NEW YORK CITY TEACHERS' RETIREMENT SYSTEM INVESTMENT MEETING held on Thursday, April 5, 2012 at 55 Water Street New York, New York 2.4 ATTENDEES: MELVYN AARONSON, Chairperson, Trustee SANDRA MARCH, Trustee MONA ROMAIN, Trustee б LARRY SCHLOSS, Trustee, Comptroller's Office JAMIE SMARR, Trustee JANICE EMERY, Mayor's Office MARTIN GANTZ, Comptroller's Office SEEMA HINGORANI, Comptroller's Office BARRY MILLER, Comptroller's Office YVONNE NELSON, Comptroller's Office THAD McTIGUE, Comptroller's Office JOEL GILLER, Comptroller's Office MARC KATZ, TRS SUSAN STANG, TRS ROBERT RAUCCI, TRS ROBERTA UFFORD, Counsel ROBERT C. NORTH, JR., Actuary 20 ROBIN PELLISH, Rocaton CHRIS LYON, Rocaton

0003 1 PROCEEDINGS 2 (Time noted: 9:50 a.m.) 3 CHAIRPERSON AARONSON: Good morning. 4 MR. KATZ: Good morning, folks. We're 5 going to begin the investment meeting of the Teachers б Retirement Board for April 5. 7 We'll start with the calling of the 8 roll. 9 Melvyn Aaronson? 10 CHAIRPERSON AARONSON: Here 11 MR. KATZ: Kathleen Grimm? 12 (No response.) 13 MR. KATZ: Jamie Smarr? 14 MR. SMARR: Present. 15 MR. KATZ: Sandra March? 16 MS. MARCH: Here. 17 MR. KATZ: Janice Emery? 18 MS. EMERY: Here. 19 MR. KATZ: Freida Foster? 20 (No response.) 21 MR. KATZ: Mona Romain? 22 MS. ROMAIN: Present. 23 MR. KATZ: Larry Schloss? 2.4 MR. SCHLOSS: Here. 25 MR. KATZ: We do have a quorum, so I 0004 1 will turn it over to the chair. 2 CHAIRPERSON AARONSON: Thank you very 3 Welcome everybody to the meeting. much. 4 And the first order of the meeting today 5 will be the pension portion by the Comptroller's 6 Office in the public session. 7 MR. SCHLOSS: Thank you, Mel. Does everybody have their monthly 8 9 report? 10 Perfect. 11 I'll quickly go through it. 12 Let's start on page 3 just for a quick 13 second. We're the blue line. The blue line is picking up, and that's sort of the conclusion of all 14 15 the economic slides. Things are picking up a little 16 bit. 2.5 to 3 percent GDP. 17 That gets you to page 6. Which is 18 unemployment claims which we talked about previously. 19 Jobs are -- unemployment is still unacceptably high, 20 but slowly coming back down. You can see the 21 unemployment rate on page 7. What you can see on 22 page 8 is a very, very muted response relative to 23 other expansions out of the recession. The problem 24 is highlighted on page 11, which, again, we're the 25 blue line, which is housing prices continue to go

0005 1 down. Until that stabilizes completely, we won't get 2 construction jobs back again. 3 You can see, however, on page 13 that 4 there is a little bit in recovery in new home starts. 5 So again it's got to start somewhere, so it's б starting there ever so slowly. 7 If you look through here, you can get 8 quickly to page what's called -- 22. 22 is a VIX. 9 It's volatility in the U.S. equity markets. You can 10 see the problems of last fall are behind us, behind 11 the U.S. stock market in general. Again, it relates 12 back to the ECB giving out three-year very, very 13 inexpensive loans, which averted the collapse of the 14 European banking system and we're back to risk on 15 versus risk off. 16 You can see on page 23 the white line is 17 the current treasury curve, and you can see rates 18 have sort of inched up afterwards because flight to 19 quality is over so people sold government bonds. 20 Risk on and off also shows on page 25, 21 which is the high yield spreads over investment 22 grade. And again, the spreads are coming down in 23 particular bonds, things like high yield bonds and 2.4 equities. 25 The best thing to see on equities is on 0006 1 page 30, and again, pretty much since the middle of 2 December all those markers have gone up, U.S. stock 3 market, EAFE and emerging markets, excluding, of 4 course, the last three days. 5 If you go to page 32 you can see the 6 latest 12 months. At the end of February, Teachers 7 is about \$43.9 billion. I think that's the highest 8 ever. We're probably up from there in March and down 9 a little, so we're probably around where we are now. 10 Perhaps up a "scoshe." And, again, if you look at it on a ten-year history, it's almost something of a 11 12 straight line here. Forget about '09. So we're 13 working our way back on long-term trends I guess. 14 If you jump now to page 38, you can see 15 that in the far left-hand column, the U.S. stock 16 market in February was up about 4 percent. 17 International markets were up 5 to 6 percent, and the 18 high yield market was up about 2 percent. 19 That got us to the next page, 39. We 20 made about 3 percent in February. And that gets our 21 fiscal year to date to about 2.5 percent. So, you 22 know, we have to get to 8. We have four months, 23 three months left. We'll see. It's a horse race. 24 It ain't over till it's over. 25 If you go back then to page 36, you can

0007 1 see how the assets are allocated. This is using our 2 adjusted policy weights. As you know moving from the 3 old allocation to the new allocation takes time. 4 What you see it probably doing in the futurel is 5 taking it to EAFE, which is over-allocated down and б once the market is under-allocated up, so it takes 7 time to actually get that done. 8 Cash, which is on here at 2 percent, is 9 now down less than 1 percent. We have bought 1 10 percent or so worth of emerging market equities. 11 We've refunded some opportunistic fixed income 12 mandates and a couple of other things along the way. 13 So the cash is back. It's very, very small levels. 14 If you jump to page 37 to the very 15 bottom, Total Equities and Total Fixed Income actual, 16 you can see that we're about 69 percent equities, 31 17 percent fixed income, which is about where we're --18 the extremes of the range, but we're kind of leaning 19 into equities, which I'd say is the right thing to do 20 after you take risk off and put it back into risk on. 21 The rest of the book is all the, as 22 usual, the managers. The manager I think have found 23 their footing again. Most of the monthly performance 2.4 are in the green, meeting their benchmarks on 25 average. 0008 1 I would ask Seema if you have anything 2 to talk about anything specific in equities? 3 MS. HINGORANI: No. 4 MR. SCHLOSS: Martin, fixed income? 5 MR. GANTZ: No. 6 MR. SCHLOSS: Barry? 7 MR. MILLER: No. 8 MR. SCHLOSS: Yvonne? 9 MS. NELSON: No. 10 MR. SCHLOSS: Excellent. No news, good 11 Market's going up, all good. news. 12 So if you have any questions -- I guess 13 the bottom line is we're up. We're back in positive 14 territory. We expect increased volatility. It's 15 been pretty calm for January, February and March. 16 April is a little choppy. My guess is there will be 17 choppy points in the rest of the year, and we will 18 see how it all sorts out on June 30th. 19 I don't have a question, MS. EMERY: 20 but I have a request. 21 MR. SCHLOSS: Yes, ma'am. 22 MS. EMERY: May we perhaps see a 23 footnote -- and maybe I missed it. Just to remind 24 us, which of these returns are net of fees and which 25 are gross of fees, because I think there's a

0009 combination in here. And I do forgot from time to 1 2 time, so would it be possible to footnote? 3 MR. SCHLOSS: Yes, we will. And we 4 have been working with our custodian to see if we get 5 them off of net. б MS. EMERY: Do you have a time frame 7 that you're giving them with regard to ... 8 They've been working on MR. SCHLOSS: 9 it for two years. They haven't got it done, so I've 10 given up on date and time. 11 Martin, you want to comment on way they 12 can't get this done? 13 MR. GANTZ: Yes. I can give a couple 14 of items here. As far as the footnote goes, for the 15 alternative asset classes, the private equity real 16 estate and opportunistic fixed income are, I 17 believe -- for the alternative assets classes, 18 private equity and opportunistic fixed income with all but one exception, to my knowledge, are reported 19 20 net of fees. So we report those net of fees. 21 For the publicly traded assets, the 22 assets held at the Bank of New York, they're reported 23 gross of fees. 2.4 One of several issues has to do with how 25 to get that into the system. The system is built as 0010 1 most custodians' systems are for the securities held 2 in their account that are publicly traded to report 3 gross fees. And I can turn to Rocaton if they have 4 clients or what the general rule is. Are they 5 reported for -- typical stock and bond accounts, are 6 they reported gross of fees or net of fees? 7 MS. PELLISH: Typically both. 8 MR. GANTZ: So the issue that we're 9 facing with Bank of New York, one of issues, is that 10 number 1 is timing. So the quarter just ended for 11 March. If we were to report the March numbers, the 12 fees that we pay, this bill wouldn't be submitted 13 until after they get their statement, which will be 14 sometime later this month, the bill would be paid later, assuming everything is okay and there are no 15 16 issues or discrepancies, and that is done correctly 17 and reflected correctly in the performance by Bank of 18 New York, and we can tell them to include that and 19 create a net of fee version of that. But because of 20 the time and differences and because of the hundreds 21 of accounts that the city has, it becomes a very 22 complex issue, especially when you add in performance 23 fees that are paid yearly, not monthly or quarterly, 24 as well as issues that arise because of discrepancies 25 in the fee calculation. Our fees are negotiated for

0011 1 you with the idea to make them as low as possible, 2 and sometimes they can be complex because of that, 3 but they do benefit the board because of our attempts 4 to get the fees lower. 5 MR. SCHLOSS: We are switching just to 6 let you understand some of the background. 7 CHAIRPERSON AARONSON: I appreciate the explanation, and will the Comptroller's Office please 8 9 work on doing that. 10 MS. MARCH: Could I ask a question? 11 Could somebody tell me, we're requesting 12 something and what we're requesting may make sense. 13 But how does the industry do it, is my question, 14 because we're up against the industry. 15 MR. GANTZ: So Robin mentioned that 16 it's done both ways. The reason I ask her is just to 17 hear from her point of view. We polled the other 18 consultants, and the answer that we've gotten is for the most part, which is -- well, perhaps we should 19 20 have an offline conversation -- for the traditional 21 stock and bond portfolio is done gross, gross of 22 And what we do in the quarterly report is we fees. 23 have a separate page that shows by assets class, in 2.4 other words, U.S. Government sector, high yield. We 25 do have an average fee that's much easier to deal 0012 1 with. The problem is the specific manager -- no 2 specific manager is that -- but the overall fee --3 the overall return for that particular asset class 4 you can take that and subtract that. 5 But that's actually not MS. EMERY: 6 what I heard our other consultants say. When we look 7 at the peer comparisons, that's correct. It's 8 usually gross to gross when we do peer comparisons. 9 When you do look at, for our internal purpose versus 10 our benchmark, how a manager is doing or how 11 particular asset class is doing against our own 12 benchmark, I heard that it was typically net of fees. 13 It depends on what you're looking at. Peer universes 14 is gross, but then manager is benchmark. 15 MR. GANTZ: So in short, it does take 16 work because of the complexity and the sheer number 17 and volume of accounts, the timing issues, the 18 performance fees, and the fact that there are 19 changes. So we will have years where a manager has 20 four quarters, but they only got paid for two because 21 of the complexities or issues doing that, and so the 22 next year they get paid for six quarters worth of 23 fees. So we have to figure out a mechanism to deal 24 with that over hundreds of accounts. 25 MS. PELLISH: If I could just say

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0013 1 something, when you get net of fee performance 2 typically from a custodian, everyone's dealing with 3 those problems, and so you just understand that for a 4 given guarter the net of fee may be distorted because 5 fees came in late or fees were combined for two periods. But over an annualized period, it tends to 6 7 even out. 8 MR. GANTZ: Over the long period I 9 agree, but over the short period of time --10 MS. EMERY: We care about long-term 11 performance. We don't care about monthly performance 12 or quarterly because a lot of the deviations --13 MR. GANTZ: And we are working on it. 14 MS. ROMAIN: So what you're asking for 15 is a footnote. 16 MS. EMERY: For now. 17 MS. ROMAIN: We move on. 18 MR. KATZ: Thank you. 19 MS. EMERY: Can we get an update 20 periodically because I really do think we really need 21 to start getting net of fees? 22 MR. SCHLOSS: It's in process. 23 Any other questions on performance? 2.4 CHAIRPERSON AARONSON: Move over to 25 Passport Funds public report. 0014 1 MR. LYON: Good morning. 2 I'm going to start by presenting 3 information through the end of February, and I'm 4 going to start with the diversified and equity funds. 5 This was sent out in advance and handed 6 out this morning as well. You can see that at the 7 end of February the total market value of the assets 8 was 9.878 billion. 9 And if you look at the first page you 10 can see how the assets were allocated across all the 11 different underlying managers and composites. At the 12 composite level, we were inside of all the 13 rebalancing ranges due to the ongoing monthly 14 rebalancing program. And the largest deviations from 15 the target were just 1.2 percent, so no particular 16 concerns from an asset allocation perspective. The 17 rebalancing program functions and has been as 18 expected. 19 If you flip ahead two pages to page 3 20 you can see the performance consistent with the prior 21 presentation. Everyone knows we've been off to a 22 strong start in January and for the month of February 23 as shown here and even through March, as we'll 24 preview in just a moment. 25 If you look at page 3 in the middle of

0015 1 the page, you can see for the month of February the 2 Teachers Total is -- the Diversified Equity Fund 3 performance and that return net of fees was positive 4 4.38 percent, which was a little bit better than the 5 broad Russell 3000 and also the Hybrid Benchmark. б And when you look over the -- you don't have to look very far, actually, when look up one row 7 8 and you see an almost 6 percent return for the 9 International Composite which made that the strongest 10 performing composite for the month. The lowest 11 returning composite was still up almost 3 percent, 12 which was the Defensive Composite. And in most 13 months where the equity markets are up fairly 14 strongly, we would expect that the Defensive 15 Composite to trail by its design. But we hope when 16 the optimism cures the market, that the Defensive 17 Composite provides some downside protection. 18 So if you look over to the 1 Year 19 column, for instance, where we know that for a 20 one-year period was highly volatile, we got a 21 positive 3 percent for Variable A for the one-year period. But during that period, because things were 22 23 so volatile, we actually benefitted from a lot of 2.4 downside protection in the Defensive Composite which 25 was the strongest performing composite for the year 0016 1 ended February 29th with a 7 percent return, while we 2 had a negative 7 percent return from International 3 Equity, for example. 4 If you also just, for your own reference 5 -- and we can talk more about it later, but over the 6 course of the past year or so a number of new 7 managers have been added, and all the managers since 8 inception performance is shown on page 5, and what 9 you can generally see is if you picked out all the 10 managers to kind of highlight by example, it's fair 11 to say as we go through these different monthly 12 reviews, all the managers who are added within the 13 past year are off to strong starts in terms of 14 absolute performance and that's partially due to 15 their market exposures, but also in terms of relative 16 performance with the worst relative performance being 17 the index fund which tracked on a net of fee basis 18 fairly close the index, and everyone else being flat 19 or immediately ahead of the benchmark among all these 20 different management strategies in the past year. So 21 we're off to a good start with all the managers who 22 have been added. 23 So I'll just pause and see if there are 24 any questions on the Diversified Equity Funds before

25 I turn to the other variable funds.

0017 1 Hearing none, I'm going to go on to the 2 Variable B, the Bond Fund. And the Bond Fund had, as 3 of February 29th, a market value of approximately 4 \$383 million. You can see the decomposition of that 5 split between several different underlying 6 portfolios. We previously discussed the transition 7 that the Bond Fund emerged from previously being the 8 stable valued fund and that transition, in large 9 part, was completed approximately at year end, 10 started this year and continues. 11 The bulk of the funds is no longer 12 invested in stable valued type instruments, as you 13 can see from the NISA portfolio, as well as the Short 14 Term Portfolio allocation. And at this point in time 15 the only remaining stable value portion of the fund 16 is the 16.4 percent notated in the top right chart 17 split between two different components with the BNY 18 Mellon managed portfolio. You can also see the 19 returns. These are net of fees. And so for the 20 total Bond Fund, the return was negative 2 basis 21 points or two one-hundredth's of a percent for the 22 month of February bringing us year-to-date returns at positive 0.76 percent over that two-month period. 23 2.4 And that compares favorably to the benchmark shown 25 below. 0018 1 And then if there aren't any questions 2 on that, we'll go on to the other three Passport 3 Funds in International Equities, Inflation 4 Protection, Socially Responsive Equity Fund. These 5 are shown on page 2 and 3. And what you can see at 6 the top left of page 2 are the market values in the 7 same order I mentioned their names, 76 million, 8 roughly, 28 million and 37 million are the 9 approximate values of these options. 10 The performance is shown as well. The 11 International Equity Fund performance, because it's 12 unified largely with the International Composite of 13 the Diversified Equity Fund, is similar, 5.9 positive 14 return for the month, down almost 7 percent for the 15 trailing year. Both numbers comparing favorably to 16 the EAFE benchmark. 17 The Inflation Protection Fund was up in 18 the 2 percent range, and that also compared favorably 19 to its benchmark, so I mentioned regularly that 20 that's not a benchmark we expect to track that 21 closely over short and intermediate time periods, but 22 a goal is to outperform it over longer time periods. 23 But nonetheless, we were glad to note that we 24 outperformed it. But their fund did trail that benchmark over their one-year period. 25

0019 1 And the Socially Responsive Equity Fund 2 was up 4.6 percent, a little bit better, net of fees 3 all these are, than the S&P 500. For the trailing 4 year, though, it did lag due to the performance of 5 the underlying funds. So it was modestly negative at б negative 0.4 percent for the one-year period. 7 Since inception, on page 3 of each these 8 funds, the Bond Fund I already mentioned. It's just 9 at two month's inception in it's current form. But 10 the International Inflation Protection and Socially 11 Responsive strategies are up about 4 percent, about 2 12 percent and about 2 percent respectively versus their 13 relevant benchmarks on an annualized net of fee basis 14 since their start-up in mid 2008. Very strong 15 relative results have continued. 16 That's everything we have through 17 February 29th. I'll pause again to see if there are 18 any questions. 19 MS. EMERY: Just a quick question along 20 the same lines with regard to the fees. So I notice 21 that these are net of fees. 22 MR. LYON: Yes. 23 MS. EMERY: Is this a calculation 2.4 that's being done by the BNY Mellon, the custodian, 25 or is this Rocaton doing adjustments for the fees? 0020 1 MR. LYON: This is done by the No. 2 custodian, but the custodial relationship is separate 3 than the pension relationship and was the Legacy 4 Mellon relationship so that the performance 5 calculation, I believe, at least historically has 6 been done by different teams, perhaps even using 7 systems. 8 MS. EMERY: Oh, is that right? So you 9 think the issue with the pension funds could be the 10 use of different systems of the custodians? 11 MR. LYON: I think the issues are 12 everything Martin mentioned, plus they may have the 13 added issue of potentially different systems or at 14 least different teams. 15 MS. EMERY: Okay, interesting. 16 Thank you. 17 MR. LYON: And then the March 31st 18 benchmark info, just to review, I had mentioned that 19 for equities that March was another strong month. 20 And you can see domestic equities returns for those 21 benchmarks opened at 3 percent range. International 22 equities were modestly negative, and fixed income was 23 negative in the longer duration, but if you're 24 showing one-year numbers on long bonds versus long

25 treasuries are 24 percent, then I guess you don't

0021 1 mind a minus 4 percent month. 2 You can also see how other options 3 performed through March 31st, the underlying funds. The Inflation Protection and Socially Responsive 4 5 Equity are shown. б Any questions? 7 Okay. That's everything that we had for 8 the public session of the Passport Funds. 9 CHAIRPERSON AARONSON: Thank you very 10 much, Chris. 11 MS. MARCH: I make a motion that we go 12 into executive session for purposes of discussing 13 sales of securities under Public Officer Law 105. 14 MS. EMERY: Second 15 CHAIRPERSON AARONSON: We are now on 16 the executive agenda of the Passport Funds. 17 18 (At this time, the meeting went into executive session.) 19 20 21 CHAIRPERSON AARONSON: Do I need a 22 motion to end the executive session? 23 MS. MARCH: I make a motion that we go back into session, public session. 2.4 25 CHAIRPERSON AARONSON: Do I hear a 0022 1 second. 2 MS. ROMAIN: Second. 3 CHAIRPERSON AARONSON: Any discussion? 4 All those in favor. 5 (Chorus of ayes.) 6 CHAIRPERSON AARONSON: We are now back 7 in public session and we are going to get a report on 8 what we did during our executive session. 9 Ms. Stang? 10 MS. STANG: In the executive session of 11 the variable funds, there was a discussion about the 12 structure and the investment manager in the Bond 13 Fund. Consensus was developed, which will be 14 announced at the appropriate time. 15 There was also an update on several 16 managers in the variable programs, as well as an 17 update on our consulting firm. 18 In the executive session of the pension 19 fund, there was a brief discussion of the structure 20 of the private equity portfolio. We received a 21 presentation on a private equity investment. 22 Consensus was developed which will be announced at 23 the appropriate time. 24 A manager update in the real estate 25 portfolio was presented. There was a discussion of

0023 1 the RFP for high yield managers. Consensus was 2 developed which will be announced at the appropriate 3 time. 4 A presentation for an opportunistic 5 fixed income manager was received. Consensus was 6 developed which will be announced at the appropriate 7 time. 8 CHAIRPERSON AARONSON: Is there a 9 motion to adjourn? 10 MS. MARCH: So moved. 11 CHAIRPERSON AARONSON: Is there a 12 second? 13 MS. MARCH: Second. 14 CHAIRPERSON AARONSON: Any discussion? 15 Hearing none, all those in favor of 16 adjourning. 17 18 (Time noted: 12:57 p.m.) 19 20 21 22 23 2.4 25 0024 1 2 3 CERTIFICATION 4 5 I, PATRICIA GUARINO, a Shorthand 6 Reporter and Notary Public, within and for the State 7 of New York, do hereby certify that I reported the 8 proceedings in the within-entitled matter, on April 5, 2012, at NYC Teachers Retirement System, 55 9 10 Water Street, New York, New York, and that this is an accurate transcription of these proceedings. 11 12 IN WITNESS WHEREOF, I have hereunto set 13 my hand this day of , 2012. 14 15 16 PATRICIA GUARINO 17 18 19 20 21 22 23 24

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