NEW YORK CITY TEACHERS' RETIREMENT SYSTEM INVESTMENT MEETING Held on Monday, May 6, 2019 at 55 Water Street б New York, New York ATTENDEES: JOHN ADLER, Chairperson, Trustee, Mayor's Office DEBRA PENNY, Trustee, TRS THOMAS BROWN, Trustee, TRS DAVID KAZANSKY, TRS, Trustee SUSANNAH VICKERS, Trustee, Comptroller's Office NATALIE GREENE GILES, Trustee PATRICIA REILLY, TRS, Executive Director VALERIE BUDZIK, TRS LIZ SANCHEZ, TRS 19 SUSAN STANG, TRS 20 RONALD SWINGLE, TRS CYNTHIA COLLINS, Trustee ROBIN PELLISH, Rocaton 23 MICHAEL FULVIO, Rocaton SANFORD RICH, BERS SAM RUMLEY, Office of the Actuary DAVID LEVINE, Groom Law Group MILES DRACOTT, Comptroller's Office JOHN MERSEBURG, Comptroller's Office SUMANTA RAY, Mayor's Office б PROCEEDINGS 

2 (Time noted: 10:26 a.m.) 3 4 CHAIRPERSON ADLER: Good morning. 5 Welcome to the investment meeting of the б Teachers' Retirement System on May 6th, 7 2019. 8 Patricia, would you please call the 9 roll. 10 MS. REILLY: John Adler? 11 CHAIRPERSON ADLER: Here. 12 MS. REILLY: Thomas Brown? 13 MR. BROWN: Present. 14 MS. REILLY: Natalie Green Giles? 15 MS. GREENE GILES: Here. 16 MS. REILLY: David Kazansky? 17 MR. KAZANSKY: Present. MS. REILLY: Lindsay Oates? 18 19 (No response.) 20 Debra Penny? 21 MS. PENNY: Present. MS. REILLY: Susannah Vickers? 22 23 MS. VICKERS: Here. 24 MS. REILLY: We have a quorum. 25 CHAIRPERSON ADLER: Thank you. I'11 0004 1 turn it over to Rocaton for the 2 performance report. MR. FULVIO: Good morning, everyone. 3 I will -- just a quick reminder, March was 4 5 the third month in a row in which we saw б positive returns in U.S. equity markets. 7 And for the U.S., that meant positive 8 returns of about one and a half percent. 9 Abroad we also saw positive returns, 10 though a little bit more mixed, with 11 non-U.S. equity markets up about 60 basis 12 points. 13 So what really drove results, at least 14 for the Diversified Equity Fund during 15 March, was what we saw in the U.S. The 16 Diversified Equity Fund was up about 1 17 percent for the month. That brought the 18 calendar year-to-date return to about 12.7 19 percent, compared to the broad U.S., which 20 was up about 14 percent, a little bit of 21 lagging there. Again, really driven by 22 the allocations to non-U.S. 23 And then with respect to the hybrid 24 benchmark, that benchmark was up about 25 1.3 percent for the month of March, and 0005 1 that approximately is roughly in line with 2 the Diversified Equity from year-to-date, 3 up about 12.9 percent.

The relative results for March were 4 5 impacted largely by the allocation to 6 actively managed strategies, which 7 unfortunately lagged during the month of March. Year-to-date, however, that 8 9 composite's up about 13 percent, which is 10 a little behind -- or I should say, it's 11 behind by about 1 percent of the broad 12 U.S. equity market. 13 Non-U.S. equity strategies have fared 14 better on a relative basis, year-to-date up about 10 percent, about 25 basis points 15 16 ahead of the international benchmark. 17 The Balanced Fund at the end of March 18 was about \$400 million in assets. That 19 Fund was up about 1 percent during the 20 month; calendar year-to-date, that Fund is 21 up about 4 and a half percent. 22 The International Equity Fund, I noted 23 earlier some relative outperformance by that Fund. Here you can see that Fund is 24 25 up about 75 basis points for the month of 0006 1 March, and just shy of 10 percent 2 year-to-date. 3 The Inflation Protection Fund with 4 assets of about \$70 million, that Fund is 5 up about 85 basis points, and calendar б year-to-date is up about 6.3 percent. 7 The Socially Responsive Equity Fund 8 with assets of about \$221 million, that 9 Fund is up about a half of a percent for March, lagging the S&P, which is up about 10 11 2 percent. Year-to-date, that fund up 12 11.5 percent. 13 CHAIRPERSON ADLER: Any questions 14 about the March report? 15 (No response.) 16 MR. FULVIO: We'll go into April. 17 April was another strong month for equity 18 markets. The U.S. equity market was up 19 about 4 percent. You can see the Russell 20 3000 there. Calendar year-to-date, that 21 benchmark is up about 18 and a half 22 percent, so really strong, and that 23 brought the fiscal year-to-date results to 24 8.9 percent. So it really wiped away or 25 eliminated, if you will, the impact of the 0007 1 fourth quarter when you look back over 2 that time period. 3 Outside the U.S., the international 4 composite benchmark, also a strong month, 5 but still behind the U.S., about 2.8

б percent. Calendar year-to-date non-U.S. 7 market is up about 12.8 percent and 8 roughly flat for the fiscal year-to-date. 9 The Diversified Equity Fund's hybrid 10 benchmark, that was up about 3.7 percent, with a calendar year-to-date return of 11 12 about 17 percent. 13 Within the international equity 14 markets, if you go about half way down the 15 page, you can see the developed non-U.S. 16 markets measured by the EAFE Index, that 17 was up about 3 percent; calendar 18 year-to-date up about 13. 19 And then the custom emerging markets' 20 benchmark, also positive, but a little bit 21 less so non-U.S. developed markets, but 22 still up about 2 percent for the calendar 23 year-to-date return of 8 percent. 24 Below that there's the underlying 25 strategies for the Inflation Protection 0008 1 Fund, the Socially Responsive Fund. 2 During April, they both posted positive 3 returns with the underlying strategy for 4 the Socially Responsive Fund up about 3 5 percent, with a calendar year-to-date б return of about 15 percent. 7 CHAIRPERSON ADLER: Questions for 8 Mike on April? 9 (No response.) 10 I think the next item is the discussion of the Investment Policy Statement, and 11 who's going to read that? Robin? 12 13 MS. PELLISH: I can make some 14 comments. 15 Again, this was very much a joint 16 effort with lots of participants, 17 specifically Diane Manzar of the 18 Comptroller's Office, doing a lot of work. 19 So what we've given, what we've 20 distributed in advance, are lots of 21 documents. We have paper copies of the 22 red-line version, and I'm happy to walk 23 through the document. I will say that what has been changed is really primarily 24 25 moving sections around to facilitate the 0009 1 flow. I don't think, and if Valerie or 2 anyone else, if you disagree, I don't 3 think there have been substantive changes. 4 We continue to focus on a very 5 user-friendly document that has good flow б with a series of exhibits that contain 7 details that -- what was previously

8 largely contained in the body of the 9 document. Again, the guiding principle in 10 editing this document has not been to make 11 rule changes or policy changes, but rather to take out the detail that is subject to 12 13 periodic review and change, some success 14 with policy, exclusion lists, divestment 15 policy exclusion, those kinds of things. 16 And the asset allocation targets, and to 17 move them into appendices that can be 18 readily changed without changing the body 19 of the document. 20 There are still some minor typos that 21 need to be addressed, but other than that, 22 if we -- and I will also say there is an 23 appendix that summarizes the main changes 24 from the former document to this document 25 that will be added. Those changes will 0010 really fall into the category of moving 1 detail and placing it into the appendix. 2 3 MS. VICKERS: I would just mention 4 that you will see some red-line and 5 green-line -- in the document. Some of б that is just moving paragraphs from one 7 place to another without real wording 8 changes. We just went over it and tried 9 to make the flow a little bit more 10 logical. 11 CHAIRPERSON ADLER: Discussion? 12 Questions? 13 (No response.) 14 I just have a couple questions. So, 15 I have gone over this document and I think 16 it looks good. I have not yet gone over 17 the appendices, and is the idea that we're 18 going to adopt the appendices when we 19 adopt the full IPS? 20 MS. PELLISH: I believe so. 21 MS. VICKERS: The appendices should 22 have been circulated along with the draft. 23 MS. PELLISH: There are a lot of 24 them. 25 MS. VICKERS: Some of them are --0011 1 well, you can take a look. 2 CHAIRPERSON ADLER: Okay. And my 3 other question is, is it correct to say that there really are no substantive 4 5 changes in this document? And did we end б up landing somewhere on the issue of the links? 7 8 MS. PELLISH: No, we kept them 9 unchanged --

10 (Talking over each other.) 11 -- as a topic that need come back to 12 the Board for any changes. 13 MS. VICKERS: My understanding is 14 that BAM is working with Rocaton to kind 15 of come up with an analysis and will make 16 a recommendation soon. 17 MS. PELLISH: Not so much with us 18 because it's in a private market, so I 19 think they're working with the private 20 market consultants. 21 MS. VICKERS: Oh, okay, sorry. With 22 Hamilton Lane to try to come up with some 23 kind of analysis, and then we'll present 24 that and the rationale for a recommended 25 change to those allocations, but all of 0012 1 that hasn't been finalized. So I think 2 that --3 (Talking over each other.) 4 CHAIRPERSON ADLER: Just to be clear, 5 what we're talking about for those -б MR. KAZANSKY: Was it the rebalancing 7 ranges? 8 CHAIRPERSON ADLER: No, it's not. 9 It's the maximum amount that can be 10 allocated to any specific manager in the 11 different private asset classes. It 12 varies by asset class --13 MS. VICKERS: To a specific fund. 14 CHAIRPERSON ADLER: It's to a fund 15 and to a manager? 16 MS. VICKERS: Yes. 17 CHAIRPERSON ADLER: Okay. Thank you. 18 It's to a fund and to a manager. So I 19 think it's actually being discussed 20 probably with Hamilton Lane and StepStone. 21 We have StepStone for real estate and 22 infrastructure; right? And probably --23 you guys aren't in -- is it true also for 24 OFI? You're not in discussions with OFI? 25 MS. PELLISH: No, I don't believe --0013 1 MS. VICKERS: I think OFI did currently have the limitations in their 2 asset section of the IPS. 3 4 MS. PELLISH: It doesn't refer to 5 OFI. CHAIRPERSON ADLER: Can I ask this б 7 question, and obviously we do have to 8 review, but are there any other 9 substantive changes in the appendices? 10 MS. PELLISH: We were very careful 11 not to make any substantive changes that

12 reflect any decisions the Board has made. 13 What we really tried to remove are 14 redundancies throughout the documents, and 15 then, again, to extract detail to the 16 appendix -- details that are really 17 important but they get lost in the main 18 document. We've tried to have the main 19 document be able to stand alone, on its 20 own, with reference to appendices for 21 detail regarding specific policies. 22 MS. VICKERS: And I would say that 23 maybe -- you know, there's an asset --24 approved asset class, an asset allocations 25 section that has things like the 0014 1 rebalancing ranges that were adopted 2 during the last asset allocation. 3 It's possible that that document was 4 not consistent with some of the things 5 that the previous IPS, that were just old б and had been there for a couple of years. 7 So, you know, it's not new policy because 8 it's our most recent approved selections, 9 but it might have changed or sort of 10 overwrote things that were in the previous 11 draft. 12 MS. PELLISH: But I think that's 13 because things that were in the previous 14 draft should have been eliminated and 15 It no longer reflected the changed. 16 Board's decisions and policies. 17 MS. VICKERS: Right. But I'm just 18 saying that it could be, if you're asking for any changes, that could be the case. 19 20 MR. KAZANSKY: I have a question in 21 the appendices. Is it a typo or is there 22 some difference between Appendix 4 and 23 Appendix -- oh, I see, Appendix 12 was 24 listed restriction --25 MS. VICKERS: Any place the 0015 1 numbering --2 (Talking over each other.) 3 MS. BUDZIK: Right. There is no 4 Appendix 72 or 109. Thank God. 5 (Talking over each other.) б MS. PELLISH: There's still some 7 typos, but I think they're in the right 8 order. But somehow, there should have 9 been a strike through one of the numbers, 10 so instead of Appendix 98, it should have 11 been --12 MR. LEVINE: Kind of like the date on 13 the front page. It says May February. Ι

14 assumed it was just a comparison --15 (Talking over each other.) 16 (Discussion off the record.) 17 CHAIRPERSON ADLER: Just one thing to 18 notify the Board on, and someone's going 19 to remind me, maybe Valerie or Robin or 20 Susannah -- there was an appendix, like --21 so there's some related appendices, and I 22 think that we ended up limiting one, if 23 I'm not mistaken. 24 So there's -- I'm looking at page 3, 25 the list of appendices. So there's 0016 divestment policy, and that's the 1 divestment policy that the Board adopted. 2 There is the excluded companies list, 3 4 which is the list of companies that are 5 currently excluded subject to the б divestments that we have adopted. 7 And then there's -- wasn't there one 8 other -- oh, restrictions on permissible 9 investments; so what's that? 10 MS. VICKERS: I think it would be helpful maybe if we can all turn to where 11 12 the appendices are --13 MR. KAZANSKY: That's February bank 14 list; right? For private markets? 15 (Talking over each other.) 16 MS. VICKERS: -- in the actual 17 document. Then that gives the context to 18 what we're talking about. 19 MS. BUDZIK: It should be on about 20 page 19, eligible investments and policy 21 restrictions. 22 MS. VICKERS: We're spending a lot of 23 time on page 19. 24 MS. STANG: Third line from the 25 bottom -- they also establish restrictions 0017 1 on --2 MS. BUDZIK: This doesn't read 3 correctly. This is -- I think some of it 4 is that the red-line is not showing up the 5 way it should. б MR. KAZANSKY: There's really no 7 strikeout on this --8 MS. BUDZIK: Yeah. And there should 9 be some strikeout. 10 MS. REILLY: Valerie, can I ask you a 11 question? 12 MS. BUDZIK: Me, a question? 13 MS. REILLY: Well, just -- it just 14 seems like there's a lot of work to get 15 this clean --

16 MS. BUDZIK: I think what happened is 17 -- so Diana, the Comptroller's Office, 18 circulated a draft that had the red-line, 19 and it was correct. And then somehow in 20 the transmission to Rocaton, things got a 21 little confused. 2.2 MR. LEVINE: In the version that was 23 distributed electronically before the 24 meeting, it actually is correct. So I 25 think it's just a printer hiccup here. 0018 1 (Talking over each other.) CHAIRPERSON ADLER: Page 19, it's the 2 3 bottom bullet on version -- because we did 4 do work on this paragraph --5 (Discussion off the record.) MS. REILLY: Do you want to pull it б 7 up on the screen? We'll put it up on the 8 screen (indicating). 9 (Discussion off the record.) 10 MR. KAZANSKY: May I make a 11 suggestion in tandem with that? That, I 12 know, John, you had said that you haven't 13 gone through all of the appendices. Let's 14 make sure we get that done so that any 15 issues can be addressed so we can put this 16 baby to bed at the Board meeting? 17 CHAIRPERSON ADLER: Yeah, right. 18 MS. VICKERS: And if anybody has any 19 technology issues, formatting issues, 20 tracking issues, that's understandable, 21 and feel free to come back to me. I think 22 -- I have the original stuff, and I can 23 have it resent to you if you need it. 24 MS. PELLISH: Okay. Is there 25 anything else --0019 1 We agree to make the changes, and 2 then forward everything for approval at 3 the upcoming public Board meeting? Is 4 that the plan? 5 MS. BUDZIK: Yes, I think we would б recirculate this document with these 7 changes, and we can highlight that 8 paragraph and any additional tweaking we 9 do to that paragraph. The appendices 10 don't have any track changes in it, so 11 those are easier documents to work 12 through. 13 CHAIRPERSON ADLER: And they don't 14 track changes because there haven't been 15 changes made? 16 MS. VICKERS: A lot of them were 17 created, so they are not --

18 MS. PELLISH: They were made by 19 extracting language from the document 20 itself. 21 CHAIRPERSON ADLER: Okay. But the 22 ones that did exist before, they have not 23 been changed? 24 MS. BUDZIK: None of them have been 25 changed. 0020 1 CHAIRPERSON ADLER: I had the 2 impression that the asset class --3 (Talking over each other.) 4 CHAIRPERSON ADLER: Any other 5 questions on the Investment Policy б Statement? 7 All right. I believe that concludes the business for the public agenda today. 8 9 Is there a motion to move into 10 executive session? 11 MS. PENNY: I move pursuant to Public 12 Officers Law Section 105 to go into 13 executive session for discussions on 14 specific investment matters. 15 MS. VICKERS: Second. 16 CHAIRPERSON ADLER: Thank you. 17 Any discussion? 18 All in favor of the motion to exit 19 public session and enter executive 20 session, please say "Aye." 21 (A chorus of "Ayes.") 22 All opposed, please say "Nay." 23 Any abstentions? 24 (No response.) Motions carries. 25 0021 1 (Whereupon the Board entered executive 2 session. ) 3 CHAIRPERSON ADLER: Okay. Anything 4 else? 5 (No response.) I believe that concludes our б 7 executive session agenda for today. 8 So, is there a motion to exit executive 9 session and return to public session? 10 MR. BROWN: So moved. CHAIRPERSON ADLER: 11 Second? 12 MS. GREEN GILES: Second. 13 CHAIRPERSON ADLER: Thank you. 14 Any discussion? 15 (No response.) 16 All in favor of the motion to exit 17 executive session and return to public 18 session, please say "Aye." 19 (A chorus of "Ayes.")

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20
          All opposed, "Nay."
21
          Any abstentions?
22
          (No response.)
23
          Motion carries.
       (Whereupon, the Board returned to
24
     public session.)
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0022
 1
          CHAIRPERSON ADLER: Okay.
                                      We are
 2
     back in public session.
 3
        Susan, could you please report out of
 4
     the executive session?
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          MS. STANG: Certainly. An executive
 б
     session consensus was reached to renew
 7
     various investment manager contracts.
        We held a discussion of the specific
 8
 9
     terms to be used in a specific investment.
10
        There was a discussion about different
11
     ways and approaches to implement our
12
     investment belief statement.
13
          CHAIRPERSON ADLER: Great.
                                       Thanks so
14
     much.
15
        I believe that concludes our business
16
     for today.
17
        Is there a motion to adjourn?
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          MS. PENNY: So moved.
19
          CHAIRPERSON ADLER: Thank you.
20
        Is there a second?
21
          MR. KAZANSKY: Second.
22
          CHAIRPERSON ADLER: Thank you.
23
        Any discussion?
24
          (No response.)
25
          All in favor of the motion to
0023
     adjourn, please say "Aye."
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 2
          (A chorus of "Ayes.")
 3
          All opposed, please say "Nay."
 4
          Any abstentions?
 5
          (No response.)
 б
          Motion carries.
 7
        Meeting is adjourned.
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          (Time noted: 1:11 p.m.)
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CERTIFICATION I, Jeffrey Shapiro, a Shorthand Reporter and Notary Public, within and for the б State of New York, do hereby certify that I reported the proceedings in the within-entitled matter, on Monday, May 6, 2019, at the offices of the NEW YORK CITY TEACHERS RETIREMENT SYSTEM, 55 Water Street, New York, New York, and that this is an accurate transcription of these proceedings. IN WITNESS WHEREOF, I have hereunto set my hand this 13th day of May, 2019. JEFFREY SHAPIRO