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 1 NEW YORK CITY TEACHERS' RETIREMENT SYSTEM
                 INVESTMENT MEETING
           Held on Thursday, March 5, 2020
                           at
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                    55 Water Street
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                  New York, New York
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    ATTENDEES:
    DEBRA PENNY, Chairperson, Trustee, TRS
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   THOMAS BROWN, Trustee, TRS
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   DAVID KAZANSKY, Trustee, TRS
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   PATRICIA REILLY, TRS, Executive Director
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    THADDEUS MCTIGUE, TRS, Deputy Executive Director
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    JOHN ADLER, Trustee, Mayor's Office
   JOHN DORSA, Trustee, Comptroller's Office
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   SUZANNE VICKERS, Trustee, Comptroller's Office
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    NATALIE GREENE GILES, Trustee
18 CHRISTOPHER BUCKLEY, Trustee
19 VALERIE BUDZIK, TRS
20 LIZ SANCHEZ, TRS
    SUSAN STANG, TRS
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   ROBERT RAUCCI, TRS
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   ALEX DONE, Comptroller's Office
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    SHERRY CHAN, Chief Actuary
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   Attendees (Cont'd)
   ROBERT BETHELMY, TRS
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   MICHAEL HADDAD, Comptroller's Office
   MICHAEL FULVIO, Rocaton
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    SANFORD RICH, BERS
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               PROCEEDINGS
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                    (Time noted: 10:16 a.m.)
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           CHAIRPERSON PENNY: Good morning.
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     Welcome to the Teachers' Retirement
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     System investment meeting. Today is
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     March 5, 2020.
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           Patricia, please call the roll.
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           MS. REILLY: John Adler?
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           MR. ADLER: I am here.
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           MS. REILLY: Thomas Brown?
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           MR. BROWN: Present.
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           MS. REILLY: Natalie Greene Giles?
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           MS. GREENE GILES: Present.
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           MS. REILLY: David Kazansky?
           MR. KAZANSKY: Present.
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           MS. REILLY: Lindsay Oates?
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           MR. BUCKLEY: Russell Buckley for
19
     Lindsay Oates, present.
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           MS. REILLY: Debra Penny?
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           CHAIRPERSON PENNY: Present.
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           MS. REILLY: Susannah Vickers?
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           MR. DORSA: John Dorsa for Susannah
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     Vickers, present.
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           MS. REILLY: We have a quorum.
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           CHAIRPERSON PENNY: Thank you very
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    much.
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           We'll start with the Passport funds,
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     we'll go to Mike Fulvio.
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           MR. FULVIO: We did distribute the
     quarterly reports for the Passport funds
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     in advance of the meeting. We weren't
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     planning to go through that in any great
     detail, given that we discussed
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     performance for those funds at the last
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    meeting.
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           However, I'm happy to answer any
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     questions on the report. And if the
     Board would find it helpful, I can
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     quickly note again for the record the
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     returns for perhaps what was a really
17
     strong fourth quarter and strong calendar
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     year for the markets and the funds.
           So, at the end of last year, the
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20
     first private equity funds did about
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     $16.2 billion in assets. Again, I noted
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     it was a strong year for U.S. equity
23
     markets, up over 31 percent.
24
           It was also a strong environment for
25
     the diversified equity fund, up about 28
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1 percent.

And again, what really bolstered returns there was the performance in U.S. equity markets, although non-U.S. equity markets across the board were quite positive, with the international equity composite of Variable A and the international equity fund up over 22 percent.

(Ms. Vickers entered the room.)

MR. FULVIO: The defensive
strategies composite, which you'll note
is a 10 percent component of the
diversified equity fund, that was also up
over 21 percent last year. So positive
contributions across the board from
different components of the diversified
equity fund.

And as you would expect, the defensive did not keep up with the U.S. equity markets or global equity markets; but again, hopefully as we look forward to 2020 and see some more volatility in the defensive composite -- on its intent providing downside protection.

The balanced fund had assets of about \$420 million. That fund was up just shy of 11 percent last year. The international equity funds, as noted earlier, was up over 22 percent, with assets of \$184 million.

The inflation protection fund had assets of \$75 million at year end. That fund was up just over $10\ 1/2$ percent. And the sustainable equity fund last year had a return of about 24 percent, assets of about \$255 million.

If there are no questions on quarterly, we can move into January.

You'll recall at the last meeting we talked a little bit of a high level about what went on in January with respect to capital market performance, in particular the equity markets, which represents the vast majority of the underlying assets in the Passport funds.

The U.S. equity market in January was roughly flat, down about 11 basis points. And the diversified equity fund for the month was down 84 basis points,

about 40 basis points behind the hybrid benchmark. Though we saw U.S. roughly flat, non U.S. equity markets were down about 2 1/2 percent during January. So that led to, as you see, it detracted from the absolute returns of the diversified equity fund in the first month of the year.

The defensive strategy composite was up just over half of a percent during January, providing diversification among the assets within the diversified equity fund. And the active composite had a tough month for the active managers in that composite, which, as you recall, do represent in a big way value-oriented strategies, which lagged quite notably during January.

The balanced fund had assets of \$422 million at the end of January. That fund for the month was up 16 basis points.

The international equity fund had assets of \$180 million. As noted before, that fund, like the international equity composite, was down 2 1/2 percent,

roughly in line with the benchmark.

The inflation protection fund had assets of \$74 million. That fund was down about 80 basis points, also roughly in line with its benchmark.

And the sustainable equity fund with assets of \$260 million had a positive return to the tune of about 2 percent, about a quarter of a percent behind its benchmark.

You'll also note that the two new funds which were launched January 1, 2020, the U.S. equity index fund, that fund returned negative 90 basis points for the month. And the international equity index fund was down about 4 percent to start the year.

MR. ADLER: Question. These are index funds, so why are they lagging? Obviously there's very little money in them, but why are they lagging the indices?

MR. FULVIO: In the unit value returns, you might recall, we chatted about this; it's been some time, but in

the past at the Board. The unit values do take into account things like the timing of cash flows, everything down to trading, administrative fees and expenses. So it rolls up not only the underlying performance of the mutual funds, but also additional factors and different things in -- return.

And actually, if you wouldn't mind flipping ahead (indicating) to slide 9, what you can see, including at the bottom of the page, for the U.S. equity index fund, are the published and full fund returns for the underlying strategies within those two funds, John.

And you can see that the total market index fund did perform for the month in line. And then within the total international index fund there is still some tracking there, you can see the negative 330 versus negative 2 3/4.

So the difference in the international fund actually, between the published mutual fund results and the index is due to fair value pricing,

investment managers who more commonly are investing in international equities have a fair value pricing policy; so that, as investors in the U.S. see that, once international markets have closed, U.S. markets continue to be open for some time.

And if you see a sell-off, for example, in the U.S., like you saw on the last day of January, managers like Fidelity are actually making fair value adjustments to the marks on the non-U.S. securities in their portfolio, for how the implied returns would have been if the non U.S. markets were open for the exact same trading hours as the U.S. market.

So, as you will recall, in a mutual fund all participants transact at the end of the day. As a result, you will see these point in time deviations between the fair value evaluation on the mutual funds, which impacts sometimes the point in time performance, and what the index is showing; because the index shows

0011 performance up to the point at which those markets are closing. The mutual funds are more of a fair value 4 representation of how those markets are 5 trading. 6 What we have seen is, over the long 7 term, these valuation differences will sort of wash out over time. But on a 9 month to month basis, you'll see some 10 deviations, particularly in months where 11 there's a lot of trading late in the day, 12 as we've seen in the last couple of 13 months. 14 MR. ADLER: Okay. Thank you for the 15 information. 16 MR. FULVIO: We could also, if 17 there's more questions, go into more 18 detail in executive session. 19 That concluded the update for 20 January. I'll let everyone take a deep 21 breath before we look at February. 22 (Laughter.) 23 I handed out the February report. 24 I'm not going to spend as much time on it 25 as talking a little about the year to 0012 1 date numbers through yesterday's close; 2 largely in part because the numbers are a 3 lot better. 4 (Laughter.) 5 Maybe we'll chat a little about the 6 markets and volatility we're seeing. 7 Alex might jump in as well. 8 So you can see through February the 9 U.S. equity market, at the top of the 10 page, was down over 8 percent for the 11 month; and about the same return for the 12 calendar year to date. If you roll that 13 forward through yesterday's close, the 14 U.S. market was down 3 percent, 3.1 year to date; so notably better in the last 15 16 week or so, as we've seen March start 17 It's just as volatile, but a few out. 18 updates that were meaningful. 19 In non-U.S. markets, the numbers 20 were not quite as strong as the U.S., but 21 a little better than what you see for 22 February. So the developed markets 23 represented by the EAFE index through 24 yesterday's close are still down 8 1/2 25 percent. Emerging markets down about 6.8

percent. Surprisingly, through Tuesday's close, which I know was roughly flat -- which is interesting, thinking about the dynamics we're seeing.

There hasn't been much economic data coming out of China, so a lot of what's been out there is speculation, sentiment related. But it should be about mid March before we start seeing more information out of China with respect to production.

The expectation there is that there will be a notable economic impact, not only on China, but globally. I'll talk a little more about that.

Nun U.S. small caps were down a little over 10 percent, so that's driving some of the more negative numbers you're seeing from the international composite benchmark.

And the defensive composite year to date through yesterday's close was down about 1.6 percent. So you can expect with the diversification of that composite, use the convertibles and other

diversified strategies, downside protection, we're estimating the hybrid composite was down 3 percent through yesterday's close.

So those are the numbers, where we are today. There continues to be a lot of uncertainty around the Corona virus, what that means, not only from a social standpoint, but the economic impacts of that. There's likely to be continued disruption in global trade and global supply chains, which everyone agrees there will be some impact to global economic growth.

As I noted earlier, there's not a lot of data out of China, we should see something in mid March. But there were some expectations put out yesterday about potentially a 6 percent contraction quarter over quarter for China.

And the last number I saw was on a global scale, that the previously forecasted global growth number was about 3 percent, and we're revising that down to a 2 percent baseline.

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           So we shall see, there will
     certainly be more information out there.
     The markets over the last couple of days
     have not only been reacting to what the
 5
     Fed has done and continued news about the
    Corona virus, but there is also more
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     discussion about what we're seeing in the
    U.S. with respect to the election. And
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     there's a lot of discussion around how
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    the primaries have driven some of the
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    market returns that we've seen.
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           Perhaps some of that was matched by
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     the headlines around the Corona virus
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    we've seen since Super Tuesday, some
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    market strength in the last couple of
16
     days.
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           So it will be interesting to see how
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     that continues to shake out. But
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     definitely never a dull moment.
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           (Laughter.)
           CHAIRPERSON PENNY: Is there
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22
     anything else?
23
           (No response.)
24
           Do I hear a motion to go into
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     executive session?
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           MR. BROWN: I move, pursuant to
     Public Officer Law 105, to go into
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     executive session for discussions on
 4
     specific investment matters.
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           CHAIRPERSON PENNY: Thank you, Mr.
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     Brown.
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           Do I hear a second?
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           MR. DORSA: Second.
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           CHAIRPERSON PENNY: All those in
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     favor?
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           (A chorus of "Ayes.")
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           Any opposed say "Nay."
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           (No response.)
14
           Okay. We are in executive session.
15
           (Whereupon, the Board entered
16
     executive session.)
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           CHAIRPERSON PENNY: Alex, Mike, is
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     there anything else to share?
19
           Okay. Then, do I have a motion to
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     move back into public session?
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           MR. ADLER: So moved.
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           CHAIRPERSON PENNY: Thank you.
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           MR. BROWN: Second.
           CHAIRPERSON PENNY: All those in
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25
     favor?
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           (A chorus of "Ayes.")
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           Any opposed?
           Any Abstentions?
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           (No response.)
 5
           We're moving out.
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           (Whereupon, the Board returned to
 7
    public session.)
           CHAIRPERSON PENNY: We're back in
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9
     public session.
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           Susan, would you report out, please?
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           MS. STANG: In executive session
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     there was a discussion about
13
     implementation issues on the pension plan
14
     side.
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           CHAIRPERSON PENNY: Thank you.
16
           Does anyone else have anything to
17
     say?
18
           (No response.)
19
           Do I have a motion to adjourn?
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           MR. KAZANSKY: So moved.
           MS. VICKERS: Second.
21
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           CHAIRPERSON PENNY: All in favor?
23
           (A chorus of "Ayes.")
24
           Any opposed?
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           (No response.)
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           We are adjourned.
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           (Whereupon, at 10:54 a.m. the matter
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    was concluded.)
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2	CERTIFICATION
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4	I, Jeffrey Shapiro, a Shorthand
5	Reporter and Notary Public, within and for the
6	State of New York, do hereby certify that I
7	reported the proceedings in the within-entitled
8	matter, on Thursday, March 5, 2020, at the
9	offices of the NEW YORK CITY TEACHERS RETIREMENT
10	SYSTEM, 55 Water Street, New York, New York, and
11	that this is an accurate transcription of these
12	proceedings.
13	IN WITNESS WHEREOF, I have hereunto
14	set my hand this 8th day of March, 2020.
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20	JEFFREY SHAPIRO
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