NEW YORK CITY TEACHERS'RETIREMENT SYSTEM BOARD MEETING Held on Thursday, November, 20, 2014 at 3:41 p.m. б 55 Water Street New York, New York ATTENDEES: MELVYN AARONSON, Chairman, Trustee SANDRA MARCH, Trustee CAROLYN WOLPERT, Trustee THOMAS BROWN, Trustee SUSANNAH VICKERS, Trustee KATHLEEN GRIMM, Trustee PATRICIA REILLY, Teachers' Retirement System THAD McTIGUE, Comptroller's Office SUSAN STANG, Teachers' Retirement System VALERIE BUDZIK, Teachers' Retirement System ATTENDEES (Continued): ELLEN DeLEO, Teachers' Retirement System JENNIFER MALDONADO, Teachers' Retirement System PAUL RAUCCI RENEE PEARCE LIZ SANCHEZ б ANTHONY MEZZACAPPA ANNETTE HANHARAN CARMELA CRIVELLI CAROL HASDAY MS. REILLY: Good afternoon. We will

begin the November 20, 2014 regular meeting of 2 3 the Teachers' Retirement Board by calling the 4 role. 5 Melvyn Aaronson? б MR. AARONSON: Here. 7 MS. REILLY: Thomas Brown? 8 MR. BROWN: Here. 9 MS. REILLY: Kathleen Grimm? 10 MS. GRIMM: Here. 11 MS. REILLY: Sandra March? 12 MS. MARCH: Present. 13 MS. REILLY: Susannah Vickers? 14 MS. VICKERS: Here. 15 MS. REILLY: Carolyn Wolpert? 16 MS. WOLPERT: Here. 17 MS. REILLY: Okay. So we do have a 18 quorum so we will proceed. 19 The next item is an update on TRS 20 operations. Ellen DeLeo has some updates for 21 us. 22 MS. DeLEO: I have two quick updates. I 23 have the final report for summer retirement. 24 TRS received a total of 1,999 25 retirements for the June 30, 2014 retirement 0004 date and 631 retirements for July and August 1 2 for a total of 2,630 summer retirement cases. 3 TRS and the Office of the Actuary were 4 able to finalize 1,479 summer retirement cases 5 by the October payroll, and an additional 529 б cases are targeted for the November payroll 7 for a total of 2,008 retirees. The remaining 622 cases are in various stages of completion. 8 9 TRS will be completing the processing of required minimum distributions due to 10 approximately 20,000 retirees for the tax year 11 12 2014 that have deferred annuitization of their 13 TDA balances and are mandated to receive an 14 RMD. Roughly 57 percent or 11,453 retirees 15 have opted to receive their distribution in 16 December of this year. Approximately 524 17 additional beneficiaries that participate in 18 our TDA-B program will also receive RMDs next 19 month. 20 MS. REILLY: Thank you, Ellen. 21 Next is the executive director's report. 22 The first item there is the next meeting, and 23 it's been suggested that the next regular 24 meeting of the Teachers' Retirement Board be 25 held on the third Thursday of the month, 0005 1 December 18, 2014. MR. AARONSON: Everyone mark their 2 3 calendars, please.

4 MS. REILLY: So the next item is 5 resolution for the TRS modernization program. 6 MR. AARONSON: That resolution we would 7 like to hold off voting on until Wednesday of next week. We have had some requests that we 8 9 do that, and I would like to move that we do 10 not vote on that motion until next Wednesday 11 before the close of business. 12 MS. MARCH: Can I ask the chair a 13 question? That would be done by telephone 14 vote? 15 MS. REILLY: Usually by e-mail. Send an 16 e-mail. 17 MS. MARCH: And we will respond to you, 18 and no, we are not having a meeting. 19 MS. REILLY: So the next item is 20 appointment of acting chief actuary. 21 "Whereas, following the retirement of Robert 22 C. North, Junior, on October 31, 2014, there 23 is a desire to appoint a full-time successor 24 to the position of actuary, and whereas" --25 MR. AARONSON: Why don't we waive the 0006 reading of the whereases and go to the 1 2 resolveds, please. 3 MS. REILLY: "Resolved that Robert C. 4 North, Junior shall continue to perform the 5 duties and functions of the actuary as set б forth in the relevant provisions of the 7 Administrative Code of the City of New York 8 and as directed by the Board of Trustees for 9 the period commencing November 1, 2014 and ending December 31, 2014. 10 11 And be it further resolved that during 12 this time period, Mr. North shall be known as 13 the Acting Chief Actuary except where for 14 purposes of executing preprogrammed benefit 15 certifications and related documents he shall 16 be authorized to sign as Chief Actuary". 17 MS. MARCH: So moved. MS. WOLPERT: Second. 18 19 MR. AARONSON: Any discussion? So now 20 instead of calling him Mr. North, we have to 21 call him Mr. Acting Chief Actuary. 22 MS. REILLY: Except when he is signing 23 documents. 24 MR. AARONSON: Are we ready for a vote? 25 All those in favor? Aye. 0007 1 MR. BROWN: Aye. 2 MS. GRIMM: Aye. 3 MS. MARCH: Aye. 4 MS. VICKERS: Aye. 5 MS. REILLY: Aye.

6 MS. WOLPERT: Aye. 7 MR. AARONSON: Any opposed? Carried. 8 MS. REILLY: Next resolution is the per 9 session Bridge Population. 10 MS. MARCH: Move to resolve waiving the 11 reading of the whereases. 12 MS. REILLY: "Resolved, the Board 13 authorizes and directs TRS to implement benefit recalculations for the Bridge 14 15 Popluation in accordance with the methodology 16 recommended by the actuary". 17 MR. AARONSON: Do I hear a second to 18 that resolution? 19 MS. WOLPERT: Second. 20 MR. AARONSON: And is there any 21 discussion? Seeing no discussion, ready to 22 vote? 23 Whoever is in favor, please say aye. 24 Aye. 25 MR. BROWN: Aye. 8000 1 MS. GRIMM: Aye. 2 MS. MARCH: Aye. 3 MS. VICKERS: Aye. 4 MS. REILLY: Aye. 5 MS. WOLPERT: Aye. б MR. AARONSON: Anybody opposed please 7 say no. 8 It's carried. 9 MS. REILLY: So that concludes the 10 executive director's report, and the next item on the agenda is the calendar. Each board 11 12 member should have received the calendar sent 13 to them listing our transactions and payments 14 for the month so I will go over a quick 15 summary. 16 First is the matter of the approval of 17 minutes for the regular board meeting held on 18 October 23, 2014. MR. AARONSON: Do I hear a motion to 19 20 accept the minutes? MS. MARCH: So moved. 21 22 MR. AARONSON: Second? 23 MS. WOLPERT: Second. 24 MR. AARONSON: Any discussion? Seeing 25 none, those in favor say aye. Aye. 0009 1 MR. BROWN: Aye. 2 MS. GRIMM: Aye. 3 MS. MARCH: Aye. 4 MS. VICKERS: Aye. MS. REILLY: Aye. 5 б MS. WOLPERT: Aye. 7 MR. AARONSON: Those opposed? Minutes

8 are carried. Accepted. 9 MS. REILLY: So pages 1 to 14, 10 inclusive, are the monthly periodic payroll of 11 TDA excess and loan payments. Page 15 is 12 payroll summary, accounts payables, new 13 retirees, and TDA accounts. Page 16 through 14 42, inclusive, is the transfer of active 15 TDA-deferred to annuity payments. Pages 43 16 through 97, inclusive, are fractional 17 payments. Pages 98 to 114, inclusive, for 18 uncollected checks for deceased members. Pages 115 through 126, inclusive, are 19 20 beneficiary continuing option payments. Pages 21 127 through 138, inclusive, are conversions to 22 pop-up payments. Pages 139 through 200, 23 inclusive, are the beneficiaries who receive 24 one-time payment from the QPP and TDA 25 accounts. Pages 201 to 203, inclusive, are 0010 returned net accumulated salary deductions. 1 2 Page 204 is the transfer of funds between 3 banks. Pages 205 through 209, inclusive, are 4 purchases and sales of securities transactions 5 from the passport funds. Page 210 through 211 б is the successive installments for deceased 7 members. Pages 212 through 220, inclusive, 8 are outstanding checks. Pages 221 through 9 238, inclusive, are revisions, including those 10 under class coverage. Pages 239 through 241, inclusive, are leaves of absence without pay. 11 12 Pages 242 through 244 are payments for service 13 credit. Page 245 through 248, inclusive, are 14 restorations to active service. Page 249 are 15 denied accident disability benefits. Page 250 16 are denied ordinary disability payment 17 benefits. Page 251 are minimum accumulations, 18 and page 252 are new service retirement 19 payments. 20 MR. AARONSON: Thank you for reporting 21 on the calendar. 22 MS. REILLY: So that concludes the 23 calendar. 24 We adopt the calendar? MR. AARONSON: 25 MS. MARCH: So moved. 0011 1 MR. AARONSON: Motion to adopt the 2 calendar. 3 Do I hear a second? 4 MS. GRIMM: Second. 5 MR. AARONSON: Motion seconded. Is б there any discussion? Seeing none, ready to 7 vote? All those in favor of adopting the 8 calendar say aye. Aye. MR. BROWN: Aye. 9

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          MS. GRIMM: Aye.
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          MS. MARCH: Aye.
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          MS. VICKERS: Aye.
          MS. REILLY: Aye.
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          MS. WOLPERT: Aye.
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          MR. AARONSON: Any opposed? Calendar is
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     adopted. Okay.
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          MS. REILLY: So the next item is if
     there is any other business before the Board
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     today.
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           MR. AARONSON: Anybody on the Board or
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     staff have any business that they would like
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     to bring up? Seeing none --
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           MS. REILLY: Any comment or questions
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     from the public?
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          MR. AARONSON: I don't see anybody from
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     the public so we can go on.
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           MS. REILLY: Well, that ends --
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           MR. AARONSON: Do I hear a motion to
    move into executive session?
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          MS. MARCH: Resolved to move into
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     executive session pursuant to Public Office of
 7
    Laws, Section 105, for discussions regarding
 8
     the purchase and sales of securities and
 9
    matters relating to the retention of the
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     specific investment manager.
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          MS. GRIMM: Second.
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          MR. AARONSON: Okay. All those in favor
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     of moving into executive session, say aye.
14
     Aye.
15
          MR. BROWN:
                      Aye.
16
          MS. GRIMM:
                      Aye.
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          MS. MARCH: Aye.
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          MS. VICKERS: Aye.
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          MS. REILLY: Aye.
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          MS. WOLPERT: Aye.
          MR. AARONSON: Any opposed?
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          We are now in executive session.
    Anybody who is not involved in investment
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    matters may please leave.
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           (Recess taken.)
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          MR. AARONSON: Is there any other business before us?
     Seeing none, do I hear a motion to go into
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 4
     regular session?
          MS. MARCH: I move that we go out of
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 б
     executive session.
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           MS. WOLPERT: Second.
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          MR. AARONSON: And is there any
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    discussion?
           Those in favor of leaving executive
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11
     session, say aye. Aye.
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12 MR. BROWN: Aye. 13 MS. GRIMM: Aye. 14 MS. MARCH: Aye. MS. VICKERS: Aye. 15 MS. REILLY: Aye. 16 MS. WOLPERT: Aye. 17 18 MR. AARONSON: Good. It looks like it's 19 unanimous. We are now out of executive 20 session, and we have to wait for Liz. (Recess taken.) 21 22 MR. AARONSON: We had an executive 23 session where we voted on an issue and had 24 consensus on another. Can you tell us what 25 the issues are? 0014 1 MS. STANG: In executive session, the resolution regarding the hiring of two new 2 3 managers in the International Composite 4 Variable A and Variable C was passed by a 5 consensus. It will be announced at the б appropriate time. Also, there was an oral 7 report on a real estate investment in the 8 pension fund. Consensus was reached, which 9 will be announced at the appropriate time. MR. AARONSON: Was the first issue 10 11 consensus or vote? 12 MS. BUDZIK: There was a vote. 13 MS. STANG: Okay. There was a vote. 14 MR. AARONSON: Okay. Is there any other 15 business befores us? 16 Do I hear a motion to adjourn? 17 MS. MARCH: So moved. 18 MR. AARONSON: Second? 19 MR. BROWN: Second. 20 MR. AARONSON: Those in favor of 21 adjourning, say aye. Aye. 22 MR. BROWN: Aye. 23 MS. GRIMM: Aye. 24 MS. MARCH: Aye. 25 MS. VICKERS: Aye. 0015 MS. REILLY: Aye. 1 2 MS. WOLPERT: Aye. MR. AARONSON: Opposed? 3 4 We are adjourned. (Time noted 3:57 p.m.) 5 б 7 8 9 10 11 12 13

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 23rd day of November, 2014. YAFFA KAPLAN