

1 NEW YORK CITY TEACHERS' RETIREMENT SYSTEM

2 REGULAR BOARD MEETING

3 Held on Thursday, January 24, 2019

4 at

5 55 Water Street

6 New York, New York

7

8 ATTENDEES:

9 JOHN ADLER, Chairperson, Trustee, Finance

10 PATRICIA REILLY, Executive Director, TRS

11 THADDEUS MCTIGUE, Deputy Executive Director, TRS

12 DAVID KAZANSKY, Trustee, TRS

13 THOMAS BROWN, Trustee, TRS

14 SUSANNAH VICKERS, Trustee, Comptroller's Office

15 CYNTHIA COLLINS, Mayor's Office

16 LINDSAY OATES, Trustee

17 VALERIE BUDZIK, TRS

18 RENEE PEARCE, TRS

19 PAUL RAUCCI, TRS

20 LIZ SANCHEZ, TRS

21 SUSAN STANG, TRS

22 ROBERT BETHELMY, TRS

23 KAVITA KANWAR

24 NATARAJAN KRISHNAMOORTHY

25 ANNETTE HANRAHAN

1       ATTENDEES (Cont'd)  
2       ANTHONY MEZZACAPPA  
3       CARMELA CRIVELLI  
4       AMY CASSIDY, Corporation Counsel  
5       MEL AARONSON  
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P R O C E E D I N G S

(Time noted: 3:37 p.m.)

CHAIRPERSON ADLER: Good afternoon,  
everybody. Welcome to the Teachers'  
Retirement System Board meeting for  
January 24, 2019.

Patricia, please call the role.

MS. REILLY: John Adler?

CHAIRPERSON ADLER: I am here.

MS. REILLY: Thomas Brown?

MR. BROWN: Here.

MS. REILLY: David Kazansky?

MR. KAZANSKY: Present.

MS. REILLY: Lindsay Oates?

MS. OATES: Present.

Debra Penny?

(No response.)

MS. REILLY: Susannah Vickers?

MS. VICKERS: Here.

MS. REILLY: We have a quorum.

CHAIRPERSON ADLER: Thank you very  
much.

Take it away.

MS. REILLY: Next on the agenda is

1 an update on TRS operations, which we'll  
2 get from Kavita Kanwar.

3 MS. KANWAR: As previously stated,  
4 TRS is going green. Starting this  
5 quarter, we will be providing quarterly  
6 account statements and TDS deferral  
7 statements to members electronically.

8 As a result of this change, 98  
9 percent of members will now receive the  
10 quarterly account statement  
11 electronically; and 70 percent of members  
12 will receive their TDS deferral  
13 statements electronically.

14 The fourth quarter statement for  
15 in-service and on-leave members should be  
16 available for secure online viewing  
17 during the week of February 4.

18 The TDS statements for retirees  
19 should be available for secure viewing as  
20 of January 25.

21 On December 28, 2018 TRS filed its  
22 June 30, 2018 comprehensive annual  
23 financial report with the Government  
24 Finance Officers Association, the GFOA.  
25 The CAFR has been posted online to the

1 TRS website as well.

2 MS. REILLY: Thank you.

3 Next on the agenda is a report from  
4 the Actuary.

5 MS. CHAN: Thanks, Patricia.

6 Everybody should have the memo, the  
7 2019 Assumptions and Methods. I can walk  
8 through that with you guys.

9 So, thid are the package of  
10 actuarial assumptions and methods that  
11 I'm proposing to use for calculating the  
12 employer contributions starting fiscal  
13 year 2019.

14 And according to state statute, it  
15 does require the Actuary to formally  
16 review these assumptions and methods  
17 every five years. That doesn't mean that  
18 within the five years I'm not looking at  
19 the assumptions, because informally,  
20 every time I plan the contributions and  
21 evaluations, I do look at the  
22 assumptions.

23 You might recall, for example, in  
24 2015 there was a change to fiscal year  
25 2016 employer contributions, the

1 mortality assumption update, as well as  
2 the change in the actual evaluation for  
3 that methodology.

4 So, it is something that is reviewed  
5 at most every five years, but sometimes  
6 more frequently than that.

7 That said, there is also,  
8 independent of that, the actual auditors  
9 commissioned by the Comptroller's Office.  
10 Every two years they do a study on the  
11 assumptions and methods. And they have  
12 two engagements each time they do it, in  
13 the four year period when they are hired.

14 And during the four years that they  
15 are contracted, they do give suggestions.  
16 And the current actuaries are Bolton; and  
17 their role, basically they have an  
18 advisory role. What they recommend is  
19 not necessarily what needs to be adopted.  
20 The Actuary does make final decisions and  
21 makes recommendations to the Board.

22 With that said, the package of  
23 assumptions and methods, they do take  
24 Bolton's recommendations into  
25 consideration. It is mainly based on

1           their recommendations with some tweaks to  
2           it; some of which include smoothing out  
3           some of the changes that they say.

4                     They don't actually provide tables  
5           of what they recommend. In words they  
6           say, reduce these rates 25 percent, or  
7           increase them 40 percent, something like  
8           that.

9                     So we actually take their  
10          suggestions and apply it to the current  
11          tables, and sometimes that gives skewed  
12          results, because it might be, the -- rate  
13          might be point 453, and nothing is really  
14          that precise. There's skewing involved  
15          in that.

16                    As well as, after we make those  
17          changes we have to compare it to other  
18          assumptions within the package to make  
19          sure that collectively we do make sense.  
20          So it's not just taking suggestions,  
21          there is work in addition to that.

22                    And additionally, on top of what  
23          Bolton had recommended, I actually also  
24          proposed, am proposing, a mortality  
25          improvement scale change. That was an

1           assumption that they did not look at,  
2           just because the mortality improvement  
3           means not just what the mortality rates  
4           are, but how do mortality rates improve  
5           in the future because of medical  
6           advancements, technological advancements,  
7           all of that.

8                     So that's not something commonly  
9           that auditors look at, just because you  
10          need a massive amount of data for that.

11                    So, in a nutshell, that's what this  
12          package consists of. If you have it in  
13          front of you, we'll turn to page 2. The  
14          assumptions are broken out between  
15          demographic and economic assumptions.

16                    So, demographic assumptions have  
17          more to do with people. So, when do  
18          members retire, when they become  
19          disabled, when they might die. And  
20          there's economic assumptions that have  
21          more to do with money. So, salary  
22          assumptions there, the discount rate is  
23          in there as well; CPI also.

24                    As far as demographic assumptions  
25          go, mainly there's no change. But if



1           there is a change, it's mostly to  
2           increase some of the assumptions. They  
3           had an increase in the fall, and a couple  
4           in January.

5                     One is the mortality rate. So  
6           mortality rates for females, they are not  
7           projected to live as long as we thought  
8           they were. That's just a product of  
9           mortality, disparities between the two  
10          genders closing in, and males are  
11          catching up. The margin between the two  
12          is not as drastic as before.

13                    The other category where rates  
14          increase was retirement. So, the service  
15          retirement rates are broken out between  
16          mandated plans and elected plans; so,  
17          people who elected a plan, meaning people  
18          who paid additional contributions for the  
19          right to retire earlier.

20                    There's people who probably went  
21          into that election with the intent to  
22          retire earlier, and that's why they paid  
23          the extra amount. So we did see an  
24          increase in retirement rates for people  
25          who elected to be in the plan.

1           For those who didn't, people are  
2           leaving at the first opportunity again;  
3           meaning the early retirement, there's an  
4           increase in that. For the other members,  
5           they're not leaving -- get the chance to,  
6           they're otherwise staying on longer.  
7           You'll see that for the mandated plan for  
8           the regular retirement, earlier  
9           retirement, they were actually decreased  
10          for the first year, meaning people are  
11          living longer.

12          Consistently through these tables we  
13          are extending the table itself, because  
14          people have longer careers and they're  
15          working longer. So we extended some of  
16          these ages further out to reflect the  
17          longer career service life.

18          As far as mortality for healthy  
19          service retirees, the males did decrease,  
20          the rate decreased about 11 percent  
21          across the board. So you will see that  
22          being reflected.

23          Again, I adopted the most recent  
24          improvements to scale MP 2018. So the  
25          Society of Actuaries is a professional

1 organization, and they had these  
2 committees that look at mortality rates  
3 and look at how these mortality rates are  
4 changing over time.

5 And each year they put out an  
6 improvement scale. So this improvement  
7 scale, again, is applied to these base  
8 mortality rates. And again, they are  
9 supposed to account for changes in these  
10 mortality rates in the future, because,  
11 generally speaking, think of a 65  
12 year-old today who has a certain life  
13 expectancy, but presumably the 65 year  
14 old teacher is going to have a longer  
15 life expectancy because maybe we'll find  
16 a cure for cancer, or maybe there's other  
17 drugs out there that we discover that can  
18 -- preventive care, better diets and all  
19 that.

20 So, in a nutshell, that's what the  
21 improvement scale does.

22 And then, as far as economic  
23 assumption goes, there's no recommended  
24 changes on that front.

25 For the methodology, there is

1           technically no change to the methodology.  
2           There is a minor tweak of how we go  
3           forward with the normal cost. New York  
4           City is under a one year lag methodology.  
5           So when we do the calculations, for  
6           example, for fiscal year 2019  
7           contributions, we're doing the valuations  
8           technically as of June 30, 2017. So when  
9           we calculate those values, we actually  
10          need to state them in fiscal year 2019  
11          terms. So you have to do a roll forward.  
12          There's a change in how the roll forward  
13          method is done for normal cost.

14                 So, after everything is said and  
15          done, all the recommendations are put  
16          into place, and you apply this to  
17          preliminary fiscal year 2019  
18          contributions, you will see approximately  
19          a \$70 million decrease in contributions  
20          between the preliminary and the final.

21                 I want to caution that, that's not  
22          -- taking the preliminary contributions  
23          and subtracting out \$70 million to get  
24          the final, because there might be some  
25          other changes.

1           Then, in Appendix B, you will see  
2           the actual tables where we applied some  
3           of the recommendations, some of the  
4           smoothing, extended the rates out. And  
5           these are the actual rates that would be  
6           used when adopted to come up with the  
7           employer contributions.

8           A lot of information. This is not  
9           meant to be digested in just one week --  
10          nor in one sit-down meeting. So, if you  
11          guys have any questions right now I'll be  
12          happy to address them. I'm also  
13          available if you guys don't want to pass  
14          a resolution today, I'm also available to  
15          answer e-mails or phone calls, or come to  
16          my office, you're welcome to come to my  
17          office as well.

18                 CHAIRPERSON ADLER: So, questions  
19                 for Sherry?

20                 MR. KAZANSKY: So, I believe it was  
21                 PNI where I read that the Society of  
22                 Actuaries just released some new  
23                 mortality tables. Are those the ones  
24                 being used here, or are those the ones  
25                 that will be used for the next go-around?

1           MS. CHAN: So, the tables that the  
2           Society of Actuaries published is based  
3           off national data from various public  
4           pension plans. And that is the industry  
5           norm table for public plans, that usually  
6           public plans would use if they don't have  
7           enough data, and the active life to come  
8           up with their own tables.

9           For New York City, because we are a  
10          larger plan and are the largest municipal  
11          plan in the country, we actually do have  
12          enough data to produce our own tables.

13          So the tables that are here are  
14          actually from our own demographic and our  
15          own population. So it's precise and fits  
16          our demographic better than using a  
17          nationwide table.

18          MR. KAZANSKY: Great. Thank you.

19          MS. CHAN: You are welcome.

20          CHAIRPERSON ADLER: Other questions  
21          for Sherry?

22          (No response.)

23          I, for one, would like to digest the  
24          materials as opposed to moving the  
25          resolutions today. So, unless there are

1 objections to taking up Sherry's  
2 invitation to postpone consideration of  
3 the proposed resolutions until a future  
4 meeting?

5 MS. BUDZIK: When we get to the  
6 executive director's report there will be  
7 a motion to lay over the two resolutions.

8 CHAIRPERSON ADLER: Okay.

9 Thank you, Sherry.

10 MS. CHAN: You're welcome.

11 The second agenda item on my report  
12 is the option factors. These option  
13 factors are proposed to be effective as  
14 of April 1 -- not an April Fool's joke --  
15 if you have the memo in front of you, I  
16 can walk you through it.

17 The last time these option factors  
18 were updated was August 19, 1985.

19 MR. KAZANSKY: So, recently.

20 (Laughter.)

21 MS. CHAN: Anyway, the last changes  
22 included mortality rates and life  
23 expectancy. So, with reflecting that, a  
24 lot has changed in terms of life  
25 expectancy, as well as the new tables

1           that are being proposed and the 2019 A&M,  
2           there is recommendation to update these  
3           option factors.

4                     And so, to give background on what  
5           the option factors are. When a member  
6           retires, the default is the maximum  
7           retirement allowance, which is really a  
8           New York City term. In other words, a  
9           single life annuity --

10                    If they choose not to elect this,  
11           they have the options to elect another  
12           form of payment, such as a joint survivor  
13           -- other combinations.

14                    If they do elect an option that is  
15           not the maximum, then there is a  
16           conversion factor that is applied to  
17           their maximum benefit, so that it is  
18           actually equivalent; because it might be  
19           because there is another life involved, a  
20           spouse or another beneficiary, they have  
21           to make sure on an actuarial basis that  
22           they're being paid out the same, were  
23           they to elect the maximum or to elect an  
24           option.

25                    So, deriving option factors, there's



1 two assumptions that are used to derive  
2 these factors. It's the interest rate  
3 and mortality tables. I can speak a  
4 little more about that a little bit  
5 later.

6 So, these option factors are, again,  
7 like I said, to be effective April 1,  
8 2019. So, for the easy cases, for  
9 anybody hired after April 1, 2019, for  
10 those people they would have just this  
11 one set of option factors, unless another  
12 set is introduced in the future, so they  
13 would just be under the new set of  
14 factors.

15 For those who are hired before April  
16 1 and retire after April 1, 2019, then  
17 they would have their benefit calculated  
18 over the multiple sets of factors, and  
19 whatever produces the highest benefit  
20 amount is what they would be due; because  
21 of the constitutional protection.

22 And we obviously did an analysis to  
23 see how many people get a lower benefit  
24 versus a higher benefit. Generally  
25 speaking, a large majority, almost in all

1 cases, they would be benefitting under  
2 the new set of option factors anyway.

3 And these option factors, because  
4 they can also be applied when you try to  
5 convert a lump sum into an annuity; the  
6 annuity factors aren't just one way, you  
7 can use the other way as well.

8 It is kind of, again, a package  
9 where if you adopt these assumptions to  
10 produce these option factors, they're  
11 also recommended to be used for  
12 converting -- loan balances when you  
13 retire, and also the TDA, because that's  
14 a lump sum value, to convert that into an  
15 annuity, you're also using equivalent  
16 factors for that.

17 So, in deriving it, first we take  
18 the base tables. These base tables are  
19 the same as in the other memo, so if you  
20 actually compare the two, they are the  
21 same tables.

22 So you take the tables, and then we  
23 applied an improvement scale onto it.  
24 The improvement scale, we applied it  
25 until the year 2024, because every ten

1           years -- we're not going to wait another  
2           30 years -- if I'm still here, I could  
3           be recommending it ten years from now,  
4           approximately ten years from now.  
5           Because I will be recommending it ten  
6           years from now, taking the midpoint of  
7           the improvement.

8                   Obviously, if you don't improve and  
9           still apply this projection scale, you  
10          are underestimating the improvement,  
11          basically. And if you do apply it all  
12          the way to the end of the period in ten  
13          years, you are overestimating. So  
14          obviously the midpoint makes more sense.

15                   And then, after we take the base  
16          tables, apply the improvement scale, we  
17          blend the tables; because, by law, we  
18          have to use the unisex factor. We can't  
19          -- male and female. And when we blend  
20          it, we use the actual demographics of TRS  
21          members, which is approximately 77.2  
22          percent female and 22.8 percent male.

23                   And when you do the beneficiaries,  
24          we also have to blend the table for  
25          beneficiaries, we blend it using the

1           inverse.  So instead of 77.2 female, we  
2           assume 77.2 male --

3                     As I said, the assumptions, the  
4           interest rate is just -- both the  
5           interest rate assumption and mortality  
6           assumption is an evaluation assumption.  
7           So the interest rate would be the 7  
8           percent for the fixed balances, and 4  
9           percent for the variable accounts.

10                    And then the mortality tables, as I  
11           said, are the same as previously  
12           proposed, which is what we use for  
13           evaluation.

14                    As far as financial impact goes,  
15           there is no change to funding for  
16           employer contributions, there's no change  
17           with the adoption of the factors.  That  
18           is because of two interrelated things.

19                    One is because we value -- when we  
20           do the evaluation and we look at the  
21           retired population, we value what the  
22           present value and benefit is, we're  
23           actually calculating and using the  
24           maximum.

25                    So we're not even taking -- we're

1           assuming they'll take the maximum value.  
2           And the reason why we do that is because  
3           they're actually equivalent. So even if  
4           when it comes time to retire they elect  
5           an option that's not the maximum --  
6           equivalent -- so the present value basis  
7           is the same. But because of that,  
8           there's no change in funding.

9                   And the next section just talks  
10           about the constitutional guarantee, that  
11           breaks it out between members that were  
12           hired before the last time factors were  
13           introduced, between the last time it was  
14           introduced and this time, for those  
15           members who enter into TRS after the  
16           introduction of these factors.

17                   So it just tells you what basis that  
18           they would have their benefits valued  
19           under, to make sure that they get the  
20           best of all the options.

21                   And below that are some examples,  
22           different ages, different combinations of  
23           options that they have, including JNS and  
24           certain life. And it tells you, it  
25           breaks out between service retirement as

1 well as disability, between the fixed  
2 fund and the variable fund.

3 And you will see a comparison on the  
4 right-hand side, you will see what the  
5 percentage increase is for most of all  
6 these members, except for a few on the  
7 back. But again, it is footnoted and  
8 emphasized that, if it is a negative  
9 number, meaning that they're worse off  
10 under the new basis, we're capping that,  
11 so to speak, at zero percent -- the floor  
12 is at zero percent, so they're not losing  
13 out.

14 It's a range, but it's approximately  
15 anywhere from zero to 4 percent that the  
16 member will see an increase in their  
17 benefits.

18 Again, if you are interested, these  
19 mortality tables are the same. And if  
20 you guys have any questions I invite you  
21 also to e-mail me, call me or come by my  
22 office

23 CHAIRPERSON ADLER: Let's see if  
24 anyone has questions for today?

25 MS. CHAN: Or today.

1                   CHAIRPERSON ADLER: Questions for  
2                   Sherry about the option package?

3                   I have a question. So, these option  
4                   factors were last updated in 1985?

5                   MS. CHAN: Yes.

6                   CHAIRPERSON ADLER: And so, why  
7                   implement them -- what is the  
8                   significance of April 1?

9                   MS. CHAN: It's a time that we can  
10                  get them in. And it's something that  
11                  probably should be before that. But  
12                  through studies and various other things,  
13                  I don't think that there is a reason for  
14                  why it shouldn't be after that. April 1  
15                  -- administratively, that's enough time  
16                  to give to the Board. It's enough time  
17                  obviously to incorporate the changes that  
18                  are packaged -- it gives staff enough  
19                  time to put this in the system -- and at  
20                  the same time, it's enough time to let  
21                  people know, and if they want to make  
22                  sure, if they're thinking about  
23                  retirement, they know what their options  
24                  are, they can be counselled by TRS.

25                  CHAIRPERSON ADLER: One of the

1 things that struck me, listening to it,  
2 is that -- I turn to the DOE employees  
3 here for more guidance, or perhaps TRS  
4 employees. But what strikes me is, I  
5 think that most folks retire and are  
6 hired in the period in between the end of  
7 the school year and the beginning of the  
8 next school year.

9 And so, April 1 seems like an  
10 arbitrary day as far as the school  
11 calendar goes. And I'm wondering if June  
12 30 or July 1, which is also the start of  
13 the fiscal year, might make more sense as  
14 a day to implement this change.

15 I'm asking a question, I don't know  
16 the answer.

17 MS. CHAN: You're saying they're  
18 mostly hired during the summer?

19 CHAIRPERSON ADLER: Yes.

20 MS. CHAN: So this is actually for  
21 hires any time from April 1 or after. So  
22 it would catch that class.

23 CHAIRPERSON ADLER: But it's also  
24 for retirement. In other words, the  
25 folks who retire get the choice, who are



1           currently employed. It just strikes me  
2           -- it might make more sense from an  
3           administrative point of view to do to it  
4           consistently with the TRS plan year,  
5           consistent with the school year, and when  
6           most folks are hired and/or retired.

7                     I'm just throwing that out. I don't  
8           know, and I sort of ask the TRS folks as  
9           well as DOE folks what your thoughts are  
10          on that.

11                    MR. KAZANSKY: So, from my  
12          perspective, I think there's two things.  
13          One is that, if they're implemented in  
14          April, then they're already in the  
15          system, and TRS gets hectic around June  
16          and July with retirements. And to add  
17          one more thing on around that same time  
18          -- I can't speak to how that all works --  
19          might be an internal problem.

20                    But the other thing is -- Sherry,  
21          correct me if I'm wrong -- you said these  
22          factors might indeed be better for some  
23          folks. And so, if they go and are  
24          implemented in April, the people who  
25          retire this year might actually benefit

1 from these option packages?

2 MS. CHAN: Correct.

3 MR. KAZANSKY: I don't have a  
4 problem with that.

5 MS. CHAN: I also want to raise the  
6 point that, as fiduciaries, if you have  
7 information in front of you saying this  
8 is the most updated, these are the most  
9 prudent assumptions to use, I don't think  
10 it's prudent to wait on those either.

11 CHAIRPERSON ADLER: We waited since  
12 1985. I'm not sure --

13 (Talking over each other.)

14 Really, it's an illustration of lack  
15 of prudence, myself.

16 MS. CHAN: I think that, actually,  
17 it supports the point of sooner rather  
18 than later.

19 MS. BUDZIK: It could add to the  
20 confusion. If June, July are the  
21 retirements, if we did this July 1 in the  
22 middle of it, I think you would actually  
23 add to the confusion.

24 CHAIRPERSON ADLER: Do the operation  
25 people feel that way too? It would be

1 better to get it in place April 1?

2 MR. MEZZACAPPA: I think so.

3 MS. CHAN: Yes.

4 CHAIRPERSON ADLER: Okay; great.

5 Other questions for Sherry?

6 So, let me pose it, then. We  
7 already I think agreed to lay it over,  
8 the first one. But the second one, do we  
9 want to lay that over too?

10 MR. BROWN: I think so.

11 CHAIRPERSON ADLER: Okay.

12 Anything else, Sherry?

13 MS. CHAN: That's it, thank you.

14 MS. REILLY: Thank you.

15 Next is the executive director's  
16 report. And the first item on that is  
17 the next meeting. It's been suggested  
18 that the next regular meeting of the  
19 Teachers' Retirement Board be held on the  
20 fourth Thursday of the month, February  
21 28, 2019. Mark your calendars.

22 The second item is a resolution to  
23 the proposed changes in actuarial  
24 assumptions and methods.

25 CHAIRPERSON ADLER: I think there is

1 consensus to lay that resolution over.

2 MS. REILLY: Do we have to take a  
3 vote?

4 MS. BUDZIK: Usually you agree to  
5 lay it over.

6 CHAIRPERSON ADLER: Are there any  
7 objections by the Trustees to lay that  
8 proposed resolution over?

9 (No response.)

10 MS. REILLY: Next is a resolution  
11 for the proposed changes in option  
12 factors.

13 CHAIRPERSON ADLER: Again, I think  
14 we made an agreement to lay that over.

15 Any objections to laying that one  
16 over?

17 (No response.)

18 MS. REILLY: Okay. Next is the  
19 calendar. The first item on the calendar  
20 is the matter of the approval of the  
21 minutes for the month of December, which  
22 includes the December 6 investment  
23 meeting minutes, the December 17 CIM  
24 meeting minutes, and the December 20,  
25 2018 Board meeting minutes.

1                   CHAIRPERSON ADLER: I believe there  
2                   is a request to lay over consideration of  
3                   the December 17 CIM meeting minutes.

4                   Does anybody object to laying over  
5                   consideration of those?

6                   (No response.)

7                   Okay. Then we have the December 6  
8                   investment meeting minutes and the  
9                   December 20 board meeting minutes.

10                  Is there a motion to approve the  
11                  minutes for December 6 and December 20?

12                  MR. BROWN: So moved.

13                  MS. VICKERS: Second.

14                  CHAIRPERSON ADLER: Discussion?

15                  All in favor of approving the  
16                  December 6 and December 20 minutes please  
17                  say "Aye."

18                  (A chorus of "Ayes.")

19                  All opposed say "Nay."

20                  Any abstentions?

21                  (No response.)

22                  Motion carries.

23                  MS. REILLY: Next, is the calendar.

24                  You all --

25                  MR. KAZANSKY: Please waive reading

1 the calendar.

2 MS. REILLY: You should have  
3 received the calendar.

4 CHAIRPERSON ADLER: Is there a  
5 motion to approve the January calendar?

6 MR. KAZANSKY: So moved.

7 MR. BROWN: Second.

8 CHAIRPERSON ADLER: Any discussion?

9 (No response.)

10 All in favor of the motion to  
11 approve the calendar please say "Aye."

12 (A chorus of "Ayes.")

13 All opposed say "Nay."

14 Any abstentions?

15 (No response.)

16 Motion carries.

17 MS. REILLY: Next is other business  
18 before the Board.

19 CHAIRPERSON ADLER: Any other  
20 business?

21 (No response.)

22 MS. REILLY: Questions or comments  
23 from the public?

24 CHAIRPERSON ADLER: Any questions or  
25 comments from the public?

1                   MR. AARONSON:  None.  (Laughter.)

2                   CHAIRPERSON ADLER:  I believe that

3 concludes the agenda for today.

4                   Is there a motion to adjourn?

5                   MR. KAZANSKY:  So moved.

6                   MS. VICKERS:  Second.

7                   CHAIRPERSON ADLER:  Discussion?

8                   All in favor of the motion to

9 adjourn please say "Aye."

10                   (A chorus of "Ayes.")

11                   All opposed say "Nay."

12                   Any abstentions?

13                   (No response.)

14                   The meeting is adjourned.

15                   (Time noted:  4:08 p.m.)

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C E R T I F I C A T I O N

I, Jeffrey Shapiro, a Shorthand Reporter and Notary Public, within and for the State of New York, do hereby certify that I reported the proceedings in the within-entitled matter, on Thursday, January 24, 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 26th day of January, 2019.

JEFFREY SHAPIRO