Pension Fund Performance Update Quarterly Presentation. I'll pass that over to Steve.

MR. MEIER: Great, great, thank you very much. So I'm going to build on what Michael and Amanda just presented. I thought they did an excellent job, so I'll try to keep my comments really more focused on the second quarter of calendar year 2023 or the fourth quarter of fiscal year 2023. It's confusing.

So just as a way of background, my hope is, through these quarterly updates in particular, they give you a sense for what's going on in the economy, how that impacts what's going on in the markets, and more importantly, how that impacts your portfolio performance.

So maybe just on the next slide, Wilfredo or Kate, whoever's driving today?

Just a couple of quick comments. Again,

building off of what Mike and Amanda said earlier, so the Fed is not necessarily done yet. Inflation equity has come down, come down very nicely since, over the past 18 months, when the Fed started its hiking cycle, but I still think there may be one more hike out there for this year, perhaps not in September, but maybe in November, depending upon the data.

The ECB and the Bank of England and Europe are similarly restricting -- have similarly restrictive monetary policy and financial conditions. There probably will be additional hikes there as well. The economy is slowing, but inflation is still sticking, and I'll show that in the slide in a moment.

I'd say the last point of note around inflation is that China is becoming really an outlier where, not only have they had disinflation or reduction in the rate of inflation, they have had an outright deflation where prices are going lower, which is a challenge that no central bank really wants to face.

On the next slide, just a look at, historically, the inflation prints, and you can see that weight bar on the far right-hand side. Right now, it's at 3.18 percent. That's CPI, that's headline CPI, the Consumer Price Index. You can see it's down significantly from the 9.1 percent hit in June of 2022.

So great progress there.

The core PCE deflator actually is a little more sticky at 4.10. That's more of a challenge, I think, for the Fed, and it's something that they continue to focus on and getting that level down to their 2 percent targets, probably may require, if not just time, perhaps another additional rate hike.

On the next slide, a look at what's referred to as super core inflation. This is a new slide for me, but it really underscores the fact that there might be a little more work for the Fed to do, and again, that super core inflation, which excludes housing, is still stuck between 4 and 5 five percent, and getting it down to that 2 percent will be, again, a function of time or additional hikes.

On the next slide, very quickly on the right-hand side you can see where inflation peaked in the U.S. in red and blue in Europe and the late gray bar in the U.K. They have all come down directionally, you see in the impact of tighter monetary conditions and fiscal policy taking effect and driving those inflation levels down.

On the next slide, a quick look at employment. U.S. employment actually is slowing but it's still relatively solid. We have had an initial claims report

today that was stronger than expected, and the stock market, at least when I left the office, was selling off as a result, but it's solid relative to monetary policy, and what we have seen in terms of Fed rate hikes, but also around expectations for an economic slowdown, which we're really not seeing reflected that strongly in the housing market.

Average job growth over the past three months adjusted for revisions, it's been over 150,000 jobs per month, which is above and beyond the level that's required in order to put new workers to work.

And finally, the unemployment rate ticked up in August at 3.8 percent. 100 percent of that increase was due to more people entering the labor market, again, looking for new positions.

On the next slide, just a look at those two last factors I talked about. So unemployment and the white on the lower right-hand side is actually, these are July numbers. We just had the August employment report last Friday. Unemployment is down 3.6 percent, and the participation rate, again, not quite at levels that we saw pre-pandemic, but it now increased to 62.8 percent. So those are good things the Fed wants to see, more people getting back to work and a slow updraft in the unemployment level associated with a slowing

economy, perhaps.

On the next slide, again, I think Mike stole all my thunder here, but the U.S. economy has been stronger than expected. Europe is slightly moving higher, but there's still some challenges. If you look at some of the numbers out of Germany, in particular, it indicates a continued slowdown. And finally, China has been disappointing relative to expectations.

On the next slide, just a chart, and what I love about this chart, it looks at economic growth over a 10-year period. It actually really shows how disruptive the pandemic was beginning in the early part of 2020 and the volatility around economic growth and how things are starting to normalize, but we still have some outliers.

I talked about China disappointing relative to expectations. You can still see on the far right-hand side, the green bar, still generating a 4-to-5 percent GDP growth, again, below their expectations and what the world was hoping for as they come out of the pandemic, but still something to watch.

On the next slide, a look at interest rates. So interest rate hikes are nearing an end. As I said, I think the Fed may have one more or perhaps they're done. I think there's probably another one or two hikes to

come from both the European Central Bank and the Bank of England. China has been cutting its rates to actually stimulate growth, and Japan is still very accommodated with negative official rates.

On the next slide, this is a slide that, working with Dan Haas on the reporting team and risk management team, has put together. If you look on the far right-hand side, you can see what looks like staircases. Those are actually rate hikes for the Fed up top in white, the ECB in green, and in the middle, the Bank of England. And to my last comment around the Bank of Japan, they're in purple on the far right-hand side, lower corner. They still have negative rates, so, at some point, those rates will have to normalize.

MS. SANCHEZ: I'm sorry for interrupting. We have a new stenographer with us, and they have asked if you can mention your name before you speak for minute purposes.

MR. MEIER: Okay.

MS. SANCHEZ: Thank you.

MR. MEIER: Great. Let me start over again.

I'm Steve Meier, with the Bureau of Asset Management and Controller's office.

On the next slide, very quickly look at where we are at with treasury yields and credit spreads.

First, U.S. Treasury yields continue to move higher. Mike talked about that earlier. We have seen a fair amount of volatility in rates throughout the year, a rally in rates moving lower in the first quarter, but again, backing up in the summer, which I'll talk about in a moment.

Credit spreads for investment grade and high yield bonds also are not pricing on recession and continue to tighten, which has driven some of the returns we have seen in investment grade and high yield investments.

On the next slide, so a couple of comments here. Why do we always talk -- why do we look at these slides? What's the information value in here? The right curve on top, that's where we were as of August 22nd. You can see the yields have moved consistently higher over the course of time since June of last year, and these are base rates, so this is considered the risk-free rates. And when we we talk about credit spreads, we talk about investment grade and high yield spreads, it's these base rates plus a spread on top, and that's your return when you invest in, say, high yield bond. So that's why we focus on this. This is the risk-free rate, and a lot of credit that's extended throughout our economy is driven off of these risk-free

rates, and you can see they have moved higher.

On the next slide, a very quick look at where they are more recently. Two-year yields today are slightly above 5 percent in white, and 10-year yields continue to be around 4-and-a-quarter. That reflects an inverted yield curve. Typically, when you -- a normally shaped yield curve will have an increased risk premium further out the curve. So as you take on more risk of inflation ticking up over the course of time, you're compensated.

So typically you'd buy a 10-year yield or something above what you'd buy, a two-year yield. This inversion basically reflects the fact that the market is anticipating a reduction in, hopefully, inflation and official short-term rates, which will drive two-year yields lower over time, and again, that's -- and over the course of time.

I think, Mike, what is Rocaton's estimate for inflation for the next 10 years? It's 2-and-a-half-ish?

MR. FULVIO: 2.45 --

MS. JANUSZ: 2.4 or 3.

MR. FULVIO: Yeah, yeah, yeah.

MR. MEIER: So that's what we look at.

MR. FULVIO: Exactly.

MR. MEIER: Yep. I thought it was

2-and-a-half.

MR. FULVIO: 2-and-a-half, 2.4.

MR. MEIER: So this is a slide I kind of touched on earlier. We have the base rates, again, whatever they are reflected in that red curve, and again, it's an inverted curve. These are high yield and investment grade spreads. Investment grade spreads, because there's lower risk associated of defaults and downgrades, are reflected in the white, just slightly under 120 basis points.

The high yield spreads, however, are at 380 basis points. You can see that it's higher than it was, say, a year ago. Not necessarily compelling in terms of its return, given that there's a potential for a recession. Recession risk is not present in the current spreads, which could create buying opportunities down the road.

But again, the reason why, and Mike will talk about this later, investment grade and high yield asset classes are more attractive now is because base rates are higher and credit spreads are higher and potentially could go even higher if we do see a downturn in our economy.

On the next slide, again, I think Mike and Amanda did a great job talking about what we have seen

over time, but stocks have had a very strong year and bonds have been volatile and generally weaker, more recently.

This following slide is something you have seen typically when I go through performance, but we thought it was better here. The upper portion of that slide, let's look at the second quarter, 2023 calendar year. You can see it's all black. So equities, the Russell 3000s delivered an 8.39 percent return, developed XUS 2.67, and emerging markets, again, which Mike touched on, a little under 1 percent for the quarter.

Bonds have had more challenges. You can see that the long duration, as yields move up, it hurts long duration bonds more, down 2.3 percent. The Custom Index, which is a slightly shorter duration and has a minimum maturity holding of five years and beyond has sold off 1.94 percent. Investment grade corporates, because of the backup in yield, it's actually driven a negative return there as well.

High yield is a little different because the coupons on high yield is so much higher. It cuts the duration in half. The duration on a high yield index or investment program is one-half of what it is for investment grade because you get more money throughout

the course of time with those higher coupons. Again, another reason why we like high yield, and I know Mike's going to talk about that in a little bit.

On the next slide, a quick look at the equity markets. There's a lot of green in the screen. Again, to echo what's been already said, equities have done well over the year to date and for the last fiscal year, of course. This is year to date for 2023, and there are two components of your return. So as a U.S. dollar investor, if you buy, say, the S&P 500, your return is what it is because dollar -- you're investing dollars, you're getting back dollars. It's a 15.37 percent return, again, year to date for the first half of the year.

It's a little different, so if you look at Euro stocks, for example, Euro stocks, they're up 13 percent, which is great, but actually, because the Euros appreciated relative to the dollars that sold off a little bit this year, has delivered a 14 percent return. And I'd say it's more dramatic when you go down and you look at the Nikkei. At the bottom, under Asian Pacific, that stock market is up 23.28 percent, but the return, as a U.S. dollar investor, is only 10.26 percent because the dollars appreciated relative to the yen. It's more expensive to bring those yen back into dollars at 147

yen to the dollar. And those are the components that we look at when we talk about these things.

World bond markets, on the next slide, just a quick look. These are 10-year U.S. Treasury yields and (indiscernible) yields around the world. You can see that, year to date, as of the time of this writing, we had a 34 basis point increase in yields, that means prices are lower, and that's the top line. The United States, just read across to the far right-hand side.

In Europe, it has been mixed. Sovereign results have been both up and down, depending, and you can see that there's an example in the United Kingdom. Yields are much higher, they're up 77 basis points, as they continue to tighten monetary policy to slow the economy and inflation has still been a little sticky there as well.

And in Asia, you can see that they're mostly -- yields are mostly, bond prices, actually, mostly lower. And if you look at Japan, you can see that the yields have actually gone up 25 basis points. Japan is interesting because they have got negative official interest rates, negative 10 basis points. They have also got something called yield curve control that artificially holds down the yields of the 10-year treasuries, or JBBs, for that matter. So they have

actually loosened some of the constraints. They were targeting 10-year yields just at a half of 1 percent. Now, they have loosened it up to half of 1 percent to 1 percent, and that's reflected here with yield moving up to 66 basis points in this case.

I know I'm throwing a lot at you, I'm just trying to build more of a foundation.

On the next slide is a quick look, you can see where rates have turned -- performance has turned. The left-hand charts are equity returns, U.S., non-U.S., and emerging, all moving up in the right direction. On the right-hand side, that's the Bloomberg Ag. It's actually called the Barclay's Ag, here, but it's technically now the Bloomberg Ag, and really just underscores the fact that we saw an incredible amount of volatility over the last two years, with the ag delivering a negative 16 percent return in 2022. It's actually come back. We saw a nice rally in the early part of the year, and it's giving some of that back now with an increase in yields, which means lower bond prices.

On the next slide, just a couple of things to note. Again, recent news, you may have read in the paper that the U.S. Treasury debt was downgraded by Fitch from AAA to AA-plus. A lot of people scratch their heads at the timing of that, but I think there is

information value in that and concerns of the size of the deficits we continue to run and some of the dislocations in our political processes around the debt ceiling and the issuance of debt out of Washington.

The other thing worth note is -- worth noting is the artificial intelligence is certainly a very strong topic today. There are issues about some of the AI companies perhaps being slightly overvalued, Nvidia has been picked on as the primary chip maker, but I do actually believe artificial intelligence will have a profound difference in our economy, our productivity, and returns over time. But we'll see how that plays out over the next five years.

Couple more food for thought ideas here. This is actually a chart that shows some of the challenges associated with the regional bank issues that we had in March, April and May, and it specifically looks at the Silicon Valley bank collapse. You can see that dotted line towards the left.

This is actually cumulative loan growth for U.S. banks, and it looks at -- the blue line is 2022. The red line, which really hasn't moved that much and is below 2 percent, is 2023. And this just underscores the fact that there's a lower ability and less of a willingness on the part of banks to extend credit, given

the backup and yields and what's going on in their portfolios. So why do we care about that?

On the next slide, it looks at small businesses. So if you look on the far left, you can see that banks account for almost 70 percent of small business funding, and if there's a lower ability and less of a willingness to extend credit, that could hurt small businesses and our economy, which are not insignificant.

The next slide basically underscores the fact that almost 50 percent of all companies reflected in green, dark blue, and light blue, those are small companies that have less than 500 employees. The small businesses are certainly a significant impact on our economy. If they're unable to get credit, those credit conditions tighten, that will eventually have an impact on our economic growth.

On the next slide, I talked, pretty much consistently over the last 13 months, about monetary policy acting with a lagged impact. This is just a slide that looks at, how long does it take, as rates move up, to ultimately filter through the economy and slow things down.

What this slide reflects, though, is we have got the lagged effects that slowed economic growth over

time. That's the top line. But more importantly is the lower line that spikes down, that reflects lower -- the lag effect of a slowing economy due to increased rate -- in rate hikes, in addition to tighter credit conditions associated, again, with banks' unwillingness or inability to continue to lend as they had previously.

So I know that there's been talk about a soft landing. You know, Mike mentioned, and I think very, very highly of Dan Haas, he is one of the people that I do read. He didn't remove his expectation of percentage for potential recession of 20 percent. I think it was 15, Mike?

So everyone is hoping for, including me, I'm hoping for a soft landing, but I'm skeptical. I do think that the number of rate hikes that we have seen, the magnitude of the hikes we have seen, at some point will bite the economy. It may be a mild recession, but I don't think we're quite out of the woods yet. We'll continue to watch and monitor that.

Maybe one last slide for food for thought, and I'll get on to performance. This is the one thing that the Fed wants to try to avoid. This is an interesting slide where it looks at the rate hikes that we saw, and -- sorry, not rate hikes, inflation. The 1970s and early '80s, for those of us that can remember that we

had the two oil price shocks that caused rates, inflation spike in the middle part of the 1970s, and then again in the latter part of the '70s and the early '80s. And you can see that overlaying that in green is the recent CPI performance in terms of where we were in rates. That's on the left side. And the Fed wants to avoid that problem, where they're successful, they get inflation down, but they don't really kill it, and then it roars back to (indiscernible) the economy again.

So that's why I think that the Fed will remain tighter for longer or keep rates higher for a longer period of time.

UNIDENTIFIED SPEAKER: It's really amazing how closely those lines track.

UNIDENTIFIED SPEAKER: Yeah, yeah, it is. Quite scary.

MR. MEIER: Maybe skip ahead to Performance, Wilfredo or Kate, whoever is driving, Slide 31. Sorry, actually 30. There we go. Perfect.

So this actually looks at the three-month performance for the second quarter of the calendar year 2023 or the fourth quarter fiscal year 2023. But you can see the total teachers' plan up top includes private and public assets, delivered a return in the quarter of 2.9 percent. More importantly, though, it's the

one-year return at 7.8 percent, and even more importantly than that is three, five year returns at 6.7, 6.5 percent.

So as long-term investors, you really want to think -- Mike, I know that's not really a long time horizon for a pension plan. We should be looking at 10-plus years, and I suspect Mike will cover this when he goes through the strategic asset allocation reviews. But again, it's nice to see all green on the screen. We'd like to see those numbers a little higher.

On the next side, a look at public market returns by strategy. And you can see, again, equities in green up top. And under three months, they have all performed well. Bonds have suffered a little bit with increase in rates, notwithstanding tighter credit spreads. But I think that we have already covered those issues.

Public market excess returns, more specifically, to the -- on the next slide, to the active managers, the passive managers, you can see that we have outperformed, or I should say portfolios outperformed the benchmarks quite significantly for three months, in the U.S. Russell 3000, SUS developed and emerging markets. Whereas, again, fixed income has been a little more challenged in terms of just the backup in rates.

TIPS also have proven to be a challenging holding, not withstand the fact that inflation has kicked up because they tend to have a significantly higher duration exposure than, say, high yield.

MS. HIRSH: Steve, can I ask a question?

MR. MEIER: Sure, please.

MS. HIRSH: So it looks like the excess returns are up for Russell 3000, U.S. equity the past three months, but every other longer duration, not so much. Is that --

MR. MEIER: That's --

MS. HIRSH: -- active versus passive? Is that part the --

MR. MEIER: That's a great question. That's a great observation, Alison. That's exactly right. You can see we pretty consistently can outperform in active strategies outside of the states that are less efficient markets --

THE REPORTER: Excuse me. Who just asked the question?

MS. HIRSH: I'm sorry. Alison Hirsh.

MR. MEIER: But that is perhaps one of the takeaways that our active managers -- and I should also reflect that our U.S. equity strategies are almost 80 percent passive with some small element of active

management in that as well.

MR. KAZANSKY: Steve -- I'm Dave Kazansky. You knew that, but.

So what happened with ETIs that they seem to struggle especially more recently.

MR. MEIER: Economically, targeted investments, they're mortgage related, and they're -- they're very subject to changes in rates. There's also been some challenges in real estate, not so much multifamily, which is the focus of the ETI program, but just again, a backup relative to the benchmark.

On the next slide, a quick look at our private manager returns. In that, you can see that, in the one-year space, there has been a little bit of challenge and private equity has been a very, very strong performer consistently. If you look at 3, 5, 10 years since its inception, the performance driven by Eneasz Kadziela, the deputy CIO and his team, have been really quite extraordinary.

A little bit of revaluation with the equity sell off on a lag basis in 2022, spilling into 2023. Real estate core and non-core similarly impacted. More of the challenge, I'd say, in real estate has been in office space and retail. I know that John Gluszack and his team have done a great job of managing that. So

we're slightly underweight those sectors relative to, say, multifamily and self storage and things of that nature. But again, a little bit of challenge in the private space. For me, that just means it's probably a better opportunity to continue investing in those strategies because things are cheapening up a little bit.

Infrastructure has actually proven to be quite a strong inflation hedge, delivering an 8.1 percent. So again, Petya Nikolova and her team have done a great job there as well.

And opportunistic fixed income, also called private credit, it's got a number of different names at this point. But again, as those base rates have moved up, as credit spreads and the private side have been still pretty generous relative to public's tightening, delivered a positive return, we think that that asset class has tremendous opportunity going forward as well.

MR. FULVIO: And I think what's very notable about that, to us, when we talk with Tina and Grace, is really haven't seen, for quite some time, stress, distress, and really more broadly for many, many years. So it's been a very quiet cycle to this point, leading up to the last year or so, and these returns, I think, in a very quiet cycle, are fairly notable.

MR. MEIER: Yeah. And so, a lot of conviction with that strategy. Most of those obligations are floating. It's a different kind of pricing dynamic there, but we still think that's going to be a great area to invest going forward. And I suspect the team that just joined will probably underscore that.

Maybe two more slides. Just a look at our excess returns and basis points for private markets on the next -- sorry, one slide before, please.

Obviously, a lot of green on the screen, which is great. Excess returns relative to the public market benchmarks have been really significant. OFI, or opportunistic fixed income, private credit, has struggled a little bit in the last year. That's because its benchmark is a blend of high yield, which is public market, and leveraged loans, and the public market for high yield credit spreads have actually tightened quite considerably, which is driving a little bit of that underperformance relative to that benchmark. But again, we still have a lot of conviction. And Tina and Grace, her team, the asset class as well.

And with that, I'll open up to -- one last look at rebalancing activities in the last slide. As Mike and Amanda and I have mentioned earlier, we had a pretty strong rally in equities earlier in the year, up

until August, and more volatility, a little bit more of a sell off in fixed income, and the rebalancing reflects that. So first and foremost, we raised a lot of cash. We raised 540 million in cash to meet benefit payments. Also (indiscernible) for the private asset commitments you have already made.

But as a general matter, on the left, you can see that we're selling equity strategies, and on the right, we're reallocating and buying fixed income. We have a rebalance meeting every week where we actually look to the targets that you have given us. We don't take liberties around the targets, we try to strictly adhere to that, but taking into consideration timing and transaction costs, we continually try to get back to those target rates. So that's reflected here.

And with that, I'll open up to any questions.

MR. BROWN: Thank you, Steve.

Any questions for Steve? Well done. Appreciate it.

And I'm Tom Brown, and just wanted to remind everyone to introduce yourself because we have a new stenographer. Thank you.

So we go to the Strategic Asset Allocation Discussion. Mike, Steve?

MR. MEIER: Great. We're going to play a

little musical chairs.

So the question I asked, when Michael brought his colleagues in and we sat down, we had the privilege of working with these gentlemen earlier, I asked the question to the team, did the average IQ in the room just go up or down? And I think you'll find that it probably went up. So it's been a pleasure.

MR. FULVIO: Yes. Steve started to say it, but we have had a good summer of very collaborative projects, in review of the Strategic Asset Allocation. I know we chatted at the board meeting, the investment meeting back in June, about the process and the work we have be doing to review Strategic Asset Allocation, not only in the context of our changes in capital market assumptions, but also the, I'll say the constraints of the system that help inform how we construct the portfolio.

And in working closely with Steve's team, I want to also introduce my colleagues, Roy Appleman and Ben Cranes (phonetic). Roy leads -- he's our head of research from the multi-asset solutions team, and Ben is a member of his team. They have been very involved in the process, as we review the portfolio asset allocation. So you'll be hearing definitely from them.

And maybe what we'll do is I'll share my

screen so folks can follow along.

So today, what we wanted to do really is introduce everyone to the outcomes of the discussions we have had to date around the portfolio's asset allocation, remind you of what those constraints were that I referenced earlier, and help you understand how we're thinking about tying together our forward-looking views to potential changes in the portfolio strategic targets over time.

So we revisit this in a formal way for the IPS every three years. I would say we're always thinking about what's going on in markets and asking ourselves, amongst the advisory team, but also within Steve's team and the team at BAM, is there anything that we should be doing or thinking about that would require changing the portfolio? Are we hearing things in the marketplace that would prompt some change?

And here, we're taking a very long-term view. So while there's a lot that was always going on, we're about changes in the shape of yield curve, those changes which could be notable don't necessarily drive changes to the long-term strategic targets.

So here, what we're talking about is being very deliberate in setting a long-term strategy. And the fund itself, as you know, at a billion dollars in

assets, is a very large fund. And so we're very mindful of what changes can actually be implemented in any given period of time. And so that also helps inform how we're implementing any changes to the long-term strategic targets.

So we'll weave in comments about our views forward, and that came up in the comments that Steve made a little bit earlier about the markets and where we see the markets today, but as we think about the constraints and what's really meaningfully different since we last went through this review three or so years ago, I think there's two things that come to mind for me, and others can share their thoughts.

We're at a point where the risk-free rate, as Steve noted earlier, the shape of the yield curve, the amount you can earn by investing in cash today is notably higher than it has been for, really, the last 10, 20 years. And so what that does is it, in our minds, shifts sort of the opportunity set for the ability to generate return, which would imply that, today, expected returns are generally higher than they have been. And that shows up in how we're projecting the forward-looking returns for a number of asset classes, all asset classes as well as for the pension.

The other thing that's notably different, and

we talked about this earlier this year, is the shift in the rules set by New York State around the basket class. So we have talked in the past about a 25 percent limit to, generally speaking, illiquid assets that are assigned the identifier that they are basket assets. And that has helped, I would say, guide strategy in the past, such that we have allocated two basket assets up to around that 24, 25 percent limit.

When New York State changed that rule and expanded the flexibility around the basket, moved that limit from 25-to-35 percent, that was, I would say, a key catalyst for taking a step back and thinking about where the system could benefit from deploying a portion of that budget to earn incremental excess returns or incremental returns for the system. And so that was a key part of the portfolio construction work we did in looking at where could or where should we think about deploying the next dollar of assets, to take advantage of that flexibility and earn that incremental return.

So what you see here in the material, thus far, is really just intended to set a baseline. So we have current portfolio assets, Steve noted, just shy of about a hundred billion on June 30th, with portfolio targets -- I'm going to paint some broad brush strokes here, but about 46 percent of the pension is allocated

to public equities, another 20 percent allocated to alternative assets, such as private equity, private real estate, infrastructure, and private debt, and then another 33 percent allocated to public fixed income.

I would say, if you look over time at the strategic targets of the systems, they have moved around generally in the same neighborhood. About 10-or-15 years ago, you would have seen definitely a lower allocation to some of those illiquid alternatives. The allocations and the commitments made to help those parts of the investment program mature over time have brought you to where you are today.

And what we have been thoughtful in thinking about in the past was really how much active -- how much risk you want to deploy between public equities and public fixed income. Today, what we're talking about is, and when we start talking about different alternative portfolios, is how are we going to consider using up some of that basket capacity, deploying that additional capital within alternative assets. That's possibly the biggest change we're looking at in terms of portfolio exposure. And where are we sourcing those incremental allocations from? And some of that comes from public equities, some of that also comes from publicly fixed income.

The other dynamic we're going to talk about, something that's a little bit different, is really what we see as a potentially additional source of diversification that we'd like to consider introducing to the asset allocation. And so those strategies, that source of diversification, we'll refer to them as CTAs, or trend following strategies, which actually are comprised of multiple asset classes in terms of how they could be constructed and designed. But we think that that actually incorporates something that's a little bit different than the diversification you would get by introducing, for example, interest rate exposure and fixed income to the equity portfolio.

So I'll pause there and see if there's any questions before we push ahead into looking at some of the different portfolio alternatives we developed with BAM.

MR. BROWN: Any questions for Mike?

MR. FULVIO: Okay. I'm going to hold this slide, Slide Number 6, which includes a lot of numbers. So what I'll try to do is just, in being mindful of that, reference only some of the numbers on this page.

I noted earlier the current asset allocation. You can see that in the first column of numbers. Today, at a high level, what we're expecting is about a 7.1

percent expected compound return current portfolio, with an expected volatility of about 10.7 percent.

The portfolios we're looking at, in all of the alternatives here, are expected to increase that level of compound return, as we look forward. That's something that we think we can achieve by making any of the changes on this page. With two of the three portfolio alternatives on this page, we're also seeing a modest increase in the expected volatility of the portfolio.

And what I would note, is in our conversations with BAM, and amongst ourselves, we think that those portfolios would provide you, even though there's a higher level expected volatility, in return, you're compensated for taking those risks. That's not to say that we're recommending we would go all the way out to portfolio to on the risk spectrum, but these are intended to show you sort of the extremes that we would think about.

And one of the other things we're obviously very mindful of is, when we're looking at these portfolios, we do still have a basket constraint, how much of that basket constraint or budget are we allocating to basket assets?

So I noted today are about 24, 25 percent.

What we're looking at in terms of these different portfolios is looking to top that out at about 31 percent, sort of on the extreme, and recognizing that, if we saw a drawdown in public markets, it's very possible to get right up again to that 35 percent, or slightly surpass it, because, as you know, and as we have lived through very recently in the last couple of years, is when public markets draw down, we're not seeing the same draw down on private market assets, based on how they're being (indiscernible) markets. So that's something we're very cognizant of.

Portfolio 1 is the one that I wanted to focus on the most today. This is one that, in our discussions with BAM, we think is an intuitive, an attractive portfolio to consider and for the board to think about. And sort of the key differences there, what I'll draw your attention to is, within the alternative assets portfolio, and that's where we're seeing the most change in terms of potential allocation changes.

Private equity, you can see there an increase of about 3 percent contemplated in that portfolio, a 1 percent incremental allocation to each of private real estate, private infrastructure, and opportunistic fixed income.

And then you also see below that, again, that

additional asset category I cited earlier, CTAs, commodity trading advisors, which Roy is going to talk a little bit more about and help provide the board with more context on what those strategies really are, why we think they're attractive, and how they help to diversify exposure in the portfolio.

But what you see when you look at that portfolio, in general, is an increase in expected returns, as I said, you see that with all of these, but an increase in the expected compound return to about 7-and-a-quarter, 7.3 percent, a modest increase in the expected volatility of the portfolio, but also a very, I would say a slightly more efficient portfolio, efficiency being measured in what we call sharp ratio. So the return divided by -- the return in excess of cash divided by volatility.

I noted, if you're going to increase one thing, you have to decrease something else. So with the increase in alternative assets there, and again, using up some of that basket, bringing the basket allocation to about 31 percent, you're taking down allocations to public fixed income as well as public equity. So we're incrementally adding expected volatility of the portfolio, and actually taking down public equity and public fixed income helps to moderate the amount of

incremental risk you're allocating in the portfolio because public equities continue to be one of the more volatile asset classes or modeling. So public equities in Portfolio 1 would go down to about 41 percent, public fixed income down to about 27, 28 percent.

Within public fixed income, I guess more notably, and Steve made some comments about this earlier, is we see increased value in allocating slightly away from treasuries and incrementally more into credit, corporate credit, both investment grade and high yield, getting value for, you know, for the additional risk you take in credit spreads today.

As we look forward, we continue to fixed income as a key diversifier in the portfolio. So we're not in any way considering that we would be replacing that exposure in the portfolio. It's the best way to diversify the equity risk, which really overwhelms the proportion of risk in the portfolio. And investment -- excuse me, investment grade fixed income still, in many respects, is the key driver of that diversification.

So I'll pause there and see if there's any comments or questions, and then I'll make a couple of brief comments about why we're showing Portfolios 2 and 3 as well.

MR. MEIER: Mike, can I ask just to comment on

the cash holding of just half of 1 percent, which really reflects reality in terms of how we manage the portfolio? So typically, we haven't had an allocation in cash. We have always had cash holdings in the portfolio. We typically try to manage that around one-half of 1 percent.

So a lot of times, if you look at a cash allocation in a portfolio like this, it's 4 or 5 percent. That implies to me that it's more tactical and it's going somewhere else, and we're not making those active decisions and actively managing the allocation. But half of 1 percent really just reflects the fact that we always need some cash on hand every month to meet benefit payments and to also meet the capital calls for the private asset commitments.

The other point I think, Mike, is the combination of the core/non-core real estate into one private real estate allocation. It used to be broken out, but we're advocating, if we combine those, we may have a little bit more flexibility to look for opportunities across core/non-core.

MR. FULVIO: Yep, I would say it allows the real estate team at BAM to be more flexible and follow the opportunities, so when there's an expectation that you'll be compensated for opportunistic real estate

relative to core, making commitments and finding (indiscernible) focused in that part of the market, we don't want to be as tied to a specific target.

MR. MEIER: I'd say the last comment I would ask, respectfully, Ed Berman has been really a wonderful partner of mine and the team's.

Ed, anything I missed here?

MR. BERMAN: No, I would say that it has been a wonderful experience (indiscernible).

THE REPORTER: Excuse me, who was speaking?

MR. MEIER: Give Ben and Roy a shout out that we have actually invited both of them to come back and actually just talk to us.

MR. BROWN: The stenographer -- sorry.

MR. BERMAN: Ed Berman, Bureau of Asset Management.

THE REPORTER: Who was that speaking?

UNIDENTIFIED SPEAKER: It's Ed Berman, the chief risk Officer for the Bureau of Asset Management.

THE REPORTER: Thank you.

MR. KAZANSKY: So yeah, Mike, before you go on, could you guys go into a little bit of your thought process as to in the public, in public equity, why the big reduction in markets?

MR. FULVIO: Yep, absolutely. So the change

in allocations that you see here, what that really reflects is moving to align the overall public equity portfolio to be more in line with that of the global market cap, as it's broken down today. So if you looked at the, for example, MSCI ACWI Index, the total global public equity market, that is roughly 20 percent emerging markets today. And what we're talking about is taking the current allocation to EM and bringing it more in line with that 20 percent. It's a, I would say, a reflection that we think that the current global market capitalization is largely reflective of where we should expect global growth, looking forward.

And anything else you'd elaborate on, Roy?

MR. APPLEMAN: Yeah, I guess maybe just to add to that a little bit, we do think there is a lot of efficiency in markets.

MR. FULVIO: I'm sorry, that's Roy Appleman now.

MR. APPLEMAN: Thank you. And so I think, generally speaking, we think there is a lot of efficiency in markets and that's reflected in market prices and essentially the capitalization of the indices, And this is a reflection of the fact that we think that the opportunity set in emerging markets is more in line with what you would consider to be the

opportunity sets on comparable risk in equity investments and less of an excess opportunity than before.

MR. KAZANSKY: Great, thank you.

MR. FULVIO: I briefly referenced Portfolios 2 and 3. I just want to make a couple comments about what those portfolios represent in our minds, and then I'll turn it over to Roy to speak more about CTAs or trend following strategies and the value we think they bring.

But actually, Portfolio 2 is largely representative of Portfolio 1's changes in broad allocations without that allocation to CTAs or trend following strategies. And so the difference you see in expected risk and return there are being largely driven by the incremental amount of diversification you get by allocating CTAs.

So CTAs are expected to provide a positive absolute return to the portfolio, but I would say, you know, well -- not well, but below that of public equities and public, excuse me, alternative assets. And so if you were to, for example, adopt Portfolio 1 without the CTAs, Portfolio 2 is what you might expect in terms of a broad risk in return scenario.

And really what Portfolio 3 illustrates is a portfolio that has a number of changes. At the end of

the day, if you allocated, for example, to Portfolio 3, you would include the CTAs, but you see sort of the incremental, or the lower expected return and lower expected volatility of not allocating quite as much to alternative assets.

I think, in our minds, Portfolio 2 is interesting, but we like the diversification you get and the risk mitigation you get by introducing CTAs, which is why, from our perspective, Portfolio 1 seems to be a little bit more attractive on a risk adjusted basis, from an efficiency basis.

So maybe, with that, I'll turn it over to you, Roy, to speak at a high level -- there's a lot of information here on trend strategies, and we're not going to go slide by slide, but Roy we will have some comments on that.

MR. APPLEMAN: Absolutely. Thank you very much, Michael.

So if I can turn your attention to Page 9, I'll keep my initial comments brief, and if there are any questions, of course, happy to take them.

So first of all, a little bit about what trend following strategies are. In many ways, the truth is in the name. What trend following strategies are strategies that aim to identify and follow absolute and

relative trends that are emerging in markets. And the strategies are traded in public markets, across asset classes. The typical strategy would trade 50 or more different tribes of tradables around equities, commodities, effects, and interest rates. And the strategies will trade both absolute and relative trend, depending on the actual implementation.

And they have been around for quite some time. So even though the strategies might be a bit new to teachers, they have been around for over 40 years and do feature in portfolios of other public pension plans in this nation.

In terms of the characteristics of the strategies, as Michael mentions, the expected returns are lower than in that of equities and other alternatives. Although, if you do look at the actual back-tested information on Page 10, you would see comparable back-tested returns to that of equities. However, our view is that, on a go-forward basis, that is not likely to repeat.

One might ask, if the expected returns are lower, why are we adding them to the portfolio? We're recommending adding them to the portfolio for a few reasons.

The first is that, if we look at the current

environment, even though rates are higher and bonds remain attractive, there is an extra risk that has become a little bit more pertinent in portfolios, going forward, which is the fact that, going forward, just because of where inflation is, where it might go, there is a bit of a higher risk that the correlation between equities and bonds, it may not be as reliable as it has been in the past.

Trend following strategies do well when the macroeconomic environment begins to trend in a specific way. So if we do get a repeat of what we saw in 2022, where we do get a bit more inflationary pressures that react over time, trend following strategies would do -- would benefit the portfolios.

So essentially, this is another tool in the toolbox to help smoothen the ride a little bit on a go-forward basis and is part of what's driving that increased in sharp ratio expectation for Portfolio 1 relative to what we currently hold today.

The other reason we like in trend following strategies as a recommendation is the fact that their correlation characteristic to the portfolio can be quite negative, and they do that with a positive expected return overall. So essentially, in some ways, that's really a bit of a very attractive outcome. Something

that has a lower negative correlation to your portfolio, but positive expected return is not easy to find and is not -- and is very beneficial to the overall risk adjusted returns of the portfolios.

So even at a relatively modest allocation of 2 percent, it is starting to have a little bit of an impact. Although, in all fairness, the impact is more incremental than it is absolute because, you know, 2 percent of the portfolio is just 2 percent.

So from our perspective, this is a strategy that is a little bit more defensive, is a little bit more better geared towards more pronounced or prolonged slowdowns in the economy, and is one that helps add something additional to the equity and bond centric nature of the existing portfolio.

So of course, happy to take any questions and discuss further.

MR. BROWN: Thank you, Roy.

Any questions for Roy?

MR. BERGE: Yes, I have a number of questions about -- oh, sorry, Bryan Berge. I'm from the Mayor's Office of Pensions and Investments. I'm representing Mayor Eric Adams as trustee.

So I had a number of questions, some of which are for BAM and I think some of which are for Rocaton,

about CTAs. So I guess I'll start with the Rocaton questions.

So CTAs are new for us, as you said, and I sort of struggle to kind of understand them conceptually. So the first question I have, if you're getting 2 percent, what are they substituting for, so to speak, in the portfolio? What other asset classes would you draw down to make the allocation to the 2 percent to CTAs, and what reason for that substitution would you --

MR. APPLEMAN: So absolutely. I mean, so we think about the portfolio as a whole, but if you had to choose one, you could say that the CTAs are probably augmenting your bond allocation. So the high quality bond allocation, which is a very good diversifier in the portfolio, and we still have a (indiscernible), but if you look at what the bond allocation largely helps in, it's environments where both growth and inflation slowed down. Essentially, more of a traditional recession in line of what we have had a few times over the last 25 years.

Where the trend following strategies help a little bit more is when the change in direction in the macro environment is a little different, essentially one where inflation also becomes a participant of why you get a slow down in the economy. So it's less linked to

just a specific macro outcome and is one that is a little bit more focused on reacting to conditions as they actually materialize.

MR. BERGE: And is the behavior of a CTA strategy dependent on the nature of the trend that is affecting the macroeconomic environment? I mean, it seems sort of mutable in a way that I don't think of other asset classes as being so mutable.

MR. APPLEMAN: That's a very, very good question. I would say that it's less dependent on the actual nature of the trend because the strategies, if they're well constructed, will follow the different types of trends that materialize. But where there is clearly a dependence is the speed in which directions change.

So if you compare two recent environments, and you can see that on Page 11, perhaps, you can see that, in some environment, trend followings will do really, really well, while in others, less so. So in environments such as 2008 or 2020/22, when the emerging trends tended to be multi-month trends because these were major macroeconomic driven crises, the trend following strategies did very well relative to equities and bonds.

But in 2020, when the reaction was very

short-term driven, the emergence of the pandemic, trend following strategies tended to have more mixed results. So it's that speed of market reaction that matters more than the actual type of trend that's emerging.

MR. BERGE: Okay. And the third question I have for Rocaton on this is, is there a concern in this asset class about a sort of internal style drift? Because it seems to me there's not always going to be some clear transcendent objective reality as to what the macroeconomic trends are. You know, so I would -- again, I guess this kind of gets back to the seeming mutability of the asset class, but is there a concern that, once you select a manager, they are changing your views about what trends are applicable in a way that isn't consistent with your original vision of their selection?

MR. APPLEMAN: So that's a great question as well. Style drift is always a concern with any sort of a manager selection process, and part of the manager selection team is to continue to monitor the integrity of the stated investment process versus the actual investment process.

But what I would highlight here is that, with trend following strategies, what you try and do is not choose a strategy that tries to only depend on specific

trends, but rather choose this manager based on a process that identifies emerging trends well and has good risk management practices in some ways irrespective of what the trend is. And I think that's part of the due diligence that has to happen when selecting this specific strategy.

MR. FULVIO: I would just add on to that, and I know Ed has a lot of experience with these types of strategies too, so I'd welcome your input.

It speaks to the importance around, in addition to those factors, thinking about how that manager is improving, researching, and updating their process to ensure that they're not missing, you know, what are paradigm shifts in the marketplace over time.

And so the other thing that I think I should emphasize is, when we're talking about CTAs and trend following, and there are different types of approaches, different types of firms who do this or deploy this type of strategy, we're talking very much about what many in the industry refer to as systematic trend following, where it's very much about this risk control process, as Roy noted, and less about someone just making an active decision and not following sort of a rules-based approach.

MR. BERGE: Okay. So I appreciate that

reference to due diligence because that provides an elegant pivot for my questions to BAM.

How do -- well, I guess maybe for both of you.

How do we envision this working from a due diligence perspective? We obviously don't have a CTA specialty consultant. Would this be something that falls within the purview of the general consultant? Would we anticipate getting a CTA specialty consultant?

MR. MEIER: It would probably go through a procurement process. We would hire someone that's expert managing these types of strategies. We actually have someone on our team, Ed Berman, who actually used to oversee these and implement these types of strategies in his prior life, but we would actually outsource it, and we'd go through a procurement process.

MS. HIRSH: But we would due diligence. We would need some internal capacity to due diligence --

MR. MEIER: Oh, of course.

MS. HIRSH: -- of how we hire --

MR. MEIER: Yes, I'm sorry. I misunderstood the question. We have expertise. I have some experience and familiarity with CTAs. Ed's is much more a deep, I'd say.

MR. BERMAN: I'm close to the microphone. Ed Berman. Thank you.

So just to put this in the context, I do have experience with CTAs as part of working at JPMorgan Asset Management with a (indiscernible) asset solution, the capacity and investment director. So I have about seven years of experience overseeing systematic strategies. CTA was part of it.

I participated in launch of several products and also worked with the board's regulators in Luxembourg, Ireland, and also in the U.S.

I think there are some of your questions, it is a systematic strategy, and there are a lot of choices go into running the strategy. So it goes through the usual manager selection process.

You think about investing and equities, the numerous strategists across the spectrum of equity investment, part of our manager selection process is to find a strategy that fits best within our control construction. I would say the advantage of CTA, it operates within a preselected universe of markets. So as Roy mentioned, it relies on macro trends, but the implementation relies on markets.

So it can be a choice of products within equities, effects, interest rates, commodities, and as such, trends can capture a broad range of outcomes. For example, if equity markets go into a protracted bear

market, trend following will pick up this sell off and will provide an offset. If the equity markets move higher, CTA again can catch this trend and participate in the upside.

In case of an inflation environment, it will do the same, focusing on the bond futures, CTA may provide the offset for inflation or deflation environment. The same applies to effects of commodities markets, and of course, here, we're mindful of existing restriction on energy. There is no need to use energy futures or energy products. There's a broad range of commodities other than energy.

So clearly, the implementation is mindful of the broader goals of the system, and it definitely can be implemented within this restriction.

MR. BERGE: Yeah, so thank you for that. It seemed like that was more about the manager selection, and maybe I phrased my question badly.

I was trying to ask specifically, do we anticipate hiring a specialty consultant in the way that we have specialty consultants for certain of our other asset classes? Will we be --

MR. BERMAN: Most likely not. I think the key to the trend following strategy, as Roy mentioned, for avail of time. It's a well known process. And much

like, I will draw a parallel with public equities. Public equities exist in the hedge fund (indiscernible), they exist in the mutual fund, or just estimate the way we use them.

The difference is how you use the strategy, level of risk you take, how systematic they are. So you can think about trend following strategy as a hedge fund strategy, which they do exist, that will go to specialty consultant. I don't believe there's any need for that. It's not the objective nor these need to pay the level of fees commanded by hedge funds.

The (indiscernible) implementation within public markets, within public managers, I would imagine it's just a standard public manager search within the existing infrastructure you currently have within --

MR. BERGE: Okay.

MR. BERMAN: -- in all the public equity fixed income.

MR. FULVIO: We have a hedge fund right now that we oversee for police and fire, similar type of strategy. Again, different, this is not a hedge fund, but it's someone --

MR. BERGE: In that case, we do run it through a special consultant, but it sounds like --

UNIDENTIFIED SPEAKER: That's not the case.

MR. BERGE: -- included at the moment, that's not necessarily the thinking right now that there would be a need for a specialty consultant.

So, Alison, I don't want to cut you off, sorry.

MS. HIRSH: Are you done with your question?

MR. BERGE: I just can't stop myself.

MS. HIRSH: I'll wait as patiently as you need me to.

MR. BERGE: My patience is -- everyone else's patience is (indiscernible).

The second question, you mentioned manager search, manager selection. Is there a view as to whether this would be a PPB governed situation or a non-PPB governed situation?

MR. FULVIO: Just my 2 cents on that is the PPB process is a little bit more challenging when you're looking for customization and constructing a portfolio that is specifically structured to the constraints and objectives of TRS, like we were talking about. So the exclusion, for example, in commodity futures, the PPB approach lends itself well when there's a very set track record that meets sort of the objectives and constraints that you lay out.

Because this would be, I think, a little bit

more bespoke to how teachers would prefer to implement, it's a little bit more challenging to do it that way, and so we haven't really stepped through ultimately how we could go through the procurement process --

MR. MEIER: Or the construction and the implementation.

MR. FULVIO: Yeah, yeah.

MR. BERGE: Well, I appreciate that that's not necessarily a question for Rocaton, but it's a concern that I would have, given difficulty -- because, you know, it's not about preference, necessarily, it's about does it have to go through it or not. But that's just a concern that I would put in people's minds, and maybe we should continue that discussion right now because it seems pretty (indiscernible).

MS. HIRSH: I have just one comment to follow up on that question.

I do think if we were to introduce CTAs as a new asset class, basically, there is an entire conversation about implementation that we have not had yet because we don't have around what staffing would need to look like in BAM, to execute if there needs to be any different, does it make sense to a consultant?

I don't know whether it goes against the basket or not, and I think, and what the procurement

procedures are, I feel like there is legal advice that needs to come into play as well. So I just want that out there because I think a lot of those questions, we just -- I don't know the answers to and it doesn't feel like we do yet.

MR. FULVIO: Some of them, we're still working through, and I should have noted earlier, we took a more conservative approach with proxying the impact to the basket, and in this case, counted the full allocation against the basket budget.

MS. HIRSH: Because I know that there have been some legal questions.

And then my other question is just that, and Ed, you have mentioned it, so it helped me lead into this, but I know very little about investing, obviously, or I have learned, but anytime the CTAs have come up, it has always been within the context of the hedge fund, and this board has very clearly not wanted to invest in hedge funds.

And so how is this not a hedge fund approach in a different -- with a different wrap?

MR. FULVIO: Do you want to start?

MR. BERMAN: Simple answer, it just (indiscernible) --

(Crosstalk.)

MR. BERMAN: Simple answer to the question. It definitely could be. And there fair number of hedge funds that utilizes this investment process. There's also a broad range of asset managers. It just mainstream asset managers, you can name JPMorgan, just my personal experience, Morgan Stanley, and I believe Goldman Sachs has strategies, within public markets running mutual funds, mostly in Europe, SMAs institutional investors. So it's a well-established strategy.

I'd have to say it's not a detailed strategy, even though there are some retail products in this field, but they're not very widespread. It's very much an institutional product. Maybe that's one of the reasons why we haven't heard as much about in this.

MS. HIRSH: And you mentioned --

MR. APPLEMAN: If I can just add to that a little bit, just a few things. I mean, in some ways, hedge funds are a fee structure, not an asset class. So first of all, the fee levels are completely different these days.

The second thing I would note is the liquidity profile is very different. These are traded in liquid markets, and both the liquidity, in terms of what's traded, as well as the liquidity the plan would have is

a different profile potentially than hedge funds.

And then the final thing that I would just add, trend following, as we noted, has been around for 40 years and back-tested over a hundred. So if there's something here that's more persistent about markets, as opposed to the more skill-based component reliance on hedge funds, so there is -- so those are the three things that I think primarily differentiated from hedge funds and make it quite --

MS. HIRSH: Can I -- that's very helpful. Can I ask two follow-up questions on that? Because that led me to another question.

So the fee structure is more in line with how we look at fees in the public markets, as opposed to the private equity, or in the other boards, the 2 and 20, that kind of thing, so it's a much smaller fee structure. Great.

And then my other question is, you mentioned some institutional strategy, do we know of other pension funds that utilize this strategy in the U.S.?

MR. BERMAN: Do you -- I don't know if you want to -- it's definitely reasonably prevalent, particularly in the West Coast, in public pension plans. I'm not even talking about non-public, but within the public plans as well. I mean, specific names, I don't

know if we want to mention, but --

MS. HIRSH: I mean they're public, right? Asset --

MR. FULVIO: CalPERS has these strategies.

MS. HIRSH: But CalPERS has not -- their hedge fund, they have a CTA strategy separate and apart from a hedge fund strategy?

MR. FULVIO: My recollection is what they more broadly call liquid, liquid --

MR. APPLEMAN: They are plans, plans that tend to have risk mitigating baskets have CTAs within those risk mitigating tools of their --

MS. HIRSH: Separate and apart from hedge funds?

MR. APPLEMAN: Separate and apart from hedge funds.

MS. HIRSH: Thank you.

MR. KAZANSKY: I just want to kind of pile on with what Alison and Bryan were mentioning earlier, which is, and I know the only thing more challenging than figuring out where the markets are going is figuring out where the trustees are, but do you see a scenario by which we decide that we want to include CTAs, but the implementation of that meets some kind of roadblock amongst us, and what would we do if we have

agreed to a strategic asset allocation and voted on it, let's say, and then implementing that CTA bucket doesn't work for one reason or another, what would our strategy be beyond that?

I guess the bigger question, really, is, do you see any kind of circumstance where implementing it would just be impossible?

MR. MEIER: I don't, at this point.

MR. BERMAN: I would say, just to mention, just one thing where we may have potential issue is around the basket clause. So just as Alison mentioned before, we need to do some legal work to understand if this product is subject to basket clause or not.

I believe there were several studies, New York Commons did the studies years back on the interpretation of the basket clause, and I think legal conclusions were quite different. So this is dispersion.

I believe our interpretation was fairly conservative at the time, just to be on the safe side. We may revisit this question going forward.

So one potential roadblock I can see in the future, if we decide to scale it to more meaningful level, just as Roy mentioned, at 2 percent, it's more of a test case and just to get everybody comfortable with it, to allow for the manager selection, but it's

probably not enough to have a really meaningful difference for (indiscernible) level, so we need to scale it up.

That said, we do have a fairly significant amount of breathing space in the basket clause right now, and fundamentally, the products ultimately represent U.S. equities, U.S. bonds. So I'm not a lawyer, I don't really want to give any promises, but I think good case to be made that the legal interpretation can be (indiscernible).

MR. KAZANSKY: And any other concerns around implementation, whether it's the cost of hiring someone to oversee this or any complications within it that might --

MR. FULVIO: I think there were questions around procurement process, something that we should have a couple more conversations around, just to understand what would be required and what the hurdles would be. So I don't have a straight answer because I think that those are things that we should talk about before the board approves a final allocation.

MR. KAZANSKY: Right. Thank you.

MR. BERMAN: Just one final thing I wanted to mention just to follow up on Roy's point before, this product are probably as liquid as it gets, so it's never

a question of getting into the position deploying capital or terminating. So liquidity, access to markets is not a concern for this type of strategy, so it's entirely transparent.

MR. BERGE: And so one final question, I promise. Bryan Berge, again. You're probably tired of hearing from me, actually.

I think this is implicit in what you're saying, but the structure is not like an LPGP structure as it is in many of alternative assets, it's more akin to a conventional manager contract?

MR. BERMAN: It is, actually.

MR. FULVIO: A conventional manager contract, and I believe the --

(Crosstalk.)

MR. FULVIO: A separate account holding these exposures.

MR. BERMAN: The SMA -- similar to public equity, fixed income in a sense, with a procurement process.

MR. BERGE: Thank you very much.

MR. FULVIO: So I'm going to just conclude by saying today was what we anticipated would be the first of several discussions, and clearly, as you think through this and questions come up, please let us and

BAM know how we can help explain more, answer questions, and continue down the road.

MR. BROWN: Thank you, Michael.

Any more questions for the team?

MR. MEIER: Just making comments. Steve Meier, for the record.

We're going through the Strategic Asset Allocation review with the hope that we can wrap this up by the end of October, November. We don't want the tail to wag the dog. Obviously, the trustees have to get comfortable and ultimately make a determination, but given the fact that we're recommending, or I should say Rocaton is recommending an increase in the allocations of private assets, wanted to make sure we can incorporate that into the pacing plans for 2024 and beyond, and we typically deal with those around November.

It's not to put an artificial constraint on the trustees, but it's just to reflect that that's one of the things we're hoping to be able to get through and get --

MS. HIRSH: Can we sort of request, and obviously, I'm happy to help facilitate this process, that we try to get to some of the -- some answers on the implementation questions before we come back next month,

so that we can have a --

MR. MEIER: Yeah, absolutely.

MS. HIRSH: Great.

MR. BERGE: Thank you.

MR. BROWN: Ben, you didn't get a chance to say anything. Do you want to chime in?

UNIDENTIFIED SPEAKER: All set. Thank you.

MR. BROWN: Alison, you are next, I guess, with the Invitation to Join Labor Rights Investor Network.

MS. HIRSH: Yes. Good morning, everybody. As the trustees know, this board, along with four other New York City pension funds, has taken a very active approach as fiduciaries and shareholders across our portfolio to ensure that the money we invest is done so in a way that increases long-term financial return for the companies we invest in and the pension funds.

And we have believed, and continue to believe, that, in order to ensure long-term profitability, workers have to be treated well and have to have freedom of association and the right to organize, and that the way workers are treated as a core part of how companies thrive. And as you know, we have been leaders in that space through shareholder proposals that this board has put forward at Starbucks and other places, Amazon,

Chipotle, et cetera.

We have, therefore, been asked to join as convening members of a new network called the International Labor Network. We would be the only pension fund as the -- or only (indiscernible) class systems to support this, the only U.S. pension funds at the convening table, but it will include the AFL, CWA, Uni Global, which is the Global Federation of Service Workers Unions, and others. And these are the folks that we have been partnering with to, informally, as much as formally, to put forward our corporate governance approach.

So instead of having, rather than having like Controller Landers sign on, we thought it would be much more powerful if all of the trustees were willing to have the pension fund sign on officially. And so that is what we are recommending and asking for approval of today.

MR. BROWN: Any questions for Alison? Comments? So I guess, just for the record, we'll show that we are in agreement, or not in agreement, perhaps. So why don't we, for the record, take a vote, hear a motion to perhaps accept the invitation to join the Labor Rights Network, so we can have that on record?

MS. HIRSH: Sure. I will make a motion to

join.

MR. KAZANSKY: I second.

MR. BROWN: Great. So it has been seconded. All those in favor, say aye.

(Ayes were heard.)

MR. BROWN: Those opposed? Great, so --

MR. FAULKNER: I'd like to abstain.

MR. BROWN: Okay. Let the record show that Gregory abstains. So this does pass.

MS. HIRSH: Thank you very much.

MR. BROWN: Thank you. Next, Alison has an update on the BAM University.

MS. HIRSH: Yes. So you should all have calendar invitations for two Fridays in September, Friday, September 22nd and Friday, September 29th, in the controller's office, to -- we are having a sort of a two-day training.

One thing that has become clear over the last year-and-a-half, since I have been in this role, and since Steve started, et cetera, is that trustees across the systems really don't actually know the process within, that BAM takes with the consultant, in partnership with the consultants. From inception to the completion of any one investment, how does a recommendation actually come to the trustees, manager

recommendation? How does -- why doesn't a manager, another manager recommendation come to the trustees, and some do, et cetera.

And so we are putting together a two-day training to walk through the work that BAM does on behalf of the trustees, to go sort of step-by-step from asset allocation through, on the public markets -- on day one, we're going to be focusing on the public markets, and what is the RP process, what are the factors that go into the procurement, how does the process move forward, why does it take so long, although we're trying to fix that, et cetera, and what is all the work that the staff does on behalf of the trustees throughout that process? And then the second day, we'll be focusing on private markets.

In addition to that, as many of you know, we are launching the STAR project, the Strategic and Tactical Accountability Review, thanks to Tom's participation as one of the oversight committee members, and Bryan's. We are in the final stages of hiring McKinsey to take on that review. They will be sitting in on the two-day training, and at the end of the last day, the BAM staff will leave, actually, in the final session of the last day of the second day training, will leave trustees and McKinley, so that, as McKinley kicks

off -- we do the kickoff of their -- McKinsey, sorry, I'm in school mode, McKinley, McKinsey.

As McKinsey, that would be the sort of kickoff of McKinsey's work because they want to start by hearing from trustees, after seeing how BAM currently functions, what you, as trustees, see as needs lacking, et cetera, to really frame the work that they're going to do.

We are also finalizing potential outside speakers trying to figure out how to balance bringing some good external talent in as well with a real desire to really dig in deep to the work that BAM does, so that there's a clear understanding of everything that goes into what you all vote on every month or what we vote on every month.

The last thing is, as I said, you all have calendar invitations. The agenda with more detail is going out hopefully today or tomorrow. I would suggest that, if you can attend to, please just accept the calendar invitation because Dorsa is on like phone bank, you know, GOTV duty to make sure anybody who is not committed to coming gets a call. So you can choose if you want to talk to Dorsa over and over again over the next two weeks, feel free to ignore the calendar invite, and if you just want to say yes, then you will be free from a call and we'll see you on the 26th.

MR. BROWN: Alison, would you resend that calendar invitation? It might have been buried on the --

MS. REILLY: It definitely went out over the summer, so yes, it will be going back out today.

MR. BROWN: Great, thank you.

MS. HIRSH: Or tomorrow.

MR. BROWN: Good. Any questions for Allison and BAM University? Great, thank you.

I think we're ready to go out of general session and into executive session. So do I hear a motion?

MR. KAZANSKY: So moved.

MR. BROWN: Great. Do I hear a second?

MS. HIRSH: Second.

MR. BROWN: It has been seconded. All in favor of going into executive session, please say aye.

(Ayes were heard.)

MR. BROWN: All those opposed, say nay. Thank you. We are in executive session. Perhaps we can take a 10-minute break and come back at 12:00 o'clock.

(The proceedings were adjourned at 11:48 a.m.)

(The proceedings reconvened at 2:08 p.m.)

MR. BROWN: At this time, we'll have a readout from Ron Swingle.

MR. SWINGLE: Thank you. This is Ron Swingle, TRS Investment speaking.

In executive session of the Pension Fund, we received preliminary performance data. We received a presentation on a real estate commitment. Consensus was reached we received a real estate presentation. Consensus was reached. And we received two alternative credit presentations, which consensus was reached on both.

MR. BROWN: Great. Do you have any questions? Do I hear a motion to adjourn?

UNIDENTIFIED SPEAKER: So moved.

MR. BERGE: Second.

MR. BROWN: All in favor of adjourning, please say aye.

(Ayes were heard.)

MR. BROWN: All opposed? We are adjourned. Thank you.

(Thereupon, the proceedings were concluded at 2:09 p.m.)

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