Proceedings NEW YORK CITY TEACHERS' RETIREMENT SYSTEM б INVESTMENT MEETING Held on Thursday, September 15, 2016, at 55 Water Street, New York, New York ATTENDEES: JOHN ADLER, Chairman, Trustee DEBORAH PENNY, Trustee THOMAS BROWN, Trustee SCOTT EVANS, Comptroller's Office SUSANNAH VICKERS, Trustee, Comptroller's Office DAVID KAZANSKY, Trustee CHARLOTTE BEYER, Trustee RAYMOND ORLANDO, Trustee REPORTED BY: YAFFA KAPLAN JOB NO. 0409689 Proceedings ATTENDEES (Continued): SUSAN STANG, Teachers' Retirement System MICHAEL FULVIO, Rocaton ROBIN PELLISH, Rocaton THAD McTIGUE, Teachers' Retirement System PATRICIA REILLY, Teachers' Retirement System VALERIE BUDZIK, Teachers' Retirement System LIZ SANCHEZ, Teachers' Retirement System MICHAEL SAMET, Office of the Actuary RON SWINGLE, Teachers' Retirement System MILES DRAYCOTT, Bureau of Assset Management DAVID LEVINE, ESQ. Groom Law Group 

1 Proceedings 2 MR. ADLER: Good morning, everyone. 3 Welcome to the Teachers' Retirement System of 4 the City of New York investment meeting for 5 September 15, 2016. б Pat, could you please call the roll? 7 MS. REILLY: John Adler? 8 MR. ADLER: I am here. MS. REILLY: Thomas Brown? 9 10 MR. BROWN: Here. 11 MS. REILLY: David Kazansky? 12 MR. KAZANSKY: Here. 13 MS. REILLY: Deborah Penny? 14 MS. PENNY: Here. 15 MS. REILLY: Raymond Orlando? 16 MR. ORLANDO: Present. 17 MS. REILLY: Charlotte Beyer? 18 MS. BEYER: Here. 19 MS. REILLY: And Susannah Vickers? 20 MS. VICKERS: Here. 21 MR. ADLER: Okay. Wonderful. 22 MS. REILLY: We have a quorum. 23 MR. ADLER: Thank you so much. 24 So I am going to turn it over to Rocaton 25 to take us through the public agenda, please. 0004 1 Proceedings 2 MR. FULVIO: Thank you. So we will 3 begin in the big books and we don't usually 4 spend much time on the quarterly updates 5 because we are usually here to talk about that б performance in the months right after, but 7 because we didn't have a meeting in July or August, I would like to turn your attention to 8 9 what would otherwise be the regular monthly 10 flash report for the month of June and that's 11 behind tab 5 and it begins on page 23. 12 So just some comments, taking a step 13 back and looking at the fiscal year that ended 14 on June 30th. It was a tough year for capital 15 markets in general. The best place to be was 16 in long duration bonds given the move in 17 interest rates. We see a ticking up a little 18 bit over the last few weeks, but in general 19 the best place to be was in those long bonds, 20 but within this portfolio, if you were to have 21 your pick among the different pieces of the 22 strategy, you would prefer to have been in the 23 index fund. And that's true not only for the 24 last 12 months but when you look back, really 25 over the three and five years, and the story 0005 1 Proceedings 2 there is diversification has not helped.

3 This, as you know, is a very diversified fund 4 with the objective of achieving Russell 5 3000-like returns but with lower volatility, б and unfortunately, as a result, we have given 7 up some return in trying to track the Russell 8 3. 9 Over the last 12 months, you can see the 10 EAFE component and EAFE markets in general 11 were down almost 7 percent. The EAFE 12 Composite, you know, not completely immune to 13 that but did protect a little bit down, about 14 6 percent, and one of the pinpoints over the

15 last 12 months in addition to the 16 diversification has been the active management within the US equity strategies. So you know, 17 18 they did not keep pace at all with the market 19 over the last 12 months, and in fact, lost 20 about 4 percent and we have seen that active 21 managers in general have had a challenging --22 challenging period of performance, relative 23 performance especially within the large cap 24 part of the market. So obviously something 25 that we are mindful of in monitoring, but this 0006

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2 fund was not immune to the challenges we have 3 seen more broadly with active management. As far as the other funds go, you can 4 5 see the Bond Fund over the last 12-month б period had a return of about 2.8 percent. The 7 International Equity Fund, like the market, 8 again down over 6 percent at about 6.65 9 percent. The Inflation Protection Fund for 10 the last 12 months with a modest return of 50 11 basis points versus CPI, just short of 1 12 percent. And the Socially Responsive Fund, 13 you can see with a return of about 90 basis points trailing the S & P, which was up about 14 15 4 percent. So again, a challenging time 16 period but again, in the past and now we can 17 return to the next fiscal year. Is there any 18 questions on this whole 2015 -- 2016? I'm 19 sorry. 20 MR. EVANS: The Socially Responsive 21 Fund, is it indexed on Socially Responsive 22 basis or actively managed? 23 MR. FULVIO: It's an actively managed 24 fund, single subadvisor. 25 MR. EVANS: So in fact, a combination of 0007 1 Proceedings

2 the limited universe and their active advice
3 choices.
4 MR. FULVIO: Yes. So with that, if

5 there is no questions, we will flip over to б the performance report for July. And just 7 focusing in on that first page there, you can 8 see that July was a strong month for markets. 9 The Russell 3000 was up about 4 percent, and 10 the Diversified Equity Fund very modestly 11 outperformed that as well as the hybrid 12 benchmark which was also up about 4 percent. 13 Within that, we saw some comeback from the 14 actively managed strategies in both the US --15 in the US, that is with the return of about 16 5.2 percent, and then in the International 17 Equity Composite, you can see nonUS markets 18 were strong as well, up about 5 percent, and 19 the composite there tracking somewhat closely, 20 about 10 basis points behind the EAFE -- the 21 broad international index, that is. The Bond 22 Fund with a very modest return, that brought 23 the calendar year return -- or I should say 24 held it steady at 2.9 percent. The 25 International Equity Fund, again, with those 0008 1 Proceedings

2 markets strong in the month of July, up about 3 5 percent. The Inflation Protection Fund flat 4 return for the month about zero percent. 5 Just make a quick comment for the last 12 months inflation there. Inflation has been б very modest. And that fund has 2.4 percent 7 8 return, outpacing inflation. And the Socially 9 Responsive Fund for the month of July, 4.6 10 percent return, outpacing the S & P 3.7 11 percent return. So we did see some turnaround 12 in both the markets in absolute terms for just 13 the month of July as well as the relative 14 performance. And just to put the numbers in 15 perspective, so for the first six months of 16 the year, despite all the volatility we saw 17 early, the Russell 3000 had a return of about 18 3.6 percent, added another 4 percent in the 19 month of July, and that brought the 20 year-to-date return for the US equity markets 21 to about positive to the tune of 7 and 3/422 percent. 23 So we have seen guite some movement in 24 the markets this year and it's -- you know, 25 certainly hasn't helped with the challenging 0009 1 Proceedings

2 environment that active managers have had, but 3 hopefully we have seen some signs that things 4 are changing. 5 Were there any questions on July? б MR. KAZANSKY: Well, just a question in

7 general. When the returns as we all are 8 expecting them to contract at the -- you know, 9 for the foreseeable future, is now the time 10 that we expect the active managers to really 11 start delivering, or do we expect them to 12 continue, you know, on par for what they have 13 been so far? 14 MS. PELLISH: Well, I would say if you 15 asked most active managers, their response 16 would be they found it hard to keep up with 17 strong bull markets but attempt to add value 18 in flat or down markets through security 19 selection. So to the extent we see markets 20 weaken and -- and experience lots of volatility, we would hope that the managers 21 22 would add value through security selection. 23 That's the hope. 24 MR. KAZANSKY: Okay. Thank you. 25 MR. FULVIO: So the other report we had 0010 Proceedings 1 2 distributed was the performance for the month 3 of August. And just a very high level there, 4 the markets were essentially flat, modestly 5 positive. The Russell 3 was up about a quarter of a percent as was the proxy we used б 7 for the defensive strategies benchmark and the international equity markets just very 8 9 modestly trailed that but also had a positive 10 return. So we would estimate at the end of 11 August calendar year-to-date return for the 12 Diversified Equity Fund still in excess of 7 13 percent. The Bond Fund we would expect, given 14 its proxy, very modest negative return to the 15 tune of 20 basis points. You can see under the international equity benchmarks, the 16 17 developed markets were also flat. The 18 developed small cap markets were a little bit 19 negative at negative half a percent. 20 The emerging markets which were up about 21 75 basis points for the month of August. 22 Worth noting that the year-to-date -- calendar 23 year-to-date return that is for that market is 24 up about 17 percent. So it had been a very 25 challenging environment for a number of years 0011 1 Proceedings 2 but we are seeing that obviously change 3 directions this year. 4 The underlying strategy for the 5 Inflation Protection Fund was down about half a percent and for the underlying strategy of б 7 the Socially Responsive Fund, that was up 8 about half a percent. So -- and just then

9 just to briefly comment since we are already 10 halfway through the month of September, we have seen in the US equity market a lot of 11 12 volatility over the last week or so going into 13 the Fed's discussions about the markets, and 14 the US equity market is down about 2 percent 15 through yesterday. So see how things change, 16 but there has been a lot of talk lately about 17 the greater possibility of a rate rise this 18 year. Doesn't seem as likely to occur this 19 month, but certainly by the end of the year 20 the market was pricing, and last I heard was at least 30, 35 percent chance. 21 22 MR. ADLER: Okay. 23 MR. FULVIO: Are there any questions? 24 MR. ADLER: Any more questions for 25 Rocaton? Is that a question, Tom? 0012 1 Proceedings 2 MR. BROWN: No. MR. ADLER: 3 Okay. So I think that 4 concludes our public agenda business. I think 5 it bears a motion to move into executive session that would be welcome. б 7 MR. ORLANDO: So moved. 8 MS. VICKERS: Second. 9 MR. BROWN: I move pursuant to Public 10 Officers Law Section 105 to go into executive session for discussion regarding specific 11 12 investment matters. 13 MS. VICKERS: Second. 14 MR. ADLER: Okay. Motion properly made 15 and seconded. 16 MR. ORLANDO: Sorry. So moved. I was 17 going to keep saying that. 18 MR. ADLER: Any discussion? All in 19 favor of the motion to move into executive 20 session, please say aye. Aye. 21 MR. BROWN: Aye. 22 MR. KAZANSKY: Aye. 23 MS. PENNY: Aye. 24 MS. BEYER: Aye. 25 MS. VICKERS: Aye. 0013 1 Proceedings 2 MR. ORLANDO: Aye. 3 MR. ADLER: All opposed, please say nay. 4 Any abstentions? Okay. Motion carries. 5 Okay. We are now in executive session, б and let's just keep right on moving here. 7 (Whereupon, the meeting went into executive session.) 8 MR. ADLER: Okay. Any more business for 9 executive session? Okay. 10 So then I think a motion would be in

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     order to exit executive session and go back
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     into public session.
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           MR. ORLANDO: I am not allowed to make
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     motions at this meeting. I am in the rule
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     enforcement business myself.
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           MR. BROWN: So moved.
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           MR. ADLER: Do we have a second?
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           MS. BEYER: Second.
           MR. ADLER: So motion moved and
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20
     seconded. Any discussion?
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           All in favor of the motion, please say
22
     aye.
          Ave.
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           MR. BROWN: Aye.
           MR. KAZANSKY: Aye.
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           MS. PENNY: Aye.
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           MS. BEYER: Aye.
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           MS. VICKERS: Aye.
           MR. ORLANDO: Aye.
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           MR. ADLER: All opposed, please say nay.
     Any abstentions? Okay. The motion carries.
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     When Liz is ready, we will be back in public
 8
     session and Susan will make the report.
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           Okay. We are back in public session.
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     Susan, would you please report out of the
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     executive session?
           MS. STANG: Absolutely. In executive
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13
     session, one manager update was presented.
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     There was a presentation on the transfer of
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     assets which was received and discussed.
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     There was a presentation on Variable B which
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    was received and discussed.
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           MR. ADLER: Thank you very much.
                                             So
    unless there is further business, I think a
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     motion to adjourn would be in order.
           MR. KAZANSKY: So moved.
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           MR. ADLER: Is there a second?
23
           MS. BEYER: Second.
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           MR. ADLER: Okay. Motion made and
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     seconded. Any discussion? All in favor of
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 1
     the motion to adjourn, please say aye. Aye.
 2
           MR. BROWN:
                      Aye.
           MR. KAZANSKY: Aye.
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           MS. PENNY: Aye.
 б
           MS. BEYER:
                      Aye.
 7
           MS. VICKERS: Aye.
 8
           MR. ORLANDO: Aye.
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           MR. ADLER: Opposed, please say nay.
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     Any abstentions? The meeting is adjourned.
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           (Time noted: 11:27 a.m.)
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Proceedings CERTIFICATE STATE OF NEW YORK ) : ss. COUNTY OF QUEENS ) б I, YAFFA KAPLAN, a Notary Public within and for the State of New York, do hereby certify that the foregoing record of proceedings is a full and correct transcript of the stenographic notes taken by me therein. IN WITNESS WHEREOF, I have hereunto set my hand this 26th day of September, 2016. YAFFA KAPLAN