South Carolina Retirement System Investment Commission
Meeting Minutes

November 20, 2014

Capitol Center
1201 Main Street, 15th Floor
Columbia, South Carolina 29201
Meeting Location: Presentation Center

Commissioners Present:
Mr. Edward Giobbe, Chairman
Dr. Rebecca Gunnlaugsson, Vice Chair
Ms. Peggy Boykin, PEBA Executive Director
Mr. Allen Gillespie
Dr. Ronald Wilder
Mr. Reynolds Williams
Mr. Curtis Loftis, State Treasurer (via telephone)

Others present for all or a portion of the meeting on Thursday, November 20, 2014: From the South Carolina Retirement System Investment Commission: Ashli Aslin, Geoff Berg, Betsy Burn, Gail Cassar, Andrew Chernick, Louis Darmstadter, Dori Ditty, Erlinda A. Doherty, Scott Forrest, Mitchell Goldsmith, Lorelei Graye, Monica Houston, Adam Jordan, James Manning, Bryan Moore, David Phillips, Eric Rovelli, Lorrie Smith, Danny Varat, Brian Wheeler and James Wingo; From the State Treasurer's Office: Clarissa Adams, Robin Johnson; From Hewitt EnnisKnupp, Inc: Suzanne Bernard; From the Public Employee Benefit Authority: Faith Wright and Tammy Nichols; From the State Retirees Association of South Carolina: Donald Tudor, Wayne Pruitt, Sam Griswold; ETV: Tom Posey, and Titus Davis; From Thoughtful Productions: Bruce Crouch; From Creel Court Reporting: M. Sean Cary; Kathryn Schwartz.

I. CALL TO ORDER AND CONSENT AGENDA

Chairman Edward Giobbe called the meeting of the South Carolina Retirement System Investment Commission ("Commission") to order at 9:37 a.m. Mr. Allen Gillespie moved to adopt the proposed agenda as presented. Dr. Ronald Wilder seconded, and the motion passed unanimously.

II. CHAIRMAN'S REPORT

Chairman Giobbe informed the Commission that documents relative to Executive Director Hitchcock's EPMS had been posted. The Chairman opened the discussion of committee composition. Chairman Giobbe proposed that Mr. Williams be substituted for himself on the Human Resources and Compensation Committee. The Commission received a memorandum from Mr. Gillespie dated November 18, 2014 setting forth his thoughts concerning committee composition and suggesting that the Vice Chair be made an ex officio member of each standing committee for at least one year of each two year period. The memo was accompanied by proposed revisions to the Commission's Governance Policies. After further discussion, the Chairman's proposed change to the composition of the Human Resources and Compensation Committee was brought to a vote. The proposed change was ratified and approved by a vote of 5-1, with Mr. Loftis opposed.

III. AUDIT COMMITTEE REPORT

Mr. Gillespie reported that he had talked with Mr. Rick Funston concerning the candidate search for the Director of Enterprise Risk Management and Compliance position. He noted that the Audit Committee had completed planning stage EPMS documents for Mr. Chernick and Ms. Houston. He also reported that the Audit Plan for the current fiscal year is to be revised in light of budget restraints.

IV. EXECUTIVE DIRECTOR'S REPORT

Mr. Hitchcock updated the Commission on communications efforts, including the attendance of RSIC Staff at several public agency benefits fairs. He also reviewed with Commissioners a brochure and 'issue brief' regarding the Funston fiduciary audit that are being offered to stakeholders and members of the public. Mr. Hitchcock reported on a recent off-site executive staff retreat. Mr. Gillespie inquired as to the top three items of discussion. Mr. Hitchcock responded by summarizing discussion of culture, developing RSIC's staff, and seeking to strengthen RSIC's governance and organizational structure through communication and collaboration.

Chairman Giobbe asked about other stakeholder outreach initiatives. Mr. Hitchcock responded that he had met with association and legislative leadership individually upon his arrival and would be conducting the next regular quarterly stakeholder meeting, in conjunction with PEBA, in December.

V. CIO REPORT

Mr. Hershel Harper provided an update on investment team staffing. He also offered comments regarding the portfolio, noting, among other things, that hedge fund exposure is presently at approximately 12 percent, below the Commission-mandated 15 percent maximum.

Ms. Boykin asked about the differences between strategic partnerships and separate accounts for real estate. Mr. Harper responded that separate accounts offer RSIC customized solutions and more control for RSIC, and noted that there would be a detailed discussion of this topic later in the meeting.

Mr. Giobbe asked for an update on manager reduction. Mr. Harper noted that he (i) anticipated moving from approximately 200 "line items" to possibly 150 or 160 line items, with approximately 75% of those concentrated in private markets, and (ii) envisioned approximately 120 or 130 managers in the future.

Mr. Harper recognized Mr. David Phillips, who provided a review of the capital markets and Plan performance for periods ending September 30, 2014. Mr. Giobbe asked for a discussion of the overlay, and Mr. Phillips provided a brief overview of its history and purpose for RSIC. Mr. Phillips reminded the commissioners that Russell is the implementation manager, noted that the overlay is presently used in only three areas (global equities, commodities and global tactical asset allocation), and indicated that the size of the overlay had been reduced in the last several months. Dr. Wilder asked if the reduction in overlay exposure was positive. Mr. Phillips responded that it was neither positive nor negative, but rather a reflection of the portfolio's needs at this time.

The Commissioners asked several questions after Mr. Phillips' presentation. Mr. Gillespie inquired about the volatility spike noted in Mr. Phillip's presentation and asked if there were any portfolio considerations as a result. Mr. Harper replied that it was discussed but that no actions were deemed necessary.

Mr. Harper recognized Ms. Suzanne Bernard, from Hewitt Ennis Knupp, for additional market commentary and a plan performance review. Ms. Bernard discussed recent developments at PIMCO and noted reasons why HEK was not recommending action at this time. The Commissioners asked several questions of Ms. Bernard, including matters relating to volatility, the decline in HEK's long term return assumptions, and the time lag in reporting, especially with regard to alternative investments.

VI. INVESTMENT BELIEFS

Mr. Harper presented the Commission with an updated version of the draft investment beliefs document. He noted that this version incorporated comments and feedback from Commissioners received at and after the October 23, 2014 Commission meeting. Mr. Gillespie asked about the removal of certain language in item 2 concerning diversification. After discussion, there was consensus that the diversification language in question should be restored. On a motion made by Mr. Williams and seconded by Mr. Gillespie, the Commission unanimously voted to adopt the RSIC's Organizational Statements and Principles ("Investment Beliefs") as presented, discussed, and amended during the Commission meeting, and directed RSIC staff to make the necessary technical and formatting revisions to incorporate the approved Investment Beliefs into the Statement of Investment Objectives and Policies (SIOP).

VII. ASSET ALLOCATION DISCUSSION

Ms. Bernard was recognized for a discussion regarding asset allocation. Utilizing the materials that HEK had prepared, she discussed recent changes in the actuarial mortality tables, provided an update on HEK's capital market return assumptions, offered thoughts regarding the current economic environment, discussed how the RSIC portfolio might perform during various economic scenarios, and provided return and risk metrics for the current RSIC Portfolio and for possible asset allocation options. Ms. Bernard concluded by noting that in HEK's opinion, there was no need for the Commission to make changes to its existing asset allocation.

An extensive discussion ensued. Ms. Boykin noted that PEBA recently had updated its mortality tables. Differences between corporate DB plans and public DB plans (and the impact that these differences can have on asset allocation) were discussed, as were private fund investment activities, and the real estate asset class. Mr. Gillespie commented on the correlation assumptions presented by HEK, and Ms. Bernard elaborated on that analysis. In response to questions from the commissioners, Ms. Bernard discussed HEK's inflation assumption and the returns horizons used for HEK's modeling. There was also some discussion of investments that may provide perform well if interest rates rise.

On a motion made by Mr. Gillespie and seconded by Dr. Wilder, the Commission unanimously voted to reaffirm the current asset allocation as listed in the current portfolio and maintain the same benchmarks, target weights and ranges. Ms. Boykin left the meeting.

Break (12:24 p.m. until 12:55 p.m.)

VII. INVESTMENT RECOMMENDATIONS

Mr. Eric Rovelli, Senior Real Estate Officer, provided an overview of Real Estate Fund-of-One structures and the way in which these structures could fit into the RSIC real estate program as one means of investing in "core" real estate. Building upon Ms. Boykin's question from earlier in the meeting, Dr. Rebecca Gunnlaugsson asked about the internal decision making process for investments in the fund of one structure. Mr. Hitchcock and Mr. Harper clarified that individual investments will be analyzed by staff and approved by Mr. Harper but that major alterations

proposed to be made to the overall structure of the relationship would come before the Commission. Mr. Harper and Mr. Rovelli explained further the mechanics of the investment review process (including the negative consent concept) within the fund of one structure.

Mr. Rovelli then made a presentation regarding the TA Realty Associates Fund-of-One core real estate account. He discussed the search process, the firm's capabilities and process, as well as the investment rationale and considerations. He discussed the current yield on typical core real estate investments. He also discussed the parameters for the use of leverage. Mr. Loftis expressed a number of concerns regarding this investment's structure and core real estate. On a motion made by Mr. Williams, and seconded by Dr. Wilder, the Commission approved the following motion regarding the TA Realty Associates Fund-of-One core real estate account by a vote of 5-1, with Mr. Loftis dissenting:

i. Adopt the recommendation of the CIO and the Internal Investment Committee as set forth in the Summary Terms Chart on Page 1 of the Due Diligence Report dated November 20, 2014;
ii. Authorize a commitment not to exceed $300 million through the use of a "fund of one" structure;
iii. Authorize the Chairman or his designee to negotiate and execute any necessary documents to implement the creation of the fund of one structure as approved by the Commission (1) upon documented approval for legal sufficiency by RSIC Legal, and (2) upon expiration of the three business day review period as approved by the Commission on May 1, 2014 (or as the review period may be amended or superseded by the Commission); and
iv. Authorize the Chairman and/or the CIO or their designee(s) to thereafter authorize the custodian of funds to transfer such funds as are necessary to meet the obligations of the South Carolina Retirement Systems Trust Funds with respect to the Investment.

Mr. Rovelli also made a presentation on the Greystar Fund-of-One core real estate account. He discussed the search process, the firm's capabilities and process, as well as the investment rationale and considerations. In response to questions from commissioners, Mr. Rovelli also discussed the valuation process, fee calculation and the typical range of fees for real estate management and development. Mr. Gillespie indicated he had some remaining questions. Ms. Boykin rejoined the meeting. On a motion made by Dr. Wilder, and seconded by Mr. Williams, the Commission approved the following motion regarding the Greystar Fund-of-One core real estate account by a vote of 4-1, with Mr. Loftis dissenting and Mr. Gillespie abstaining:

i. Adopt the recommendation of the CIO and the Internal Investment Committee as set forth in the Summary Terms Chart on Page 1 of the Due Diligence Report dated November 20, 2014;
ii. Authorize a commitment not to exceed $150 million through the use of a "fund of one" structure;
iii. Authorize the Chairman or his designee to negotiate and execute any necessary documents to implement the creation of the fund of one structure as approved by the Commission (1) upon documented approval for legal sufficiency by RSIC Legal, and (2) upon expiration of the three business day review period as approved by the Commission on May 1, 2014 (or as the review period may be amended or superseded by the Commission); and
iv. Authorize the Chairman and/or the CIO or their designee(s) to thereafter authorize the custodian of funds to transfer such funds as are necessary to meet the obligations of the South Carolina Retirement Systems Trust Funds with respect to the Investment.

Mr. Louis Darmstadter, Senior Private Equity Officer, made a presentation on Crestview Partners III, LP. He discussed the fund's fit in the Portfolio's private equity program and pacing schedule, the firm's capabilities and process, and the investment rationale and considerations. On a motion made by Mr. Williams, and seconded by Dr. Gunnlaugsson, the Commission unanimously approved the following motion regarding the proposed commitment to Crestview Partners III, LP:

i. Adopt the recommendation of the CIO and the Internal Investment Committee as set forth in the Summary Terms Chart on Page 1 of the Due Diligence Report dated November 20, 2014;
ii. Authorize a commitment not to exceed $75 million into Crestview Partners III, LP;
iii. Authorize the Chairman or his designee to negotiate and execute any necessary documents to implement the Investment as approved by the Commission (1) upon documented approval for legal sufficiency by RSIC Legal, and (2) upon expiration of the three business day review period as approved by the Commission on May 1, 2014 (or as the review period may be amended or superseded by the Commission); and
iv. Authorize the Chairman and/or the CIO or their designee(s) to thereafter authorize the custodian of funds to transfer such funds as are necessary to meet the obligations of the South Carolina Retirement Systems Trust Funds with respect to the Investment.

Mr. Darmstadter next made a presentation on Bridgepoint Europe V, L.P. He discussed the fund's fit in the Portfolio's private equity portfolio and pacing schedule, the firm's capabilities and process, and the investment rationale and considerations. On a motion made by Mr. Williams and seconded by Dr. Wilder, the Commission approved the following motion regarding the proposed commitment to Bridgepoint Europe V, L.P. by a vote of 5-0, with Mr. Loftis abstaining:

Adopt the recommendation of the CIO and the Internal Investment Committee as set forth in the Summary Terms Chart on Page 1 of the Due Diligence Report dated November 20, 2014;
ii. Authorize a commitment not to exceed 75 million Euros (approximately $96 million as of 10/18/14) into Bridgepoint Europe V, L.P.;
iii. Authorize the Chairman or his designee to negotiate and execute any necessary documents to implement the Investment as approved by the Commission (1) upon documented approval for legal sufficiency by RSIC Legal, and (2) upon expiration of the three business day review period as approved by the Commission on May 1, 2014 (or as the review period may be amended or superseded by the Commission); and
iv. Authorize the Chairman and/or the CIO or their designee(s) to thereafter authorize the custodian of funds to transfer such funds as are necessary to meet the obligations of the South Carolina Retirement Systems Trust Funds with respect to the Investment.

Mr. Williams left the meeting.

Mr. Steve Marino, Investment Officer, made a presentation regarding renewal of the Investment Management Agreement ("IMA") with Integrity Asset Management, a small cap value manager that has served the SCRS trust funds since at least 2005. He noted that Integrity's current IMA expires in February 2015. He provided an overview of Integrity's investment team, process, fit within the RSIC Portfolio, performance, and fees. It was noted that HEK's rating on this manager is a "hold". On a motion made by Mr. Gillespie and seconded by Dr. Wilder, the Commission approved the following motion regarding renewal of Integrity's IMA by a vote of 5-0:

Adopt the recommendation of the CIO and the Internal Investment Committee as set forth in a memo dated October 31, 2014 regarding Integrity Asset Management;
ii. Authorize the renewal of the Commission's existing contract with Integrity Asset Management for another term of up to five years; and
iii. Authorize the Chairman or his designee to negotiate and execute any necessary documents to implement the renewal of the Investment as approved by the Commission (1) upon documented approval for legal sufficiency by RSIC Legal, and (2) upon expiration of the three business day review period as approved by the Commission on May 1, 2014 (or as the review period may be amended or superseded by the Commission).

VIII. EXECUTIVE SESSION
On a motion made by Dr. Gunnlaugsson and seconded by Mr. Gillespie, the Commission unanimously agreed to go into Executive Session to discuss investment matters pursuant to S.C. Code Section 9-16-80 and 9-16-320, personnel matters pursuant to S.C. Code Section 30-4-70(a)(1), and receive advice from legal counsel pursuant to S.C. Code Section 30-4-70(a)(2). The Commission receded into closed session at 3:31 p.m.

The Commission reconvened in open session at 4:43 p.m. Chairman Giobbe noted that there were two motions which the Commission needed to vote upon. He recognized Mr. Gillespie, who moved approval of the motion set forth directly below regarding the Commission's existing investment in the Loomis Sayles Multi Sector Full Discretion Trust. The motion, seconded by Dr. Gunnlaugsson, and unanimously approved by the Commission, stated that the Commission adopted the recommendation of the CIO and the Internal Investment Committee as presented with regard to the Loomis Sayles Multi Sector Full Discretion Trust ("Loomis") to (i) authorize the restructuring of Loomis from a commingled fund structure to a separately managed account structure, (ii) authorize the Chairman or his designee to negotiate and execute any necessary documents to implement the decisions approved by the Commission upon documented approval for legal sufficiency by RSIC Legal Counsel and upon expiration of the three business day review period as approved by the Commission on May 1, 2014 (or as the review period may be amended or superseded by the Commission); and (iii) authorize the Chairman and/or the CIO or their designee(s) to thereafter authorize the custodian of funds to transfer such funds as are necessary to meet the South Carolina Retirement Systems Trust Funds' obligations with respect to the Investment.

IX. ORGANIZATIONAL CHART
Chairman Giobbe recognized Mr. Gillespie, who moved approval of a motion authorizing staff to make technical revisions to various RSIC policy documents to comport with the new organizational chart. The motion, seconded by Dr. Wilder, and unanimously approved by the Commission, provides as follows: "Authorize RSIC Staff to make any technical revisions to the Commission's Governance Policies, the SIOP, Annual Investment Plan, and other documents consistent with the organizational chart presented by the Executive Director."

X. ADJOURNMENT
There being no further business, upon a motion made by Mr. Gillespie and seconded by Dr. Gunnlaugsson, the Commission unanimously voted to adjourn. The meeting adjourned at 4:45 p.m.

[Staff Note: In compliance with S.C. Code Ann. § 30-4-80, public notice of and the agenda for this meeting were delivered to the press and to parties who requested notice and were posted at

the entrance, in the lobbies, and near the 15th Floor Presentation Center at 1201 Main Street, Columbia, SC, at 9:18 a.m. on Wednesday, November 19, 2014.]

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1 not higher. So it's not uncommon for large
2 public funds to have the vast majority of their
3 success or failure riding on the behavior of
4 the global equity markets, regardless of what
5 their asset allocation happens to be, because
6 it has such a powerful impact due to the
7 volatility. So it's just something to keep in
8 mind that while you may say wow, that's still
9 a lot, it's considerably less than your peers
10 and it's something we think is a positive.
11 We'll talk later about asset allocation impact
12 and how you can weather various markets that we
13 might have. But this is a key issue, and I
14 just wanted to spend a minute emphasizing that.
15 So our -- please.
16 MR. WILLIAMS: What would a pie chart like that look
17 like if instead of weighting it just by
18 volatility there was also correlation factored
19 in there? Would global equity suck up even
20 more of the risk in --
21 MS. BERNARD: So, you know, the way we do it is more
22 regression-based, so I'm not familiar with that
23 exact methodology, and I understand the Goldman
24 Sachs approach is pretty similar to ours. You
25 probably get a little bit more when you run

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1 this for Goldman Sachs' approach on your
2 current portfolio. So keep in mind instead of
3 69, it might be closer to --
4 MR. HARPER: Seventy-five.
5 MS. BERNARD: Okay. If I were to run this, and that
6 does take into account correlations.
7 MR. WILLIAMS: Okay.
8 MS. BERNARD: So it picks up things that have
9 equity-like characteristics. So, for example,
10 your hedge funds have equity-like
11 characteristics if they're equity long short
12 managers. Your high-yield managers will have
13 equity characteristics because of the way high-
14 yield bonds behave. So you get things that are
15 coming into that that aren't necessarily only
16 global equity, and that's where your
17 correlations really kick in. It's a key issue,
18 Reynolds, in looking at how you behave versus
19 how your assets might be allocated by asset
20 class, so. What we have here I'll go through
21 quickly. It's mostly related to compliance.
22 So we just want to always make sure that you
23 know we're watching this and that everything is
24 working as it's supposed to. So David's done
25 an excellent job talking about the market. The

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1 markets obviously during the third quarter we
2 had massive correction in global equity
3 markets. Europe had some not so great news, US
4 seems to be one of -- US dollar seems to be one
5 of the few brighter spots out there. So in
6 this environment, you return negative one
7 percent, about 20 basis points shy of your
8 benchmark. The positives, you did have strong
9 performance out of your hedge funds, your
10 global asset allocation in real estate. The
11 underweight you had to commodities, the worst
12 hit asset category during the third quarter and
13 underweight emerging market debt both help and
14 then an overweight to a couple of areas of
15 fixed income that did outperform your policy.
16 However, that was more than offset by your
17 private equity and your global fixed income
18 mixed credit all underperforming as well as
19 some underweights to areas that did do a little
20 bit better during the quarter. So yes, we're
21 looking at this quarter, but really all of the
22 long-term news is good relative to your policy.
23 A quick look at the markets. I'm not going to
24 spend much time on this, but the one thing I
25 would like to highlight is right here in the

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1 one-year period. If you look at the equity
2 markets and just the divergence of returns and
3 that honestly extends out to even three-year
4 and five-year annualized returns, just a
5 divergence worldwide of the global equity
6 markets. This is one of the reasons that we
7 have recommended global equity managers, to
8 have a little bit of flexibility there. And
9 flexibility is going to be a key issue when we
10 talk about this asset allocation review that
11 we'll be doing later today. According to the
12 SIOP, we always use this report to provide any
13 meaningful updates of changes that occurred
14 during the quarter at your manager. A couple
15 things, none of them require action today. We
16 have looked at them as not essential to the
17 success of these managers, but we are going to
18 come back to you in the next -- within the next
19 month with some additional thoughts on it. So
20 Schroder is a key individual that headed up
21 their Latin American markets segments left.
22 It's meaningful change but not one that causes
23 us to recommend to sell immediately. We talked
24 extensively about PIMCO at the last meeting.
25 We've moved them down to a hold. We think

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1 things have largely stabilized there, but we
2 continue to watch that. Interestingly, a
3 related note, GMO had Marc Seidner left to go
4 to PIMCO. He was a key individual there. We
5 continue to think GMO is strong however. And
6 then at Mondrian, they have been planning, I
7 think in a very intelligent way, the retirement
8 of their CIO fixed income. So we're continuing
9 to monitor that as well. None of these require
10 action. We've guarded talked about your
11 overlay, so I won't go into that here. But
12 this is basically what your asset allocation
13 was at 9/30, the overlays, how those all kind
14 of work out, and then in this last column here,
15 were you in compliance with your SIOP. So here
16 we have the allowable ranges, your policy
17 targets and where you actually were. So
18 everything is as it should be. We looked at
19 performance. We have a couple things here that
20 are hopefully useful. The one year, the three
21 year, the five year, all net of fees relative
22 to your policy index showing the difference
23 except for the third quarter all above not only
24 the policy index but also above the 7.5 percent
25 actuarially assumed rate of return, and these

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1 are annualized returns. Now, this is something
2 we show every quarter. This is how you compare
3 to other large public funds. And what we're
4 looking at here on the vertical axis is return,
5 on the horizontal is risk. So if you look at
6 the three-year number you can see there's a
7 very direct correlation between risk, lower
8 risk means lower return. Higher risk means
9 higher return. That's largely because we've
10 been driven over most of the last five years by
11 a very strong equity market. That's been the
12 place to be. If we'd known five years ago
13 everything we know today you'd put 100 percent
14 of your portfolio in equities because it's been
15 a very strong unidimensional market. That's
16 great, wonderful, we benefitted from that
17 because you have a big allocation to equities.
18 You do not have as large of an allocation to
19 equities as some of your peers. We've chosen
20 intentionally to have a diversified portfolio
21 that is lower risk and will do well in a
22 variety of markets, not just unidimensional
23 ones where equity does well; however, that
24 means that your ranking in periods like that
25 are not going to be as strong. So over the

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1 three-year period, we are looking at a ranking
2 that's around in the -- we'll look at that in
3 a second. But I'd like to point out also on
4 this five-year period, while you're still
5 probably not a size you'd like to be, it's much
6 more random. This show how it looks in a
7 universe of returns. So this is fifth to the
8 95th is the kind of range within this bar, the
9 middle is the 50th. You're the blue box. The
10 green box is the policy index, and the first to
11 the far left set, we're looking at returns,
12 then standard deviation, which is a proxy for
13 risk or the volatility of your portfolio. And
14 then we show over here the Sharpe Ratio which
15 is return per unit of risk. So the efficiency
16 of your portfolio. So for the -- we show the
17 three year and the five year periods here.
18 It's in the 80th percentile for the total fund
19 for the three year and about the same for the
20 five-year. That may be disappointing. If you
21 look at standard deviation, however, it's also
22 quite low. That's a good place to be. When we
23 pull it all together, your Sharpe ratios are in
24 the 21st percentile and the 26th percentile, so
25 the top quartile. So while you may say on an

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1 absolute basis relative to other funds I wish
2 we'd earned a better return, quite frankly your
3 return per unit of risk is much better than the
4 average fund out there. Also we talked a
5 little bit about unidimensional markets where
6 equities are driving everything. Third quarter
7 wasn't that market; we all know that. You were
8 actually in the 33rd percentile for the third
9 quarter and the 44th for the calendar year to
10 date. So one of the reasons we do all these
11 things we do in alternatives is to make sure
12 that you're participating in markets but you're
13 not going to get 100 percent of it because you
14 don't have as much in equities, but you're
15 protecting yourself in down markets, and that's
16 exactly what we were trying to do during third
17 quarter. Okay. So while you underperformed
18 your benchmark, you outperformed the vast
19 majority of funds. I'm sorry, please, Mr.
20 Chair.
21 THE CHAIRMAN: No, I think as you pointed out, and
22 I wanted to make sure that we all understand
23 it, when you talk about that far left chart in
24 terms of absolute returns, that's comparing us
25 to all other funds that may have very different

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1 mixtures of very different asset allocations,
2 and as you rightly point out, if you have a
3 fund that's 100 percent equities, obviously
4 that's a very different picture that would be
5 presented if it gets compared to us, for
6 example.
7 MS. BERNARD: Right.
8 THE CHAIRMAN: So I think that's an important point.
9 MS. BERNARD: It's tremendously important.
10 THE CHAIRMAN: And then you rightly point out the
11 Sharpe Ratio where we stand substantially
12 higher and then the third quarter results.
13 MS. BERNARD: Right.
14 THE CHAIRMAN: So I think that's important to
15 recognize.
16 MS. BERNARD: It's a huge issue.
17 MR. LOFTIS: Suzanne, can you hear me?
18 MS. BERNARD: Of course I can, Curtis, Mr.
19 Treasurer.
20 MR. LOFTIS: Hey, well, good. I have operator
21 problems from this end. I noticed we haven't
22 talked any about the lag in reporting a fund
23 like ours would have. So the numbers that we
24 get for the end of September, might not mesh
25 with the funds out of North Carolina which is

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1 a very different portfolio. Do you make any
2 projections about what will happen as those
3 other numbers come in and why the lag they have
4 ---
5 MS. BERNARD: Right.
6 MR. LOFTIS: --- from a lot of the alternative.
7 MS. BERNARD: It's a problem you have with universe
8 construction that not everyone's data comes in
9 real time. So these are continually updated,
10 Mr. Treasurer, so as we get data, let's say a
11 first quarter data was revised because someone
12 had private equity numbers come in that they
13 didn't have when they did the first tranche of
14 universe reporting, that gets modified over
15 time. So if we were to go back and re-strike
16 first quarter universes, they would change
17 slightly, usually a couple percentage point.
18 We're not talking big changes. But they're
19 continually fed and cared for so that we make
20 sure we've got the most current data. But most
21 folks have --
22 MR. LOFTIS: And ---
23 MS. BERNARD: Oh, please.
24 MR. LOFTIS: I understand that, and I'm not trying
25 to throw a monkey wrench in here in any way,

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1 but I do think it's important that our fund is
2 going to be affected by a lag in reporting a
3 whole lot more and before we beat our chest too
4 much with this, you know, turbulent time that
5 we've just gone through, it might be wise if we
6 take a good look at it over a longer period of
7 time.
8 MS. BERNARD: Certainly, and I wouldn't suggest that
9 one quarter's worth of universes are anything
10 to get excited about, just trying to show what
11 it does do when the markets decline. Most of
12 your private markets that don't necessarily
13 report real time, such as private equity, some
14 real estate funds, don't show meaningful
15 quarter by quarter deviations that one quarter
16 adding or subtracting is going to have a
17 meaningful impact on your returns, unless we
18 have a really catastrophic type of market
19 event, but we certainly didn't have that during
20 third quarter. But it's an excellent point,
21 there is a mix of data in here.
22 MR. LOFTIS: Thanks, Suzanne.
23 MS. BERNARD: Of course. So just to make sure we're
24 all clear on that return issue, it is important
25 to note that that includes all public funds

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1 that have more than a billion dollars that we
2 were able to compile, so it's mostly data from
3 a large number of custodians. I'd say it's the
4 most comprehensive universe out there.
5 However, keep in mind, some of them are fully
6 funded, some of them are massively underfunded,
7 some have different restrictions. It's a very
8 wide range of funds with different risk
9 situations and different just circumstances
10 that they find themselves in. So you're going
11 to have a wide range of asset allocation
12 practices within it.
13 MR. FEINSTEIN: Suzanne, this is not just the BNY
14 universe?
15 MS. BERNARD: It's BNY and we're also adding any
16 funds that we have as well. So we want to get
17 it as comprehensive as we can.
18 MR. FEINSTEIN: Oh, okay. Thank you.
19 MS. BERNARD: And we have a large number of public
20 funds as well. Performance attribution, just
21 briefly go over this. Let's start out with
22 this chart here on the right. At a macro
23 perspective, just for the third quarter, as we
24 mentioned, you were down about 20 basis points
25 or .2 percent. Managers were really the

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1 thing for your liabilities because that means
2 that of course people are collecting pensions
3 longer and that you need to make sure that what
4 we have saved up for that is going to meet
5 those obligations adequately.
6 MS. BOYKIN: And I would just point out that PEBA
7 has, in fact, updated our mortality tables just
8 within the past few years and included in that
9 an assumption that mortality improvements would
10 occur over time so we're not working with a
11 stagnant mortality expectation. So just so
12 that you know, we are incorporating that into
13 our evaluations already.
14 THE CHAIRMAN: I think that's a very good point.
15 Because I think one of the ---
16 MS. BERNARD: Correct.
17 THE CHAIRMAN: --- criticisms of the situation in
18 Detroit was the actuaries were working on
19 mortality tables that were 20 years old, so
20 that the thing was way out of whack and
21 balance.
22 MS. BERNARD: The last formal update from the
23 Society of Actuaries was a 2000 table, and they
24 project increases over time, so it's not as if
25 they don't believe that people are going to

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1 live longer as time marches by, but it's been
2 a little bit better than they anticipated. So
3 that's what needs to be adjusted here. So for
4 public funds your actuary has some discretion
5 in how they do this. They can even choose to
6 use your own population as the example for
7 mortality assumptions. So there's a lot of
8 choices they have, so please know that this
9 doesn't mean your actuary has to do exactly
10 this. But for plans that are moving over to
11 these 2000 -- from these 2000 tables to the
12 2014 tables that are being released, most of
13 them are experiencing somewhere between a five
14 and ten percent increase in their liabilities.
15 So it's not an immaterial impact. And for
16 corporate funds, they have to decide how
17 they're funding that over time.
18 THE CHAIRMAN: Peggy, just a question, when you said
19 you update them, are those for the population
20 in general or is it state specific or region
21 specific? How does it work?
22 MS. BOYKIN: Our actuary looks at two things. They
23 look at the mortality tables and they also look
24 at experience in our system. We have an
25 experience study conducted every five years,

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1 and we will have another experience study
2 conducted next year. And so when they updated
3 that last time, historically we've updated
4 those mortality tables during that experience
5 study which is done every five years. When we
6 updated it last time, we made a conscious
7 decision that we were not only going to update
8 it, but we were going to build in a projection
9 that is going to continuously be updated, so we
10 built in a mechanism to take that into
11 consideration. It doesn't mean that that
12 mortality might -- that increase might have
13 been slightly more than what we were already
14 projecting, but our actuary will evaluate that,
15 not only do a comprehensive study every five
16 years, but every year part of the evaluation
17 tells us whether we are on track with that
18 assumption or not. And the preliminary
19 information we have from our actuary this year
20 is that we did not have any, you know, real
21 adverse differences between our actuarial
22 assumptions and actual incurrences.
23 THE CHAIRMAN: Interestingly enough there was a
24 chart that came out here a week ago that
25 indicated that life expectancy in South

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1 Carolina was below the national average.
2 MR. GILLESPIE: So we've got the upside.
3 THE CHAIRMAN: So that's the good news for the
4 pension fund.
5 MS. BERNARD: So it sounds like your actuary has
6 been feathering in real assumptions real time,
7 so that's kind of your best case scenario. So
8 it's probably more accurate of your actual
9 experience, and it's been feathering in these
10 improvements in life expectancy over time.
11 This is important stuff. You know, we -- I
12 remember very vividly working with a group of
13 Catholic sisters who had a pension fund, and
14 they lived quite a bit longer than the average
15 life expectancy. These things need to be
16 factored in, particularly in groups that can be
17 smaller sometimes. So just so you can all feel
18 good about your life expectancy, here we're
19 showing how it's improved. Just what we're
20 looking at here on the vertical axis is the
21 life expectancy for people that are 65 at that
22 point in time. So today if you're 65, anyone
23 in the room here, we've got males at about 87
24 years and females at about 89, but 15 years
25 from now a person that's 65 could be expected

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1 to live nearly two years longer. So that has
2 repercussions. The Social Security
3 Administration has been upping their
4 projections as well, which is shown on that
5 bottom table. So it sounds like you've
6 addressed this largely. So I don't think this
7 will have the same impact on you that it's
8 having on funds that perhaps are not looking at
9 things as real time. The other mathematical
10 kind of input when we're looking at how this
11 all fits together is what are the outlooks for
12 the investment markets, what can they produce,
13 is it going to be consistent with what you're
14 expecting them to produce from an actuarial
15 standpoint. Now before I get into this, please
16 keep in mind, again, I'm not an actuary.
17 Actuaries do look at very, very long-term
18 periods when they are making their assumptions.
19 So we're looking here at a ten year and a 30
20 year, but they look even longer really in terms
21 of -- public pension funds are considered to be
22 a perpetual being. So they're looking at very,
23 very long-term averages. So, and people can
24 disagree on this. Our assumptions when we've
25 gone out in the market, we do this annually.

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1 The last time we did it was 12/31 of '13, ours
2 fall right about the middle of what investment
3 managers, other consultants assume. But
4 obviously there's a range of assumptions in
5 there as well. Before I move on to this
6 though, I want to make sure I actually go back
7 and cover the issue that you may raise, Mr.
8 Chair, about actuaries and some of the pension
9 problems that have occurred. I think, and I
10 don't know Detroit's situation intimately, but
11 what we've seen go wrong occasionally in the
12 past is where actuaries and perhaps
13 legislatures that didn't want to increase
14 contributions to a pension fund have worked a
15 little too closely hand-in-hand where that
16 actuary does not have an independent opinion on
17 what contributions are appropriate to fund this
18 pension fund prudently over time. So
19 occasionally you'll see unrealistic actuarial
20 assumptions, mortality tables that aren't
21 adjusted correctly, things that are a bit
22 antiquated. Within the rule book, yes, but
23 perhaps very, very much on the, if you will,
24 aggressive side to minimize funding. And
25 that's where things can go wrong. Where you

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1 have a healthy relationship with an actuary who
2 independently determines these things, gives
3 their best thinking and that contributions and
4 such are determined on a formulaic basis and
5 consistently applied, we don't see those
6 problems occurring so much. And you use a very
7 reputable actuary. We have no reason to
8 believe that anything is inappropriate there at
9 all. So, you know, I don't want to draw any
10 correlations here. Also, the actuarial assumed
11 rate of return that you're using of 7.5 is
12 actually I believe on the somewhat conservative
13 side. I haven't looked at it in the last six
14 months, but 7.75 was the more common average
15 out there. We have seen people ratcheting down
16 their assumed rates of returns.
17 THE CHAIRMAN: Interestingly enough, Detroit just
18 dropped theirs to six and three quarters.
19 MS. BERNARD: Right. Now, it also needs to reflect
20 your circumstances and how you are investing.
21 So, for example, if you were a closed pension
22 fund and you were just meeting your obligations
23 and you were primarily in fixed income, there's
24 no way you should be assuming 7.5, and no
25 actuary would tell you that. They would

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1 probably be assuming somewhere in the fours.
2 So how these all fit together is important, and
3 it would be important to have an actuary come
4 and talk to you about that. But I think the
5 key issue is do the actuaries ever have a
6 motivation other than best thinking and meeting
7 the needs of the beneficiaries when advising on
8 things such as actuarial assumed rates of
9 return and contributions. And I have no reason
10 to believe you have anything but best practices
11 here. So I think that's where it goes awry,
12 and it's usually more at the municipal level
13 than at a state level.
14 MS. BOYKIN: Well, I think just one statement on the
15 assumed rate of return, you know, the actuaries
16 may opine on that, but for South Carolina, the
17 state, the rate of return is embedded in the
18 statute, so that's not something that's purely
19 in the purview of the actuary, although they do
20 opine on that.
21 MS. BERNARD: Good point. Right. And sometimes
22 people don't take their actuary's
23 recommendations because, obviously, when you
24 lower an actuarially assumed rate of return, it
25 means greater contributions and that's not

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1 always a popular stance. Okay. So capital
2 markets assumptions. We update these
3 quarterly. We have an entire group that does
4 nothing but capital markets assumptions.
5 They're looking at what are the visible
6 elements that contribute to returns. So, for
7 example, in the stock markets, you're looking
8 at dividend yield, you're looking at GDP
9 growth, you're looking at inflation, and then
10 is there any potential for PE expansion or are
11 we in normal ranges or contraction. And then
12 we're looking at that on yields in the bond
13 market, basically looking at what signals are
14 out there that tell you where the markets are
15 heading over the next five to ten years. So
16 how can you extrapolate that. It's very little
17 market prognostication; it's really trying to
18 be as concrete as we can be about this.
19 Volatilities and correlations are generally
20 historically observed with some adjustments
21 that we make. So with that said, this is how
22 our capital markets assumptions have changed,
23 and these are ten year assumptions. I'll show
24 you our 30 year assumptions in a minute. These
25 are nominal returns, so they include the

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1 effects of inflation, and that's an important
2 distinction that we'll talk about in a minute.
3 If you can look at where I've highlighted here
4 in the yellow, this is how things have changed
5 and where they've changed more meaningfully
6 from 12/31/13 when we did your asset liability
7 study using those numbers and our most recent
8 statistics through September. What you see
9 predominantly, and I'm sorry I should have
10 included high yield bonds in this yellow
11 category as well, these are areas where we've
12 seen meaningful change and they've all been
13 meaningful declines, unexpected returns
14 predominantly across the bond segments of the
15 market not surprisingly given how we continue
16 to see interest rates drops. Notably these are
17 also areas that have experienced also some
18 reductions in assumed volatility. We also show
19 what they look like over time, and you can see
20 on a year-by-year basis they do at times change
21 meaningfully. I think probably something that
22 comes across pretty strikingly is if you went
23 back to 2011, we had an 8.5 percent global
24 equity assumption. It's now down to 7.3. And
25 that's been because of the continued strong

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1 market, dividend yields have gone down. So the
2 other thing that I'd like to point out here is
3 inflation. You assume a 2.75 percent inflation
4 in your actuarially assumed information. We
5 have 2.2 right now in the market. That's about
6 a 50 basis points difference, that's important
7 because when we look at this on a real basis,
8 you'll see that really what we need to do is
9 earn 4.75 on a real basis. So I think that
10 maybe these numbers are a little low because
11 our inflation assumption does not match that of
12 your actuary. We're a little bit more
13 conservative on our inflation assumption. And
14 in theory, inflation passes through all asset
15 classes over time. It's not always how it
16 occurs, but that's generally what we see. This
17 is a lot of information, I apologize, the type
18 isn't probably the greatest for everybody, but
19 this is our ten year capital markets
20 assumptions. What I want to point out before
21 we dive too deeply into this is if you're
22 trying to hit 7.5 percent over the next ten
23 years, there's not a lot of asset classes that
24 we believe on a base case basis are likely to
25 produce that. So let's start out here at the

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1 top. In the equity area we're close. We're at
2 about 7.3. Emerging markets equity a bit
3 higher. You go down, you really have to get
4 down to private equity and infrastructure to
5 get any other asset classes that are really
6 reliably producing that. The bond markets are
7 anemic. Obviously we're at a very low interest
8 rate environment with little room for a
9 continued decline in interest rates. They're
10 anticipated to go up in the short term. That
11 is going to have obviously a negative impact on
12 bond returns. Equity markets have had an
13 extremely strong run. While they may continue
14 to do well, are they going to do anywhere near
15 as well as they've done over the last couple of
16 years. And alternatives, private equity, for
17 example, have their appeal, but you don't want
18 to be risking up the portfolio to make a
19 gargantuan allocation to private equity just to
20 try and reach for an actuarially assumed rate
21 of return. This is over ten years. This is
22 correlations; I'm not going to go into that.
23 And then here's 30 years. And again, what you
24 see here, again, this is nominal, and you see
25 a few things that are a little bit better.

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1 Global equity closer to that seven and a half
2 at 7.4, emerging market. So you see a few more
3 things in here in the equity areas that have
4 produced. You get down here to broad hedge
5 funds a little closer at 7.2. Private equity
6 infrastructure, but let's look here at the
7 geometric return. Really what you have to
8 produce over the long term is about 4.75 on top
9 of your inflation assumed rate of return.
10 That's a little bit more rosy picture. The
11 equity market's producing in excess of that.
12 The bond markets we still think are probably
13 going to be anemic in that space, but that's
14 not why you're investing in them. You see some
15 things in emerging markets bonds that are
16 somewhat appealing, in the alternative space
17 that are appealing. So when we look at it from
18 a real standpoint over the long term we
19 continue to think that you can produce a 7.5
20 percent return or something close to it on a
21 real -- I'm sorry, in the real basis would be
22 4.75. When you use your inflation assumption
23 I think that gets you closer to the 7.5. As a
24 reminder, what did we look at earlier this
25 year, and this is using what we had at fourth

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1 quarter of 2013. So this was looking at your
2 targets, and then we used this kind of a straw
3 horse, this 60/40 no alternatives, and I'm not
4 trying to beat up on this is a bad allocation.
5 I'm just trying to look at it as a relatively
6 simple portfolio versus what you have, which is
7 a lot of diversification, a lot of moving
8 parts. In terms of your alternatives
9 allocation, is it worth all of that extra
10 effort. What is it producing for you in terms
11 of return and risk reduction, which is why you
12 would invest in it. When we did this earlier
13 this year, you obviously are seeing a ten year
14 return that's better with a lower expected
15 risk. So the Sharpe Ratio, which again is
16 return per unit of risk, is much more
17 attractive. If you get out to 30 years, you're
18 getting a little higher return scenario, as we
19 just looked at. Again, better risk return.
20 This is how we looked at the world in capital
21 markets modeling. It doesn't change much in
22 terms of our kind of base case scenario. We're
23 still looking at something very similar to
24 that, and basically when we're modeling all the
25 different ways that your performance can evolve

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1 over time, we're not just looking at that
2 expected scenario, of course, we want to
3 include a lot of different economic scenarios.
4 They aren't randomly generated. They are
5 actually -- they have logic to them. So how do
6 they behave together. So these are two simple
7 ways to look at it, and it's basically what are
8 inflation and bond yields doing in low,
9 moderate, and high scenarios, what are the
10 weightings that we had in our capital markets
11 assumptions, and then the same thing on return-
12 seeking assets or how equity markets perform in
13 high, moderate, and low return scenarios. And
14 you can see kind of how those shake out in
15 terms of expected scenarios where the extremes
16 here, kind of a low inflation high return
17 seeking, which is kind of what we've had the
18 last couple of years. But this has got a
19 relatively low weight going forward, and the
20 opposite of a high inflation low equity
21 environment has an equally low weight. I'm not
22 going to go through all of this, but just as a
23 reminder, what we tried to do here is to look
24 at your contribution rates ten years out, your
25 funded status ten years out using these

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1 different types of scenarios. So you can see
2 here low growth high inflation, not a very
3 pretty one, that's why it's red. On the flip
4 side, high growth low inflation green because
5 everyone would like to see that. And then the
6 range is important as well. So what we were
7 trying to do here was to look at it using your
8 current targets and then if you were to just be
9 simple and have 60/40, not do all this. So
10 this is contribution rate. So in contribution
11 rates lower is better. You want to be more
12 down here. Your worst case scenarios in this
13 are low growth high inflation. Not
14 surprisingly, having a diversified portfolio in
15 those types of environment gives you some
16 better outcomes, still not appealing
17 necessarily, but better outcomes. And then in
18 terms of funded ratio, similarly in protecting
19 against that downside situation, you do better
20 with a diversified portfolio than a non-
21 diversified portfolio. Where you may not do as
22 well, and it's about the same, but oftentimes
23 in very high growth low inflation environments
24 a simple 60/40 portfolio might outpace a
25 diversified portfolio as we've seen. And then

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1 this is again looking at your contribution rate
2 and funded scenarios in various economic
3 environments.
4 DR. WILDER: What is our current contribution rate?
5 MS. BOYKIN: For the employer or the employee?
6 DR. WILDER: I assume you're talking about combined?
7 MS. BERNARD: Yeah, it's combined.
8 DR. WILDER: Combined.
9 MS. BOYKIN: I'll get that for you because I don't
10 have what they're increasing to July 1. So
11 I'll get that for you.
12 MS. BERNARD: We had that in our full study. I just
13 don't have the slide in here, I'm sorry, Dr.
14 Wilder.
15 MS. NICHOLS: The current rate is eight percent for
16 employee and 10.9 for employer, I believe, for
17 SCRS, the larger plan.
18 DR. WILDER: So it's approximately 19 plus or minus
19 currently combined?
20 MS. BERNARD: Right.
21 MR. GILLESPIE: But it ratchets it up like three
22 points.
23 MS. BOYKIN: No, it will go up slightly July 1 of
24 2015. In the preliminary results we've gotten
25 from the actuary, we expected that the

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1 contribution rates were going to go up each
2 year for the next three years until 2018. But
3 based on the resnlts for this year, the
4 preliminary results, we won't be putting into
5 place another increase in 2016. We delay a
6 year. So there will be one for 2015, but
7 that's based on last years evaluation. For
8 this coming year we won't be -- the actuary is
9 not recommending an additional increase because
10 of the returns that were generated on the
11 portfolio last year, as well as some of the
12 changes that were made to the benefit structure
13 in 2012. So those two things in combination
14 have worked to mitigate that additional
15 contribution increase that would be required
16 for the following year.
17 MS. BERNARD: Right, that's an important point.
18 When we did our study we were using actuarial
19 information from the prior year. Your
20 experience was better than expected in terms of
21 returns, so that actually would raise all of
22 these numbers in a positive way.
23 THE CHAIRMAN: Suzanne, I have a question. How do
24 you account for the substantial difference
25 between the funded status of say I think the

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1 last figure I saw was for the Fortune 500
2 companies on average are 85 percent funded?
3 MS. BERNARD: Sure.
4 THE CHAIRMAN: As opposed to public pension funds
5 which are substantially below that. Is that a
6 result of -- well, I think it's got something
7 to do with the requirements for -- federal
8 requirements ---
9 MS. BERNARD: Yes.
10 THE CHAIRMAN: --- SEC requirements for funding of
11 private pension funds. But is it also a
12 function of bigger contributions or is it
13 largely the requirement of the greater -- of
14 the legal requirement to fund those private
15 pension funds?
16 MS. BERNARD: The latter. When they brought in
17 place the Pension Protection Act, it basically
18 created -- I'm simplifying a complex act, but
19 basically created a market to market
20 environment in the corporate defined-benefit
21 space that made rather severe penalties to
22 delaying funding. So most, you had an increase
23 in PBGC premiums. If you're underfunded you
24 have to do notifications to your participants
25 that are rather alarming. So most corporate

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1 defined benefit plans have chosen to pre-fund
2 heavily, at least to 90 percent. It has also
3 created a disincentive for people to have
4 defined benefit plans because it can be so
5 lumpy and so big in bad markets. So what we've
6 seen is a huge divergence in asset allocation
7 practices of corporate plans in public funds.
8 If we looked at it ten years ago, they were
9 pretty similar, some differences, but they're
10 both return-seeking long-term investors. Now
11 corporate defined benefit plans are basically
12 looking to hedge their liabilities and when
13 their liabilities move, they want their assets
14 to move. So they've started to favor long-term
15 bonds because that more closely approximates
16 how their liabilities move, particularly long-
17 term corporate bonds. And then they'll have a
18 smaller pool of return-seeking assets. So it's
19 not uncommon, for example, to see a well funded
20 corporate defined benefit plan at 60/70 percent
21 long-term bonds. So they behave very
22 differently now. Now there -- also many of
23 them have chosen to freeze benefits and move --
24 start just offering defined contribution plans.
25 Some have closed down their plans entirely.

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1 Some continue to have active plans. But that's
2 more the minority today. So one could argue
3 pros and cons of this. I think obviously
4 funding and making sure that a pension fund is
5 well-funded is a positive thing; however, it's
6 made the rules and regulations and penalties
7 quite onerous for a lot of corporations and
8 they've chose to just get out of the business.
9 And so instead now participants are relying on
10 defined contribution plans, which can be great,
11 but they don't provide that mortality kind of
12 tail. So if you look to be 100, might you
13 outlive your assets. You don't have a defined
14 benefit plan, as that backstop for an insurance
15 policy. So that's -- I'm sorry, I don't mean
16 to go off on a tangent there.
17 THE CHAIRMAN: No, no, go ahead.
18 MS. BERNARD: So it's been kind of sad to watch,
19 because I think there's room for both defined
20 benefit and defined contribution plans out
21 there and the rules that have been put in place
22 are very difficult for corporations to continue
23 to offer that.
24 MS. BOYKIN: Suzanne, have you seen any impact on
25 the markets overall because of that movement on

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1 the corporate side from moving away from more
2 of the equity focused portfolio, so that's a
3 huge amount of capital moving from equity to
4 more of a fixed income, especially with the
5 closure of so many plans? So what kind of
6 impact have you seen that on the markets
7 overall?
8 MS. BERNARD: Right. Interestingly, what ends up
9 happening a lot of times is they'll draw back
10 their equity after the equity markets have done
11 well. It's kind of the opposite of what you
12 might anticipate that people draw out when it's
13 doing poorly, no, they draw out when it's doing
14 well because your funded status is now
15 increased and you can, if you will, immunize a
16 larger portion of your portfolio. So where
17 we've send it -- we've not seen it as much in
18 the equity markets. Where we've actually seen
19 it has been on the long corporate side because
20 there's a finite pool of assets out there and
21 a lot of people wanting those. So there's
22 synthetic ways to get that as opposed to
23 holding the physical bonds. It is something
24 that, you know, if supply doesn't keep up with
25 demand there's going to be some challenges in

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1 investing in that marketplace. So we think
2 there's some investment reasons that cause it
3 to not be as efficient a market as it perhaps
4 once was. You have greater demand definitely
5 today than you did ten years ago for long
6 corporate bonds. And a very low environment to
7 issue debt, so that has kind of an interesting
8 combination.
9 THE CHAIRMAN: So Suzanne, just to kind of put this
10 in perspective then. As far as public pension
11 funds are concerned, to improve their funded
12 status we have two ways to do it, added
13 contributions or market performance.
14 MS. BERNARD: Uh-huh.
15 THE CHAIRMAN: Obviously market performance is
16 always questionable, so over the long term
17 obviously greater contributions would be a more
18 significant factor; is that reasonable? I mean
19 obviously we'd like to have both but --
20 MS. BERNARD: Yeah. Yeah, we'd love to be wrong on
21 our expected scenarios. But under a very low
22 inflationary environment that's had a long
23 equity run with bond yields where they are,
24 there aren't a lot of places to get excited
25 about for consistent reliable beta. So yes,

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1 market returns are expected to be less than
2 they were three years ago, five years ago, and
3 that would mean the contributions play a larger
4 role than they normally would. So where are we
5 on this economic environment of ours? We have
6 a group of about 15 people that look at, mostly
7 economists looking at what we call our medium
8 term views, which is not trying to be so much
9 tactical but rather saying from a one to three
10 year standpoint, what are the most attractive
11 areas to be in. So basically what I just went
12 through causes us to rank order them this way,
13 the alternatives, and when I say alternatives,
14 I mean hedge funds, private equity, real
15 estate, all the esoteric stuff is our most
16 favorable area, followed by equities
17 predominantly -- well, we think both non-US and
18 US are attractive there, and then bonds not
19 surprisingly are anticipated to be kind of the
20 least favorable in the one to three year
21 period. This is not a 30-year period; this is
22 short term. But it has ramifications for how
23 we choose to position the portfolio. And
24 before we get into this too far, I just want to
25 make sure we're all clear on the distinction

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1 here. We're talking about what is a good
2 strategic asset allocation that's going to do
3 well for you in good times and bad. There are
4 tactical things that staff does, as Hershel was
5 discussing earlier. You've given many of your
6 managers the optionality to move to where they
7 see value, so for example, your tactical asset
8 allocation managers, your hedge fund managers,
9 even global equity, they have this latitude to
10 try and find attractive opportunities. So
11 you're allowing them a bit of latitude as well
12 to try and navigate the short-term vagaries of
13 the market as well. If you ask us where we
14 think the most attractive elements are in the
15 equity markets, it would be topped by large cap
16 and emerging markets equity with small cap
17 being really the least attractive. In fixed
18 income, we like local emerging markets debt as
19 opposed to US dollar. We do like TIPS over
20 treasuries right now and government bonds, non-
21 US bond and long duration we think are probably
22 least attractive in the short term. And then
23 on alternatives, we do like hedge funds and
24 real estate. You'll notice private equity is
25 not on here because this is a one to three year

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1 view. We don't include things that have long
2 lock ups. So when I'm talking real estate here
3 I'm talking more core real estate, REITs, that
4 sort of thing rather than value added and
5 opportunistic. We don't think you should try
6 and time over short-term periods movements in
7 or out of private equity and long-term real
8 estate. Those are things we think you should
9 have long-term allocations to.
10 THE CHAIRMAN: Suzanne, just in that prior chart
11 where you had -- the one just before that. Oh,
12 yeah, EM local debt as a favored position. I
13 guess that would assume a weaker dollar rather
14 than a stronger dollar?
15 MS. BERNARD: Right. Right, or at least a
16 flattening dollar.
17 THE CHAIRMAN: Over the next one to three years?
18 MS. BERNARD: Yes.
19 THE CHAIRMAN: Okay.
20 MS. BERNARD: Okay. So what does this all mean.
21 Let's pull this altogether. So our group in
22 the UK and the US got together and really
23 looked at what are people nervous about in the
24 next five years. We have a lot of scenarios
25 here for that, I apologize. But keep in mind

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1 most of these are things that people worry
2 about, not things that people would like to
3 have happen. So most of these scenarios are
4 negative. It doesn't mean that our expected
5 scenario is negative, but as we go through it
6 it might start to feel that way. Because I
7 think of the nine scenarios we have, perhaps
8 seven of them are not very favorable because
9 people worry about spikes in inflation,
10 emerging markets having problems, big political
11 problems in the Middle East causing supply --
12 negative supply shocks to energy markets.
13 These are the types of these people worry
14 about, are we over accommodative in our
15 monetary policy and that's going to cause
16 problems down the line. So we're trying to
17 look at what could be the impacts of that over
18 the next five years and how would your current
19 portfolio behave in that again versus this kind
20 of straw man of a simple 60/40 stock bond mix,
21 and try and show you how the numbers look.
22 You're going to see a lot of five-year returns
23 that aren't 7.5 percent, I'll tell you that,
24 because we're looking here at negative
25 scenarios, not positive ones. Okay. So here

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1 are the scenarios. The optimistic one that
2 everyone would love to see is blue skies, and
3 that is nice economic outlook going forward,
4 moderate to low inflation. And then we have
5 three low demand scenarios in increasing order
6 of severity starting with just growth being
7 kind of bland, but not falling into recession,
8 an obvious recessionary environment but one
9 that we have a recovery afterwards. And then
10 finally what we call black skies, which is even
11 worse than 2008. So we're talking very deep
12 recession that does not have an immediate
13 recovery. So what are kind of the
14 repercussions of how you might behave in these?
15 And then we're looking here at some various
16 topical scenarios. High inflation, which
17 people worry about a lot. So that's energy and
18 commodity prices pushing everything up, what
19 would you need to be in to do well in that
20 market. Rising yields, folks just kind of
21 losing confidence in the bond market. There's
22 been a lot of outflows from those market. That
23 continues and people just aren't reinvesting,
24 what are we going to see. Ultra-loose monetary
25 policy. So not causing immediate disruption

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1 to change as well. So when I showed you the
2 correlation table earlier, that's our base
3 case. When we're looking at some of these more
4 extreme scenarios, you see very big differences
5 in those correlations. So they're trying to
6 ask themselves when we've had this happen in
7 the past, what have correlations done. They
8 don't always behave the same even in similar
9 circumstances. But what do we think might
10 happen today. So there's a little bit of art,
11 a little bit of science on that, but we
12 definitely adjust the correlations for the
13 differing market dynamics in crisis situations
14 because those, you know, fear drives everyone
15 away from return-seeking assets. We saw that.
16 You couldn't even do cash management well in
17 the crash at its worst. So we're trying to,
18 you know, look at that as well. Different
19 people might adjust it differently, but we do
20 try to adjust for that.
21 THE CHAIRMAN: But I think again I think we should
22 focus on the fact that having a diversified
23 portfolio does have -- obviously has its
24 disadvantages in the --
25 MS. BERNARD: Yes.

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1 THE CHAIRMAN: — the kind of equity markets that
2 we saw here recently. On the other hand, the
3 fact that we have had more frequently -- more
4 frequent disruptions in the market '94, 2002,
5 2008 than we've had historically mitigates
6 towards having a diversified portfolio to
7 protect you against the unknowns, the things
8 that may happen, the frequency of this
9 occurring. So I think that as you've described
10 it is very accurate.
11 MS. BERNARD: Thank you. And I think the other
12 thing to keep in mind we didn't talk about so
13 much here is when these dire economic scenarios
14 do potentially happen, how capable are
15 employers, employees of increasing
16 contributions. So, you know, obviously we
17 don't want those increasing any more than they
18 absolutely have to if we have a very difficult
19 economic scenario. So one thing this portfolio
20 does is reduces, tries to minimize to the
21 extent we can while still creating a good long-
22 term return assumption how you get hit when
23 things do go sideways or poorly and that the
24 state and the employees are not in the
25 situation of having to up contributions more

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1 than absolutely necessary in a difficult
2 economic environment. And we all saw that in
3 2008; it's unpleasant, nobody likes that. So
4 how do we make sure we mitigate against that
5 downside scenario as well. Okay. Shall we go
6 forward? So possible asset allocation changes.
7 So we have seen a decline in your expected rate
8 of return not because of you but because of the
9 capital markets. Everyone has seen a decline
10 in their expected returns over the last two
11 years unless they're using some unusual
12 numbers. And the basic issue is that when you
13 think about the core drivers of the capital
14 markets, the stock and bond markets, the stock
15 markets have been going up, up, up. That's
16 great. They don't go up forever for no reason;
17 they have to have growth behind them; they have
18 to have good engine behind them. And then
19 bonds obviously have dropped in terms of
20 interest rates over time. So, you know, the
21 other question is how do we get to that seven
22 and a half. Now, keep in mind everything we've
23 shown you thus far is what we would consider
24 market returns. This does not include any sort
25 of alpha that you add over your policy. And

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1 over time you have been able to do that pretty
2 well. Hedge funds, private equity, real
3 estate, we would not invest in these asset
4 classes if you didn't think you could add some
5 alpha over these assumptions that we make here.
6 So that's something that's not accounted for in
7 these statistics and hopefully is a positive.
8 It's a very difficult thing to model, so we
9 don't model it. But keep in mind that is
10 included. And also as I mentioned earlier,
11 this issue here on your inflation, your
12 inflation assumption is 2.75. Ours was 2.2.
13 You're about 50 basis points higher. If we
14 move everything up by 50 basis points to
15 reflect that differential and inflation, you're
16 much closer to that 7.5 percent. So if we
17 compare your ---
18 MR. LOFTIS: But why is that meaningful to us
19 though? As investors, the actuarial return
20 can't dictate what we do. I mean I know it's
21 always been that connection ---
22 MS. BERNARD: Correct.
23 MR. LOFTIS: --- and some people (inaudible)
24 control. But I brought this up to the
25 actuaries at a time when we all changed our,

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1 you know, both the actuarial and our assumed
2 rate and everybody made clear to me it doesn't
3 matter, doesn't matter, doesn't matter. And
4 all of the things I've been told over the last
5 three years that didn't matter they're now
6 important. And I don't understand all this,
7 and this is why I keep asking these questions.
8 I hope I'm not out of place.
9 MS. BERNARD: No, absolutely.
10 MR. LOFTIS: It's just, you know, I don't see how
11 you can say let's add that 50 basis points.
12 MS. BERNARD: Okay.
13 MR. LOFTIS: That's just a made up 50 basis points.
14 MS. BERNARD: Yeah. No, I wouldn't just tack on 50
15 basis points. So let's say if the actuary saw
16 the world the same way we did in terms of
17 inflation and said okay, 2.2 is a right number,
18 they would be unlikely to be using 7.75 as your
19 actuarially assumed rate of return. They would
20 probably be dropping that by about 50 basis
21 points. So normally when actuaries drop their
22 inflation assumptions they drop their
23 actuarially assumed rate of returns as well.
24 So all I'm trying to do is just kind of level
25 the playing field, so if -- but you're right,

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1 this is our best thinking. They have to
2 provide their best thinking. You should not
3 try to manage your asset allocation around what
4 the actuary is using for their number. We're
5 just trying to show you where there may or may
6 not be disconnects.
7 MR. LOFTIS: Yeah, they're not -- I mean they're not
8 taking what we make. They're taking into fact
9 what they have -- what has to be paid to make
10 that -- make Peggy's shop work. And, you know,
11 so I think when we link these two things
12 together, we need to be careful. And I just go
13 back to all these things, you know, there was
14 a time when if I'd said hey, we had a bad
15 quarter, you know, things aren't looking so
16 good, we ought to look at our AIP, everybody
17 would've laughed at me. Now unfortunately, you
18 know, what, four months from the last time we
19 passed the AIP that changed (inaudible) three
20 to five year problem, we're going to take
21 something that's probably -- I mean I talked to
22 four or five real estate people in New York,
23 they say no, you don't get meaningful returns
24 back in three to five years. And now we're
25 talking about this inflation like it's

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1 meaningful to what we do. I just don't see it.
2 I don't understand it. I'll be quiet. I don't
3 want to interrupt you again. I just wanted to
4 say that, and I'll just let it die if that's
5 all right because -- unless you feel like you
6 need to say something to it. It just doesn't
7 jibe with what I've been able to research and
8 experience.
9 MS. BERNARD: Okay. You raised some good issues.
10 Let me try to address them. So first of all,
11 I agree with you 100 percent that actuaries
12 should be doing their job separate of this
13 Commission. However, they're going to be
14 looking at what your asset allocation is and
15 asking themselves is this assumed rate of
16 return realistic. So I would never suggest
17 that you change your asset allocation to meet
18 an actuarially assumed rate of return. That's
19 like getting into this death circle; it doesn't
20 make any sense. However, it is important to
21 say how do those two things align, you know,
22 are we looking at an environment that can
23 produce that. The reason we're looking at five
24 year returns for these modeling was because
25 honestly that's about all we can model under

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1 these economic stress scenarios. You go out
2 any further than five years it gets really
3 ridiculous. You just -- there's not meaningful
4 numbers. So you shouldn't be making investment
5 decisions based solely on what you think it's
6 going to earn over the next three to five
7 years, but you should care about it as an entry
8 point. That's -- we're looking at long-term
9 returns.
10 MR. HARPER: Strategic policy versus tactical.
11 THE CHAIRMAN: I think it's really -- yeah. It's
12 really important to realize that long term, and
13 with all due respect to people who make 30 year
14 assumptions or ten year assumptions, they're
15 almost meaningless.
16 MS. BERNARD: Who knows. Yes.
17 THE CHAIRMAN: It's guesswork at best and very poor
18 guesswork. And if you go back to what people,
19 a lot of very smart people and economists
20 talked about where the ten year was going to
21 be, ten year treasury was going to be at the
22 first of this year and where it is now ---
23 MS. BERNARD: Yeah.
24 THE CHAIRMAN: --- they're virtually all wrong with
25 very few exceptions, and that was only nine

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1 months. So when you start talking about five
2 year projections or ten years or 30 years, you
3 have to take them with a great deal of
4 skepticism and --
5 MR. LOFTIS: I'm with you 100 percent, Mr. Chairman.
6 Thanks for saying that. But let me remind you
7 how I had my head beaten in by the Senate
8 because we had ten and 30 year projections that
9 showed these great returns, and I kept saying
10 well, you know, ten years, 30 years, a lot of
11 firms won't even do 30 years. I mean it's just
12 -- what I'm seeing today, and I really wasn't
13 going to say anything back, but I do appreciate
14 what you said, what I'm seeing today is
15 everything that we kind of argued over in the
16 past is now flipped over. And I'm okay with it
17 because I have a lot of trust in you guys, you
18 might believe it or not. You know, I vote no
19 a lots of times, but I just think it is
20 important that we kind of look at this stuff
21 and say well, gee, just a year ago so many of
22 our precepts were different than they are now.
23 And so, you know, it's just important to me to
24 say that. So again, thanks for the time to say
25 it.

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1 MS. BERNARD: So I think -- let me just pause and
2 reiterate probably the most important element
3 to all of this. The investment program that
4 you have right now gives you a lot of the
5 upside when stock markets are doing well. It's
6 not going to give you as much as someone who is
7 more heavily invested in equity, but you're
8 going to get most of it. When we have strong
9 one directional markets you're not going to do
10 as well as your peers. We all know that.
11 Hopefully that's not a surprise to anyone in
12 the room. When we have any economic
13 disruptions, and we've tried to show you a lot
14 of different scenarios here and many of them
15 are not pleasant that anyone would wish on us,
16 but you need to be protected. So what we've
17 created is a portfolio that is more efficient
18 return per unit of risk and that protects you
19 better in a wide variety of downside
20 environments, including the equity market
21 giving up, but also inflationary environments,
22 emerging versus developed markets doing poorly,
23 etcetera, etcetera. And that's what we think
24 is important, that we don't want to just rely
25 on expected scenarios that the stock market is

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1 going to go up and we just should have more of
2 that to meet our needs. You need to make sure
3 that you have a well diversified portfolio that
4 meets your needs in all of the markets that we
5 can have, and that's what we've attempted to do
6 here. So I think it's a long-term discussion.
7 Trying to get the number right in advance is
8 not going to happen, but we can show you how we
9 believe those things are going to evolve. All
10 right. So let's see, was there anything else
11 I want to do here? So we do show some
12 different policy portfolios here, but now that
13 we've all pooh-poohed ten and 30 year
14 assumptions, I'm not sure you want me to talk
15 about them. But sometimes people say what
16 could we do to increase our expected return,
17 and should you have a question like that, this
18 is what we would look at. I think though you
19 immediately get to this discussion, which is
20 here is where we are currently, here's what
21 you've got in alternatives, and alternatives to
22 us here is private debt, private equity, real
23 estate, and this is your target allocations,
24 commodities, hedge funds, anything that's not
25 traditional stocks and bonds, long only. And

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1 then how much is illiquid. To get a higher
2 return, and here's our projected nominal
3 returns from where you are, in almost all these
4 cases you have to increase alternatives or
5 illiquids. And in the discussions we've had
6 over time, I think where you are is about the
7 right spot. But if all you cared about was
8 trying to oomph that return a little bit more,
9 that's where we would suggest you need to go.
10 And probably the areas in which it would have
11 to happen the most, I'm sorry, are in private
12 equity, which is currently nine. And as you
13 may recall, that's one of the stronger
14 performers. And a bit in private debt. So
15 we're talking more illiquids, more long-term
16 lockups. You do have the liquidity capability
17 to do so; however, just from a comfort
18 standpoint that may not be the right answer.
19 And I think that where you are is a good place
20 to be. Sometimes people will jump to well, the
21 bond markets a loser's game, why am I in that.
22 I think we've hopefully demonstrated that there
23 are markets in which even a, you know, a low
24 yield environment, bonds will help you. So
25 right now what you have is three percent in

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Comparative Policy Portfolios

	Current	Portfolio 1	Portfolio 2	Portfolio 3
Global Equity (Public)	31.0%	30.0%	30.0%	28.0%
Private Equity	9.0%	10.0%	10.0%	12.0%
Total Global Equity	40.0%	40.0%	40.0%	40.0%
Real Estate	5.0%	6.0%	8.0%	10.0%
Commodities	3.0%	3.0%	2.0%	2.0%
Total Real Assets	8.0%	9.0%	10.0%	12.0%
Low Beta Hedge Funds	8.0%	8.0%	8.0%	8.0%
GTAA/Risk Parity*	10.0%	10.0%	7.0%	5.0%
Total Opportunistic	18.0%	18.0%	15.0%	13.0%
Mixed Credit	6.0%	5.0%	6.0%	5.0%
Emerging Market Debt	6.0%	5.0%	6.0%	6.0%
Private Debt	7.0%	8.0%	8.0%	9.0%
Total Diversified Credit	19.0%	18.0%	20.0%	20.0%
Blended Fixed Income	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Global Fixed Income	*3.0%*	*3.0%*	*3.0%*	*3.0%*
Core U.S. Fixed Income	*7.0%*	*7.0%*	*7.0%*	*7.0%*
Cash and Short Duration	5.0%	5.0%	5.0%	5.0%
Total Cons. Fixed Income	15.0%	15.0%	15.0%	15.0%
Total RSIC Policy Portfolio	100.0%	100.0%	100.0%	100.0%
Alternatives Exposure				
Total Alternatives***	39%	42%	43%	48%
Total Illiquid Alternatives****	21%	24%	26%	31%

	Current	Portfolio 1	Portfolio 2	Portfolio 3
Projections (10Yr)				
Expected Nominal Return	6.78%	6.86%	6.92%	7.07%
Expected Real Return	4.48%	4.58%	4.61%	4.77%
Expected Volatility	12.05%	12.24%	12.16%	12.36%
Sharpe Ratio	0.380	0.382	0.388	0.394
Projections (30Yr)				
Expected Nominal Return	7.23%	7.32%	7.33%	7.46%
Expected Real Return	4.82%	4.90%	4.91%	5.05%
Expected Volatility	12.41%	12.58%	12.49%	12.68%
Sharpe Ratio	0.325	0.327	0.330	0.336
Projections (30Yr)*				
Expected Nominal Return	7.64%	7.73%	7.73%	7.87%
Expected Real Return	4.76%	4.85%	4.85%	4.98%
Expected Volatility	12.41%	12.58%	12.49%	12.68%
Sharpe Ratio	0.324	0.326	0.329	0.334

*Using long-term inflation assumption of 2.75%

*GTAA/risk parity modeled as a blend of 50% Global Public Equity and 50% Non-U.S. Developed Bonds (0% Hedged)

**Current Portfolio split evenly between USD and Local Currency EMD

***Includes private equity and debt, real estate, commodities, and hedge funds and assumes the Plan invests up to maximum 15% HF limit across asset classes

****Includes private equity, private debt, and real estate