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2	NEW YORK CITY TEACHERS' RETIREMENT SYSTEM
3	INVESTMENT MEETING
4	Held on Thursday, January 7, 2021
5	Via
6	Zoom Videoconference
7	
8	ATTENDEES:
9	DEBRA PENNY, Chairperson, Trustee, TRS
10	THOMAS BROWN, Trustee, TRS
11	DAVID KAZANSKY, Trustee, TRS
12	JOHN ADLER, Trustee, Mayor's Office
13	CYNTHIA COLLINS, Trustee, Mayor's Office
14	JOHN DORSA, Trustee, Comptroller's Office
15	SUZANNE VICKERS, Trustee, Comptroller's Office
16	NATALIE GREEN GILES, Trustee
17	RUSSELL BUCKLEY, Trustee
18	PATRICIA REILLY, TRS, Executive Director
19	THADDEUS MCTIGUE, TRS, Deputy Executive Director
20	VALERIE BUDZIK, TRS
21	LIZ SANCHEZ, TRS
22	SUSAN STANG, TRS
23	SHERRY CHAN, Chief Actuary
24	STEVE YUAN, Mayor's Office
25	JIMMY YAN, Comptroller's Office

- 1 ATTENDEES (Cont'd)
- 2 PHILIP DUKES, Mayor's Office
- 3 SUMANTA RAY, Mayor's Office
- 4 SANFORD RICH
- 5 ROBIN PELLISH, Rocaton
- 6 MICHAEL FULVIO, Rocaton
- 7 KATIE PIRO, Rocaton
- 8 ALEX DONE, Comptroller's Office
- 9 MICHAEL HADDAD, Comptroller's Office
- JOHN MERSEBURG, Comptroller's Office
- 11 DANIEL HAAS, Comptroller's Office
- 12 DAVID JETER, Comptroller's Office
- 13 CARA SCHNAPER, Comptroller's Office
- 14 DAVID LEVINE, Groom Law Group
- 15 ARISTEA AFTOUSMIS, TRS
- 16 NISA BIKRAM, Comptroller's Office
- 17 KOMIL ATAEV, TRS
- 18 MAILEN NUNEZ, TRS

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PROCEEDINGS  (Time noted: 10:00 a.s.  MS. REILLY: Good morning. Welcome  to the investment meeting of the  Teachers' Retirement Board for January 7,  2021.  I'll start by calling the roll.  John Adler?  MR. ADLER: I'm here.  MS. REILLY: Thomas Brown?	
3 (Time noted: 10:00 a.: 4 5 MS. REILLY: Good morning. Welcome 6 to the investment meeting of the 7 Teachers' Retirement Board for January 7, 8 2021. 9 I'll start by calling the roll. 10 John Adler? 11 MR. ADLER: I'm here.	
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John Adler?  MR. ADLER: I'm here.	
11 MR. ADLER: I'm here.	
12 MS. REILLY: Thomas Brown?	
13 MR. BROWN: Here.	
14 MS. REILLY: Natalie Green Giles?	
15 MS. GREENE GILES: Good morning.	
16 Happy New Year. I'm here.	
17 MS. REILLY: David Kazansky?	
18 MR. KAZANSKY: Present.	
19 MS. REILLY: Russell Buckley?	
20 MR. BUCKLEY: Here.	
21 MS. REILLY: Debra Penny?	
22 CHAIRPERSON PENNY: Good morning.	
23 I'm here.	
24 MS. REILLY: Susannah Vickers?	
MS. VICKERS: Good morning, here.	

1	MS. REILLY: We have a quorum.
2	I'll turn it over to the Chair.
3	CHAIRPERSON PENNY: Happy New Year,
4	everyone. Good morning.
5	We're going to start with the
6	Passport funds November 2020 performance
7	update. Robin or Mike, will you take it
8	away, please?
9	MR. FULVIO: I will start, and I'm
10	going to attempt to share my screen. So
11	hopefully everyone can see that in a
12	moment, if they don't yet. I'm sure it's
13	not very legible, so feel free to follow
14	along with the attachments you received.
15	I'll start at a very high level and
16	speak to November. And again, this feels
17	like a very long time ago at this point.
18	As you might recall, in general the
19	fourth quarter was a strong quarter for
20	the markets, in spite of everything that
21	went on in the world.
22	But November, with the election
23	early in the month, and coming more to a
24	resolution, as it felt at least at the
25	time, towards the end of November the

1	markets did quite well that month,
2	particularly in the U.S.
3	And you can see here, just looking
4	at the numbers for the month in the U.S.,
5	equity markets, up 12 percent. It's not
6	obvious from the numbers on this page,
7	but I'll note that developed markets were
8	up 15 percent, outside the U.S. that is,
9	and emerging markets were up 9 percent.
10	So all in all for equity markets a
11	pretty strong month. And we also saw
12	across the funds quite strong absolute
13	returns. So that certainly shows up. At
14	the top of the page with the diversified
15	equity fund for the month, up $12\ 1/2$
16	percent. That was enough to outpace both
17	of the benchmarks that we're showing.
18	And really what drove strong results
19	for the fund during the month, again,
20	absolute returns pretty much across the
21	board, but some strong relative results
22	for the active U.S. composite during the
23	month, which helped. Again,
24	international equities also up over 13
25	percent certainly helped.

1	The defensive was up about 9.4
2	percent. So again, not quite the beta we
3	saw from the markets, but still quite
4	positive nonetheless. You can see again,
5	the longer term numbers here. Really, if
6	you were not around for the last few
7	months like me, I was certainly watching
8	the markets to see really the numbers
9	that we're seeing here and what we're
10	going to talk about in the next part of
11	the discussion looking back at 2020 as a
12	whole and what the markets have done,
13	it's pretty amazing to see the capital
14	market return double digits, and in some
15	cases quite high double digits,
16	considering everything that went on in
17	the world in 2020. And again, obviously
18	that's showing up here on this page.
19	Beyond the diversified equity fund
20	you can see the other Passport funds, the
21	balance fund, up about 4 percent during
22	the month. The international equity fund
23	I noted earlier, again the strong market
24	environment markets abroad, so you can
25	see there 13.5 percent return during the

1	month of November for Variable C.
2	The sustainable equity fund, 8.4
3	percent return. You will recall that
4	fund is a bit growthier relative to the
5	other funds. And even though value did
6	better during the month of November,
7	still a pretty strong return for this
8	fund, which again, as I noted, has that
9	growth year bias, and quite strong, that
10	certainly shows up in the calendar year
11	to date return there of over 33 percent.
12	The U.S. equity index fund up about
13	12.9 percent. And for the month, the
14	international equity index fund up about
15	13.3 percent.
16	I will pause there and see if there
17	are any questions. I know we'll talk
18	more about the markets in the next part
19	of the discussion.
20	Okay. Not hearing any questions,
21	I'm going to start the quick update on
22	December returns for the markets. And
23	I'll transition it then over to Robin,
24	and she will speak to the 2020 market
25	review part of that discussion.

1	So again, December was another
2	strong month and folks should be able to
3	see (indicating screen). For the U.S.
4	equity market, up about 4.5 percent. The
5	international composite benchmark just
6	below that, up about 5.6 percent. Again,
7	that's the combination of developed and
8	emerging markets. And during the month
9	developed markets outside the U.S., they
10	were up about 4.7 percent. In emerging
11	markets, a pretty strong month in
12	general, up over 7 percent. Small caps
13	strong abroad as well, also up nearly 7
14	percent for the month.
15	So a good month across the board as
16	you can see, and that all translates into
17	about a 4.7 percent return for the hybrid
18	benchmark of Variable A.
19	Below that you can see the returns
20	for the other Passport fund option
21	benchmarks. I guess the ones that I'll
22	note, December was a good month for the
23	sustainable equity fund underlying
24	strategies. You can see there, up over 4
25	percent, pretty similar to what we saw

1	for the diversified equity fund.
2	And then the two passive index
3	funds, I'll make note that the U.S.
4	equity index fund was up about 4.5
5	percent, and the non U.S. about 5.8.
6	Again, you can see there are really
7	staggering numbers when we look longer
8	term, really shrugging off what we saw
9	from the one year numbers, shrugging off
10	what we saw with all the volatility
11	earlier this year.
12	And again, given the turnaround to
13	the markets for the second half of the
14	year, the fiscal year to date numbers
15	really jump off the page. Of course,
16	that misses all the volatility we saw in
17	the first part of this year, but they are
18	very quite notable market returns.
19	I will pause there, and if there's
20	no questions I'll turn it over to Robin.
21	And in the meantime, I'll pull up that
22	document.
23	MS. PELLISH: Thank you.
24	So, we just thought that it made
25	sense to take a quick look back at the

Т	markets in 2020. I'm going to take a lew
2	minutes. We have a few slides, just to
3	provide a holistic view of the past 12
4	months. I think it makes sense if the
5	Board agrees in the February investment
6	meeting to do a deeper dive, not
7	necessarily on the history of 2020, but
8	really looking forward and what are the
9	events of 2020, what are those
10	implications that we can see for 2021?
11	And I might bring in an outside
12	speaker to talk to that topic, if there's
13	time on the agenda and if the Board
14	thinks it would be of interest.
15	So, on this first slide
16	(indicating), some statements I think
17	will come as not newsworthy to folks at
18	the table, they've been hearing this at
19	all the investment meetings, they've been
20	going to the CIM meetings. We started
21	out with global pandemic leading to
22	remarkable and rapid downdrafts in all
23	global markets, but an equally rapid
24	rebound; so that we saw most asset
25	classes delivering positive returns.

1	we've seen interest rates go to historic
2	lows, and a continued and actually more
3	accentuated outpacing by growth versus
4	value. We can talk a little about
5	commodities on one of these slides. And
6	we've seen a fairly significant decline
7	in the U.S. dollar versus other
8	currencies.
9	If we can turn to the first slide
10	(indicating). This is really a picture
11	of the year. And what you can see here
12	is the S&P 500 compared to two sectors,
13	airlines, hotel and separately hotels,
14	restaurants and leisure; to show that,
15	although the headline number, the S&P 500
16	has had a return of 18.4 percent over the
17	year, there were sectors that obviously
18	suffered from the lasting impact of the
19	pandemic, notably anything related to
20	hospitality and travel.
21	There are some other sectors we
22	could have highlighted, but we
23	highlighted those two.
24	Although there were significant
25	gains for investors in index funds during

1	the year, for example, and in growth
2	funds, for example, if you were holding
3	significant allocations to specific
4	sectors the gains were much more modest,
5	or you realized significant losses.
6	We also show on this slide on the
7	right-hand side the measurement of
8	volatility in 2020. So we all felt we
9	can recall it, but you can see that the
10	VIX, which is a measure of equity market
11	volatility, reached the levels last seen
12	in the global financial crisis of '08 to
13	'09, and then rapidly moved down to more
14	normal levels of volatility. Still
15	higher than long term averages, but much
16	closer to those long term averages.
17	Move to the next slide (indicating)
18	So the next slide shows total returns for
19	different benchmarks. So this is just to
20	reiterate the point that most asset
21	classes generated positive returns during
22	the year. We saw particularly strong
23	returns for risk markets, equity markets,
24	with a late year rally in emerging
25	markets.

1	And in particular, the long bond
2	sector, so you can see U.S. long duration
3	Treasury had a return of almost 18
4	percent, and that's simply a reflection
5	of the interest rates to historic lows.
6	So, of course there's a relationship
7	between the very strong returns and
8	equities and the very strong returns of
9	the long duration bonds. Both in some
10	ways are a reflection of the fact that
11	interest rates are at historic lows,
12	investors are searching for return. And
13	so by the developed economy is moving
L 4	interest rates down to historic lows,
15	investors were moving rapidly into risk
16	assets. And so you saw a tremendous
L7	return in equity markets globally.
18	I note here the convertible return,
19	which is really quite staggering. And I
20	don't have a lot of insight into the
21	specifics of the convertible market
22	return. We will talk in more detail
23	about that next month.
24	But the good news is we have an
2.5	allocation to convertibles within the

1	defensive composite of Variable A. And
2	so, that part of the program participated
3	in this rally.
4	Can we turn to the next slide?
5	(Indicating). The next slide cites what
6	I've mentioned over and over, and what
7	can be seen is a primary driver of all
8	capital market returns; the action by
9	central banks to lower interest rates to
10	these historic lows and to negative
11	levels in Europe and Japan.
12	So, we compare here key policy rates
13	driven by central banks. We compare year
14	end '19 to November 2020. You can see
15	rates are lower and significantly lower
16	across the globe.
17	This is the same topic, which I
18	think we emphasize a lot. Because when
19	interest rates are close to zero it
20	drives investors into risk assets and
21	into equity markets. So they aren't
22	separate phenomenon. And I think it's
23	important to understand that.
24	So if we go down to the next slide
25	(indicating). Again, to emphasize a

1	point that We'll talk about a little
2	later when we talk about the U.S. active
3	equity composite within Variable A.
4	Everyone is familiar with the fact that
5	the large tech stocks had tremendous
6	returns. You can see here for 2020
7	returns of Apple, Amazon, Microsoft,
8	Facebook, Google. And quite dramatic
9	returns compared to the rest of the
10	market.
11	You can also see the return of the
12	Russell 1000 value versus the broad large
13	cap market, the Russell 1000, and the
14	Russell large cap growth stocks, the
15	Russell 1000 growth.
16	So again, it was market driven by
17	large cap growth stocks, particularly
18	large tech stocks.
19	And then we touch on commodities,
20	although we don't have direct investment
21	in commodities. These sectors drive some
22	of the stock market sectors, particularly
23	crude oil prices.
24	So again, one of the interesting
25	things we saw in 2020 was the remarkable

1	pace of downdrafts in equity markets and
2	oil prices, and a remarkable pace of the
3	move back up. You can see for a very
4	brief moment we actually had negative oil
5	prices because of storage issues.
6	But you can see that many commodity
7	markets, particularly precious metals,
8	actually had a pretty good year,
9	particularly silver, and gold was up
10	almost 25 percent. But you see that oil
11	prices for the entire year were down
12	about 20 percent or more.
13	Finally, I wanted to touch on the
14	experience of the dollar. And you can
15	see that the dollar for 2020 against a
16	basket of foreign currencies which are
17	trade weighted, was down about 7 percent.
18	And we also note, again, this is an
19	investment we hold currently in many of
20	the Teachers portfolios, but you can see
21	the dramatic rise of bitcoin, and
22	potentially bitcoin becoming an
23	institutionally appropriate investment.
24	Maybe not today, but there is increased
25	talk of that being something that

1	institutions should consider.
2	So I'm going to conclude my comments
3	on the 2020 lookback. And interested in
4	any feedback, questions, and also any
5	feedback on whether you would like to
6	have part of the February agenda focused
7	on the 2021 outlook.
8	MR. ADLER: A 2021 outlook sounds
9	good, although I don't know what these
10	outlooks are worth, to be honest.
11	Because if we had a 2020 outlook in
12	February of 2020 nobody would have
13	foreseen anything that happened in 2020,
14	yet alone January 6, 2021, I think.
15	That doesn't mean it's not useful to
16	hear what market observers think is going
17	to happen.
18	And I note, obviously this is on
19	2020, but I note that, and I think it's
20	extremely important for us that the yield
21	on the 10 year Treasury has gone up, way
22	up, so that it's now above one percent,
23	when it was down, way down during most of
24	this year.

I wondered if, you didn't talk about

1	Treasury yields, I don't think, in this
2	presentation.
3	MS. PELLISH: I think we have one
4	slide right there, John (indicating).
5	MR. ADLER: That's the dollar index
6	
7	MS. PELLISH: No. If you look at
8	the screen, the ten year Treasury yield,
9	on the left (indicating).
10	MR. ADLER: That's the dollar index
11	Maybe my screen is behind or something.
12	Which page
13	MR. FULVIO: Slide 6.
14	MR. ADLER: I have the attachment.
15	My internet is sketchy today.
16	Okay. You want to comment on that?
17	MS. PELLISH: You can see at the
18	very end of that graph on the left-hand
19	side that while Treasury yields declined
20	to about 50 basis points. So, close to
21	zero. You can see there's been a slight
22	rebound, still very low.
23	And there's a lot of different
24	prognostications on the pace of the
25	rebound in Treasury yields, 10 year

1	marker across the curve. But most
2	observers don't see a significant rise in
3	yields over the next several years.
4	You'd have to have reflation, and the
5	question is, What would drive inflation
6	rates to increase?
7	So while there is still concerns
8	about potential recession and economic
9	growth, it seems likely to us that
10	interest rates will be kept fairly low.
11	MR. ADLER: Okay; thanks.
12	MS. PELLISH: I know that BAM has,
13	this is a topic that is actively
14	researched and thought about within BAM,
15	because of course they're managing both
16	the long and intermediate term programs
17	within the pension fund.
18	Any other feedback, questions?
19	MS. GREEN GILES: Recognizing what
20	John is saying about prognosticators, we
21	know this is not a perfect science. But
22	I do think it's helpful. I would be
23	interested in the outlook. I think we
24	have monetary fiscal policy under a new
25	administration. I think that future

1	stimulus packages, a Democrat Senate, 1
2	think we have a lot of political shifts
3	in our immediate future and potential
4	I'd like to hear. The more we hear from
5	different people the better, I think, to
6	get an understanding. So I would
7	advocate for something on the agenda.
8	MS. PELLISH: Great.
9	CHAIRPERSON PENNY: I think that's
10	final, then. Great. If you would do
11	that, we would appreciate it.
12	MS. PELLISH: Sure.
13	I think that concludes this part of
14	the agenda.
15	CHAIRPERSON PENNY: All right;
16	perfect. Mike can take down his screen.
17	Do we have a motion to go into
18	executive session?
19	MR. BROWN: So moved.
20	MS. VICKERS: Second.
21	CHAIRPERSON PENNY: Any discussion?
22	All those in favor please say "Aye.
23	(A chorus of "Ayes.")
24	Any opposed?
2.5	(No response.)

1	(Whereupon, the Board entered
2	executive session.)
3	CHAIRPERSON PENNY: Anyone else?
4	I guess we still have to go back
5	into public. Anything else?
6	Do I hear a motion to go back into
7	public session?
8	MR. BROWN: So moved.
9	CHAIRPERSON PENNY: Do I hear a
L 0	second?
11	MR. KAZANSKY: Second.
12	CHAIRPERSON PENNY: Any discussion?
13	All those in favor please say "Aye.
L 4	(A chorus of "Ayes.")
15	Any opposed?
L 6	(No response.)
L7	We're going into public session.
18	(Whereupon, the Board returned to public
L 9	session.)
20	CHAIRPERSON PENNY: We're back in
21	public session.
22	Susan Stang, will you please report
23	out?
24	MS. STANG: In executive session we
2.5	discussed two investment related topics.

1	Consensus was reached as to a path
2	forward on one of these topics.
3	CHAIRPERSON PENNY: Thank you.
4	Anything else?
5	Hearing nothing, do I hear a motion
6	to adjourn?
7	MR. KAZANSKY: So moved.
8	MR. BUCKLEY: Second.
9	CHAIRPERSON PENNY: Discussion?
10	All those in favor please say "Aye.'
11	(A chorus of "Ayes.")
12	All opposed?
13	We stand adjourned.
14	Happy New Year to everyone.
15	(Whereupon, at 1:33 p.m., the
16	meeting was concluded.)
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2	CERTIFICATION
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5	I, Jeffrey Shapiro, a Stenographic
6	Reporter and Notary Public, within and
7	for the State of New York, do hereby
8	certify that I reported the proceedings
9	in the within-entitled matter, on
10	Thursday, January 7, 2021, and that this
11	is an accurate transcription of these
12	proceedings.
13	IN WITNESS WHEREOF, I have hereunto
14	set my hand this 10th day of January,
15	2021.
16	
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19	
20	JEFFREY SHAPIRO
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