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NEW YORK CITY TEACHERS' RETIREMENT SYSTEM
INVESTMENT MEETING

Held on Thursday, September 8, 2022
Via Videoconference
10:13 a.m.
ATTENDEES:
DEBRA PENNY, Chairperson, Trustee
DAVID KAZANSKY, Trustee
THOMAS BROWN, Trustee
SUMANTE RAY, Trustee, Mayor's Office
BRAD LANDER, Trustee, Comptroller
ALISON HIRSH, Trustee, Comptroller's Office
RUSSELL BUCKLEY, Trustee
PATRICIA REILLY, Teachers' Retirement System
SUSAN STANG, Teachers' Retirement System
ROBIN PELLISH, Rocaton
DEVON ALEXANDER, Rocaton
MICHAEL FULVIO, Rocaton
VALERIE BUDZIK, Teachers' Retirement System
REPORTED BY:
YAFFA KAPLAN
JOB NO. 8598345

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ATTENDEES (Continued):
LIZ SANCHEZ, Teachers' Retirement System
THAD McTIGUE, Teachers' Retirement System
DAVID LEVINE, Groom Law Group
STEVEN MEIER, Comptroller's Office
JOHN DORSA, Comptroller's Office
KOMIL ATAEV, Teachers' Retirement System
ISAAC GLOVINSKY, Teachers' Retirement System
PETYA NIKALOVA, Bureau of Asset Management
KATE VISCONTI, Bureau of Asset Management
KIM BOSTON, Bureau of Asset Management
TINA SUO, Bureau of Asset Management
SIMON LIANG, Bureau of Asset Management
MITCH FIELDING, Bureau of Asset Management
ED BERMAN, Bureau of Asset Management
DAN HAAS, Bureau of Asset Management
JIMMY YAN, Bureau of Asset Management
HYDE HSU, Bureau of Asset Management
MORAIMA PARES, Bureau of Asset Management
BLAIR BARBERINO, Bureau of Asset Management
WILFREDO SUAREZ, Bureau of Asset Management
JOHN ADLER, Mayor's Office
TOM CARROLL, Bureau of Asset Management
GREGORY ZELIKOVSKY, Office of the Actuary

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ATTENDEES:

KEVIN BALOAD
DEV SUBHASH, StepStone
YING LIN, StepStone
JAMES MAINA, StepStone

MS. REILLY: Good morning. Welcome to the investment meeting of the Teachers' Retirement Board for September 8, 2022. I will start by calling the roll.
Bryan Berge?
MR. RAY: Suman Ray for the Mayor's Office.
MS. REILLY: Thomas Brown?
MR. BROWN: Present. Good morning, Patricia.
MS. REILLY: Russell Buckley?
MR. BUCKLEY: On behalf of Panel For Educational Policy Chair Dr. Angela Green and Interim CFO Benjamin Schanback, I am here.
MS. REILLY: Alison Hirsh?
MS. HIRSH: Here on behalf of Comptroller Lander.
MS. REILLY: David Kazansky?
MR. KAZANSKY: Present.
MS. REILLY: Debra Penny?
MS. PENNY: Present.
MS. REILLY: We have a quorum. I will turn it over to you.
MS. PENNY: Thank you so much. Thank

you.

Good morning, everyone. Welcome back. Happy First Day of School to all of our public school children and teachers. We are going to start with a welcome and a little opening by our comptroller, Mr. Brad Lander.

MR. LANDER: Thank you so much, Deb.

It's really actually so nice to be here on a first day of school. I did a first day of school visit this morning in Brooklyn at Arts & Letters 305 United, really great public elementary, K through 8 actually. And really special to have the Teachers' Retirement System meeting on the first day and especially this year when, you know, last year's opening still so full of pandemic anxiety. Not that those are all behind us by a long shot, but still it really felt like the first day of school today just with that immense sense of possibility for these kids.

Actually my favorite was one of the classrooms I went into, the teacher had done first day feels and the kids all got stickies and they had all columns excited, happy. But

then a few kids admitted nervous, scared, anxious. And just what our teachers, our educators, and our principals make possible is extraordinary. Like it really is the foundation of our democracy, the foundation of our city's economy, the possibility of making this crazy, wonderful, diverse, messy city work together. So much of that comes from what happened in our public schools. So to have the responsibility of making sure those teachers and educators and administrators know that for the hard work they are doing they have got retirement security, it feels like an extra sacred duty today. So it's an honor to be here with you.

And it's also -- I will just say I -- it's been good. I have seen David out at a number of as part of the work to make sure those schools themselves are robustly funded, the teachers are getting the resources they need to do the work in the classrooms, as we are doing the work to make sure that their retirement security is invested soundly and will be there for them when they leave. So

fun and an honor to be here.

Also great to be here at my first meeting of Teachers' Retirement System with

Steve Meier. I know a lot of you got to meet him through the interview process or met him already, but to do sort of a formal introduction, we are really excited to have Steve on as our new chief investment officer. And I know he takes really seriously the service orientation of working with our partners, our labor trustees, our other public sector trustees, and really understanding that what we are doing is providing kind of stewardship advice, custodianship, and service to this set of people who are leading and making that set of decisions on these issues and trying to do it on the most transparent and thoughtful and prudent way that we possibly can. I am also excited about the fact that we do it with such attention to stewardship of those funds and fiduciary duties and a broad sense of responsibility.

So it was wonderful to join with you all

just a couple of days ago as part of the effort to make sure that through the shareholder action we are talking on through MasterCard, that guns are better tracked. And I understand the vote at the International Standards Organization about whether to create a merchant category code for standalone gun stores is likely to take place today or tomorrow so fingers crossed that goes in the right direction, but whether it does or not today or tomorrow, that action is really powerful and important.

We were part of our work together to file a shareholder resolution yesterday at Apple who have human rights possibly that make clear that their workers, like our New York City workers, have freedom of association and can make decisions about whether they want to join the union, but there is some reason to be concerned that Apple for all their good products and good investment returns is not following that policy. So we asked them to file the shareholder resolution that would require them to have an accounting for the gap

between what their stated International Labour Organization policy is and what their actions have been.

And then especially excited today to know that we are almost entirely complete with the direction of this Board to divest public equities from fossil fuel reserve owners. I was excited to see over the summer that the American Federation of Teachers is lifting up the work for net zero and prudent climate investment all across the country and obviously knowing that we here at TRS have been the forefront of that work. You know, kind of digging in and doing the hard work of identifying those companies, of doing it in a prudent way, of doing it alongside investment in climate solutions and renewables and showing that it's prudent and responsible investment is really exciting, so honored to be a big part of that. I want to say a big thank you to this Board for the partnership in all of that work.

I don't get to come all the time, but I always appreciate Alison keeping me very up to

date on what you guys are doing. And I think when I came in now eight months ago, seven months ago, you know, I made the commitment that Steve is about to pick up but that we really are taking seriously to understand that it's a role of partnership, dual relationship, and the trustees who are making the decisions who have the responsibilities set on the trustees individually and collectively by the members. So I hope you feel like we are living up to that set of promises that we made. If you see opportunities for us to continue to do better, I know that Steve and Alison and I and our whole team in the Comptroller's Office at the Bureau of Asset Management are really deeply, deeply committed.

MS. PENNY: We appreciate that. And on behalf of our members, we really appreciate the work that you do with the resolutions, especially the one with the MasterCard and tracking gun purchases. Mike Garland has been doing an awesome job with the proxy committee right in line with the Teachers, what they

feel and what they are committed to, so we really appreciate that work so thank you.

So I guess we are ready to continue, so we are going to go to the quarterly performance. And, Steve, you are on deck.

MR. MEIER: Great.

Thank you very much and good morning,

everyone. So I am actually going to go a little out of order. I am going to give a market update.

MS. PENNY: Don't mess up my order now. All right.

MR. MEIER: Given the current circumstances of the market, probably makes sense to talk about a little bit what's going on in the world for context around performance. So again thank you, thrilled to be here. I should -- also full disclosure, I should mention that I am originally from New York. I grew up in New Jersey, my wife is from Brooklyn, and my wife is actually a school teacher who did her graduate school training here in New York City as well, and my mother was a school teacher as well. So I am

more than happy to be here.

I am going to give you an overview what's going on in the market, but I am also consistently going to try to provide you with a couple of themes that recur and we should always be mindful of as we help you manage these pension assets. And, firstly, that's the focus on long-term outcomes, the benefits associated with diversification of investing, viewing the world through a global lens. The U.S. is not an island. There is a lot going on in the world that's impacting currency, capital flows and our domestic markets as well, and lastly investing consistently over time as opposed to trying to time the markets.

On the next slide -- Kate, one more, please. This is actually a headline of an article that I saw a little over two years that really caught my eye. What it emphasizes -- this is a sincere article. It emphasizes the long tail that these pension promises hold. This one happens to be 155 years this women, Irene Triplett, was actually the daughter of a Civil War veteran who fought for

ironically both the South and the North, retired with a pension, and as a pensioner with income in the 1920s was considered hot property. He married a woman 50 years younger than him and fathered Irene at the healthy old age of 83 and Ms. Triplett actually lived until she was 90 years old, so it really gives you a sense that we have the luxury to think on a long-term basis as opposed to worrying about every little thing in the market.

The next slide is actually one of my favorite charts. This is the Callan & Associates Periodic Table of Investment Returns. I think it does a great job of demonstrates variability of individual asset returns over time. Very hard to read, but I think it still makes the point that diversifying holdings across assets and strategies makes sense. I think the other thing I take away on the slide, and I am sure the consultants in the room have picked up on it already, the upper left-hand corner you can see emerging markets outperformed for five years pretty dramatically. That was

associated with BRICS; Brazil, Russia, India, China, and South of Africa, the buildup of sale of commodities. Also, China ahead of the Beijing 2008 Olympics. That would have been an interesting theme to know about or to have forecasted beforehand the position accordingly. Full disclosure, of course, you will notice the next year it's the worst-performing asset class. The orange is way down at the bottom and next year was up 78 percent, so volatility. But, again, you never know which asset class is going to outperform.

On the next slide, again this is just -- I think this is from here, the United Nations in New York City. Your plan's investment portfolio is invested in both U.S. and international assets, both private and public. Our domestic economy, as I said earlier, the markets are impacted by things that occur beyond our national borders and I think first on that list would be pandemics, talk about technological innovations, monetary policies at central banks, the impact on currency valuations, trade flows, and country

competitiveness. Geopolitical developments, and we are feeling some of the pain there associated with the war in Ukraine. We also are impacted by election results, trade pacts, and defensive alliances. Climate change preparedness is really having an impact on capital flows investments as well as the physical environment and the demand for raw materials. Again, this is just emphasizing the fact that U.S. is not an island; we are part of an integrated global economy in society.

The next slide, I believe you have seen this slide before very recently. And I suspect it had a title that talked about the lost decade and it talked about periods of time where over 10 or 12 or even more years that the 60/40 portfolio is flat and most recently time would have been 1966 to '82. I actually take something different away from this slide. I think what it shows you is that it's time in the market, meaning being an consistent investor as opposed to trying to time the market which no one can actually

really do well, very, very few people. But when I look at it, I look at the gradual upward shift over 120 years to the right in terms of wealth creation again, being part of the markets, being beneficiary of innovation, growth of the US, and global economy. The whole trend of globalization that ramped up in the '90s, labor force and productivity growth as well as increased standards of living around the world, we want to be part of that consistently.

The next slide, Kate, moving on to our economic and market update, inflation is top of mind these days both here and abroad. I am sure if you open any periodical or even watch the local news, you will see the inflation levels are near 40-year highs which is certainly a problem for the Fed. Our economy is emerging from the global pandemic and undergoing significant major transitions called the post-pandemic headwinds. We see increase in demand for goods, services, and experiences while supplies still last, pushing prices higher. We have also seen a pretty

dramatic shift in monetary policy regimes both here and abroad from loose to very tight with higher interest rates and a quantitative tightening in terms of balance sheet reduction again here in the United States, a little less so in Europe. We continue to see supply chain bottlenecks; a lot of that is associated with China's zero tolerance for COVID and their policy of lockdown. We have also seen pretty dramatic shortages for labor that are pushing wages higher. And, lastly, we have seen an increase in demand and price pressures on energy, commodity prices; a lot of that has to do with the Russian invasion of Ukraine.

On the next slide, again just emphasizing the point of inflation around the world; these levels of inflation on the left at 6.8 percent in June, PCE here in the States, CPI in Europe for July was 9.1, and CPI in the UK is over 10 percent and seems to be going much higher. Our economy I should say, the European, and UK economies is really suffering from the increase price and pressures on energy in particular. What's

going on in the marketplace really has pushed inflation well beyond and well above the Fed's, ECB's and Bank of England's 3 percent inflation target.

The next slide just looks at a recent University of Michigan survey which indicates that there are high inflation expectations which are now over 5 percent. Again, this is a survey. I think the good news also you can see on the top left on the right-hand side, it's come off the boil a little bit. And the Fed's real concern -- and I don't know if you saw, maybe it was onscreen this morning at 9:00, he was actually talking about the concern about inflation expectations becoming embedded and placing consistent price pressure on wages and impacting consumer behavior.

The next slide, getting back to oil and commodity prices. This is a slide that is a West Texas Intermediate crude oil spot rates and you can see they have polled pretty significantly higher this year. There were over $120 per barrel of oil. It's actually come off significantly. This chart you can't

see that, but in the upper 80s. It's actually at $82 per barrel today. On recessionary fares the Fed is more aggressive, the ECB is more aggressive, other central banks around the world tighten, there is increased concern there will be a recession at some point.

On the next slide here, we are looking at employment. In July the U.S. employment rate was 3.5 percent, a 50-year low. And it's moved slightly higher in August up to 3.7 percent probably for good reasons, in that there are more people joining the labor force now looking for work. The participation rate, you can see that's anticipated on the left-hand side; the yellow line up top.

Participation rate is now 62.4 percent. Pre-pandemic it was 63.4 percent. We are still down over 2 million workers in our domestic economy, again also contributing to price pressures on wages. The shortage of workers also made it **for difficult for employers to attract, retain, and hire workers in this environment. We have also demographic shifts, including retirement. There has been,

since the pandemic, 2.1 million excess retirement above what was expected. We have also seen low birth rates in the States which I think takes a longer period of time to adjust, probably 20 to 25 years. But we have also seen a significant decline in immigration trends, which was all made worse by the COVID pandemic.

On the next slide, this is what's referred to as the misery index over the past 30 years. And I don't know if you remember this; I remember this from being a high school student in the '70s: The misery index is simply the CPI inflation, plus the unemployment level. If you look at the right-hand side, you can see it popped up at the outset of the pandemic pretty dramatically and that was driven by unemployment spiking. And subsequent to some recovery, it's popped up again. This is almost entirely due to the high levels of inflation. Again, today's misery index really underscores the fact that inflation is a real problem for the average citizen in the United States. A couple of fun

facts from historical perspective, and I love history and financial history: The misery index actually had its highest level under Jimmy Carter in 1980 at 19.72 and its lowest under Dwight Eisenhower in 1953 at 2.97.

The next slide is a chart that really shows disruption that COVID placed on GDP around the world. These are five major economies or zones and you can see that on the right-hand side at the outset of the pandemic, the spike-down in GDP was fairly universal and the recoveries have been much more idiosyncratic depending on monetary policy, fiscal policy, and actually vaccination protocols around the world.

I think the other interesting thing about this slide, you can see the blue line is just below 10 percent probably 8-1/2 percent over time. That's China's economy. So for the prior eight years I guess before the pandemic, it was really an engine of growth for the entire world economy and that's certainly come off. And with their zero-tolerance COVID protocol, it's really

stretching that economy. You can see the economic growth in China right now is a little flat and even slightly negative here in the States. I will talk a little about that in a moment.

The next chart actually shows the details in the last six quarters in terms of U.S. GDP growth. On the far right-hand side, you can see there is more of a downdraft than there is uplift and that represents the U.S. economy in the first calendar quarter of '22 was down 1.6 percent followed by down 0.6 percent. The rule of thumb typically has been if you have two consecutive quarters of negative GDP growth, you are in a recession. I don't think that applies now because the employment market is just so strong as is the consumer, the consumer balance sheets are strong. You can see the gray bars are all positive; that represents consumer spending. So it's come down a little bit, but it's still pretty robust.

This next slide actually talks about the Federal Reserve dual mandate. And actually

when I was preparing slides for this meeting, I was surprised to find this out. This is actually specific language that we have taken from congressional legislation from 1977 that says the Fed's mandate was to achieve maximum employment, stable prices, and moderate long-term interest rates. And I count that as three mandates, but I guess the conventional wisdom is stable prices would lead to moderate long-term interest rates so they kind of shorten it and now it's just a dual mandate. Actually, Chair Powell was on the screen today answering questions. Someone asked if they were in conflict with one another and he said no, he still thinks they are useful. A couple of other things. Fed Chair Powell has recently stated his resolve to fight inflation and get it back to the 2 percent target level, even if it results in higher unemployment.

And at Jackson Hole at the end of August at the economics symposium he said fighting inflation will bring some pain to businesses and consumers. And there is a lot of talk about will the Fed be able to achieve what's

referred to as a soft landing or a reduction in inflation to their target level without causing a recession. The fact they are going aggressively in terms of raising rates in a short period of time increases the risk of a recession and the average recession results in an increase in unemployment of 2 percent or higher, so that's a real challenge for the Fed at this point.

The next slide, I have to admit these are two of my favorite slides. The top actually shows 30 years of federal fund rate changes, hikes and cuts. As a general matter since 1983, it's a slightly longer period than shown here, the Fed has increased interest rates 86 times; 75 of those hikes have actually been less than 50 basis points, meaning 25 basis points. We can't say that with any certainty because I don't know if you remember, but before 1992 they never told you how much they were cutting. They changed their open market activities to reflect that. I think this also underscores the fact that the cycle, the Fed only began coming up the

zero level at mark plus 25 basis points. They have raised points subsequent to that 50 basis points which is unusual, two subsequent hikes of 75 basis points. And you can see on the far right-hand side, the last time they hiked 75 basis points was in 1994. And, if you remember, that caused all sorts of problems out in California with inverse floaters and Orange County defaulting on their debt. Anyway, the market is still currently pricing in a 75 basis point rate height for September '21 followed by another 50 and another 25 in November, December respectively. So the expectation is that at the end of the year, you will see short-term official interest rates in the range of 3.75 and 4 percent. And that's pretty tight relative to where it's been.

The slide at the bottom actually is actually the Goldman Sachs Financial Conditions Index; that actually reflects --

you see the slope up to the right, on the far right, and reflects tightening financial conditions. And the index actually looks at

the target Fed fund level which is great, moving higher, the trade rate exchange rate which is moving higher and S&P 500 which is moving lower, investment grade corporate bond spreads which have slightly moved higher, and ten-year U.S. treasury yields which have moved dramatically higher. So stay tuned. I think there is a little bit more hiking and a little more financial condition tightening and my expectation is the Fed will be at higher levels for a longer period of time, which will be pretty challenging for the economy to avert a recession.

On the next slide, higher U.S. official rates and quantitative tightening and tightening monetary conditions have also caused the U.S. treasury yield curve to shift higher. I'm sorry, this is maybe too technical, but I love this stuff. You can see where it's sorted out a year ago on the low blue line and how low interest rates, how relatively flat the yield curve was on the short end and shifted higher at the beginning of the year, that orange slide in the

middle-ish. And you can see now on the top line that rates have moved substantially higher this year and the yield curve is actually now inverted, which is a fancy way of saying the short rates are higher than the longer-term rates and that reflects a couple of things. First, there is no real yield premium that goes with buying further out the curve, but also reflects monetary policy is moving higher. At some point there will be a risk of recession and reduction in short rates again. Lastly, on the right-hand side, you can see the two-year treasury yield spread to ten-year treasury yield spread is in negative territory now about 20 basis points. That's really an unusual circumstance.

On the next slide it's a look at credit spreads investment grade and high-yield credit spreads, and this impacts your investment grade corporate bonds and high-yield corporate bonds. This is a way of looking at the fact that when economic uncertainty increases and the potential for recession increases, it hurts corporate credit directly, but in

different -- in varying amounts. So the upper red bar is actually the high-yield credit spreads which I am glad you can't see this slide because I can't see with or without my glasses on, but I don't think it's correct. High-yield spreads right now are about 475 basis points above corresponding U.S. treasuries and investment grade spreads which are lower have also moved up a little bit higher, about 140 basis points above treasuries. And, again, that just reflects that there is more uncertainty in the marketplace.

On the next slide, this emphasizes -- there is a lot of information on here, but I will point you to what's relevant. This actually points to the fact that the pain in the bond market is global. And I mentioned earlier -- I think I mentioned earlier, at least I thought I mentioned earlier: U.S. treasury ten-year yield if you look at the far right, it's the top left, it says year-to-date change or "YDTD Change." Our interest rates right now as of the time of this print was 150

basis points higher, but look down the list; these are all major sovereign debt issues in ten years. They are all up 1, 2, 200-plus basis points with one big exception and that's China; it's the last one on the lower right-hand side. Treasury yields there have actually come down 13 basis points and that's because they are actually reducing rates. Their GDP growth is flat. Their policy of zero COVID tolerance is really hampering the economy. Right now I don't know if you read, but a week ago they closed down their fourth largest city which took 21 million people out of the marketplace and shut down businesses. In China right now there are 44 million people that are in lockdown, so that policy is having a negative impact on China's growth. But again as you have seen in the chart earlier, they also have been an engine of GDP growth around the world which is now hampered.

On the next slide, this is really very, very interesting and very unusual. The U.S. dollar is incredibly strong this year. It's trading at two- and three-decade highs against several trading pairs or current currencies and this is due to the fact that our interest rates have moved up higher faster here in the States. We have been -- the Fed, although they might have gotten religion late, they have been fairly aggressive and very aggressive raising rates. Our economy is generally stronger. We also benefit from having reserve currency status, in particular oil. Everything in oil is created in dollars. And, lastly, flight-to-quality buying associated with geopolitical risks. Again, the Russia's invasion of Ukraine and sabre-rattling by China in the straits of Taiwan have caused people to move into U.S. dollar and out of other currencies. There is a couple of impacts worth noting about the strength of the dollar. Firstly, it lowers earnings for U.S. companies that have operations abroad. So as they sell products in the UK in pounds and repatriating those dollars for reporting purposes in the States, they are at low levels because the pound has lost value relative to the dollar. And it

also lowers our competitiveness because as we export, because the dollar is so strong, our products are less competitive; they are more expensive abroad. And lastly, I am trying not to be so down, there is some positive news. It actually lowers the imported inflation for imported goods. Because of the strength of the dollar, we buy at slightly lower levels which helps the Fed.

The next slide I won't belabor the point, I just think this is fascinating: The euro versus the dollar, the pound versus the dollar, and the Japanese yen versus the dollar at all over 20-year lows; meaning the dollar is incredibly strong. This is highly unusual. And everyone talks about the euro in particular. It's at parity with the dollar today. Each euro buys a dollar whereas back 15 years ago, a euro bought a $1.58.

The next slide, now we are moving more into the meat around investments. These slides are for the past 30 years and on the left-hand side it actually shows volatility, the volatility index or the VIX which is

derived from the S&P Index options pricing.

It's fancy, but what it really shows is the volatility of stock prices have picked up. This is referred to also as the Wall Street Fear Index and the higher it is, the more fear there is in the marketplace. And there is a saying -- it's pithy; I don't know if it really impacts how we make investment decisions. The saying anyway goes when the VIX is high, it's time to buy and when the VIX is low, it's time to go. That basically means be a contrarian. When there is more concern and more uncertainty in the marketplace and more volatility, it's better to step in. On the right-hand side, this is a similar slide that shows the MOVE index for bonds. It's the Merrill Lynch Options Volatility Estimate. Similarly, it looks at options pricing at 2's, 5's, 10's, and 30's treasuries. You can see that's moved up pretty substantially as well.

On the next slide talking about general market returns, the left-hand side actually shows that over the past 20 years equity index gains have dominated. If you look at that

cluster of returns between zero and 10 percent, that's for U.S., non-U.S, and Russell 3000 broad U.S. stock prices. So generally there is uplift associated with investing in equities certainly over the last 20 years. On the far right-hand side, you can see all three pairs have been down for the first and second quarter of calendar year 2022. We have experienced in S&P 500 the worst first-half performance since 1962, down 20 percent. And note that the S&P 500 has been 22 in the last 30 years. It's been down only eight years. On average, it's up 10 percent. Worse, it's been down 38 percent and at best it's been up 34 percent. And on the far right-hand side, this is an even more remarkable slide I believe and it shows Bloomberg Barclays Aggregate Index and it's remarkably negative recently. Look on the far right-hand side how far down that is. The U.S. Ag had its worse first-half performance since 1976, down 10.3 percent. Ten-year U.S. treasuries, I don't know how they calculated this. But I can promise if someone has a question, I will get

the answer. U.S. ten-year treasury had their worst first-half performance since 1788. I don't think the government was issuing debt back then, so I suspect they probably used New York City bonds or some manner of local bonds at a proxy. I am looking at the consultant. I have a book on it, but I don't have it here.

And I would say the last point I would make is the U.S. Ag has been up 26 of the past 30 years. Its best return for the full year was up 18 percent. Its worst return was down negative 3 percent. And year to date in 2022, it's down over 10 percent. So, again, these are really extraordinary times.

The next slide, it actually reflects -- this is a great slide. It reflects the full fiscal year of 2022. So on the left, that's the second half of calendar year 2021. In the middle, it's the first half of calendar year 2022. And on the far right, that's the results for the full fiscal year 2022. You can see on the left that the year is off to a pretty good start. Obviously emerging markets equities have had some headwind down 9-plus

percent, but the other markets are actually holding their own. There is a dramatic drawdown in stock and bond prices in the first half of this year, calendar year, second half fiscal year that overpowered any returns we saw in the first half. You can see the product is in the far right-hand side; negative returns across the board. There is one exception here and that's oil, and WTI oil is up 43 percent for the year.

On the next slide, actually this chart shows the relative outperformance of U.S. stocks relative to non-U.S. stocks and emerging market stocks. On the left-hand side, that dark line I can't see. It's dark blue. It looks blue here, but I thought it was black. The cumulative returns for U.S. equities have been very substantially higher than those four in the red. Developed ex-U.S. and emerging markets in blue. The middle chart actually shows the performance for fiscal year 2022. Again, you can see it's performed relatively well in the first half and then down significantly in the second

half. And finally the chart on the right-hand side shows fiscal year-to-date performance 2023. It's really two months of data. You can see they had a pretty substantial rally in July and then sell-off in August as well now in terms of performance. So I set the table and I hope I have managed expectations down. I tried to be fair and honest. It's been a tough marketplace in which to invest, as indicated earlier. Public markets assets and investments have actually been under significant negative pressure in 2022.

Actually, can you go to the next slide, Kate? Thanks. As a result, performance across all public markets was negative for both the second quarter 2022 and the full fiscal year 2022. You can see that reflected here. Those two columns that stick out like sore red thumbs reflect those negative performances. The good news is all the five-year returns -- again thinking with the long-term hat, wearing a long-term hat, thinking from a long-term perspective the past five years of cumulative returns have all been

positive. That's relative even in regards to U.S. equities relative to the expected returns. Those expected returns, I have to caveat those are over a ten-year investment horizon. Those are based on the capital market assumptions so we still have five years to get above and beyond those levels, but again U.S. equities held up and performed reasonably well irrespective of all these outcomes.

Are there any questions? I should have said that upfront. There is no such thing as a bad question, but there might be a bad answer for me. But I will try to be more transparent.

MR. KAZANSKY: We learned as trustees every question we ask is a great question.

MR. MEIER: I learned that as well. Now that I am on the buy side for New York City, my jokes are funnier, I am better looking.

The next slide, Kate. Actually reflects again the market has been very challenging in all areas. This is actually the Teachers' Retirement System net public market returns by

strategy. And we have got the benefit of John Merseburg with U.S.; he is going to do a deeper dive in equities. I will leave it to him to talk about performance in equities specifically. In the fixed income space on the lower part of the chart, you can see the performance has been challenging as well.

Again for the full fiscal year, but perhaps outperforming some of the benchmarks. And again here I think the takeaway, the long-term view, the five-year returns have been all positive. The one area that really shines is cash. I say that with a smile because we technically have a zero allocation, but cash is king and is generating positive returns for that period of time.

On the next slide, this is much better news. I wanted to end on a higher note. These are private market returns by strategy. And you can see there's been a significant outperformance in the last year for the private equity of 27-1/2 percent, real estate core up 31 percent, noncore up 29 percent, infrastructure up 17 percent, and

opportunistic fixed income up 4.6 percent. So the diversification across public and private markets has been powerful. And a cynic would look at this and say yes, okay, I see those private markets have outperformed, but they are marked with a lag. They tend to be less price volatile and less -- respond less to economic developments in the marketplace. I met with one of your private equity managers yesterday and he made the statement that yes, we don't have to worry about marking our positions to market today because we are not necessarily selling today as if we are liquidating stock. We can be more selective in terms of when we choose to sell a position we are long. If anything as starts, things can cheapen up -- and Eneasz can speak better to that, but as things start to cheapen up, there is a lot of dry powder in the programs we have waiting to be called and put to work as well.

And on the next slide, this is actually quarter-to-date performance. We can see that for the quarter we have actually outperformed

the policy benchmark. The policy target weight benchmark came in at negative 9.43 percent where the actual plan came in negative 8.9 percent, so that's 53 basis points of outperformance. And that's driven by two things: The allocation effect, those over and underweights plus-30 basis points in that small middle chart and on the right-hand side investment manager outperformance alpha delivered by our investment managers at 23-plus basis points. No one likes to see negative returns, but on a relative basis, that's a very fairly good outcome.

On the next slide, as I mentioned, John is going to talk about -- more about the equity market performance. This actually looks at the three-month performance for public markets and one-year excess performance for publics as well. And you can see here that it's been a challenging market, perhaps more so for equities. I know that John is going to cover that, but fixed income has pretty much performed as expected given the environment that we are operating in.

MR. LANDER: Just to make sure I understand this, our U.S. equities was -- TRS equities was 12 basis points below the Russell 3000 for the quarter?

MR. MEIER: Yes. Yes, that's exactly right.

And the next slide again this shows the relative, the strong outperformance associated with the private market holdings for the year. If you look across, you can see one year with the exception of noncore real estate, it's down a little bit. It's 19 points basis points below its target. That index is actually above and beyond what the benchmark is in core by 200 basis points, so not necessarily a bad result. I think the more important thing to look at as long-term investors is that the three-year, five-year, ten-year and since-inception numbers are all well above those benchmark targets and that is a good outcome.

MR. LANDER: Our private equity benchmark is Russell 3000 plus 300 basis points as opposed to some private equity

benchmark?

MR. MEIER: Yes, that's pretty standard. It looks at the public stock market, plus an illiquidity frame associated with private holdings. But that -- those are the actual benchmarks that are in the investment policy statement.

Last slide -- next slide, I should say. I just talked about some of the rebalancing activities that we undertook in the second quarter calendar year 2022. We had two mid-cap managers come on and we had to fund and these changes reflect that, that we raised capital by selling large and mid cap and small cap and reallocated it into these mid-cap managers. We also had to sell some short-term treasuries to fund that and then we actually bought large cap again to rebalance the market cap weighting across the portfolios.

Next, Kate. All the over and underweights for the public markets are basically within tolerance, within expectations. It's our job -- as portfolio managers and given the targets that you have

given us in your asset allocation in the investment policy statements, it's our job to manage to those targets. We do so very carefully looking at a couple of things. We look at certainly the transaction costs associated with rebalancing. The targets typically have some variability of 2 to 4 percent depending upon the asset class around them, but you can see they are all pretty tight to where they are supposed to be.

And with that, I am going to turn it over to Ed Berman who is going to do a deep dive and discussion of our risk. It's going to be a little different than I think you have seen in the past. Ed.

MR. BERMAN: It's a difficult chair to fill.

MR. MEIER: He is a difficult act to follow as well. I seem to get to speak right after him every time.

MR. BERMAN: Thank you. Excited to be here. This is my first time meeting with the boards and we do this as an opportunity to refresh the presentation with the new visuals.

We will go over them as we talk and first I want to thank the risk team for putting together the risk analysis, and specifically Dan Haas is now on the line. You know him very well and Dan is on standby to correct the mistakes I am making probably.

Kate, can we look at the first slide, please. So we will go over the plan in two slides. We will first focus on the plan in the top level and then dive into the individual asset classes. So for this quarter, the risks for the total risk for the plans to 11.6 percent. Almost a 1 percent change from the previous quarter, you can see at the bottom right of this table. But what does this number mean; should we worry about it, should we be concerned, or is it in line with expectations? So we are trying to peel the onion a little bit and think what this number means, what in fact this number will tell us. So broadly this speaks that there are two main inputs into the risk levels. It's the markets and the portfolio construction process.

When we build a portfolio, the most important decision we make is a stock/bond split; how much we put in equity, how many -- how much in fixed income. The stocks always bring up the highest appreciation, the best chance to make returns, but they also bring us the highest risk so we try to balance it with the fixed income allocation which acts as a balance and provides the most optimal risk/return profile. So we captured this in the first column on this table, which we will call market portfolio. It's just a standard blend of 60/40, 60 percent of MSCI ACWI which is the broadest global benchmark and 40 percent to the Barclays U.S. Ag which is the broadest measure of the U.S. fixed income.

The next step in the investment process is the asset allocation process and this is captured in Column 2, which is the policy benchmark. In this exercise which is coming very soon, again we split the stock portion and the fixed income portion in individual asset classes. And you can see at the bottom of this page, that 11 buckets. And this is,

as mentioned, captured by the second column.

And the final step in the investment process is the actual portfolio, the plan itself. And that's where we do the manager selection, the intermediate rebalancing, there is some cash flow needs, day-to-day management of the portfolio.

So let's start with Column 1, market portfolio and that will give us a handle or feel of what markets did in the baseline for our analysis. So in the market portfolio there are three main dimensions of risk which correspond to the three main dimensions how the portfolio makes money; equities, interest rate, and credit. So the equity is probably most intuitive. It's captured by asset allocation and it's 60 percent by construction. The interest rate risk, which essentially is the time value of money, is measured by so-called interest rate duration. So what is duration? And that's simply a conveniently scaling factor that translates interest rate moves into the market value changes. So we can see that for this quarter,

the interest rate durations for the market portfolio is 2.6 years. It simply means that 1 percent increase in rate means a 2.6 percent loss for the portfolio.

The third and last dimension of risk is credit and credit represents the risk that the borrowers may not repay the loans, the risk of default. Much like interest rate allocation, credit is measured by duration. And again it's a simple scaling factor and 1 point duration, 1.6 means that the 1 percent increase in spread levels translates into 1.6 percent loss for the portfolio. You will notice that the interest duration is lower than credit duration. It's simply reflective of the fact that Barclays Ag is mostly -- as a matter of fact, about 60 percent of Barclays Ag is captured by the government.

So what does this portfolio mean for the risk levels? You can see them at the bottom of this table in Column 1. So we capture here two broad risk measures. First of all, total risk. Total risk for the portfolio for the market portfolio is 11.1 percent. What does

this number mean? It means that over the next 12 months, we expect the portfolio to return about 11.1 percent, within this range plus or minus. And it's about a 15 percent chance that it goes a little higher than 11.1 percent and there is a chance it will be lower than 11.1 percent. If you want to see that for this quarter, the risk level increased quite significantly by about .9 percent. That's simply a reflection of this period.

I will go back to Steve's portion of the presentation. The equities as measured by the VIX index is very high level of risk. As a matter of fact, VIX is now about twice the pre-COVID level. The actions are more dramatic in the fixed income. So the move index, which is for fixed income, is about three times pre-COVID level. As a matter of fact, we need to go back to the global financial crisis days to see the same level of risk in the fixed income markets. So it's not surprising that our market portfolio risk levels are impacted and that gives us a very nice baseline as we move forward and assess

these levels to the portfolio.

The second measure of risk you can see at the bottom of this table is the beta to the S&P 500. So while total risk level is calibrated to longer-term performance, it's a 12-month return, the beta is a shorter measure. To give you a sense of how much shorter, it shifts with the short-term moves within the S&P. And we picked the S&P 500 as probably the most representative, the most important equity index globally. So in the entire stock markets globally, the U.S. market captured about 60 percent of total capitalization. And out of all U.S. equity, the S&P 500 is by far the most important index. So the beta of .56 means for 1 percent change in the S&P, the portfolio will shift .56.

MR. BROWN: This is for the S&P?

MR. BERMAN: This is for the S&P, and that, of course, includes fixed income and equity and everything.

So you will notice this number is lower than the 60 percent allocation. And why this

is so? First of all, it's because of the international allocation. As the S&P moves, we expect international equities to move as well but not as much. But also fixed income allocation, so that's where you see the diversification benefits. That's exactly the purpose of the diversification process and that's how we expect it to be. You can see also the beta is broadly unchanged, it remains steady, and again it's a positive outcome.

Let's move to the policy benchmark. That's where we adjust for the asset allocation process. So what changed? First of all, you will notice at the top of the table that the asset allocation picked up with slightly more equity risk and that's of course again by construction; that's not surprising. You will notice that the interest rate duration, interest rate risk is slightly lower. And this is simply because we take an allocation to high yield, again public allocation process. High yield tends to be of a shorter maturity, meaning lower interest rate duration. You will also notice that the

credit spread duration is slightly lower. That's because we have allocation to TIPS as inflation protection and it's very relevant in the current environment.

So what does that mean for the risk levels? Moving to the bottom of the page, you will see that the total risk remains almost unchanged. And that's -- again, it's a positive outcome. We take more equity allocation, we take exposure to high yield, to private markets, we take exposure across the entire structure, yet the risk levels remains unchanged. It's a positive; that's where we see diversification at work. You will notice that the beta to S&P is slightly lower, not material but slightly lower. Most importantly the changes to the risk level are entirely in line with the changes to the market portfolio. So, again, gives us confidence knowing that the changes in risk level are driven by the markets, not something that our manager does. And, again, it's a positive outcome.

MR. BROWN: Yay.

MR. BERMAN: Finally to the plan itself,

that's captured in the last column. There are small differences. First of all, you will notice the equity level is slightly different. We will have more to say about it on the next page. I won't spoil it, but broadly speaking the rebalancing ranges. You will notice that interest rate duration is slightly higher. This is because of allocation to the ETI program, which is exposure to long bonds so it's not surprising.

So what does it mean for risks? You will see at the bottom of the table and you will notice that the risk level is slightly higher, at 11.6 percent. What drove this change? To some degree, it's the allocation to active managers primarily outside of the United States developed markets. But the most important contributor is the credit markets as we take material allocation to private equity, infrastructure, OFI, private real estate also brings high levels of risk again. We will have more to say about it on the next page. The beta to S&P is slightly higher, not materially but you see a slight exposure to

the S&P; it's not surprising. And here I will bring forward the third measure of risk, active risk. So much like as the total risk level, active risk assesses the excess returns for the portfolio over the benchmark. And what it is is quite simply the active risk is 1.8 percent, meaning that the excess return over the next 12 months is expected to be within 1.8 percent range plus or minus. It's also about a 15 percent chance that excess returns will be higher and unfortunately about a 15 percent chance that excess returns will be lower. There is no free lunch unfortunately, so it's all up and down. So based on the 1.8 percent is dealing to some extent by the active managers. It's the private assets.

Again, I am deferring to the next page, but before we go to the next page I want to draw attention to the two charts on the right. So Chart 1 shows the evolution of the risk measures between these three portfolios over the past 12 months. You will notice how well-aligned these portfolios are; everything

moves together. Again, gives me some comfort. It's not something our managers do. Again, it's a positive outcome and it means that the portfolio functions as expected. You will notice that all three risk measures bottomed out around January of this year, January December and this, again, is a function of markets. As well as the volatility picked up significantly in the first quarter, second quarter of this year, the risk levels went up but the broad relationship between the benchmark and portfolio remains the same. And finally the chart at the bottom of this page, Chart 2, shows the evolution of active risk which is the excess returns. Again, the same messaging, very consistent. It bottomed out at about 1.6 around December of last year and has been ticking up driven by the high-risk levels in the marketplace, but again the relationship is steady as you would hope to see for a portfolio this size and this level of diversification.

So I will pause here if there are any

questions before we move to the asset class

risks.

MR. LANDER: I am going to have to leave. I will chime in one thing and Alison will follow up on and Steve hinted at. We look forward moving into the asset allocation process in the near future and, you know, part of what we are waiting for and kind of hoping for and working for is that the governor signs the basket clause bill which she indicated basically all bills that were vetoed by the prior governor at some point, she'll wait until after the election to deal with them. So I think she is going to look at them in between November and December. We have done -- Alison has done a really nice job of rounding up a lot of folks in the investment community, in the labor community, in the political community to communicate there is a broad consensus that giving us more flexibility makes a lot of sense. That doesn't mean we would automatically in the asset allocation process take advantage of that flexibility. That will be a decision the trustees will make in consultation with our

investment experts, but hopefully we will have that and we will know for sure by the end of the year. Thank you all.

MS. PENNY: Thank you. Have a good day.

MR. BERMAN: Next slide, please. Kate, can we go to the next slide, please. Thank you. So here we dive more into the inside of the portfolio. We will consider individual asset classes as defined by the strategic benchmark.

So, first of all, let's focus on the Column 1 where we review the allocations. The message here is that allocations are broadly in line with the benchmark. There are small overweights, underweights which are primarily within daily range. There is one exception here at the bottom of the page, as I am sure you are all aware. We are in slight overweight in the private equity allocation and slightly underweight in the rest of the alternatives; private real estate, infrastructure, and OFI.

In the next column, Column 2, we look at the risk levels, total risk levels at the asset class level, and the contribution to the portfolio. Actually, the same information is captured in the chart in the bottom of the page. A little bit easier to follow, so you can track mostly the chart instead of the numbers. I realize this page is a little dense, a lot of numbers here, but that's just unfortunately hard to avoid. Risk tends to be about numbers. So focusing at the chart on the bottom of the page, the blue bars represent the portfolio allocations and the orange bars represent the risk contribution. So several takeaways from this chart. First of all, there is one asset class that punches well above its weight, its equities, and as a matter of fact the public and private equity taken together contribute about 85 percent of the total risk level. This is not surprising. This is actually typical for a multi-asset portfolio; risk levels are much higher. Within the asset allocation, the U.S. equities tend to be the highest risk level and that's, first of all, consistent with the highest returns from the U.S. markets, but also from a

high ratio of technology allocation within the U.S. stocks. So it's not surprising. Actually, the S&P 500 is one of the riskiest indices among global markets. The private equities are also high risk and that's unfortunately the way it is; high returns mean high risk. But also look at the fixed income allocation in the middle of this chart. Specifically core fixed income and TIPS, you will notice a tall blue chart and almost no orange. So fixed income provides diversification; it's a balance for the portfolio. It's how it's intended to be and, again, it's a good outcome.

The next column on this page, the chart, Column Number 3, active risk. Again just to remind you, it's the assessment of the excess returns. There is some takeaways here. First of all, focusing on the public markets, active risk tends to be low. For public equity it's about 1 percent and for fixed income it's less. Again, that's not surprising; it's by construction. But there are some areas of risk concentration. In particular if you

focus on the developed markets ex-U.S, you will notice that the active risk is almost 3 percent and this is a reflection of the active nature of our managers. Bailie Gifford I won't draw as much, as John will cover a lot of it in more details and the same goes for emerging markets. But within fixed income, you will see that the active risks are low and that's simply a reflection of the mostly passive nature of our fixed income allocation. It's as expected and in line with the portfolio construction process. The numbers get to be much larger on the bottom of the page. That's where we get into private equities, and I hope it doesn't come as a surprise. We benchmark private equities against public markets. We know they perform very differently. We expect excess returns from private markets to be different and that's reflected in our risk numbers, so that's not surprising.

It's probably more interesting is comparing risk against returns because I keep mentioning that risk is a measure of return,

right, and that's what's captured in Column 4. I'm sorry. The first thing that jumps out at me in Column 4 is the sea of red in the public markets. And I want to connect it to Steve's portion of the presentation as we just heard. This was probably the most challenging period for the 60/40. We need to go back about a hundred years to see similar performance. All this portfolio is not constructed for this quarter. We are more long-term investors so it's not surprising it was a challenge in this quarter as Steve just mentioned, but it's interesting to see how well it compares against our risk measures and by five years it's actually not surprising. For the U.S. equity allocation, the returns were well within expectation. For the developed markets ex-U.S, the returns were much worse than expectations. Again, go back to what I said before about 15 percent chance that the returns will be worse. We are definitely within this range. This is a unique historical period and the returns for developed market ex-U.S, Bailie Gifford comes

to mind, were unfortunately disappointing. The same can be said about fixed income where the treasury markets, again quoting back from

Steve, you have to go back to the 18th century to find a comparable period. So it's not surprising that the returns for the fixed income allocation were worse than expected. At the same time, the excess returns actually performed well and it conformed to our model. You see that the excess returns were well within our estimates. So what it tells us is that the managers performed as we wanted them to perform. Investments performed as expected, but we are at the mercy of the markets. Private markets provide a very useful diversification and that's at the bottom of the page. There is one exception. It's a good exception; private real estate. It performed well and above much of our estimates. I hope it will continue, but the rest of the asset classes performed as our model estimate.

So I will pause here if there are any questions before we move towards

forward-looking projections.

MS. PENNY: Any questions?

MR. BROWN: I am still shocked we have records back to 1788.

MR. BERMAN: Yes, but it's clearly a sign of the times.

MR. BUCKLEY: The blue sheet on the total risk contribution column, what is that intended to imply across the various asset classes and sub-asset classes? I am just noticing we got emerging market 11.9 contribution total risk. I assume that whole column is intended to sum to 100. The conditional formatting between the 11.9 and say the 0.8 for the TIPS for example, I just wanted to better understand what that column is intending to convey.

MR. BERMAN: The conditional formatting, it identifies the asset classes in each group which provides the highest and lowest allocation.

MR. BUCKLEY: So just max and min.

MR. BERMAN: So it's within each bucket within equities, within fixed income.

MR. BUCKLEY: Okay, great. Thank you.

MR. BERMAN: I would say there is no huge discoveries here, not to say there were none. There were no huge discoveries; there were no huge takeaways. I would hate to bring this to the table, but if there were, we, of course, would have communicated it long before this meeting.

MR. MEIER: I appreciate some of the concepts Ed has been going through. I think he is doing a great job presenting them, but they are complex. I have been doing this for 38 years. I am a certified financial risk manager, and the first time I went through it with Ed, my head was spinning a little bit, but it's the third time for me and actually when it sinks in, it's really very, very informative. And I hope it ties into the portfolio review that we did earlier as well, but we had to recruit someone with a Ph.D. in organic chemistry to manage the risk for your portfolio.

MR. BERMAN: I am not sure it's that important, but yes.

MR. MEIER: In a good way.

MR. BERMAN: Risk is mostly multidimensional, it's complex. We are more than happy to work with Steve, maybe too much. I am more than happy to answer questions and provide color on that. There is significantly more to be said.

Can we please turn to the next slide. So here we are looking at the forward-looking projections as has been the custom. And I think the purpose of this is to highlight some possible evolutions for the markets going forward, but primarily to think about the asset allocation and to see how the portfolio may perform in different environments. And I think it's as Steve says several times a day, we have no crystal ball which we don't and I would say this part in particular is very difficult for projections. I have to say that our conviction level is not very high and it's probably easy to draw thousands of scenarios; it's more difficult to pinpoint more likely scenarios. So I am not assigning any probabilities, but this is a reflection of how

we see the world and how we see the future evolution.

So for the base-case scenario which I would say is medium level of conviction for us, we see a softish landing for the U.S. economy and I would say it's -- the time is probably around six months. I think it will deteriorate if we project it further than that, but we see the Federal Reserve moderately successful in guiding the U.S. economy to a soft landing. The stock market probably has a little bit more downside. The rates remain elevated, but probably more so in the curve. But the inflation will probably moderate as supply lines get streamlined, but the credit spread also remain elevated and slightly widened and that's driven by the headwinds facing the companies in terms of high interest rates and just the ability to generate profits and the commodity prices will moderate slightly given a slowdown in the economy and the supply lines.

The negative surprise is probably a growing conviction at this point especially

given the recent Powell speech in Jackson Hole, and that's why we see the stock market taking probably a deeper downside. So average, probably minus 15 percent. We see the rates remaining elevated, moving higher. The curve is inverted further. Inflation unfortunately is still a big concern and potentially moving higher and the credit spreads, of course, widen driven by headwind space globally. Of course connected to the inflation, commodity prices remain high and even higher. So what will be maybe a catalyst for the negative surprise? Well, first of all, it's the Federal Reserve overtightening and with the unique scenario the Federal Reserve may be tightening in a slowed economy, that's not a positive environment. Ongoing war in Europe may have an impact specifically on the Western Europe. Germany comes to mind, but also France, Italy, and other countries. And we are watching carefully the situation in China. The Chinese economy, again as Steve mentioned, has been a driver of global expansion up until COVID. It's been

performing fairly poorly recently. It's in the restructuring phase now.

And, finally, there is always a chance for a positive surprise even though our conviction is very low. And I would say the best driver at this point of a positive surprise is more on the policy side. I think it's a question of stimulus. So Germany just announced recently the fiscal stimulus and its restructuring of the energy market capturing energy prices. There's a possibility for domestic stimulus. And in China watching the commerce, there is a chance there will be a stimulus in China as well. So in this case, markets may respond positively. You can see an upside in the U.S. S&P 500. The curve will probably steepen to be more normal and front end will move slightly down and the back end will move higher. Inflation will moderate and the credit spreads will tighten.

So what does it mean for the portfolio? The results are shown in the two charts at the bottom. So first of all, focusing on the Chart 1 which shows the evolution at the

portfolio level, there are several interesting takeaways. First of all, the direction of travel is not surprising. I mean, we understand when the stock market tanks we will probably face some losses, but the magnitude is interesting. So let's focus, first of all, on the gray bar which shows the base-case scenario. And the base case will project the stock market decline by about minus 5 percent. Notice that the portfolio is declining by minus 3.8 percent. That's a big change. So we are capturing almost 80 percent of the equity markets. It's more than what would be applied by 60 percent allocation. And why that is so? You can see in the chart on the right the asset classes, the gray bars, they all point down. There is no diversification. Under this scenario, all asset classes perform poorly. The TIPS detract, the core fixed income detracts. As a matter of fact, you will notice that the core fixed income is the only asset class that detracts under any of these risk scenarios.

Focusing on the positive surprise again,

it performs worse than expected. For a 10 percent upwards in equities, the portfolio returns only plus 4.6 returns while not capturing the full size of the upside. Less than 60 percent is supplied by the equity market. Again focusing on the green bars on the chart on the right, you see the TIPS detracting. The only scenario that performs sort of as expected is the negative surprise; it performs in line with the allocation. So the technical term for this behavior is negative conductivity. It's not what you want to see from the asset allocation and, broadly speaking, the reason for that is a fairly unique economic environment. We are long-term investors. The asset allocation is calibrated to long term. The current environment is anything but long term. The technical term, it's a black swan event. It's an outlier.

Again, no crystal ball. These are just three possible scenarios. We cannot even assign probabilities for these scenarios. We are facing probably almost an infinite possible range of outcomes, but we thought

that it's an interesting exercise to highlight certain features of the portfolio.

So I will pause there for any questions and discussion.

MS. PENNY: Any questions for Ed? Okay, we can get rid of the negatives. I have to ask when it's Mike's turn, you are going to have much better news for us so no pressure.

MR. FULVIO: It's all positive surprises.

MS. PENNY: Thank you so much.

MR. BERMAN: Thank you.

MS. PENNY: Okay, so the website?

MS. HIRSH: So I will introduce this and hand it over to Kate Visconti on our team in BAM. Many of you have seen Kate on Zoom as the person who is really running slides and whatnot. She is -- also she joined the team in February as assistant director of pensions and has been helping just generally project manager and working with things across BAM and outside of BAM and workers' rights issues. One of the things she spearheaded is an attempt to make our investments more

accessible.

So I for one when I became a trustee in January, I looked at the monthly reports that we get from State Street that we upload to Convene. I don't understand anything in them, I can't look at them and figure out how much money we have at any given place. I know based on questions that we got from our trustees, I am not the only one who has a hard time reading those reports. I think Steve told me it was a hard report to understand, so one of the things we wanted to do was give trustees and really the general public -- this is all public information already -- the ability to understand where we are invested and how in a public-facing way.

So Kate is going to walk you through the changes we are making to the asset allocation tab on the Comptroller's website, what we are recommending. And once we get through the series of September board meetings, we will make this live on the Comptroller's website open to any feedback and questions, et cetera as we go through that.

So with that, Kate, I hand it over to you.

MR. RAY: Alison, I will say in that monthly report there is one useful table in that that's not anywhere else; page 12.

MS. HIRSH: Okay, I will focus on page 12. Okay, Kate.

MS. PENNY: We heard your name for so long, it's nice to hear from you.

MS. VISCONTI: You too, likewise. So thank you, Alison. Thank you for your time on this.

I am going to take maybe five minutes to give you an overview of this new tool and I will walk you through a few examples how we think you might want to use it. So keep in mind as I am going through it that all the data presented here is data that is already provided to you in the monthly and quarterly reports and also already on our website in PDF form, but as we were just saying it's a little bit clunky so this is hopefully going to streamline things for you.

So looking at this dashboard as it is

right now, you are seeing assets under management across all the five systems. So let's hone in on yours. You can do that by clicking here. You can also use these filters up here, so this is how would you filter for Teachers. So now you are looking at a dashboard of assets under management for Teachers specifically. Over here in the top left you are seeing total net asset value for your system as of June 2022, the end of June. Over here you are seeing net asset value, but it's broken down by asset class. So private equity, 7 billion. 7.7, so its units are in million. Down here in the bottom left corner you are seeing that same information, but you are seeing it visually. You can see what a large percentage public equity is, for example. And then down here in the bottom right, you see what we think might be the most useful part of this new tool. So this is a list of all of the investments that you have with their corresponding asset class and their corresponding net asset value.

So let's walk through an example. Let's

say that you are interested in seeing your investments in private equity. So you can see again, click anywhere else, that says private equity or you can filter up here at the top. Now, what you are looking at is a dashboard of your system and specifically your system's investments in private equity. So you are saying that you have a total of 7.8 billion in private equity and then you are seeing down here in the bottom right all of these private equity investments.

So, for example, EQT Fund VIII you are seeing has 118 million in that asset value. So let's say you are interested in understanding your fund with EQT more broadly but you know that you have EQT outside of private equity, so what you might do is remove this filter here. Now you are looking down at your whole system. Go over here to investment name. You can type EQT and now here you are seeing all of your investments in EQT. And as you select these, the dashboard populates with basically a view of your EQT investments. So you are seeing that you have 512 million in

EQT. You are seeing the breakdown across infrastructure and private equity down here. You are seeing the proportions, so it's actually almost even for your system. And over here you are seeing the investments themselves so you are seeing all of the individual EQT investments in infrastructure, and then down here all of the individual EQT investments in private equity and their corresponding net asset value.

So maybe the reason that you are interested in this is because a member wanted to know this information for whatever reason. You can go ahead, click this button here. You see export data and then you can download it. You can receive it as an Excel spreadsheet and do with it whatever you would like. You can do that with any iteration of the tool in a different section.

So this is the assets under management side. We also have a new tab which is going to be asset performance. So over here, as it loads over here in the top left you are seeing something that we already have on the website.

You might be familiar really just one bar at the bottom of this chart that's on the existing website, so now it's a little bit more interactive. This is the fiscal year to date for all the systems. You can click on yours and make it a little bit clearer. And this is right now showing as of the fiscal year end, June 2022. You can select any month and you will see fiscal year to date up until the end of that month.

So turning to the other two, this chart here and the corresponding graphs below over here, you are seeing the year-over-year performance for your system. This is for your total portfolio. You can go in, and let's say you are interested in infrastructure. Filter and you will see the performance year over year for every infrastructure and you can see down here a chart that will show that same corresponding information visually.

So this is a broad overview of the tool. We hope that it's going to be helpful to you, helpful to your members. Like Alison said, it's your data, it's your information, so your

feedback is really critical and helpful. So do you have any questions?

MS. PENNY: Thank you. It is great. But, Kate, did you want to just tell the members again: So first when does it become live and how would they get to this, and this is for all of the members, any member of the public can go on the website? You want to just tell them the website they would go on.

MS. VISCONTI: We can send this. Thank you. It's still in development mode, so it's a little bit hard. This is not the right website link. Let's see. I can show you where it is now. If you can see, still see my screen, so this is the regular Comptroller's Office website. You would go -- this is the best way I know how to do it at least. Go over overview of the office, down to this is how you get to really the pension side and BAM side, and then here you have the asset allocation page. So this is -- maybe this is helpful. This is what it looks like right now. You basically have for all the systems the total assets under management and then the

breakdown broadly by asset class. And then this is that same information. This is the sum total what we have right now and it's on the Comptroller's Office website right here. We can make sure you have that link handy, but this will be replaced. Yes.

MS. HIRSH: Just to answer the second question: We want to present it to each of the boards. So the last investment meeting is the last week of September, so the plan is to go live around October 1st following the last board.

MS. PENNY: That's great improvements. Does anyone want to add anything to Kate or -- you did a great job.

MR. RAY: I have a question for Kate. The AUM, is that in realtime; how often is it updated? Because there are always calls and distributions.

MS. VISCONTI: It's a good question because we have some nuance. Maybe if we have Dan on here, he can jump in and provide the nuance that I can't provide. But it's updated within 60 days of month end and sometimes it's

happening sooner. So this data is coming from State Street and basically as soon as they have it, it gets posted. So the latest we have here is July 2022, but maybe if we -- do we have Dan on? He is probably -- Dan, do you want to jump in and provide that nuance that we are talking about? We can't hear you. At least, I can't.

MR. HAAS: I was on mute. My apologies.

Good morning, everyone. Kate, I think you nailed it. If I understand the process correctly -- and I am kind of new to the nuances of this tool, but we should be picking up audited State Street monthly numbers which are typically posted I think 18 business days out from month end. A little processing time I think on our end, but you would typically see these -- what's called a five-week lag. They are accounting values. They are as of prior month end, so they would include any valuations that State Street recorded that month. And then the net asset values you see are the most recent valuation for a private equity manager, for instance, that have been

adjusted for cash flows. So it's an important nuance to note because when Eneasz, for instance, gives you a deep dive or actually any of our alternative assets group heads give you a summary, you will see that that information is official as of the prior quarter end. So there is a timing difference in what you will see posted up here. I am dragging you back in the weeds as always, but happy to answer any other questions you have.

MR. RAY: So it's as recent as the most recent State Street report?

MR. HAAS: That's correct.

MS. VISCONTI: Yes. So nothing will go up here before it goes to you.

Any other questions or feedback? If you think of anything, you can send it my way or Alison whenever it comes to you.

MS. PENNY: Thank you, Kate.

MS. VISCONTI: All right, Alison, back to you.

MS. PENNY: Well, I think -- Yaffa, welcome back and I am sure your fingers need some exercise. Yaffa is our amazing

stenographer.

So, Mike, I know you are just itching to start. Should we take a ten-minute break if that's okay, because it's been over two-and-a-half hours. But we will take a ten-minute break and come back.

(Recess taken.)

MS. PENNY: All right, welcome back. And we are now -- we are still in public session and it's time for public funds and we are turning it over to Mike Fulvio.

MR. FULVIO: I will start out. Great to see you all. We will begin, we call it the second quarterly report although I will focus in on the numbers to end the fiscal year which ended June 30th. So if you are following along in the materials on Convene, I am in page 23 of the quarterly report and you can see here what's otherwise the monthly report for the plan. The Passport Funds at the end of June 30th, the Diversified Equity Fund finished with about 15.2 billion in assets. Again given the challenges we discussed earlier with respect to markets in the first

half of the 2022 calendar year, having a notable impact on performance of these funds which as you know are largely equity-oriented. The Diversified Equity Fund returned negative 21.7 percent for the fiscal year. The numbers for July are better. And then if we are looking through the underlying composites, you know, a similar dynamic with respect to actively-managed equity strategies here in this fund as well. It was a challenging environment for active managers in the first half of this year and that shows up in the relative results for the actively-managed U.S. composite. The non-U.S. equity composite here has active managers did keep up with the benchmarks all told for the fiscal year. That composite was down about 20.3 percent. The Balanced Fund which ended fiscal year with about 539 million in assets, that was down about 1.9 percent last year roughly in line with the benchmark. The International Equity Fund, I noted earlier the active composite, the Diversified Equity Fund which again is a mirror of the International Equity Fund, that

fund down 20.7 percent. The Sustainable Equity Fund last year doing comparatively better to the International Equity Fund was down 18.8 percent. That fund was roughly in line with its Russell 1000 growth benchmark. And, again, the U.S. Equity Index Fund following the markets there down about 13 percent and the International Equity Index Fund down about 18 percent. Obviously as we discussed in the past, the capital flows into and out of those funds impacting performance and time-weighted results.

So I will pause there and see if there are any questions on the fiscal year results.

MS. PENNY: Any questions for Mike?

MR. KAZANSKY: No.

MR. FULVIO: I will note, because it's in the material, we have been discussing active management. And we have the performance scorecard, if you will. We did meet recently with the U.S. equity managers on the active management side for the Diversified Equity Fund. No material updates there. As far as on the International Equity side, there are a couple of new flags triggered. We are expected to meet with those managers this fall.

I am now going to switch over to the Passport Funds monthly report for July, which as we have been discussing has a nicer bend to it. The Diversified Equity Fund started the fiscal year quite strongly as did markets. That fund was up about 8 percent during the month of July, roughly in line with both of its custom benchmarks. The actively-managed equity composite, we saw that outperform. We also saw very modest outperformance from the International Equity composite. What we have seen in the first half of the 2022 calendar year was a reversal of what we have been talking about for many years where growth has been outpacing value. Value made its resurgence in the first half of this year. We actually saw that quickly revert back in July for the month and since then, it's reverted again. August was another strong month for value, but again managers keeping up in what was a strong month of July. The Balanced Fund

was up about 2.9 percent. International Equities up over 4 percent for the International Equity Fund. The Sustainable Equity Fund was up almost 13 percent for the month of July. Again, speaking to the strength of the growth stocks during July and then you can see the two index funds roughly tracking their benchmark, the U.S. up about 9.3 percent and the International Equity Index up about 3.7.

So I will pause there. Otherwise, we will just very briefly touch upon August.

MR. ALEXANDER: We can skip August. We can skip August. I think Steven had a very comprehensive presentation that covered a lot of not-so-great news for August, but on the high level for the month of August, we actually had negative results across the board for both.

MS. PENNY: Devon, what did I tell you?

MR. ALEXANDER: For both equity and fixed income although on the positive side, fiscal year to date still positive.

So I would actually just end it there

and pause for any questions, but the details are there.

MR. RAY: The one-year column is startling.

MR. FULVIO: Yes. I want to leave some time; we have MFS coming in to speak. As we do periodically bring in one of the managers that you work with, a working relationship with MFS, they are here to present their capital markets views and I guess I will bring them in now. They have three folks. I will sit here. Do you mind if we will put them in here if that's okay, if we shift them over.

(Discussion off the record.)

MS. STANG: Why don't you start by introducing yourself to the stenographer on the screen just so she can get your name, and if there is any complication to your name spelling that would be --

MS. HAIGH: So I am Stacey Haigh. I am your dedicated relationship manager. Joining me are my colleagues, Rob Almeida who is our global investment strategist, and Kelley Rullo who partners with me on our institutional

relationships on the East Coast.

MR. FULVIO: Feel free to tell me which slides.

MS. HAIGH: So thank you so much for inviting us here today and thank you for your nine-year partnership with us and the trust and confidence that you have had with us in the past nine years in managing assets on behalf of the Teachers' Retirement System. We are honored to be a part of your mission and investing in the retirement for the New York City educators and their families, so thank you very much. So with that, maybe I will hand it over to Kelley and then move on to Rob.

MS. RULLO: Thank you again for your time. My name is Kelley Rullo. We are thrilled here -- to be here today with our colleague, Rob Almeida. Rob is a member of our investment management team. He has been at the firm for over 20 years. He is one of our multi-asset portfolio managers and as global investment strategists at MFS, he is a frequent presenter of perspectives from across

our global research platform to our institutional relationships. In our time today we are going to have Rob share some of those perspectives from our platform and really focus in on what our efforts are looking at and what we believe is material for long-term investors and asset allocators such as yourselves.

So with that, maybe I will kick things over to Rob. We will have time at the end for questions, but certainly welcome and encourage open dialogue. So if you have any questions, feel free to jump in at any point.

MR. ALMEIDA: Thank you all very much for your partnership and for your time today. As Stacey and Kelley referenced, my name is Rob Almeida. I work inside the investment department. I have a dual role. I serve as a portfolio manager on a couple of strategies and serve as the firm's investment strategist.

I work, just for context, maybe a little bit differently from other asset managers, strategists, or Wall Street strategists that you might be familiar with. All of those,

most all perhaps very smart men and women operate from what I call an outside-in perspective where they have mental framework for what drives financial assets; might be an economic view, it might be a financial metric view. Whatever it is, they utilize that to construct a view and then that view is espoused internally to other investors and they share that externally. I do the opposite; I work inside out. So it's my job the way I see it not to give you my view or my team's view, it's to give you MFS' view.

So what I do is I sit across the global research platform in our fixed income meetings, in our equity meetings, in our aggregated fixed income and equity meetings, U.S. equity, non-U.S. equity, large cap, small cap, across the board and I try to aggregate what I am seeing and hearing across the organization and I use that to invest in my strategy and give you what is hopefully a very short, very concise, very honest view of how we are thinking about the world and just do it in 12, 13 minutes.

Maybe back up a couple of slides. Go backwards to the front. One more. Go one more. Right to the beginning. So my title is very boring, Financial Market Outlook. So it is what it says, but my theme is focusing on what matters. And I don't know if this analogy will resonate as you are educators, but I have an 18-year-old son who is entering his senior year in high school and of course doesn't listen to anything that I have to say. But as my wife and I just try to message with him as he is preparing for his post-high school education on college and working on his essay and all sorts of things, what matters? What's really, really -- because there is so much to be anxious about and worry about, so let's just focus on what matters.

And similarly with financial markets, you know, what we have seen over the last 20 years thanks to the Internet is a systematic democratization of information. And as educators, I think you will appreciate information and knowledge are two different things; they are not the same thing. We might

be more informed, but it doesn't mean we are more knowledgeable as it pertains to financial markets. Now performance for the equity markets, it used to be on the evening news. Now you are getting it on your phone instantaneously. Jerome Powell sneezed or caught a cold or said something, that's news, that's moving markets. It's not material; it's not important.

If we simplify, what's the purpose of financial markets? Every industry has a purpose. What's the value proposition to society? The purpose of financial markets is to allocate scarce resources to society. Three hundred years ago, kings and queens allocated to society scarce capital. Beginning with capitalism, market participants determined the cost of capital, the price of capital, and who got what and how much. So what's happened in the last few years we have conflated things, things like that on television; GDP, unemployment, inflation. These things matter and we will talk about them, I am not dismissing them, but do they

matter nearly as much as we think? Is that really what's important to your pensioners and your investors?

So with that, Mike, jump two slides. Perfect. So how I constructed my very short presentation, I guess I want to maybe back up my claim that what matters is cash flows.

It's profits that drive asset prices. If we think about it in really simple terms whether it's treasury bonds, New York General Obligation bonds, Salesforce.com equity, IBM equity, every financial asset in the world is a stock of wealth. It's a representation of the potential cash flow generation of that asset it represents. What we are looking at here, the gray line is probably one of the most talked about things in financial markets; that's GDP, that's global GDP.

What I did is I started out at 100 coming out of the global financial crisis and you can see what global growth did for the next business cycle, right? I am showing you what you already know. That's not the point, though. The point is the blue line. The blue

line is wealth. That's what I am using here is profits, global corporate profits, and you can see what global corporate profits did. Again, I indexed it at 100 and over the course of the last business cycle. So from the end of the global financial crisis up until COVID, the lockdowns hit in February 2020, very long but very weak growth business cycle. Equity markets up -- were up 250 percent worldwide. Investments are simple; cash flows drive asset prices. It's really hard because the future has no facts, not a single one.

The point I am trying to make, you can see up until 2020 what did that line do. It was up 260, 270; that's what drives asset price. The gray line, GDP, that's a flow. It's just a flow; it's just a year-on-year number. It's representative of people spending money, going to a New York Rangers game, buying milk, buying a car. That's the bulk of it, that's two-thirds and the rest is government spending, companies spending money. So it's two different things, but we conflate the two.

Mike, go to the next slide please. This is probably the most important one. So this is looking at profits through a slightly different lens. This is profit margins and this is really what's most important. So the blue line -- I guess they are both blue, but the dark blue line is S&P 500 so companies in the United States. The light blue line is outside the United States, so companies inside the MSCI EAFE Index. Now the dotted line going left to right, that's average which as educators you know you are never really at the average. It's just a marking point; you are either above it or below it. But the point being that over the last 20 years, profit margins in the United States and outside of the United States beginning in 2008, 2009 after the recession accelerated just like in the prior slide that I showed you. What matters for future asset prices, what matters for future equity market performance is which way these lines will go. That's it; everything else is an input. So central banks setting interest rates, that's the cost of

capital. Regulation growth in the economy, those things matter, but they are inputs into the single output that matters most which is profit margins.

And I guess what I want to share with you and what we are constructively concerned about, maybe that's an oxymoron phrase, is your average profit margin in the United States is around 9 percent. It's been that way for 100 years. I am just showing you 20 years because I wanted to show a non-U.S. universe. And you can see about a year, year and a half before the COVID virus, margins started to fall. Now, profits are just a function of revenues and cost. So how many cups of coffee is Starbucks going to sell tomorrow multiplied by the price of those cups of coffee minus the cost of making and selling coffee; it's very, very simple.

So the question investors should have been asking throughout the 2010 year is in an environment where the economic growth is so weak, there is no inflation, how are profits so high? And if we just take a simple

Sherlock Holmes methodology, remove all possibilities, the one left standing is the answer: It wasn't coming from economic growth, it wasn't coming from selling widgets or raising the prices on widgets; it was coming from countries shifting labor outside of the country. Offshoring, it was elongating supply chains, it was borrowing money. All these things are reversing now, so here we are and profit margins were at an all-time high pre-COVID and they blew through that. I think the simplest explanation is this was a sugar high.

Now what's happening? The reverse. What's the price tag for the sugar high? Well, now unfortunately some people can't afford -- one in out of six households are behind in their utility needs, so we know the cost of it. And what we believe we are going to see is as growth continues to fade -- that's a nice word for slowdown. As revenues fade, slow down, that stimulus fades, wears off, as interest rates go up, what we are going to start to see is those lines fall.

That's one half of the equation. The other half of the equation is now the cost of managing, running your business, undergoing what we think is a step-function structural change. I will highlight in a minute why.

So go to the next slide. So what matters is cash flow. The second thing that matters is what's the price of those cash flows valuation. For long-term investors like you folks, it's not all that important. You have got 10, 20, 30-year horizon so the price you are paying today looking out over 20 years, it's a lot less material. But since we are talking about near-term market, it matters. So you are probably wondering well, this isn't a valuation slide; what am I looking at? So everyone is aware of the massive amount of borrowing that governments made around the world to, let's say, accelerate out of the pandemic. The numbers are so big it's just hard to even contextualize, so I am showing it as a percentage of the economy.

So to put it into context, the left-hand

axis is the Federal Reserve balance sheet as a percentage of GDP. That's that blue line. And for 100 years -- I am only showing you the last 20 -- it's only been about 4 or 5 percent. The gray line is the European Central Bank's balance sheet; that's a percentage of their economy. That's on the right-hand axis. That's been a little bit higher, but around 8, 9, 10 percent. Both took a step-function jump up during the global financial crisis. You can see that there in '08 and of course we see what it did over the 2010s in quantitative easing, then took a massive spike in the last two years.

Go back to my earlier comments, the purpose of the financial markets. It's priced society's scarce resources and allocated them. And what I am trying to demonstrate here is the cost or the potential implications of stimulus. So at 40 percent of GDP or in Europe at 70 percent of GDP, what's happened is markets aren't pricing risk; central bankers are. They made financial markets wildly inefficient.

If we can go to the next slide, I will give you one last proof point. So this is looking at U.S. small companies. I am using the Russell 2000 and Russell 3000. And what this is charting is the number of companies in the indices that were unprofitable. This isn't a perfect metric, but it's kind of easy to understand. And the point I am just trying to make is the policies instituted over not just the last two years, but over the last several years has inefficiently allocated to society scarce resources and created risk, if you will. And you can see the number of the unprofitable companies in the benchmarks today; it's higher than where it was in 2008, it's higher than where it was during the tech bubble in 2009. So think about this and I will wrap up my -- up my comments.

Just go to the next and almost last slide. So looking forward, I think the prospects for more stimulus are about as low as they can possibly be because we know the price hike for that; it's 7, 8, 9 percent inflation. Central banks have to correct

their mistake and bring down their aggregate demand. They have to and they have made that very clear. The consequence for that is it's going to expose those corporations with vulnerabilities and one of my concerns or areas of vulnerability, if I can phrase it like that, this is looking at the cost of people so wages. And one of the ways that companies are able to generate such high profit margins in such a low-growth environment is just simply underpaying people and what you can see here is that's reversing. I don't need to show this in a chart to any of you that have gone to your favorite restaurant and you had to wait longer than you should because they just can't staff. I don't know if you are having this problem with teachers; we are having it with bus drivers, the bus drivers in my town. There is a shortage of labor everywhere. Economists want to blame it on the pandemic. If you look back at every pandemic in history, we went back a thousand years, the common pattern is a change in attitude if you will. The great resignation,

but the pandemic came at the worst possible time; it was a spark that lit the fire. The kindling was years and years of labor giving share to ownership, owners of capital if you will. So now the U.S. or the European labor, it's now they are pushing back and this is companies biggest expense; this is companies biggest cost. So as growth reverts back to where it was pre-corona, as revenues fall back to where it was pre-corona, what's different versus the last 30 years is household resources.

We can go to the last page. So to bring it all together, I realize it sounds like a bearish message and an unhappy and unpleasant one and it is. However, I am genuinely -- we are genuinely enthusiastic about this because finally we are able to showcase the value of discretionary portfolios. So when something is abundant, it's not worth a lot. So if everyone could run really fast, you know, we would all play for the New York Giants. But, you know, people with a unique skill get paid a lot because they have something that's

scarce. So conversely when there is something that's not scarce, in abundance, it's not worth very much. And as I showed you in the 2010s, profit generation, market accretion, however you want to think about it was massively abundant. Everything is different now; deflation to inflation, quantitative easing to quantitative tightening, deregulation to re-regulation, globalization to nationalism. All of this increases the cost of doing business and it's going to expose companies that probably should not have been around as long as they have.

And I will end with the markets. Financial markets have a -- this is going to sound corny, but a real beautiful natural selection process. So inefficiencies grow, but then the market wakes up and it kills companies. It killed banks in '08 because they were behaving or acting in an unsustainable way. It put those banks out of business. I would offer in the last 10, 12, 13 years financial markets, investors weren't -- their natural selection process was

hindered or intervented by central banks. And as all of that reverses, those companies -- I hope they are in your portfolios. We think they are -- that has had something that's sustainable and durable, they are going to be worth more, a lot more because they will be scarce. That's what we are really excited about.

So let me stop there and happy to take questions, comments.

MS. PENNY: That's a great presentation.

MR. ALMEIDA: Thank you. You made my day.

MS. PENNY: Very interesting. I guess not. Thank you for joining us.

Oh, question.

MR. BUCKLEY: So, I guess, are you advocating for a return to value over growth investing?

MR. ALMEIDA: That's more yes, it's more discretionary over not discretionary.

MS. STANG: Or active versus passive, that's what you are saying?

MR. ALMEIDA: Yes, the value of growth

just for the way I answer that question because I get that quite a bit and it's a very good one. It's often the opposite of what most people think. Growth stocks outperform when there is no growth. Value stocks outperform when there is a lot of growth. So value stocks generally are mature companies that sell widgets and so the economy is doing better, you have more assets to buy a new car, buy another television. Generally, mature goods. When growth is weak, those companies that have outside growth become really scarce. So I am excited. I don't know which will outperform more, but I am excited for the power of active within each universe.

MR. BUCKLEY: Thank you.

MS. PENNY: All right, thank you again.

MR. GREGOR: Thanks so much.

MS. PENNY: Okay. So is there anything

else, Mike?
MR. FULVIO: That concluded the public session for Passport.
MS. PENNY: Anything else for public session before we go into executive?

Okay, do I hear a motion to go into executive session?
MR. BROWN: So moved.
MS. PENNY: Thank you, Mr. Brown.
Do I have a second?
MS. HIRSH: Second.
MS. PENNY: Thank you, Ms. Hirsh.
Any questions or concerns? Great. All in favor, please say aye.
Aye.
MR. BUCKLEY: Aye.
MR. RAY: Aye.
MS. HIRSH: Aye.
MR. BROWN: Aye.
MR. KAZANSKY: Aye.
MS. PENNY: Any opposed? Any abstentions?
Okay, we are moving into executive session. Thank you, everyone, for joining us.
(Discussion off the record.)
MS. PENNY: Welcome again. We are now
MS. PENNY: Okay, welcome back. We are back into public session. Ms. Stang, would

you please report out?
MS. STANG: Certainly.
In executive session we received a manager contract update. We received an update on an investment initiative. We received some preliminary performance results and an in-depth overview of our public equity program. We received presentations on two infrastructure investments. Consensus was reached. We received a presentation on an alternative credit investment. Consensus was reached.
MS. PENNY: Thank you so much. Does anyone have anything else for this meeting? Hearing none, do I hear a motion to adjourn?
MR. BROWN: So moved.
MS. PENNY: Thank you, Mr. Brown.
Do I hear a second?
MS. HIRSH: Second.
MS. PENNY: Any questions? All those in favor, please say aye.

Aye.
MS. HIRSH: Aye.
MR. BROWN: Aye.

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MR. KAZANSKY: Aye.
MS. PENNY: Okay, thank you. We stand adjourned.
[Time noted: 3:04 p.m.]

C E R T I F I C A T E

STATE OF NEW YORK)
: ss.
COUNTY OF QUEENS)

I, YAFFA KAPLAN, a Notary Public within and for the State of New York, do hereby certify that the foregoing record of proceedings is a full and correct transcript of the stenographic notes taken by me therein.

IN WITNESS WHEREOF, I have hereunto set my hand this 18th day of September, 2022.

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YAFFA KAPLAN