| 1  | Proceedings                                     |
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| 3  | NEW YORK CITY TEACHERS' RETIREMENT SYSTEM       |
| 4  | INVESTMENT MEETING                              |
| 5  |   |
| 6  |   |
| 7  | Held on Thursday, February 7, 2019, at 55 Water |
| 8  | Street, New York, New York                      |
| 9  |   |
| 10 | ATTENDEES:                                      |
| 11 | JOHN ADLER, Chairman, Trustee                   |
| 12 | THOMAS BROWN, Trustee                           |
| 13 | DEBRA PENNY, Trustee                            |
| 14 | SUSANNAH VICKERS, Trustee, Comptroller's Office |
| 15 | DAVID KAZANSKY, Trustee                         |
| 16 | PATRICIA REILLY, Teachers' Retirement System    |
| 17 |   |
| 18 | REPORTED BY:                                    |
| 19 | YAFFA KAPLAN<br>JOB NO. 2467349                 |
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| 1  | Proceedings                                 |
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| 2  | ATTENDEES (Continued):                      |
| 3  | SUSAN STANG, Teachers' Retirement System    |
| 4  | RON SWINGLE, Teachers' Retirement System    |
| 5  | ROBIN PELLISH, Rocaton                      |
| 6  | MICHAEL FULVIO, Rocaton                     |
| 7  | MATT MALERI, Rocaton                        |
| 8  | PAUL RAUCCI, Teachers' Retirement System    |
| 9  | VALERIE BUDZIK, Teachers' Retirement System |
| 10 | LIZ SANCHEZ, Teachers' Retirement System    |
| 11 | SHERRY CHAN, Office of the Actuary          |
| 12 | DAVID LEVINE, Groom Law Group               |
| 13 | CYNTHIA COLLINS, Mayor's Office             |
| 14 | SUMANTE RAY, Mayor's Office                 |
| 15 | SANFORD RICH, BERS                          |
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| 1  | Proceedings                                   |
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| 2  | MR. ADLER: Good morning, everybody.           |
| 3  | Welcome to the Teachers' Retirement System of |
| 4  | the City of New York investment meeting for   |
| 5  | February 7, 2019.                             |
| 6  | Patricia, will you please call the roll?      |
| 7  | MS. REILLY: John Adler?                       |
| 8  | MR. ADLER: I am here.                         |
| 9  | MS. REILLY: Thomas Brown?                     |
| 10 | MR. BROWN: Here.                              |
| 11 | MS. REILLY: David Kazansky?                   |
| 12 | MR. KAZANSKY: Present.                        |
| 13 | MS. REILLY: Lindsey Oates? Debra              |
| 14 | Penny?  |
| 15 | MS. PENNY: Here.                              |
| 16 | MS. REILLY: Susannah Vickers?                 |
| 17 | MS. VICKERS: Here.                            |
| 18 | MS. REILLY: We do have a quorum.              |
| 19 | MR. ADLER: Thank you very much. So as         |
| 20 | our usual custom, I will hand it over to      |
| 21 | Rocaton.                                      |
| 22 | MS. PELLISH: Yes. I am just going to          |
| 23 | I feel like we are a little bit I will        |
| 24 | have to shout, so I am just going to move     |
| 25 | forward a little bit. I want to introduce my  |

| 1  | Proceedings                                    |
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| 2  | colleague Matt Maleri who is hopefully going   |
| 3  | to follow me. We will see. And you have met    |
| 4  | Matt before I believe, and Matt is part of a   |
| 5  | number of efforts at Rocaton, but he is here   |
| 6  | in his role as part of the asset allocation    |
| 7  | team. And since there was, as you know, a      |
| 8  | resolution discussed at the CIM yesterday      |
| 9  | regarding beginning an asset allocation study, |
| 10 | we thought this might be a good opportunity to |
| 11 | talk to you about our capital market           |
| 12 | assumptions, look at our capital market        |
| 13 | assumptions as of year-end versus those that   |
| 14 | we used in the last asset allocation study.    |
| 15 | Of course, this is one small step in the whole |
| 16 | process, and we will be collaborating closely  |
| 17 | with the Bureau of Asset Management on this    |
| 18 | process and going over the assumptions. We     |
| 19 | thought it just might be an opportune moment   |
| 20 | to set the stage.                              |
| 21 | So with that, we will start with the           |
| 22 | Passport Funds's December review. Everyone     |
| 23 | should have that performance deck as of 12/31. |
| 24 | You can see as year-end the well, very         |

difficult performance during December and we

| 1  | Proceedings                                    |
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| 2  | went through that at the CIM yesterday, and I  |
| 3  | think everyone is well aware of that. I will   |
| 4  | say that relative to the Russell 3000, the     |
| 5  | Diversified Equity Fund benefited from its 10  |
| 6  | percent allocation to the defensive strategies |
| 7  | composite, which was down about 60 percent of  |
| 8  | the Russell 3000 decline. So it did its job    |
| 9  | in the month of December.                      |
| 10 | So for the month, the return of the            |
| 11 | Diversified Equity Fund was negative 8.24      |
| 12 | percent compared to the Russell 3000 return of |
| 13 | minus 9.3 percent. For the calendar year,      |
| 14 | that means that the Diversified Equity Fund    |
| 15 | had a negative return of about 7.3 percent,    |
| 16 | and that is about 200 basis points below the   |
| 17 | Russell 3000. Primary contributor to that      |
| 18 | below US market return is, of course, the      |
| 19 | approximately 20 percent allocation to         |
| 20 | international equities, and as we are all      |
| 21 | aware, international equities significantly    |
| 22 | underperformed the Russell 3000 from the       |
|    |  |

dollar-based investor's perspective during

 $\hbox{underperformance by the actively managed $\tt US$}\\$ 

2018. In addition, we did have

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| Τ  | Proceedings                                    |
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| 2  | composite, and we will be talking about that   |
| 3  | composite in additional detail later on.       |
| 4  | What I wanted to also note here is that        |
| 5  | for the month of December, the Balanced Fund   |
| 6  | fell by about 1.4 percent. So for the          |
| 7  | one-year return, that's a negative 2 percent.  |
| 8  | The International Equity Fund, as we first     |
| 9  | noted, underperformed for the year but for the |
| 10 | one-month period in December actually          |
| 11 | outperformed the US equity market by it was    |
| 12 | a loss about 4 and a half percent. Compared    |
| 13 | about half of the loss of the US equity market |
| 14 | during that month. The Inflation Protection    |
| 15 | Fund, which has exposure to the US equity      |
| 16 | market lost about 3 and a half percent, and    |
| 17 | the Socially Responsive Fund followed the S &  |
| 18 | P 500's return with a loss of over 9 percent.  |
| 19 | So a very difficult month for December.        |
| 20 | We can talk more about the month of            |
| 21 | December or we can turn to January. I vote     |
| 22 | for turning to January.                        |
| 23 | MR. KAZANSKY: Before we do though, I do        |
| 24 | want to note and appreciate the fact that the  |
| 25 | defensive composite really did its job         |

| Τ  | Proceedings                                   |
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| 2  | MS. PELLISH: Yes.                             |
| 3  | MR. KAZANSKY: in December.                    |
| 4  | MS. PELLISH: Yes. Any other comments          |
| 5  | or questions on December? Hearing none, we    |
| 6  | have preliminary performance.                 |
| 7  | MR. ADLER: I don't think I have that          |
| 8  | page. Is it possible                          |
| 9  | MS. PELLISH: No, I have it. It was            |
| 10 | just done the other day.                      |
| 11 | MR. ADLER: I am still dizzy from the          |
| 12 | roller coaster.                               |
| 13 | MS. CHAN: The market roller coaster?          |
| 14 | MR. ADLER: Yes, the market roller             |
| 15 | coster. Or the V shape as they referred to it |
| 16 | yesterday.                                    |
| 17 | MS. PELLISH: So as you all heard in the       |
| 18 | CIM yesterday, a very significant rebound in  |
| 19 | January, and Mike talked about some of the    |
| 20 | reasons behind that but just to note the      |
| 21 | numbers for the month of January, the Russell |
| 22 | 3000 was up 8.6 percent. So again, up 8.6     |
| 23 | percent in January, down 9.3 percent in       |
| 24 | December. The International Composite         |
| 25 | benchmark lagged the US equity market in      |

| 1  | Proceedings                                    |
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| 2  | January by about 200 basis points. So up       |
| 3  | about 6.7 percent. Where the Defensive         |
| 4  | Strategies benchmark earning about the same    |
| 5  | amount and so we our best guess for the        |
| 6  | benchmark return for January is positive 8     |
| 7  | percent. So that same hybrid benchmark was     |
| 8  | down 8 percent in December, up 8 percent in    |
| 9  | January. You know, what's really what I        |
| 10 | always find very interesting is looking at the |
| 11 | impact even on longer term numbers of rolling  |
| 12 | out one month.                                 |
| 13 | So if we look at the five-year average         |
| 14 | annual return for the Russell 3000 index       |
| 15 | ending January 31, 10.4 percent. So you gain   |
| 16 | a month, a mere month, and lose a month five   |
| 17 | years ago. If you look at the same number as   |
| 18 | of 12/31, it's 8 percent. That's a huge        |
| 19 | difference. Two hundred basis points on a      |
| 20 | five-year average annual number.               |
| 21 | MR. ADLER: That's amazing.                     |
| 22 | MS. PELLISH: And that's the impact of          |
| 23 | volatility. I mean, that's sort of one way to  |
| 24 | look at it. If you look at the Balanced Fund   |
| 25 | benchmark, that was also up about 3 percent in |

| 1  | Proceedings                                    |
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| 2  | January. International equities I already      |
| 3  | noted rebounded. Not to the extent of the US   |
| 4  | equity market but still pretty strongly. Our   |
| 5  | International Composite benchmark rebounded by |
| 6  | almost 7 percent. And we can see the Real      |
| 7  | Return Mutual Fund was up over 4 percent, and  |
| 8  | the Neuberger-Berman Socially Responsive Fund  |
| 9  | was up almost 8 percent. So strong rebound in  |
| 10 | January. February, do we have to date?         |
| 11 | MR. MALERI: You are sort of up for the         |
| 12 | first few days but not quite as exciting as 8  |
| 13 | percent.                                       |
| 14 | MS. PELLISH: So certainly a return I           |
| 15 | mean, this is extreme volatility in one month, |
| 16 | but I think as we launch into a discussion of  |
| 17 | the asset allocation study, we are certainly   |
| 18 | mindful of the need to discuss how volatility  |
| 19 | going forward may affect our decisions around  |
| 20 | that policy.                                   |
| 21 | MR. ADLER: Also speaks to how much the         |
| 22 | end point that you look at is so has so        |
| 23 | much effect on, you know, what the returns are |
| 24 | that even a month's difference in the end      |
| 25 | point makes this kind of                       |

| 1  | Proceedings                                    |
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| 2  | MS. PELLISH: Huge difference.                  |
| 3  | MR. ADLER: huge difference.                    |
| 4  | MS. PELLISH: And the only way the              |
| 5  | best way to deal with that is look at rolling  |
| 6  | periods of time.                               |
| 7  | MR. ADLER: But even rolling returns as         |
| 8  | you pointed out the five-year                  |
| 9  | MS. PELLISH: So when we present manager        |
| 10 | returns to you, one of the things we try to    |
| 11 | present is this graph that shows rolling       |
| 12 | five-year returns or three-year returns at     |
| 13 | different end points, so it isn't quite as     |
| 14 | significant an impact but it's and it also     |
| 15 | it's also that end point dependency is         |
| 16 | exacerbated by the fact that humans tend to    |
| 17 | anchor onto recent experience and project that |
| 18 | over forward. You overweight recent            |
| 19 | experience and the whole thing gets            |
| 20 | exacerbated and you really try to repeat the   |
| 21 | last five years. Of course, that's rarely      |
| 22 | successful.                                    |
| 23 | MR. ADLER: Right. And one of the               |
| 24 | things you guys often say to us I think is     |
| 25 | that truthfully recent performance in terms of |

| 1  | Proceedings                                    |
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| 2  | markets not necessarily manager but            |
| 3  | sometimes managers too doesn't generally       |
| 4  | means like if there is a low point, that's     |
| 5  | when you want to buy. Not oh, you know,        |
| 6  | international has done so poorly so let's      |
| 7  | leave international. It's really the opposite  |
| 8  | that you want to go into.                      |
| 9  | MS. PELLISH: Unless you can identify a         |
| 10 | fundamental reason why you think that          |
| 11 | performance will persist, which is hard to do. |
| 12 | So unless there is any more questions about    |
| 13 | performance, maybe we can launch into our      |
| 14 | capital market assumptions.                    |
| 15 | So just to remind everyone, we have            |
| 16 | capital market assumptions that we update      |
| 17 | every quarter and more often if there is an    |
| 18 | extreme event, and these capital market        |
| 19 | assumptions form the basis of the projections  |
| 20 | of asset classes, that is that are used        |
| 21 | when we think about how we might want to alter |
| 22 | our strategic asset allocation policy. We      |
| 23 | collaborate with BAM who is also using all of  |
| 24 | the other consultants' capital market          |
| 25 | assumptions, so we discuss those assumptions   |

| 1  | Proceedings                                    |
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| 2  | and you know, we have flexibility so if there  |
| 3  | is a if there is a compelling argument to      |
| 4  | modify some of them, we will happily do so,    |
| 5  | but these are the assumptions that we          |
| 6  | developed as of year-end, and they will form   |
| 7  | the basis of our discussions with you and BAM. |
| 8  | MR. MALERI: Great. Good morning. So I          |
| 9  | guess just to start, if I had to boil down our |
| 10 | assumptions in maybe one or two sentences,     |
| 11 | it's really simple. When markets have done     |
| 12 | well, our assumptions go down, and when        |
| 13 | markets have done poorly, our assumptions go   |
| 14 | up. So I can leave it there and call it a      |
| 15 | day, but I think you want a bit more detail as |
| 16 | to how we actually build the assumptions, but  |
| 17 | to the point that was made earlier when        |
| 18 | markets have done well like we have            |
| 19 | experienced, notwithstanding the fourth        |
| 20 | quarter, that generally means our outlook      |
| 21 | going forward is lower. You should expect      |
| 22 | lower returns after you just experienced very  |
| 23 | high positive returns, and the opposite is     |
| 24 | true as well. When markets perform poorly,     |
| 25 | our expectation is from that point forward you |

| Τ  | Proceedings                                    |
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| 2  | should experience greater returns. So that's   |
| 3  | the general framework for how we create        |
| 4  | assumptions.                                   |
| 5  | I will start on page 3. There is a lot         |
| 6  | of words on that slide, so I will try to boil  |
| 7  | it down to just some of the key takeaways      |
| 8  | there. The first that is really, really        |
| 9  | important in our assumption setting process is |
| 10 | when we sit around and develop assumptions, we |
| 11 | are most focused on economic factors.          |
| 12 | Interest rates, equity market valuations,      |
| 13 | credit spreads for fixed income markets. We    |
| 14 | are never we rarely, if ever, are sitting      |
| 15 | around thinking what should the return be for  |
| 16 | US equity. What we are thinking about is how   |
| 17 | should US market valuations play out over the  |
| 18 | next three years, five years, ten years, and   |
| 19 | that in turn influences our return expectation |
| 20 | for US equities. Similarly, for all fixed      |
| 21 | income asset classes, we generally don't sit   |
| 22 | around and think well, what should the US bond |
| 23 | market return be for the next ten years. We    |
| 24 | sit around and ask ourselves what do we think  |
| 25 | interest rates will do for the next ten years, |

| 1  | Proceedings                                    |
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| 2  | what do we think inflation and credit spreads  |
| 3  | will do for the next ten years, and that in    |
| 4  | turn will influence our return and risk        |
| 5  | assumptions for fixed income markets.          |
| 6  | So everything you see when we get to the       |
| 7  | actual numbers for asset class return risk and |
| 8  | correlation, all of that is an output rather   |
| 9  | than an input. What is an input is again, all  |
| 10 | the different factors that I mentioned         |
| 11 | earlier, and you can see on the top left part  |
| 12 | of page 3 we list out, you know, just a decent |
| 13 | sampling of what those factors are, where all  |
| 14 | those factors are today. And then we come up   |
| 15 | with an assumption for where we think those    |
| 16 | factors are going to be under kind of          |
| 17 | long-term scenarios. We call it equilibrium.   |
| 18 | So for example, what we think is the normal    |
| 19 | ten-year yield for a US treasury bond and we   |

also point out that for all of this, there is a range of outcomes. So when we look at a lot of the data and a lot of the numbers in here,

know where we start off today and come to a

forecast of what we think is normal. I would

it's very, very specific. You know, 4.5

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| 1  | Proceedings                                    |
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| 2  | percent return for US equities. It sort of     |
| 3  | leaves you with this impression that we have   |
| 4  | the crystal ball and there is a very precise   |
| 5  | number and there is for the expected case, but |
| 6  | I think what again is important here is we     |
| 7  | develop a wide range of outcomes, and as we do |
| 8  | the capital markets modelling, as we go        |
| 9  | through asset allocation studies with clients, |
| 10 | not only do we focus on what is the expected   |
| 11 | outcome, but we look at what are downside      |
| 12 | outcomes, what are worst-case scenarios, so    |
| 13 | really we focus on trying to get that range of |
| 14 | outcomes right and try not to get too excited  |
| 15 | for what the expected number is for each asset |
| 16 | class.   |
| 17 | MR. ADLER: Can I just ask a question?          |
| 18 | What you gave us is your projected returns,    |
| 19 | and you told us what your projected returns    |
| 20 | were when we did this in 2016. But you don't   |
| 21 | tell us what the actual returns have been.     |
| 22 | MR. MALERI: We can. Absolutely.                |
| 23 | MR. ADLER: I think that would be useful        |
| 24 | just to understand how far off you were.       |
| 25 | MR. MALERI: So there is a couple of            |

| Τ  | Proceedings                                   |
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| 2  | ways.   |
| 3  | MR. ADLER: I guess we can do it by            |
| 4  | looking we can look at the benchmarks that    |
| 5  | you just gave us.                             |
| 6  | MR. MALERI: Exactly and again, back to        |
| 7  | my opening comments, if you look at the       |
| 8  | January benchmark report or the December      |
| 9  | numbers, which are probably more relevant for |
| 10 | your assumptions, any asset class that's done |
| 11 | really well, so US equities, you know, again  |
| 12 | even in spite of the poor fourth quarter, I   |
| 13 | think we are up close to 14 percent for the   |
| 14 | last decade, so as a result, expectations for |
| 15 | that asset class are very low going forward.  |
| 16 | MS. PELLISH: So let me just add one           |
| 17 | point. So you are right. As I looked at this  |
| 18 | again and I looked at this a lot before it    |
| 19 | was mailed out, but as I looked at this this  |
| 20 | morning, I thought that would have been nice  |
| 21 | if we include the ten-year and I talked about |
| 22 | this before we sat down. So we can give you a |
| 23 | few of those numbers for the major asset      |
| 24 | classes, and that will give you a sense how   |
| 25 | different our projections are versus history. |

| 1  | Proceedings                                   |
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| 2  | MR. MALERI: Again, just to look at the        |
| 3  | January page that we just looked at because   |
| 4  | it's right in front of us, the most striking  |
| 5  | difference in our return assumptions and what |
| 6  | you would have experienced historically is    |
| 7  | this spread between US equity return          |
| 8  | assumptions and emerging market equity return |
| 9  | assumptions and for the seven-year period at  |
| 10 | this time. There is not a ten-year number on  |
| 11 | this page but seven years.                    |
| 12 | MS. PELLISH: There is                         |
| 13 | MR. MALERI: N/A for emerging markets          |
| 14 | but for seven years you have 13 percent       |
| 15 | annualized for the Russell 3000. You have 2   |
| 16 | percent annualized for emerging market        |
| 17 | equities, so a huge, huge gap over 11 percent |
| 18 | annualized for seven years. To us that spread |
| 19 | shouldn't exist. If you are investing in      |
| 20 | equity markets here domestically or           |
| 21 | internationally over the very long term       |
| 22 | defined as seven, 10, 15 years, you should    |
| 23 | largely expect similar results, and in our    |
| 24 | mind you should expect somewhat of a premium  |

for investing in things such as emerging

| 1  | Proceedings                                    |
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| 2  | equities and not just developed equities.      |
| 3  | MS. PELLISH: So just to be clear, so           |
| 4  | this premium of 11 percent per year that you   |
| 5  | earned in US equity versus emerging markets,   |
| 6  | we are largely forecasting that to be reversed |
| 7  | over the next decade. Now, I will tell you we  |
| 8  | have been forecasting that for a while so      |
| 9  | MR. ADLER: A broken clock is right             |
| 10 | twice a day.                                   |
| 11 | MS. PELLISH: at some point we will             |
| 12 | be right.                                      |
| 13 | MR. MALERI: If we keep rolling off             |
| 14 | those good months.                             |
| 15 | MS. PELLISH: But that's an important           |
| 16 | point to be cognizant of, and the fact that we |
| 17 | along with I think virtually everyone else has |
| 18 | been forecasting that is why you continued to  |
| 19 | hold onto nonUS equity markets, and in fact,   |
| 20 | during the last seven years, you have added to |
| 21 | emerging equities in your portfolios.          |
| 22 | MR. MALERI: And one of the questions           |
| 23 | we get similar questions from clients that say |
| 24 | exactly what Robin described. You have been    |
| 25 | recommending international, it hasn't worked   |

| 1 | Proceedings |
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| 2  | out, and what we have done and certainly happy |
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| 3  | to do this is shown the realized return for    |
| 4  | the asset class and where they fall on our     |
| 5  | range of outcomes, and what is a good          |
| 6  | perhaps a positive takeaway from this is       |
| 7  | everything we have experienced was in the      |
| 8  | range of outcomes that we forecasted ahead of  |
| 9  | time. So certainly as we would expect, we      |
| 10 | don't get every number right, but what we want |
| 11 | to make sure we capture is that range of       |
| 12 | outcomes. So the 2 percent annualized that we  |
| 13 | have gotten from emerging equities over the    |
| 14 | last seven years, that would have been in our  |
| 15 | range of distributions if we turned back the   |
| 16 | clock and ran our assumptions seven years ago. |
| 17 | If we experienced something that was way       |
| 18 | outside our range of expectations, I think     |
| 19 | that would be concerning. If you go back to    |
| 20 | 2008, in fact, a lot of the work that we have  |
| 21 | done on our assumptions over the last decade   |
| 22 | plus has been centered around that 2008 event, |
| 23 | and admittedly 2008, that outcome wasn't in    |
| 24 | our assumptions in 2007 and 2006. So now we    |
| 25 | have been really focused on making sure that   |

| 1  | Proceedings                                    |
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| 2  | events that have happened and we think might   |
| 3  | happen are at least captured in the modelling. |
| 4  | It's really difficult to show up at a meeting  |
| 5  | and say that that was a really tough           |
| 6  | environment that we lived there, and oh, by    |
| 7  | the way, we didn't actually capture that when  |
| 8  | we built the forecasting four years ago, five  |
| 9  | years ago. At least we can show up and say     |
| 10 | tough environment but this is in the realm of  |
| 11 | what we expected. At least kind of gives you   |
| 12 | comfort that the decisions you made, you had   |
| 13 | the right information to make those decisions. |
| 14 | MS. PELLISH: And maybe just to add one         |
| 15 | more point. Maybe more importantly looking     |
| 16 | forward when we look at the range of           |
| 17 | distributions, we can give you a sense of what |
| 18 | is the the worst-case outcome, what's the 1    |
| 19 | percent outcome, and you can make a collective |
| 20 | decision about whether that is an outcome you  |
| 21 | can live with.                                 |
| 22 | MS. VICKERS: I was just wondering do we        |
| 23 | see the range of outcomes that you are talking |
| 24 | about?   |
| 25 | MR. MALERI: We do have a couple of             |

| 1  | Proceedings                                   |
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| 2  | slides in here that have that.                |
| 3  | MS. VICKERS: Page 4, are these the            |
| 4  | averages?                                     |
| 5  | MR. MALERI: Expected case.                    |
| 6  | MS. PELLISH: The 50th percentile.             |
| 7  | MS. STANG: Matt, just the 2 percent           |
| 8  | that we realized in emerging markets over     |
| 9  | seven years, what percent of all the outcomes |
| 10 | was that? Was it the worst 10 percent?        |
| 11 | MR. MALERI: Actually, if you go               |
| 12 | hopefully, I am going to turn to the page and |
| 13 | it bears this out. If you go to page 9, you   |
| 14 | will see here, this is again the range of     |
| 15 | outcomes for the asset classes. The first     |
| 16 | and this is a decade so not quite seven years |
| 17 | but it will give you a decent idea. The first |
| 18 | percentile is about 1 and a half percent      |
| 19 | annualized, and second percentile was about 4 |
| 20 | and a half percent annualized.                |
| 21 | MS. STANG: So pretty lousy.                   |
| 22 | MR. MALERI: Pretty long outcome.              |
| 23 | That's why the expectation going forward is   |
| 24 | much better. So I will just skip over page 5  |
| 25 | Has all the detailed different time periods,  |

| 1  | Proceedings                                    |
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| 2  | three, five, and ten years. And just the one   |
| 3  | takeaway from this page is when we show you    |
| 4  | these numbers, they are all each period is     |
| 5  | built upon the prior forecast. So our model    |
| 6  | let me say it differently. Our model is a      |
| 7  | series of one-year returns. So the three-year  |
| 8  | number is really year one, year two, year      |
| 9  | three. When you move out to five years, it's   |
| 10 | the same three-year period but plus the        |
| 11 | additional one-year period. So everything      |
| 12 | hangs together in our modelling. The           |
| 13 | three-year number should intuitively factor    |
| 14 | into the five-year expectation as well as the  |
| 15 | ten-year expectation. So I think what's        |
| 16 | probably most helpful at this point, pages 6   |
| 17 | and 7, we can sort of look at collectively and |
| 18 | this is really one of the key items of our     |
| 19 | discussion this morning is preparing our       |
| 20 | assumptions today versus what they were at the |
| 21 | time we did the last study, and so the         |
| 22 | assumptions we used at that time were our      |
| 23 | March 31, 2016 assumptions. So almost three    |
| 24 | years ago at that point or at this point and   |
| 25 | what we have on page 6, again, these are just  |

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|             |

| 2  | some of the factors that we use so try to give |
|----|--|
| 3  | you a sense of how valuations have changed. A  |
| 4  | couple key takeaways here. So you can see      |
| 5  | that treasury yields from the last time we did |
| 6  | the study three years ago until today have     |
| 7  | generally risen, but importantly you will note |
| 8  | that short-term rates, so one-year treasury    |
| 9  | bills as we know the yield on that has moved   |
| 10 | up quite significantly in the last couple      |
| 11 | years. So 2.6 percent today versus just about  |
| 12 | 60 basis points almost three years ago whereas |
| 13 | if you look at the 30-year treasury bond, that |
| 14 | yield today or at year-end was about 3 percent |
| 15 | versus 2.6 percent the last time we went       |
| 16 | through this exercise. And so we have made     |
| 17 | the color highlighting there hopefully to make |
| 18 | it somewhat obvious. We will call it kind of   |
| 19 | risk assets. Credit markets, corporate bonds,  |
| 20 | high-yield bonds, emerging market debt, and    |
| 21 | then the regular emerging markets collectively |
| 22 | even in spite of the poor performance for      |
| 23 | emerging markets valuations have generally     |
| 24 | gotten higher, and as a result returns are     |
| 25 | generally lower.                               |

| 1  | Proceedings                                    |
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| 2  | MS. PELLISH: Forecasted.                       |
| 3  | MR. MALERI: Forecasted returns,                |
| 4  | correct. So you can see US equities, the       |
| 5  | valuation, we use the Shiller PE methodology   |
| 6  | there that went from 25 and a half times       |
| 7  | earnings to 28 and a half times earnings, and  |
| 8  | this again includes the very poor performance  |
| 9  | as we experienced in the fourth quarter. Some  |
| 10 | of this reversed in January. Sometimes when    |
| 11 | we see extreme market moves like that, we      |
| 12 | rewrite our assumptions. So as we get closer   |
| 13 | to doing the study, that might be something we |
| 14 | want to take into consideration. Generally     |
| 15 | month to month you don't see much change, and  |
| 16 | I should say that we update our assumptions    |
| 17 | quarterly. So from one quarter to the next,    |
| 18 | you generally don't see a whole lot of         |
| 19 | movement. In the extreme case like January     |
| 20 | where the market is up almost 9 percent that   |
| 21 | sometimes it's worse revisiting the            |
| 22 | assumptions because a move like that can       |
| 23 | change the expected outcomes. On slide 7,      |
| 24 | here is again probably one of the more         |
| 25 | important slides of this morning is looking at |

| Τ  | Proceedings                                    |
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| 2  | the actual return assumptions for each asset   |
| 3  | class from the last time we did the study      |
| 4  | until today. A little bit of a mix. The back   |
| 5  | there you can see again the color highlighting |
| б  | a few asset classes which we generally have    |
| 7  | higher expectations and then a few asset       |
| 8  | classes which are generally lower. So I would  |
| 9  | say on balance if you are going to run a       |
| 10 | portfolio and try to understand, okay, what    |
| 11 | was the expected portfolio return from three   |
| 12 | years ago versus today, I would say it's       |
| 13 | generally pretty similar and maybe even        |
| 14 | slightly a few basis points higher. Again      |
| 15 | fixed income generally have higher return      |
| 16 | expectations whereas some of the public equity |
| 17 | markets and the alternatives to asset classes  |
| 18 | are a bit more mixed.                          |
| 19 | MR. ADLER: Just a question. US core,           |
| 20 | that's corporate?                              |
| 21 | MR. MALERI: Traditional investment             |
| 22 | grade like a Barclays aggregate-type exposure. |
| 23 | MR. ADLER: So sort of one-third,               |
| 24 | one-third, one-third?                          |
| 25 | MR MALERI: Yes Corporates                      |

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| 2  | mortgages, and treasuries.                     |
|----|--|
| 3  | MS. VICKERS: I was going to ask is             |
| 4  | there any asset class that's missing from here |
| 5  | that I mean, I don't know if this reflects     |
| 6  | our current portfolio or should we talk about, |
| 7  | you know, anything exciting that we should     |
| 8  | look at?                                       |
| 9  | MR. MALERI: So these assumptions here          |
| 10 | are what we call the core asset class return   |
| 11 | assumptions. We actually model I think it's    |
| 12 | up to 44 different asset classes at this       |
| 13 | point. A lot of those additional ones that     |
| 14 | aren't on this page are sort of variations of  |
| 15 | existing asset classes. So you know, we model  |
| 16 | US small cap equity, nonUS small cap equity.   |
| 17 | Within investment grade fixed income, we model |
| 18 | all the different sectors like corporate and   |
| 19 | mortgages.                                     |
| 20 | MS. PELLISH: And that's likely what we         |
| 21 | will actually use in the study because that's  |
| 22 | how you allocate your fixed income.            |
| 23 | MS. VICKERS: Is there anything in the          |
| 24 | TDA that we don't have in the QPP?             |
| 25 | MR. ADLER: Convertibles.                       |

| 1  | Proceedings                                    |
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| 2  | MS. PELLISH: Yes, converts. You had            |
| 3  | them and got rid of them.                      |
| 4  | MS. VICKERS: Maybe we should just keep         |
| 5  | everything open.                               |
| 6  | MS. PELLISH: Yes. So you have as we            |
| 7  | talked about, EMD is a permissible asset class |
| 8  | that we are not using.                         |
| 9  | MR. KAZANSKY: So in the asset                  |
| 10 | allocation that we adopted a few years ago,    |
| 11 | except for I guess place holders, we got out   |
| 12 | of TIPS, got out of REITS, and got out of the  |
| 13 | convertibles, and so at least looking at this  |
| 14 | page, that seems to have paid off to some      |
| 15 | degree.  |
| 16 | MR. ADLER: Well, I mean, it might not          |
| 17 | well, it would be given it would pay off       |
| 18 | going forward but it may not have might not    |
| 19 | have paid off for the last years because with  |
| 20 | us, one of the reasons you lower               |
| 21 | forward-looking assumptions is because they    |
| 22 | may have done well, you can't really tell from |
| 23 | this necessarily.                              |
| 24 | MR. MALERI: The other kind of                  |
| 25 | complicating factor is what did you sell those |

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| 2  | asset classes in favor of? So if you sold      |
| 3  | convertibles and bought US equities, that      |
| 4  | worked out really well. If you sold            |
| 5  | convertibles and bought emerging markets       |
| 6  | equity, it didn't really work out so well. So  |
| 7  | you have to think of it in a portfolio         |
| 8  | context: What did I buy and what did I sell    |
| 9  | to know if you made a good decision or not.    |
| 10 | MS. PELLISH: But I think the point that        |
| 11 | occurs to me with that question is one of the  |
| 12 | things we should do in the asset allocation    |
| 13 | study is look back at the progression of       |
| 14 | decisions that have been made, and you know,   |
| 15 | it's hard evaluating whether that was the      |
| 16 | right decision over 36 months, but I think it  |
| 17 | would be good to look at the progression of    |
| 18 | changes to the policy, and I think that will   |
| 19 | set a context how everything moved in terms of |
| 20 | risk and in terms of targeting US asset        |
| 21 | classes.                                       |
| 22 | MR. MALERI: You would think at a               |
| 23 | minimum and we say this to all our clients     |
| 24 | when we are doing an asset allocation study,   |
| 25 | we want to look at the full opportunity set    |

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| 2  | and reunderwrite. If they removed              |
| 3  | convertibles last time, what was the rationale |
| 4  | then. Does the rationale still hold? So we     |
| 5  | shouldn't just make the assumption that        |
| 6  | because we removed asset classes last time     |
| 7  | that they should still be excluded. We should  |
| 8  | always kind of reunderwrite what the right     |
| 9  | opportunity set is.                            |
| 10 | MR. ADLER: A couple of notes. The two          |
| 11 | asset classes that had the biggest change are  |
| 12 | I think buyouts and commodities. And we don't  |
| 13 | have an allocation of commodities, and         |
| 14 | commodities strike me as very high risk. So    |
| 15 | you know, I am not an advocate of these things |
| 16 | until you guys say oh, you really should think |
| 17 | about commodities.                             |
| 18 | MR. FULVIO: You would take cash.               |
| 19 | MR. ADLER: Except cash is a very low           |
| 20 | return asset.                                  |
| 21 | MS. PELLISH: Not so much anymore               |
| 22 | because T bonds are up. Very few of our        |
| 23 | clients have dedicated allocations to          |
| 24 | commodities. Because there is so much          |
| 25 | volatility and they do have some               |

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| 2  | inflation-sensitive properties and sometimes   |
| 3  | they can be very diversifying, but the         |
| 4  | expected return is fairly low and so volatile  |
| 5  | themselves.                                    |
| 6  | MR. ADLER: I am curious A, if you could        |
| 7  | explain why buyouts have such an increase      |
| 8  | when, you know, equity and you just have large |
| 9  | cap equity and I think buyouts were more with  |
| 10 | mid cap and small cap. So maybe that's the     |
| 11 | distinction, but you know, you have large cap  |
| 12 | equity diminished by 90 basis points and       |
| 13 | buyouts gone up by 170.                        |
| 14 | MR. MALERI: So I should have                   |
| 15 | highlighted this earlier that the change in    |
| 16 | assumptions is not purely a reflection of      |
| 17 | changes in market conditions. There is also    |
| 18 | methodology enhancements that we make over     |
| 19 | time. And buyout in particular, I can recall   |
| 20 | two changes that we made in the last three     |
| 21 | years. One is that our buyout assumption now   |
| 22 | includes some exposure to nonUS buyout funds,  |
| 23 | so historically it had been purely US          |
| 24 | exposure. We have now come to the view that    |
| 25 | when you are investing in buyout, typically    |

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| 2  | funds allow some investments outside of the    |
| 3  | US, so that's one part of it. We also went     |
| 4  | back and revisited what the liquidity premium  |
| 5  | should be for buyout and we have raised that a |
| 6  | touch. So the combination of including more    |
| 7  | nonUS exposure in our buyout assumption plus   |
| 8  | just our kind of what we think is the          |
| 9  | long-term normal expectation for illiquidity   |
| 10 | we increased a bit as well, so those two       |
| 11 | factors have really led to what you see there  |
| 12 | in terms of the change.                        |
| 13 | MR. ADLER: I appreciate that. I do             |
| 14 | note that the equity assumptions for developed |
| 15 | market has gone down even lower. There is      |
| 16 | very little buyout in emerging markets. So I   |
| 17 | am not saying you guys are off your rockers    |
| 18 | but just curious to me.                        |
| 19 | MR. MALERI: And again, it's more of a          |
| 20 | function of the latter, the illiquidity        |
| 21 | premium that we revisited. As you might        |
| 22 | imagine, there is a lot of moving pieces       |
| 23 | behind the scenes in terms of how the numbers  |
| 24 | actually get put together, so without a kind   |

of detailing every little piece to sum it up

| 1  | Proceedings                                    |
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| 2  | and say there is methodology changes that are  |
| 3  | largely responsible for that difference.       |
| 4  | MS. PELLISH: And even though nonUS, the        |
| 5  | forward-looking forecast has gone down, it's   |
| 6  | still significantly higher than US.            |
| 7  | MR. ADLER: Yes. That's true and again          |
| 8  | higher than the buyout assumption even if it's |
| 9  | gone down.                                     |
| 10 | MR. MALERI: So again, if you think             |
| 11 | about it, you know, historically it was 100    |
| 12 | percent and I will tell you it was 100 percent |
| 13 | US equity. It's again slightly different than  |
| 14 | that, so even if you moved some of it and      |
| 15 | added to nonUS as Robin pointed out, that      |
| 16 | still moves you in the right direction.        |
| 17 | And I think my guess is if you look at         |
| 18 | mid cap and small cap in US, that's higher     |
| 19 | still and you think that's correlated with     |
| 20 | buyouts than the large cap. I will skip        |
| 21 | slides 8 and 9. I think we covered it a bit.   |
| 22 | The point is there is a range of outcomes for  |
| 23 | each of the asset classes that all the         |
| 24 | modelling we do captures those different       |
| 25 | scenarios and we would do the same thing for   |

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| 2  | portfolio level results. So as we look at      |
| 3  | different alternative portfolios, we will show |
| 4  | the range of outcomes. I think we think        |
| 5  | that's particularly helpful when you are going |
| 6  | through the portfolio and developing process.  |
| 7  | Just to the next kind of set of slides,        |
| 8  | there is two parts left here. One is color of  |
| 9  | how we come up with our fixed income           |
| 10 | assumption and how we come up with our public  |
| 11 | equity assumptions. So the first set of        |
| 12 | slides there, pages 10 and 11 provides some    |
| 13 | more color and how we come up with our fixed   |
| 14 | income return assumptions, and as I mentioned  |
| 15 | earlier, we really focus on factors. In the    |
| 16 | face of fixed income, your treasury rate       |
| 17 | forecast is really the key component there.    |
| 18 | So what we have on slide 10 is a graphic       |
| 19 | which shows historical yields for the 10-year  |
| 20 | treasury as well as the 30-year treasury, and  |
| 21 | then not only our expected path but the range  |
| 22 | of outcomes that sits around it. So maybe      |
| 23 | just to focus on the 10-year treasury, which   |

is the left-hand side of that page, you can

see at the end of 2018, the 10-year treasury

24

| 1  | Proceedings                                    |
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| 2  | yielded about 2.7 percent. The blue dotted     |
| 3  | line there is our expectation over the next    |
| 4  | ten years. So about a 1 percent rise in        |
| 5  | yields, and while that may sound low, what we  |
| 6  | have done for context is put the market's      |
| 7  | expectation which is that forward curve. So    |
| 8  | based on market prices, you can see there is   |
| 9  | even there is a much lower expectation of      |
| 10 | how yields will rise over the next decade. So  |
| 11 | I think this for us is a helpful sanity check  |
| 12 | to see not that we we always want to follow    |
| 13 | what the market expectations are, but I think  |
| 14 | it's helpful to be cognizant of how different  |
| 15 | or how similar our forecast is for yields      |
| 16 | versus what the market is expecting.           |
| 17 | MR. ADLER: So your forecast is the blue        |
| 18 | dot, and you are saying the market expectation |
| 19 | is the brown dot?                              |
| 20 | MR. MALERI: Correct, yes.                      |
| 21 | MS. PELLISH: It's the forward curve.           |
| 22 | MR. MALERI: And importantly the bright         |
| 23 | yellow bars that sit around each of those      |
| 24 | dotted lines are the range of expectations.    |
| 25 | So we got questions or we do get questions a   |

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| 2  | lot about if you wind up in this scenario     |
| 3  | where the rates stay low or go lower, you can |
| 4  | see the range of outcomes are different       |
| 5  | percentiles. Certainly not the expected case  |
| 6  | but we do build in cases where rates go lower |
| 7  | and stay low. That was something historically |
| 8  | we really haven't anticipated, and over the   |
| 9  | last couple of years we have more prominently |
| 10 | featured that in our forecasting.             |
| 11 | MR. ADLER: Question. This is as of            |
| 12 | December 31st. In January the Fed kind of     |
| 13 | changed its smoke signals, so would you think |
| 14 | that you guys would change a bit now? And my  |
| 15 | guess is the market has changed a bit.        |
| 16 | MR. MALERI: Yes. Actually what we             |
| 17 | found interesting about January, we didn't    |
| 18 | spend too much time on this when we covered   |
| 19 | performance in January, but yields didn't     |
| 20 | react much in January, which to us is a bit   |
| 21 | surprising. So you have fourth quarter rates  |
| 22 | fell a lot as equity markets fell, and as     |
| 23 | equity markets performed really well in       |
| 24 | January, interest rates didn't move hardly at |

all, and you would typically think in that

| 1  | Proceedings                                    |
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| 2  | sort of strong market environment that fixed   |
| 3  | income investments would do poorly and that    |
| 4  | wasn't the case. So I guess that sort of       |
| 5  | where I am headed is our assumptions for fixed |
| 6  | income likely would not if we had rerun        |
| 7  | this at the end of the January likely would    |
| 8  | not have changed much from where we were at    |
| 9  | year-end, so I think perhaps the Fed's stance  |
| 10 | was well telegraphed, and that's why the rates |
| 11 | did not move much in January. But again, if    |
| 12 | we reran these numbers as of today or as of    |
| 13 | the end of January, they likely wouldn't be    |
| 14 | much different.                                |
| 15 | MR. ADLER: That's helpful.                     |
| 16 | MR. MALERI: And then I think page 11 is        |
| 17 | a helpful visual looking at the yield curve    |
| 18 | where we were three years ago in 2016 where we |
| 19 | did the study as well as today, and then       |
| 20 | Rocaton what we call our equilibrium or normal |
| 21 | level of yield curve. Hopefully it's quite     |
| 22 | obvious that today's yield curve is very, very |
| 23 | flat. There is almost no pick up in yield      |
| 24 | going from say treasury bills, very short-term |

treasury bills all the way out to owning a

| 1  | Proceedings                                    |
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| 2  | 30-year treasury bond. And we think the        |
| 3  | expectation is that you should get paid some   |
| 4  | premium for owning longer duration fixed       |
| 5  | income. You can see actually despite being as  |
| 6  | low as the yields were back in 2016, yields    |
| 7  | were what we consider to be normally shaped or |
| 8  | sloped and you don't see that at all today.    |
| 9  | So that to us, there is some excitement around |
| 10 | short-term yields being higher, but the        |
| 11 | unexciting part is that you are not getting    |
| 12 | paid to take on extra duration at this point.  |
| 13 | Then just the last couple of slides, I         |
| 14 | won't go through these last three              |
| 15 | individually, but these are hopefully helpful  |
| 16 | in explaining giving a sense of why our        |
| 17 | expectations for equity markets are the way    |
| 18 | they are, and you know, the one we get asked   |
| 19 | about most as you might imagine is US equity   |
| 20 | forecast. So what we have done here is simply  |
| 21 | we look at starting valuations. We just make   |
| 22 | cyclically adjusted P. That goes all the way   |
| 23 | back to 1928, so we have about 90 years' worth |
| 24 | of data here and we break it up into ten       |

different deciles, ten different starting

| 1  | Proceedings                                    |
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| 2  | groups, and we say for each of those starting  |
| 3  | groups from most expensive to least expensive, |
| 4  | what was the expectation five years forward.   |
| 5  | So for example, just focusing on the left-hand |
| 6  | side of the page when valuations were in the   |
| 7  | 10 percent of most attractive observations,    |
| 8  | from that point forward on average you got     |
| 9  | about 18 percent a year for five years.        |
| 10 | The unfortunate thing is that we are at        |
| 11 | the other end of the vehicle today. So if you  |
| 12 | look at the valuations today, they are in the  |
| 13 | top 10 percent of the most expensive market    |
| 14 | and what that generally led to you can see     |
| 15 | over five years that generally led to flat or  |
| 16 | slight return over five years. Importantly     |
| 17 | that's why we put the data on here. We do      |
| 18 | point out the maximum/minimum so no guarantee. |
| 19 | There is a wide range of outcome, but in       |
| 20 | general when you are at this point in the      |
| 21 | cycle for US equity markets, it's generally    |
| 22 | pretty much unfavorable going forward five     |
| 23 | years.   |
| 24 | MS. PELLISH: So is this chart clear?           |

Because I find this chart incredibly

| 1  | Proceedings                                    |
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| 2  | compelling.                                    |
| 3  | MS. VICKERS: To me it's not.                   |
| 4  | MS. PELLISH: Let me restate it. So             |
| 5  | what this chart says, if you look back over    |
| 6  | the past 90 years of data and you look at I    |
| 7  | think it's quarterly                           |
| 8  | MR. MALERI: I think it's monthly.              |
| 9  | MS. PELLISH: Look monthly and you              |
| 10 | figure out what the PE ratio was of the US     |
| 11 | stock market at the end of every month for the |
| 12 | past 90 years and you array those PE ratios in |
| 13 | deciles most expensive to least expensive, so  |
| 14 | you have a huge amount of data, and you take   |
| 15 | the most expensive decile, so when PE ratios   |
| 16 | were highest, you take all those months where  |
| 17 | PE ratios were highest and look out over the   |
| 18 | subsequent five years an average for that      |
| 19 | decile of PE ratios.                           |
| 20 | The average return over the subsequent         |
| 21 | five years was negative 60 basis points. The   |
| 22 | highest return for the five-year period in     |
| 23 | that decile of PE ratios was almost 11         |
| 24 | percent. The lowest was negative 22 percent.   |
| 25 | So it's a very intuitive fact, which is when   |

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| 2  | you are paying a lot for stocks, which is what |
|----|--|
| 3  | the PE ratio is. It's just how much how        |
| 4  | many dollars you are paying for every dollar   |
| 5  | of earning. When you are paying a lot over     |
| 6  | the next five years, you tend to have a lower  |
| 7  | return because your starting point is pretty   |
| 8  | expensive. Conversely, if you go to the other  |
| 9  | end of the extreme and you say what happened   |
| 10 | in the periods of time when stocks were        |
| 11 | cheapest, the lowest decile of PE ratios, the  |
| 12 | average five-year return for those periods of  |
| 13 | time were 18 percent. The best return over     |
| 14 | any one five-year period was almost 31         |
| 15 | percent. The lowest was about 7 percent. So    |
| 16 | the interesting thing so one of the things     |
| 17 | when you look at charts like this, there is    |
| 18 | lot of charts like this going over historical  |
| 19 | periods of time, but it's a pretty consistent  |
| 20 | pattern and it's so intuitive. The cheaper a   |
| 21 | stock is, the cheaper the stock market is in   |
| 22 | general, the better you tend to do. The more   |
| 23 | expensive it is, the worse you tend to do in   |
| 24 | the subsequent five-year period and it's       |
| 25 | pretty consistent. There is this blip in the   |

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| 2  | seventh decile but this is an unusually       |
| 3  | consistent pattern of returns and it's a very |
| 4  | long period of time and it's a very           |
| 5  | intuitively appealing concept. You pay more,  |
| 6  | you earn less. You pay less, you earn more.   |
| 7  | And so when we put in PE ratios as one of the |
| 8  | inputs to the expected calculating the        |
| 9  | expected return, it leads us to have a lower  |
| 10 | expected return for the next five, seven, ten |
| 11 | years, and if you look back at history, that  |
| 12 | has also tended to be the case in history.    |
| 13 | MS. VICKERS: What about the most recent       |
| 14 | couple of years? Was it not the case?         |
| 15 | MS. PELLISH: Yes, it was. It was.             |
| 16 | MR. MALERI: And that's why again, we          |
| 17 | point out the maximum and minimum. It's we    |
| 18 | wish it was a guarantee. We wish we could     |
| 19 | rely on this with, you know, extreme          |
| 20 | confidence, but you know, there was a period  |
| 21 | of time where you were stocks were as         |
| 22 | expensive they were the most expensive        |
| 23 | decile and you earned 10 percent annualized   |
| 24 | for five years. That one result is not very   |
| 25 | intuitive but it happens and so and I don't   |

| 1  | Proceedings                                    |
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| 2  | have the exact number, but I am guessing the   |
| 3  | most recent five-year period we lived through  |
| 4  | probably falls in that category of stocks were |
| 5  | really expensive, but you did really well for  |
| 6  | five years, and as Robin I think said earlier, |
| 7  | it's why you just don't abandon some asset     |
| 8  | classes because they look expensive on paper.  |
| 9  | MR. FULVIO: I think that's the headline        |
| 10 | on this. There is another dynamic also when    |
| 11 | you look at these numbers. So if the           |
| 12 | valuation of the equity markets are in any of  |
| 13 | the four deciles to the right, the variability |
| 14 | in returns over the following five-year time   |
| 15 | period is a lot wider. It's anywhere from 30   |
| 16 | to 40 percent as opposed to in the other time  |
| 17 | periods anywhere from 20 to 25 percent.        |
| 18 | MS. PELLISH: We should show that 18 as         |
| 19 | well.  |
| 20 | MS. STANG: So you get the delta.               |
| 21 | MR. FULVIO: It's not only the direction        |
| 22 | but it's also the spread.                      |
| 23 | MS. PELLISH: The volatility and the            |
| 24 | spread. So building on the point you raised,   |
| 25 | Susannah, it's important again when we do this |

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asset allocation study, we are going to look

at the expected outcome, but we are also going

to look at the range of possible outcomes

because we want to identify scenarios that may

well occur even if a small probability, and if

those are completely untenable, then we need

to move away from those.

MR. MALERI: We don't need to start there, but the next two pages show the same exact thing for nonUS developed and emerging equities. One we have lots of data there only back to 2005, and with that small data set, you can see it's not as well-behaved. I think generally you can see the pattern that Robin pointed out kind of moving from left to right, but it's not quite as well-behaved where we have data for the 90 years in the US equity market. And again, it's sort of introducing uncertainty and all of that leads back to wanting to own a diversified portfolio, and maybe on the market we like US -- nonUS equity markets, but it's a sort of cautionary tale that nobody has the crystal ball.

Unfortunately, we don't have the crystal ball

| 1  | Proceedings                                    |
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| 2  | and we try to use intuition to make decisions, |
| 3  | but we know there is some level of uncertainty |
| 4  | always and so you have to go back to kind of   |
| 5  | basic investing principles of owning a         |
| 6  | diversified portfolio, don't make extreme      |
| 7  | decisions, and that's I think really important |
| 8  | to cope in the back of your minds as we go     |
| 9  | through the asset allocation exercise.         |
| 10 | MS. PELLISH: Anything else in here?            |
| 11 | MR. MALERI: No. That's all I have              |
| 12 | planned.                                       |
| 13 | MS. PELLISH: So much more to come in           |
| 14 | terms of assumptions, in terms of asset        |
| 15 | classes to be considered, and in terms of I    |
| 16 | guess a timetable for the study.               |
| 17 | MS. PELLISH: Thanks, Matt. Mr.                 |
| 18 | Chairman, should we move on?                   |
| 19 | MR. ADLER: Yes, sure. Let's move on.           |
| 20 | MR. FULVIO: So right now based on the          |
| 21 | agenda item what we are handing out are the    |
| 22 | ten principles associated with the United      |
| 23 | Nations Global Compact. So there has over the  |
| 24 | years been a number of resolutions from the UN |
| 25 | as it relates to human rights practices, labor |

| 1  | Proceedings                                    |
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| 2  | practices, environmental factors, and          |
| 3  | anticorruption guidance, and this guidance     |
| 4  | that the UN offers not only to governmental    |
| 5  | organizations but to corporations across the   |
| 6  | globe. And so what they have done is           |
| 7  | synthesized all these different resolutions    |
| 8  | over the years into ten principles that they   |
| 9  | have provided as in their mind responsible     |
| 10 | approaches to conducting not only business but |
| 11 | as a government organization governmental      |
| 12 | entities hire regulating companies in your     |
| 13 | jurisdiction, so we thought this was something |
| 14 | that was interesting and perhaps creates some  |
| 15 | sort of framing or lens that might be helpful  |
| 16 | as we work through other projects such as      |
| 17 | looking at the screening for emerging market   |
| 18 | portfolios. We have continued to make          |
| 19 | progress on that with the working group, and   |
| 20 | Robin and I continue to have conversations     |
| 21 | with the vendors and requested some follow-up  |
| 22 | items. We tried to think of constructive ways  |
| 23 | of framing out the evaluation of portfolio     |
| 24 | companies and using the data and the insights  |
| 25 | that the vendors can provide on how those      |

| companies are scoring, but also trying to      |
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| marry the beliefs statement with how we are    |
| framing out those screens is proving to be     |
| challenging but I think a challenge that all   |
| institutional investors that are focused in    |
| this space are wrestling with. We have had     |
| more conversations with others in the          |
| marketplace on not only the Global Compact but |
| just in general. This has really been the      |
| crux of the struggle for folks which factors   |
| do we care the most about and how do we hone   |
| in and measure those factors. So yes, it's     |
| easy to go back out and hire a data provider,  |
| but we want to make sure that we are creating  |
| something more actionable based on what they   |
| could provide and how the board or any other   |
| board approaches the space. So we found that   |
| the things that are called out in these ten    |
| principles which we can talk through, they are |
| intentionally high level, and as you start     |
| peeling back the layers, the UN's Global       |
| Compact has specifics in terms of how they are |
| looking to measure and score and how companies |
| should be reporting, self-reporting to some    |

| 1  | Proceedings                                    |
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| 2  | degree, how they are conducting themselves to  |
| 3  | be either in accordance with these principles, |
| 4  | and interestingly enough, we can use the data  |
| 5  | vendors to highlight where companies are not   |
| 6  | in compliance or in direct contrast with the   |
| 7  | spirit of these specific principles. So        |
| 8  | something we wanted to talk through a little   |
| 9  | bit and preview I would say, and Robin, kick   |
| 10 | me up under the table if you disagree. We are  |
| 11 | not experts on these principles themselves and |
| 12 | the resolutions behind them and how they       |
| 13 | structured the evaluation process, but in our  |
| 14 | mind as we spent time looking at these and     |
| 15 | talking to others in the marketplace about     |
| 16 | them, they struck a chord in terms of I think  |
| 17 | what the spirit of what TRS was looking for in |
| 18 | the beliefs statement, and it seemed like it   |
| 19 | might be an interesting way to communicate     |
| 20 | what you are focused on to not only your       |
| 21 | managers but the data vendors who will be      |
| 22 | evaluating or providing some sort of           |
| 23 | assessment of company controversies and        |
| 24 | company scores. So I will pause there.         |
| 25 | MS. PELLISH: So to add to what Mike is         |

| 1  | Proceedings                                    |
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| 2  | saying, so we didn't expect that this would    |
| 3  | provoke a detailed conversation at the board   |
| 4  | level because we are working with the working  |
| 5  | group on the details of this process, but what |
| 6  | we did do but we thought it was worth          |
| 7  | spending a few minutes introducing this        |
| 8  | concept to the board, getting any feedback you |
| 9  | might have at this time on this subject, and   |
| 10 | then also informing you that as follow-up to   |
| 11 | the previous conversation we had regarding how |
| 12 | to solicit follow-up from Sustainalytics and   |
| 13 | MSCI that would help us distinguish between    |
| 14 | their two processes, we have asked them to     |
| 15 | look at an emerging markets portfolio not      |
| 16 | one of our current portfolios, but to look at  |
| 17 | an actual emerging markets portfolio and       |
| 18 | provide feedback on how that portfolio would   |
| 19 | score if you used the UN Compact principles as |
| 20 | a framework to evaluate those holdings and     |
| 21 | this and we have shared the investment         |
| 22 | beliefs of the board with the providers as you |
| 23 | know, but this is a set of ten principles that |
| 24 | they are used to using in their processes.     |

MS. VICKERS: What's striking me, isn't

| 1  | Proceedings                                    |
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| 2  | there the UN Principles of Responsible         |
| 3  | Investing, UNPRI? And my understanding is      |
| 4  | that's sort of the standard when we ask        |
| 5  | managers we work with. Do you know the         |
| 6  | difference between this and that?              |
| 7  | MR. FULVIO: So my understanding is that        |
| 8  | while that references this, this is specific   |
| 9  | in looking through to underlying company       |
| 10 | business practices as opposed to investment    |
| 11 | principles that a portfolio manager would, for |
| 12 | example, employ.                               |
| 13 | MS. PELLISH: So we can come back. We           |
| 14 | have looked at this. Still a little murky to   |
| 15 | us but we will come back to you with a more    |
| 16 | specific response.                             |
| 17 | MS. VICKERS: So this is specific for           |
| 18 | the business, how business is operating?       |
| 19 | MS. PELLISH: Yes.                              |
| 20 | MS. STANG: PRI is more general.                |
| 21 | MS. VICKERS: Because I feel this is            |
| 22 | pretty general.                                |
| 23 | MS. PELLISH: It is. It's very high             |
| 24 | level.   |
| 25 | MR ADLER: Except in labor I think              |

| 1  | Proceedings                                    |
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| 2  | it's very precise in labor. It lists four      |
| 3  | different aspects of labor, which is obviously |
| 4  | very important to this board, which you know,  |
| 5  | I think is really interesting. Like what it    |
| 6  | doesn't go into, for example, the issue of     |
| 7  | supply chain, but it says businesses should    |
| 8  | uphold I don't know the limitation of all      |
| 9  | forms of forced and compulsory labor, child    |
| 10 | labor, discrimination. I mean, there is a lot  |
| 11 | there on labor. Not like so maybe not on       |
| 12 | all the other things but                       |
| 13 | MS. PELLISH: So we are not recommending        |
| 14 | the board adopt this as its framework at this  |
| 15 | point. We wanted to introduce it and perhaps   |
| 16 | it's most useful because the data providers    |
| 17 | are used to working with this. So your         |
| 18 | investment beliefs statement is a custom       |
| 19 | statement obviously that they are committed    |
| 20 | to, you know, working with, but this is        |
| 21 | something they have worked with already and so |
| 22 | we gave we said to them, we said to both       |
| 23 | firms, come back to us and highlight the       |
| 24 | holdings in this portfolio that are            |
| 25 | significantly inconsistent with these          |

| 1  | Proceedings                                    |
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| 2  | principles and so we have just gotten that     |
| 3  | those reports back from the two providers and  |
| 4  | we will go over it with the working group.     |
| 5  | MS. VICKERS: Just to confirm, so the           |
| 6  | feedback from both MSCI and Sustainalytics and |
| 7  | I don't know anybody else                      |
| 8  | MS. PELLISH: No. Those are the two.            |
| 9  | MS. VICKERS: is this is a framework            |
| 10 | that they have employed for other clients and  |
| 11 | they are used to working with and think is     |
| 12 | effective and                                  |
| 13 | MS. PELLISH: Well, they don't have             |
| 14 | opinions on it, but they are very familiar     |
| 15 | with it and they have employed it.             |
| 16 | MS. VICKERS: Is there another framework        |
| 17 | that they have told you they employed, or is   |
| 18 | this the only one?                             |
| 19 | MR. FULVIO: No. I think honestly the           |
| 20 | big sell for them is the ability to customize  |
| 21 | and focus in on specific factors, so specific  |
| 22 | items that I think you would even say underlie |
| 23 | each of these ten principles and measures      |
| 24 | those for those. So I will give you one        |
| 25 | specific example would be controversies        |

| 1  | Proceedings                                    |
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| 2  | surrounding workplace conditions and safety    |
| 3  | and well-being of employees, and so that       |
| 4  | specific factor they would say the             |
| 5  | controversies they can identify relate to that |
| 6  | factor, then feed into these higher level      |
| 7  | principles, and they will specifically link    |
| 8  | how they have mapped their underlying factors  |
| 9  | like that safety issue to these fact to        |
| 10 | these principles and they it's really a        |
| 11 | helpful way of sort of outlining the different |
| 12 | things you are focused on while letting the    |
| 13 | data provider specifically identify how they   |
| 14 | would express this preference.                 |
| 15 | MS. VICKERS: That makes a lot of sense.        |
| 16 | Just in the conversations that we have had     |
| 17 | internally at BAM trying to utilize the MSCI   |
| 18 | system, so if I asked a certain question and   |
| 19 | asked for a report to be run, sometimes there  |
| 20 | is a determination question and trying to      |
| 21 | figure out which range, which factors to       |
| 22 | employ. So if there is kind of I don't         |
| 23 | want to call it a cheat sheet, but you know,   |
| 24 | if I have a question about child labor, child  |
| 25 | labor is here, and then there are factors that |

| 1  | Proceedings                                    |
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| 2  | are in MSCI or Sustainalytics that are linked  |
| 3  | to that.                                       |
| 4  | MS. PELLISH: That are linked to that.          |
| 5  | MR. FULVIO: Kind of helps connect the          |
| 6  | dots.  |
| 7  | MS. PELLISH: That's exactly and the            |
| 8  | data providers didn't come to us with this.    |
| 9  | MR. FULVIO: So there was in one of             |
| 10 | the vendor presentations they did refer to the |
| 11 | Global Compact and what they said was look, we |
| 12 | track all these factors. You could use this    |
| 13 | as a way of looking things up, but they        |
| 14 | weren't recommending it or suggesting that was |
| 15 | the approach. They like to use that though     |
| 16 | because I think there are plan sponsors or     |
| 17 | investment asset owners who see certain things |
| 18 | within this that they want to be more focused  |
| 19 | on, so it's an easy way of saying I want this  |
| 20 | and this.                                      |
| 21 | MS. VICKERS: It's a summary because            |
| 22 | there is so much in the systems and it's very  |
| 23 | hard to sort of figure out how it how to       |
| 24 | make it useful for the questions you want to   |
| 25 | ask. So if you have these kind of summary      |

| 1  | Proceedings                                    |
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| 2  | level buckets, if that's what they are,        |
| 3  | buckets or factors, then I think it can go a   |
| 4  | long way in sort of helping to focus and make  |
| 5  | the data more useful.                          |
| 6  | MS. PELLISH: And because the process           |
| 7  | that we are currently contemplating and        |
| 8  | there is still discussion about that process   |
| 9  | but because the process that at least we have  |
| LO | been contemplating is one in which we are not  |
| L1 | precluding any investments but we are asking   |
| 12 | managers to be mindful of principles and then  |
| L3 | we are periodically evaluating their           |
| L4 | portfolios using certain screens, we can we    |
| L5 | would then have a discussion about any         |
| L6 | securities that pop up as inconsistent with    |
| L7 | these principles and screens and we would have |
| L8 | a discussion about them. So there is a lot of  |
| L9 | room for we would expect the managers to       |
| 20 | present a compelling case about why that       |
| 21 | holding isn't inconsistent with the investment |
| 22 | beliefs of the board despite the score, and so |
| 23 | there is room there is room in the process     |
| 24 | that acknowledges that data can be wrong. The  |

data can be old and there may be a nuance that

Proceedings

| 2  | the board that mitigates the issue.            |
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| 3  | MS. VICKERS: Right. And with active            |
| 4  | management, that's what we want to see. We     |
| 5  | want them to be taking a deeper dive into each |
| 6  | company that they choose.                      |
| 7  | MS. PELLISH: Yes.                              |
| 8  | MR. FULVIO: There is one other wrinkle         |
| 9  | that became apparent to us as we were talking  |
| 10 | to the vendors that we think is an important   |
| 11 | consideration. So what we said when we gave    |
| 12 | the vendors this task, they provided this in   |
| 13 | their feedback at the onset, we said in        |
| 14 | addition to finding or highlighting            |
| 15 | inconsistencies with this, also let us know to |
| 16 | the extent there is anything that for whatever |
| 17 | reason is not included by this but poses some  |
| 18 | sort of significant                            |
| 19 | MS. PELLISH: Reputation.                       |
| 20 | MR. FULVIO: reputational risk.                 |
| 21 | Exactly. So one of the companies that          |
| 22 | actually passes the factors they have outlined |
| 23 | for this but something they would put, for     |
| 24 | example, on watch or that they have            |
| 25 | highlighted which wasn't flagged from this was |

| 1  | Proceedings                                    |
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| 2  | and I would argue maybe you could include      |
| 3  | it under number 10, anticorruption, but if     |
| 4  | there was, for example, at one of the          |
| 5  | portfolio companies in the sample portfolio a  |
| 6  | bad actor who embezzled money, so that does    |
| 7  | not necessarily mean the company did something |
| 8  | wrong or incorrect. And perhaps they did, but  |
| 9  | I think it still prompts the same kind of      |
| 10 | conversation we would have with the manager,   |
| 11 | which is have you evaluated the company for    |
| 12 | what might potentially be a lack of controls   |
| 13 | or you know, lack of oversight to identify     |
| 14 | something like this. And we recognize bad      |
| 15 | actors can show up anywhere                    |
| 16 | MS. PELLISH: At good companies.                |
| 17 | MR. FULVIO: at good companies and it           |
| 18 | may not warrant a sale of the company but it   |
| 19 | does require an additional screen or something |
| 20 | else to be focused on.                         |
| 21 | MR. ADLER: I just want to make a               |
| 22 | comment because you said something, Robin,     |
| 23 | that I don't think we have agreed to, which is |
| 24 | that we are not talking about potentially      |
| 25 | eliminating companies and I think that is not  |

| 1  | Proceedings                                    |
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| 2  | our understanding, at least not yet. I         |
| 3  | thought that what we were doing is looking at  |
| 4  | the potential for saying some companies we are |
| 5  | not considering investable. Some companies we  |
| 6  | may engage with, and some companies we are     |
| 7  | going to and the rest we are going to say      |
| 8  | fine. Then obviously we are going to revisit   |
| 9  | this periodically, but you said we are not     |
| 10 | considering eliminating any companies and I    |
| 11 | don't think that's true, and in particular I   |
| 12 | think we are saying that with indexing as      |
| 13 | opposed to active management, we may limit the |
| 14 | universe. So am I incorrect about that?        |
| 15 | MS. PELLISH: No. I think there is              |
| 16 | and you have articulated that very clearly     |
| 17 | before, and that's why I was trying to         |
| 18 | reference Rocaton's perspective. So let's      |
| 19 | divide out active versus passive because the   |
| 20 | passive is a really, really important but      |
| 21 | separate discussion and I think we can focus   |
| 22 | on the active at the outset because we are     |
| 23 | going to have primarily active portfolios. So  |
| 24 | if you focus on the active, I would agree that |
| 25 | there well may be companies that the board     |

| 1  | Proceedings                                    |
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| 2  | decides to exclude. I think the difference in  |
| 3  | the perspective you have outlined is when you  |
| 4  | make that decision about excluding them, do    |
| 5  | you look at the entire universe of the         |
| 6  | emerging markets index and say to managers we  |
| 7  | don't want you to own these ten stocks, or do  |
| 8  | you periodically look at portfolios of active  |
| 9  | managers to see whether any of the stocks they |
| 10 | own violate these whatever criteria we end up  |
| 11 | defining and using with a database provider?   |
| 12 | And then have a discussion about it, and so I  |
| 13 | think it's a question when and how you exclude |
| 14 | companies, not whether there is any            |
| 15 | possibility of excluding companies.            |
| 16 | MS. VICKERS: That was my understanding.        |
| 17 | The result will be the exclusion of certain    |
| 18 | securities, but you know, sort of the          |
| 19 | framework is principles-based.                 |
| 20 | MR. ADLER: Well, okay. I am not saying         |
| 21 | it's not a principles-based framework, but I   |
| 22 | also thought that what we were going to do and |
| 23 | I think this is part of the idea of giving     |
| 24 | companies examples to score was that we may    |
| 25 | decide that certain companies are, you know,   |

| 1  | Proceedings                                    |
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| 2  | under the benchmark that we set and we do want |
| 3  | to exclude and we want to say from the get-go  |
| 4  | these companies are beyond the pale, and so we |
| 5  | want to say to active managers we don't want   |
| 6  | you to invest in it. I thought that's where    |
| 7  | we landed, and honestly I am not sure whether  |
| 8  | this discussion took place here or in the      |
| 9  | working group and I think some of this is      |
| 10 | working group discussion, not                  |
| 11 | MS. VICKERS: But I kind of I agree             |
| 12 | with what you are saying, but I think that the |
| 13 | managers would agree if we give them a kind of |
| 14 | clear roadmap, we say we don't want to invest  |
| 15 | in any of this, and you know, with our         |
| 16 | research at the begining it was ten companies. |
| 17 | Oh, yes, those ten companies are on our list   |
| 18 | too based on the principles that you are       |
| 19 | giving us.                                     |
| 20 | MS. PELLISH: So you are talking about          |
| 21 | defining the permissible universe?             |
| 22 | MR. ADLER: I am and I thought from the         |
| 23 | get-go what we saying was we were moving from  |
| 24 | a country screen process to a company          |
| 25 | screening process and I thought again where we |

| 1  | Proceedings                                    |
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| 2  | I thought where we arrived I thought it        |
| 3  | was kind of consensus but I may be wrong       |
| 4  | was that, you know, we are going to divide the |
| 5  | emerging market universe into three buckets:   |
| 6  | The no bucket, the yes bucket and the          |
| 7  | engagement bucket. And then obviously          |
| 8  | companies can move back and forth.             |
| 9  | MS. VICKERS: I don't remember those            |
| 10 | three buckets.                                 |
| 11 | MR. KAZANSKY: I have to say I don't            |
| 12 | think what we ultimately arrived I believe     |
| 13 | that what we were kind of focused on was if we |
| 14 | provide the managers with clear and concise    |
| 15 | direction about what we are interested in and  |
| 16 | what we are looking for, that we were pretty   |
| 17 | much trusting them to make the right decisions |
| 18 | because ultimately if we have given them our   |
| 19 | principles and our statement of beliefs that   |
| 20 | outline these are the things we are looking    |
| 21 | for, at least these are the things we are      |
| 22 | looking to stay away from, and then they go    |
| 23 | ahead and find those things and do the         |
| 24 | opposite of what we wanted them to do, that's  |
| 25 | not necessarily a smart move for them to       |

| 1  | Proceedings                                    |
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| 2  | retain them to stay our manager. So I think    |
| 3  | what I remember was we were kind of giving     |
| 4  | them the rulebook and saying do what you need  |
| 5  | to do. Don't bring us anything a year from     |
| 6  | now that we are going to be like why did you   |
| 7  | do that, that didn't make any sense, and then  |
| 8  | if there was something that occurred in that   |
| 9  | time period that we would sit down and say     |
| 10 | okay, well, what do we do at this point? Do    |
| 11 | we engage, do we walk away, do we take some    |
| 12 | other action?                                  |
| 13 | MR. ADLER: Based on that, why are we           |
| 14 | hiring a data provider then?                   |
| 15 | MS. VICKERS: We haven't decided.               |
| 16 | MS. PELLISH: To evaluate the                   |
| 17 | portfolios.                                    |
| 18 | MS. VICKERS: I think we what we                |
| 19 | haven't ever decided is sort of the sequence   |
| 20 | of what comes first. The data provider         |
| 21 | running the screen or the investments and then |
| 22 | every year after a certain date, we do an      |
| 23 | annual check. We haven't gotten there. I       |
| 24 | think  |
| 25 | MR. ADLER: Honestly, I think this is           |

| 1  | Proceedings                                    |
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| 2  | working group discussion.                      |
| 3  | MS. PELLISH: All right. So more to             |
| 4  | come which I think in any event we are going   |
| 5  | to need a data provider because if we change   |
| 6  | the process, we are going to need a different  |
| 7  | process to evaluate companies whether we       |
| 8  | develop a screened universe at the outset or   |
| 9  | just need a process to find, and I think there |
| 10 | is some consensus that that would include a    |
| 11 | data provider, so we would be back to the      |
| 12 | working group with the results from the data   |
| 13 | providers and more discussion about the steps  |
| 14 | in the process.                                |
| 15 | MR. ADLER: Okay.                               |
| 16 | MS. PELLISH: All right. I think that           |
| 17 | concludes what we want to cover in the public  |
| 18 | session.                                       |
| 19 | MR. ADLER: Okay. So unless anybody has         |
| 20 | anything else oh, wait a second. I think       |
| 21 | the ILPA sign on is a public item; is that     |
| 22 | right?   |
| 23 | MS. BUDZIK: It can be a public item.           |
| 24 | MR. ADLER: So I think folks have in            |
| 25 | front of them the proposed sign on letter with |

| 1  | Proceedings                                    |
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| 2  | ILPA that I think we did discuss yesterday in  |
| 3  | public session, and so if folks have had a     |
| 4  | second to review it, I think there is other    |
| 5  | three other systems that caucused at the       |
| 6  | system all agreed to sign onto this yesterday. |
| 7  | I think BERS is doing a poll of its trustees;  |
| 8  | is that correct, Mr. Rich?                     |
| 9  | MR. RICH: We are out there right now.          |
| 10 | We will know by tomorrow's evening.            |
| 11 | MS. COLLINS: The City wants to send out        |
| 12 | the final letter with everybody's signature.   |
| 13 | The intent is to have each fund represented    |
| 14 | individually on the letter. So just has more   |
| 15 | impact as five funds instead of the New York   |
| 16 | City funds.                                    |
| 17 | MR. ADLER: And I think the letter is           |
| 18 | supposed to go out tomorrow evening, and to    |
| 19 | summarize again, the letter is urging the SEC  |
| 20 | to maintain the strongest fiduciary            |
| 21 | protections for investors in private equity    |
| 22 | funds. So do we need a motion to sign onto it  |
| 23 | or just see if there is consent?               |
| 24 | MS. BUDZIK: I think consensus is fine.         |
| 25 | MR. ADLER: So do we have consensus?            |

| 1  | Proceedings                                    |
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| 2  | And obviously I know the Comptroller's Office, |
| 3  | but is there consensus to allow the Teachers'  |
| 4  | Retirement System to sign onto this letter?    |
| 5  | MR. KAZANSKY: Yes.                             |
| 6  | MS. PENNY: Yes.                                |
| 7  | MR. ADLER: Okay. Great. So with that,          |
| 8  | I think that concludes our business for the    |
| 9  | public agenda. So we have some executive       |
| 10 | session business. Is there a motion to exit    |
| 11 | public session and enter executive session?    |
| 12 | MS. PENNY: There is. I move pursuant           |
| 13 | to Public Officers Law Section 105 to go into  |
| 14 | executive session for discussions on specific  |
| 15 | investment matters.                            |
| 16 | MR. ADLER: Is there a second?                  |
| 17 | MS. VICKERS: Second.                           |
| 18 | MR. ADLER: Any discussion? All in              |
| 19 | favor of the motion to exit public session and |
| 20 | enter executive session, please say aye. Aye.  |
| 21 | MS. VICKERS: Aye.                              |
| 22 | MS. PENNY: Aye.                                |
| 23 | MR. BROWN: Aye.                                |
| 24 | MR. KAZANSKY: Aye.                             |
| 25 | MR. ADLER: I believe it's unanimous.           |

| Τ  | Proceedings   |
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| 2  | So let's go into executive session.                   |
| 3  | (Whereupon, the meeting went into Executive Session.) |
| 4  | MR. ADLER: Anybody have anything else                 |
| 5  | for executive session? So a motion to exit            |
| 6  | executive session and return to public session        |
| 7  | would be in order.                                    |
| 8  | MR. BROWN: So moved.                                  |
| 9  | MR. ADLER: Thank you, Mr. Brown. Is                   |
| 10 | there a second?                                       |
| 11 | MS. PENNY: Second.                                    |
| 12 | MR. ADLER: Thank you, Ms. Penny. Any                  |
| 13 | discussion? All in favor of the motion to             |
| 14 | exit executive and enter public session,              |
| 15 | please say aye. Aye.                                  |
| 16 | MS. VICKERS: Aye.                                     |
| 17 | MS. PENNY: Aye.                                       |
| 18 | MR. BROWN: Aye.                                       |
| 19 | MR. KAZANSKY: Aye.                                    |
| 20 | MR. ADLER: Resounding. Any opposed?                   |
| 21 | And okay, any abstentions? Motion carries.            |
| 22 | Okay. We are back in public session.                  |
| 23 | Susan, would you please report out of                 |
| 24 | executive session?                                    |
| 25 | MS. STANG: Certainly. In executive                    |

| 1  | Proceedings                                    |
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| 2  | session, there was a presentation and          |
| 3  | discussion of a sector of the US equity market |
| 4  | and a subsector of the US equity market.       |
| 5  | MR. ADLER: Great. Thank you. That              |
| 6  | concludes our business for today. Is there a   |
| 7  | motion to adjourn?                             |
| 8  | MR. KAZANSKY: So moved.                        |
| 9  | MR. ADLER: Thank you, Mr. Kazansky. Is         |
| 10 | there a second?                                |
| 11 | MS. VICKERS: Second.                           |
| 12 | MR. ADLER: Thank you, Ms. Vickers. Is          |
| 13 | there any discussion?                          |
| 14 | All in favor of the motion to adjourn,         |
| 15 | please say aye. Aye.                           |
| 16 | MS. VICKERS: Aye.                              |
| 17 | MS. PENNY: Aye.                                |
| 18 | MR. BROWN: Aye.                                |
| 19 | MR. KAZANSKY: Aye.                             |
| 20 | MR. ADLER: All opposed, please say nay.        |
| 21 | Any abstentions? Motion carries. Meeting is    |
| 22 | adjourned.                                     |
| 23 | (Time noted: 12:25 p.m.)                       |
| 24 |  |
| 25 |  |

| 1  | Proceedings                                 |
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| 2  | CERTIFICATE                                 |
| 3  | STATE OF NEW YORK )                         |
| 4  | : ss.                                       |
| 5  | COUNTY OF QUEENS )                          |
| 6  |   |
| 7  | I, YAFFA KAPLAN, a Notary Public            |
| 8  | within and for the State of New York, do    |
| 9  | hereby certify that the foregoing record of |
| 10 | proceedings is a full and correct           |
| 11 | transcript of the stenographic notes taken  |
| 12 | by me therein.                              |
| 13 | IN WITNESS WHEREOF, I have hereunto         |
| 14 | set my hand this 18th day of February,      |
| 15 | 2019.                                       |
| 16 |   |
| 17 |   |
| 18 | YAFFA KAPLAN                                |
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