RETIREMENT SYSTEM INVESTMENT COMMISSION

Commission Meeting Agenda

Thursday, March 5, 2020 9:30 a.m.

RSIC Presentation Center

I. Call to Order and Consent Agenda
   A. Adoption of Proposed Agenda
   B. Approval of December 2019 Minutes

II. Capital Market Expectations Review – Meketa Investment Group

III. Experience Study Presentation – GRS Actuarial Consultants

IV. Consolidated Annual Investment Plan and Statement of Investment Objectives and Policies Consideration

V. Executive Session to discuss investment matters pursuant to S.C. Code Sections 9-16-80 and 9-16-320, including a comprehensive review of the private equity portfolio performance and a discussion of various underlying holdings, and a review of potential investments in the due diligence process; and to receive advice as needed from legal counsel pursuant to S.C. Code Section 30-4-70(a)(2) related to potential investment matters.

VI. Potential Action Resulting from Executive Session

VII. Macroeconomic Presentation – Bob Prince, Bridgewater Associates

VIII. Quarterly Investment Performance Review

IX. Reports:
   A. Commission Chair
   B. Committee Chairs
   C. CEO
   D. CIO
   E. AIP Progress
   F. Delegated Investment

X. Adjourn

NOTICE OF PUBLIC MEETING

This notice is given to meet the requirements of the S.C. Freedom of Information Act and the Americans with Disabilities Act. Furthermore, this facility is accessible to individuals with disabilities, and special accommodations will be provided if requested in advance.

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South Carolina Retirement System Investment Commission
Meeting Minutes

December 12, 2019 9:30 a.m.
Capitol Center
1201 Main Street, 15th Floor
Columbia, South Carolina 29201
Meeting Location: Presentation Center

Commissioners Present:
Dr. Ronald Wilder, Chair
Dr. Rebecca Gunnlaugsson, Vice Chair
Ms. Peggy Boykin, PEBA Executive Director
Mr. Allen Gillespie
Mr. Edward Giobbe
Mr. Reynolds Williams
Mr. William H. Hancock
Mr. William J. Condon, Jr.

I. CALL TO ORDER AND CONSENT AGENDA

Chair Dr. Ronald Wilder called the meeting of the South Carolina Retirement System Investment Commission ("Commission") to order at 9:30 a.m. Mr. Allen Gillespie made a motion to approve the proposed agenda as presented. Mr. Edward Giobbe seconded the motion, which was approved unanimously.

Mr. Hancock made a motion to approve the minutes from the September 12, 2019 Commission meeting. Mr. William J. Condon, Jr. seconded the motion, which passed unanimously.

II. CHAIR'S REPORT

The Chair noted that he had nothing to report to the Commission.

III. COMMITTEE REPORTS

Mr. Hancock presented the report of the Audit & Enterprise Risk Management Committee as written and noted that it had been made available to the Commissioners for review prior to the meeting.

Dr. Rebecca M. Gunnlaugsson reported that the Human Resources & Compensation Committee met on October 24, 2019. The Committee received a human resources update from Mr. Hancock with staff changes since February 2019 and an update on the learning management system. The Committee also discussed the compensation consultant Request for Procurement ("RFP") and decided to use the current plan and policy in place.

The Committee will not issue an RFP at this time but will update the compensation data through other current sources.

IV. CEO'S REPORT

Mr. Michael Hitchcock, Chief Executive Officer, began his presentation of the Agency Business Plan (the "Plan") by explaining the Plan started being developed by the executive leadership team since its' retreat in August. The Plan is a Funston recommendation, it focuses on the middle and back office functions and how we see those developing to support the overall goals of the Agency. Mr. Hitchcock stated that there are four strategic goals which the executive leadership team will be tracking the process towards meeting the goals, the initiatives, and the underlying objectives.

V. CIO'S REPORT

The Chair recognized Mr. Geoff Berg, Chief Investment Officer, for his report. Mr. Berg gave an update on fiscal year-to-date performance and prefaced his report by noting that while the update had been prepared using the new performance reporting framework, the report reflected the 17 asset classes in the current portfolio.

Mr. Berg stated that the performance for the quarter ended September 30, 2019 was 0.61 percent versus the policy benchmark of 1.15 percent, noted that the Plan increased in value by $210 million during the quarter to nearly $32.2 billion, and indicated that approximately $1 billion in gross benefits were paid during the quarter. The Commissioners and Mr. Berg discussed various topics, including Plan and policy benchmark returns during various time periods, and a review of performance during the quarter. Mr. Berg noted that private equity and private credit underperformed during the quarter due to return drag from older investments. Returns for GTAA, mixed credit, and emerging market debt lagged the returns of their benchmarks during the period, while equity options, other opportunistic, and public real estate exceeded their respective benchmarks' returns. Mr. Berg also noted that REITs and public infrastructure were top performers for the one-year period.

Mr. Berg turned to a discussion of the new reporting framework. Mr. Berg reminded the Commissioners that the goal of the framework was to answer three main questions: (1) did the diversification in our Policy Benchmark beyond the Reference Portfolio add value; (2) if our portfolio deviated from the Policy Benchmark in a structural, top-down way, did these deviations add value, and (3) how well did managers perform relative to their benchmarks? Mr. Berg indicated that over most time periods, the value of diversification had been positive, while overall portfolio structure and management selection decisions had not improved returns during most of these time periods. A discussion ensued, during which Mr. Berg, Mr. Hitchcock and the Commission addressed an array of topics relating to the new reporting framework, including observations regarding the quality of portfolio structure versus the simplified policy, and the quality of manager selection.

Mr. Berg then reviewed asset allocation. He discussed over-weights and under-weights against the current policy targets, reviewed changes in Plan exposure during the quarter, and reviewed the public equity and bond portfolios in detail with the Commissioners. Lastly, Mr. Berg gave a high-level report on risk for the total portfolio.

Mr. Berg then turned the discussion to the quarterly AIP progress update. He stated that the implementation of the portfolio reporting framework was a major priority for Staff. Mr. Berg indicated that another priority was to continue to drive improvements to private markets returns. He stated that there are four main areas that the Investment Team is focusing on to support this ongoing initiative: (i) phasing in the co-investment platform; (ii) evaluating how to better use the secondary market; (iii) continuing to improve sourcing of investment opportunities, and (iv) adapting the Investment Team's process to make better use of the specialty consultant. The final priority mentioned by Mr. Berg related to continued enhancements to risk reporting.

VI. CONSULTANT REPORT

The Chair recognized Meketa Investment Group, Inc. ("Meketa") for their report. Mr. Benham stated that the themes of the report were whether investment managers add value and whether past performance indicates future returns. Mr. Benham introduced Mr. Roberto Obregon, Research Consultant, to provide the Active Management Presentation. Mr. Obregon provided an overview of the three main topics related to manager selection – searching for manager alpha; persistence in manager return; and active risk budgeting.

The first was searching for manager alpha. He stated that there was no clear answer as to whether managers add value and it may depend on the asset class. Fees are a necessary part of evaluating the value of investing in an active manager. He stated that the data showed that, net-of-fees, median managers do not add value.

Turning to the second topic, persistence in manager return, he stated that past performance is not a good predictor of future manager returns. Mr. Obregon showed that there has been no predictive relationship between how managers have performed historically and how they subsequently performed. He re-iterated the point that past performance does not guarantee future results.

Closing with the third topic, Mr. Obregon explained risk budgeting, which is monitoring and calculating how the risk is distributed in a portfolio. He noted that risk budgeting approaches often use standard deviation as the measure of absolute risk, and tracking error, or active risk, as the measure of relative risk. He stated that it is common for investors to measure the amount of active risk that individual managers take relative to their benchmarks. Mr. Obregon explained that active risk can also be calculated for an asset class or at the total system level and it is important to have appropriate benchmarks in place for this to be of value. He stressed that it is important to be able to measure the risk to manage it. Mr. Obregon stated that of the top 30 US public plans, seven currently have explicit active risk budgets at various levels of their portfolio.
A lengthy discussion ensued regarding active risk budgeting among Meketa, the CIO, and Commissioners. This concluded Meketa's presentation.

A break was taken from 11:20 a.m. to 11:35 a.m.

VII. SIOP AND AIP PRESENTATION

The Chair recognized Mr. Hitchcock for his presentation on the proposed Statement of Investment Objectives and Policies ("SIOP") and the Annual Investment Plan ("AIP"). Mr. Hitchcock stated that the SIOP and AIP are the Commission's foundational documents that explain what the Commission does and what it is trying to achieve. He noted that both documents are required by State law. Traditionally, RSIC had maintained them as two separate documents, but there was no requirement that the documents be separate. Mr. Hitchcock noted that the requirements for the two documents overlap and RSIC had decided to consolidate the documents. The consolidation will instill a sense of permanence into longer term strategic decisions like asset association.

Mr. Hitchcock reviewed the proposed SIOP and the overall changes. The first section amended in the SIOP is Purpose, Investment Objective and Belief. He noted that the job of RSIC is to invest and manage the Plan to produce revenue that, when combined with contributions, would equal benefit payments. He went on to explain that the Roles and Responsibilities section was changed to align with existing lines of authority and accountability as well as to emphasize the importance of risk management with a more detailed description of the Internal Audit and ERM/Compliance functions. The amended section also adds a description of the Executive Team and IIC to highlight their increased management role.

Mr. Hitchcock continued by reviewing the changes in the Asset Allocation section of the SIOP. The amended section directly links the purpose of Strategic Asset Allocation to meeting RSIC's primary investment objective of making the Plan work. He stated that it also emphasizes the risk management benefits of employing a long-term perspective to asset allocation and provides perspective on the need to simplify the Policy Portfolio.

The Portfolio Benchmarks section was amended to trace the Commission's process and deliberation on the Reference Portfolio Benchmark, Policy Portfolio Benchmark, and Implementation Portfolio Benchmark. Mr. Hitchcock described this section as providing the role of each benchmark in the assessment of the value of additional risk and complexity in the portfolio. He stated that this section grounds the selection of the Reference and Policy Portfolios in the needs and risk of the Plan. It also set the asset class return benchmarks for the Policy Portfolio Benchmark and how the Implementation Portfolio Benchmark would be determined. And finally, the section established ranges for asset and sub-asset classes.

Under the Portfolio Performance Framework Section, the changes would require the creation of a Portfolio Performance Framework that compares the relative performance and risk of the portfolio benchmarks and the actual portfolio. In this section Mr. Hitchcock noted that RSIC was trying to measure three decisions: diversification, which is the comparison between the Policy Portfolio and the Reference Portfolio; portfolio structure, which is the Implementation versus the Policy Portfolio, and the actual implementation of the Portfolio, which is the actual Portfolio versus the Implementation Portfolio. He explained that the Commission would have greater insight into the decisions, the decision-making process, as well as creating a sense of accountability of those decisions.

Mr. Hitchcock described the changes to the next section, Strategic Initiatives, as major ongoing Staff projects that would have a more significant impact to the portfolio, asset class, or investment strategy than typical decisions. The changes to these initiatives would be included in the AIP and progress would be reviewed at Commission meetings
Investment Policies was the next section of the SIOP to be amended. Those changes were organizing existing policies into more cohesive categories. Mr. Hitchcock noted the updates to certain policies to correspond with and implement new SIOP/AIP strategic direction. He also stated that this section would introduce the concept of baselines for each asset class and would be reviewed by Commission. It would also clearly define items that must be reviewed at each Commission meeting to comply with South Carolina Code Section 9-16-320.

The next section discussed was the Securities Litigation Policy, Mr. Hitchcock explained that this section had major changes. He explained that the primary focus of changes to the Securities Litigation Policy involved when and how RSIC would take an active role in securities litigation. He stated that the Policy now sets a $5 million loss threshold for U.S. actions before considering taking a lead plaintiff role. The CEO would approve outside counsel. It also sets a $1 million threshold for foreign claims that require actively opting-into litigation in a foreign jurisdiction. Other changes to this section included the delegation of lead plaintiff decision to the Executive Team and would require a unanimous vote to become lead plaintiff and delegated opt-in decisions on foreign claims to the CEO based on the Chief Legal Officer's recommendation. Lastly, the CEO has authority to direct litigation and settlement.

Mr. Hitchcock concluded his presentation by outlining the next steps and suggested that in the interim before the next Commission meeting, the Commissioners would provide input as to the changes outlined. The Chair stated that the Commission had reached a consensus on the main elements that relate to what Commissioners are responsible for regarding the Reference Portfolio and Policy Portfolio and sought additional input or feedback from the Commissioners on the proposed revisions.

VIII. DELEGATED INVESTMENT REPORTS

Mr. Berg noted that there were six delegated investment that had closed since the last Commission meeting. The six investments are as follows:

	Asset Class	Investment	Investment Amount	Closing Date
1.	Private Equity	Horsley Bridge XIII Venture, L.P	$50 million	September 17, 2019
2.	Private Credit	KKR BDC JV(Strategic Credit Opportunities Partners, LLC – Phase 2)	$75 million	September 30, 2019
3.	Private Equity	KPS Special Situations Fund V	up to $75 million	October 9, 2019
4.	Private Equity	KPS Special Situations Mid-Cap Fund	up to $20 million	October 9, 2019
5.	Private Credit	GoldenTree Loan Management II	$75 million	October 18, 2019
6.	Private Equity	Brighton Park Capital Fund I	up to $75 million	December 11, 2019

IX. EXECUTIVE SESSION

Mr. Giobbe moved that the Commission recede into Executive Session to discuss investment matters pursuant to S.C. Code Sections 9-16-80 and 9-16-320; to discuss personnel matters related to CEO performance and compensation pursuant to S.C. Code Section 30-4-70(a)(1); and receive legal advice from legal counsel pursuant to S.C. Code Section 30-4-70(a)(2). Dr. Gunnlaugsson seconded the motion, which passed unanimously.

X. POTENTIAL ACTION RESULTING FROM EXECUTIVE SESSION

Upon completion of executive session, the Commission moved to adopt the recommendation of the CIO and the Internal Investment Committee as discussed in executive session regarding BlackRock SLS; (ii) authorize an investment of up to $200 million in the Fund; and $200 million in the secondary co-investment side-car; (iii) approve a waiver of the three-business day review period;(iv) authorize the CEO or his designee to negotiate and executed any necessary documents to implement the investment as approved by the Commission upon documented approval for legal sufficiency by RSIC Legal; and (v) authorize the CEO and/or CIO or their designees to thereafter authorize the custodian of funds to transfer such funds as are necessary to meet the Retirement System trust funds' obligations with respect to the investment. Dr. Gunnlaugsson seconded the motion, which passed unanimously.

XI. ADJOURNMENT

There being no further business, Dr. Gunnlaugsson moved to adjourn the meeting. Mr. Giobbe seconded the motion, which passed unanimously, and the meeting adjourned at 4:27 p.m.

[Staff Note: In compliance with S.C. Code Section 30-4-0, public notice of and the agenda for this meeting was 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, S.C., 4:58 p.m. on December 9, 2019]

South Carolina Retirement System Investment Commission

2020 Capital Markets Expectations

Executive Summary

- We update our capital markets expectations each year in January.
  - Changes are driven by many factors, including interest rates, credit spreads, and equity prices.
- In 2019, yields went down and prices went up for most risk assets (by a significant amount).
  - Hence our expected returns have declined for almost every asset class.
- The result is that for the Commission, our long-term return[1] expectation for the portfolio declined from 8.04% to 7.41%.

[1] Twenty year projections.

Setting Capital Market Expectations

- Capital Markets Expectations (CME's) are the inputs needed to conduct mean-variance optimization (MVO).
  - MVO is the traditional starting point for determining asset allocation.
- Consultants (including Meketa) generally set CME's once a year.
  - Our results are published in January, based on December 31 data.
- This involves setting long-term expectations for a variety of asset classes for:
  - Returns
  - Standard Deviation
  - Correlations (i.e., covariance)
- Our process relies on both quantitative and qualitative methodologies.

Asset Class Definitions

- We identify asset classes and strategies that are appropriate for long-term allocation of funds, and that also are investable.
- Several considerations influence this process:
  - Unique return behavior
  - Observable historical track record
  - A robust market
  - Client requests
- We then make forecasts for each asset class.
  - We created inputs for 81 "asset classes" in 2020.

Building 10-year forecasts

- Our first step is to develop 10-year forecasts based on fundamental models.
  - Each model is based on the most important factors that drive returns for that asset class:

Asset Class Category	Major Factors
Equities	Dividend Yield, GDP Growth, Valuation
Bonds	Yield to Worst, Default Rate, Recovery Rate
Commodities	Collateral Yield, Roll Yield, Inflation
Infrastructure	Public IS Valuation, Income, Growth
Natural Resources	Price per Acre, Income, Public Market Valuation
Real Estate	Cap Rate, Yield, Growth
Private Equity	EBITDA Multiple, Debt Multiple, Public VC Valuation
Hedge Funds and Other	Leverage, Alternative Betas

  - The common components are income, growth, and valuation.

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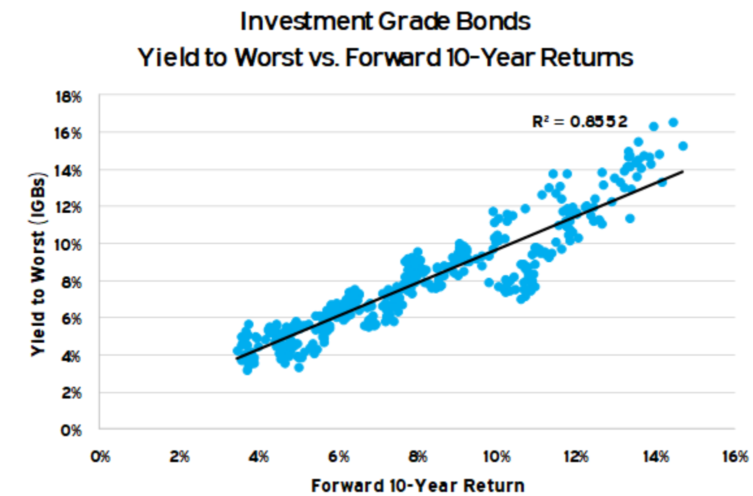
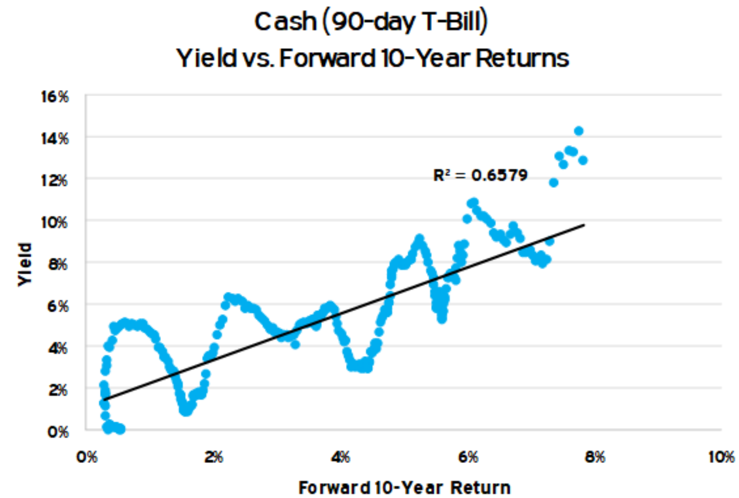
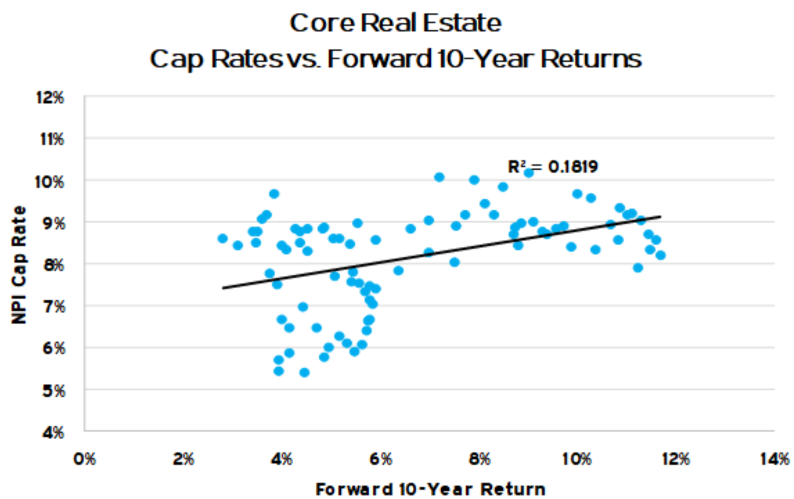
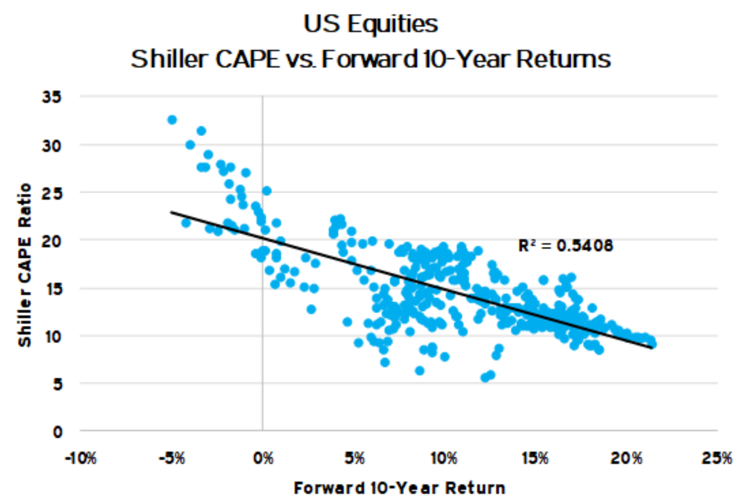
Some factors are naturally more predictive than others









Moving from 10-year to 20-year Forecasts

- Our next step is to combine our 10-year forecasts with the historical returns for each asset class.
  - How much we weight each depends on our confidence in them (both the model & the data).
    - The 10-year model weighting varies between 50% and 100%.
    - It only hits 100% when there is a lack of reliable historical data.
- We then infer a forecast of 10-year returns in ten years (i.e., years 11-20).
  - This allows us to test our assumptions with finance theory.
  - Essentially, we assume mean-reversion over the first ten years (where appropriate), and consistency with CAPM thereafter.
- The final step is to make any qualitative adjustments.
  - The Investment Policy Committee reviews the output and may make adjustments.

Capital Market Assumption Development Example: Equities

- We use a fundamental model for equities that combines income and capital appreciation.

E(R) = Dividend Yield + Expected Earnings Growth + Multiple Effect + Currency Effect

- Meketa Investment Group evaluates historical data statistically to develop expectations for dividend yield, earnings growth, the multiple effect and currency effect.
- Our models assume that there is a reversion to the mean pricing over long time periods.

Capital Market Assumption Development Example: Bonds

- The short version for investment grade bond models is:

$$E(R) = \textit{Current YTW (yield to worst)}$$

- Our models assume that there is a reversion to the mean for spreads (though not yields).
- For TIPS, we add the real yield of the TIPS index to the breakeven inflation rate.
- As with equities, we make currency adjustments when necessary for foreign bonds.
- For bonds with credit risk, Meketa Investment Group estimates default rates and loss rates in order to project an expected return:

$$E(R) = YTW - (\textit{Annual Default Rate} \times \textit{Loss Rate})$$

The other inputs: standard deviation and correlation

- Standard deviation:
  - We review the trailing fifteen-year standard deviation, as well as skewness.
  - Historical standard deviation serves as the base for our assumptions.
  - If there is a negative skew, we increased the volatility assumption based on the size of the historical skewness.

Asset Class	Standard Deviation	Skewness	Assumption
Bank Loans	6.6%	-2.3	9.0%

  - We also adjust for private market asset classes with "smoothed" return streams.
- Correlation:
  - We use trailing fifteen-year correlations as our guide.
  - Again, we make adjustments for "smoothed" return streams.
- Most of our adjustments are conservative in nature (i.e., they increase the standard deviation and correlation).

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South Carolina Retirement System Investment Commission

2020 Capital Markets Expectations – Comparing the Results from 2020 to 2019

Fixed Income

	2020 E(R) (%)	2019 E(R) (%)	Δ from 2019 (%)	Notes
Cash Equivalents	2.4	2.9	-0.5	Lower rates
Long-term Government Bonds	3.2	3.7	-0.5	Lower yields
TIPS	2.9	3.6	-0.7	Lower real yields
High Yield Bonds	5.2	6.5	-1.3	Lower yields and much tighter spreads
Bank Loans	5.0	6.1	-1.1	Lower yields
Emerging Market Bonds (major)	4.5	5.2	-0.7	Lower yields
Emerging Market Bonds (local)	4.8	5.3	-0.5	Slightly lower yields
Private Debt Composite	6.9	7.3	-0.4	Lower yield

Equities

	2020 E(R) (%)	2019 E(R) (%)	Δ from 2019 (%)	Notes
US Equity	7.4	8.1	-0.7	Higher prices
Dev. Market Equity (non-US)	7.9	8.5	-0.6	Lower dividend, higher prices, offset by slight currency effect
Emerging Market Equity	9.1	10.4	-1.3	Higher prices, lower Dividend yield
Option-based Equity	6.0	7.1	-1.1	Higher equity prices
Private Equity	9.4	10.1	-0.7	Higher prices, partly offset by lower borrowing costs

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South Carolina Retirement System Investment Commission

2020 Capital Markets Expectations – Comparing the Results from 2020 to 2019

Real Assets

	2020 E(R) (%)	2019 E(R) (%)	Δ from 2019 (%)	Notes
Core Real Estate	6.3	5.8	0.5	Lower cost of borrowing, slightly improved cap rates
REITs	7.0	7.0	0.0	
Value Added Real Estate	8.4	7.5	0.9	Lower cost of borrowing
Infrastructure (Public)	7.5	8.2	-0.7	Higher prices
Infrastructure (Core Private)	6.7	6.5	0.2	Lower cost of borrowing
Infrastructure (Non-Core Private)	9.1	8.8	0.3	Lower cost of borrowing

Alternative Strategies (Other)

	2020 E(R) (%)	2019 E(R) (%)	Δ from 2019 (%)	Notes
Hedge Funds	4.9	5.4	-0.5	Higher prices, lower yields
TAA	4.4	5.1	-0.7	Higher prices; lower yields
Risk Parity	5.4	6.2	-0.8	Higher prices, lower yields
US Inflation	2.6	2.6	0.0	

Peer Study (2019 Horizon Survey)

- Annually, Horizon Actuarial Services, LLC publishes a survey of capital market assumptions that they collect from various investment advisors.[1]
- The Horizon survey is a useful tool for Commissioners to determine whether their consultant's expectations for returns (and risk) are reasonable.

Asset Class	10-Year Average (%)	20-Year Average (%)	MIG 20-Year (%)
US Equity (large cap)	6.0	7.1	8.1
Non-US – Developed	6.8	7.7	8.5
Non-US – Emerging	7.8	8.7	10.4
US Corporate Bonds – Core	3.6	4.3	4.6
U.S Corporate Bonds – High Yield	5.1	5.8	6.5
Non-US Debt – Developed	2.6	3.4	2.3
Non-US Debt – Emerging	5.6	6.1	5.3
US Treasuries (cash)	2.7	3.0	2.9
TIPS	3.1	3.5	3.6
Real Estate	5.8	6.8	7.0
Hedge Funds	5.3	6.2	5.4
Commodities	3.9	4.7	5.0
Infrastructure	6.8	7.2	6.5
Private Equity	9.0	10.1	10.1
Inflation	2.2	2.3	2.6

[1] In the 2019 survey there were 34 respondents. The 10-year horizon included all 34 respondents, and the 20-year horizon included 16 respondents. Figures based on Meketa 2019 Asset Study.

Current Asset Allocation Policy – 5 Asset Mix

	Current Policy (%)
Bonds	26
Private Debt	7
Global Equity	46
Private Equity	9
Real Assets	12

	2020	2019
Expected Return	7.41%	8.04%
Standard Deviation	12.9%	12.9%
Probability of Achieving 7.25%+ over 20 Years	51.8%	60.4%
Probability of Achieving 7.0%+ over 20 Years	55.2%	63.8%
Probability of Achieving 5.0%+ over 20 Years	80.0%	85.7%

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Current Asset Allocation Policy – Detailed Sub Exposure

	Current Policy (%)
Equities:	51
US Equity[1]	25
Developed Foreign Equity	11
Emerging Markets Equity	6
Private Equity	9
Rate Sensitive:	14
Investment Grade Bonds	6
Government Bonds	5
TIPS	2
Cash and Short Duration	1
Credit:	15
High Yield/Bank Loans	4
Emerging Market Debt	4
Private Debt	7
Real Assets:	12
Real Estate	9
Infrastructure	3
Opportunistic	18

	2020	2019
Expected Return	7.41%	8.04%
Standard Deviation	12.9%	12.9%
Probability of Achieving 7.25%+ over 20 Years	51.8%	60.4%
Probability of Achieving 7.0%+ over 20 Years	55.2%	63.8%
Probability of Achieving 5.0%+ over 20 Years	80.0%	85.7%

[1] Inclusive of 7% target to equity options.

Conclusion

- As a result of the strong market returns in calendar year 2019, the Commission is in better financial condition than it was twelve months prior.
- The "downside" of such returns is that the forward-looking returns for the portfolio declined.

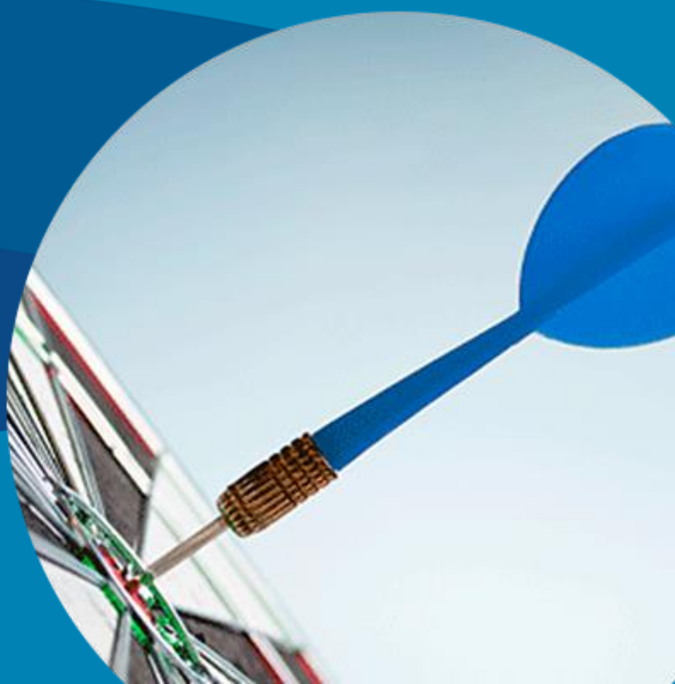
Retirement System Investment Commission

2020 Experience Investigation

Presented by:

Joe Newton, FSA, EA, MAAA and
Danny White, FSA, EA, MAAA

March 5, 2020



Purpose of Experience Study

- Assumptions should occasionally change to reflect
  - New information and changing knowledge
  - Changing patterns of retirements, terminations, mortality, etc.
- Recent experience provides strong guidance for some assumptions (e.g. turnover) and weak guidance for others (e.g. investment returns)
- Based on results of study:
  - Actuary recommends revised assumptions
  - PEBA Board accepts, rejects, or modifies recommendations
    - Assumed rate of return is a prescribed assumption established in South Carolina law

How assumptions factor in …

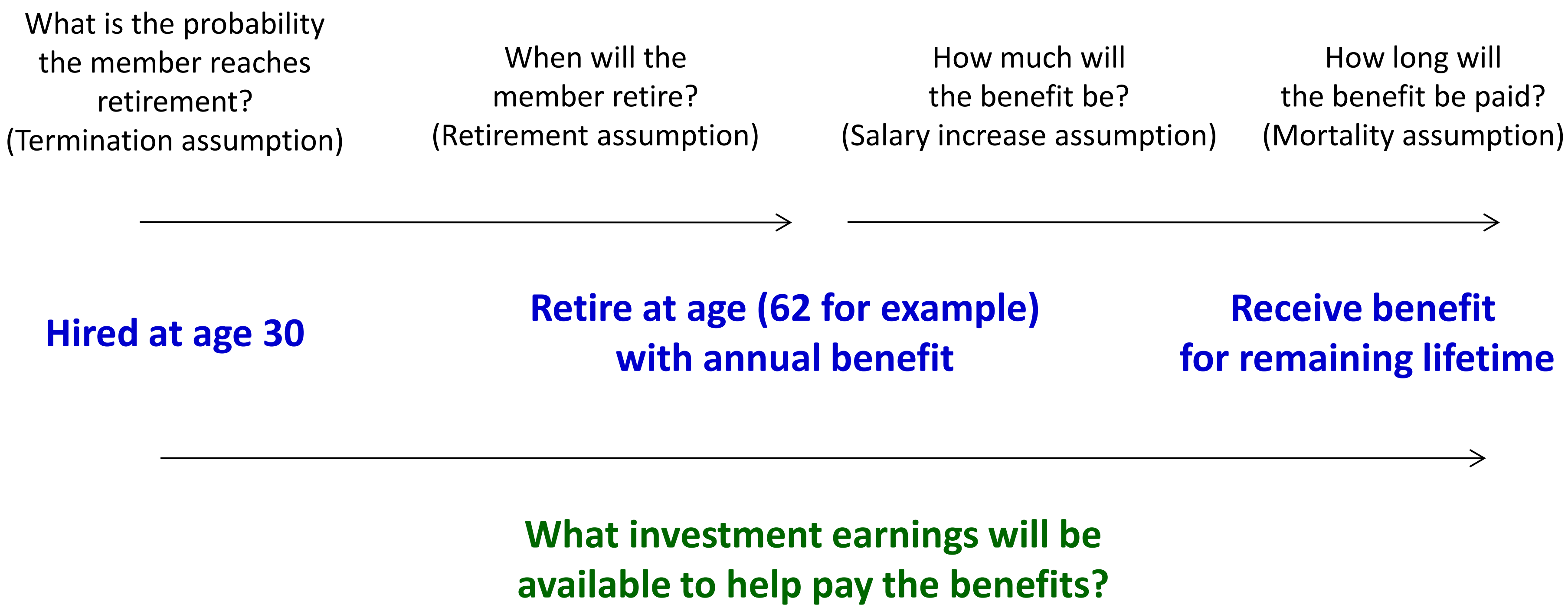
- The true cost of benefits will be borne out in actual experience
  - Cost of benefits NOT affected by actuarial assumptions
  - Determined by plan provisions, actual demographic experience (termination, retirement, mortality), and actual investment returns
- Assumptions provide expectations for future contributions, investment returns and benefit payments
  - Important for decision making today

GRS

Experience Study Process

- Compare actual experience to current actuarial assumptions and recommend changes to assumptions if necessary to better align with future expectations
- Reviewed past experience over a given timeframe
  - Identified how many members retired, terminated, became disabled, or died, including their age/service
  - Identified salary increases received by active members
  - Emphasis on forward-looking expectations for economic assumptions

Inside the Actuarial Valuation: Projecting the Liability for Each Member



Actuarial Standards of Practice

- Guidelines for the assumption setting process are set by the Actuarial Standards of Practice
  - ASOP #4 Measuring Pension Obligations
  - ASOP #25 Credibility
  - ASOP #27 Selection of Economic Assumptions
  - ASOP #35 Selection of Demographic and Other Noneconomic Assumptions
  - ASOP #44 Selection and Use of Asset Valuation Methods

Reasonable Assumptions, per ASOP 27

- An assumption is reasonable if
  - It is appropriate for the purpose of the measurement
  - It reflects the actuary's professional judgement
  - It takes into account historical and current economic data that is relevant as of the measurement date
  - It reflects the actuary's estimate of future experience
  - It has no significant bias (i.e., it is not significantly optimistic or pessimistic)
    - Although some allowance for adverse experience may be appropriate

GRS

Reasonable Assumptions, per ASOP 27 (cont.)

- Each individual assumption must satisfy the standards
- From ASOP 4: Actuary should select assumptions such that the combined effect of the assumptions selected by the actuary has no significant bias (i.e., it is not significantly optimistic or pessimistic) except when provisions for adverse deviation are included

Summary of Recommendations

- Material Recommendations
  - Decrease nominal investment return assumption to 7.00% when current statute expires
- Minor Recommendations
  - Decrease payroll growth assumption from 3.00% to 2.70%
  - Increase probabilities of retirement
  - Increase probabilities of turnover
  - Update mortality assumption for new experience
  - Decrease probabilities of disability incidence
- Full detail in the report

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Investment Return Assumption

- From ASOP 27: “The investment return assumption reflects the **anticipated returns on the plan’s current and, if appropriate for the measurement, future assets**.”
- For Public Sector Plans, used as the discount rate to discount future benefit payments to determine liabilities
- Investment return assumption established in Statute (Section 9-16-335) and is currently 7.25%
  - Assumption expires June 30, 2021

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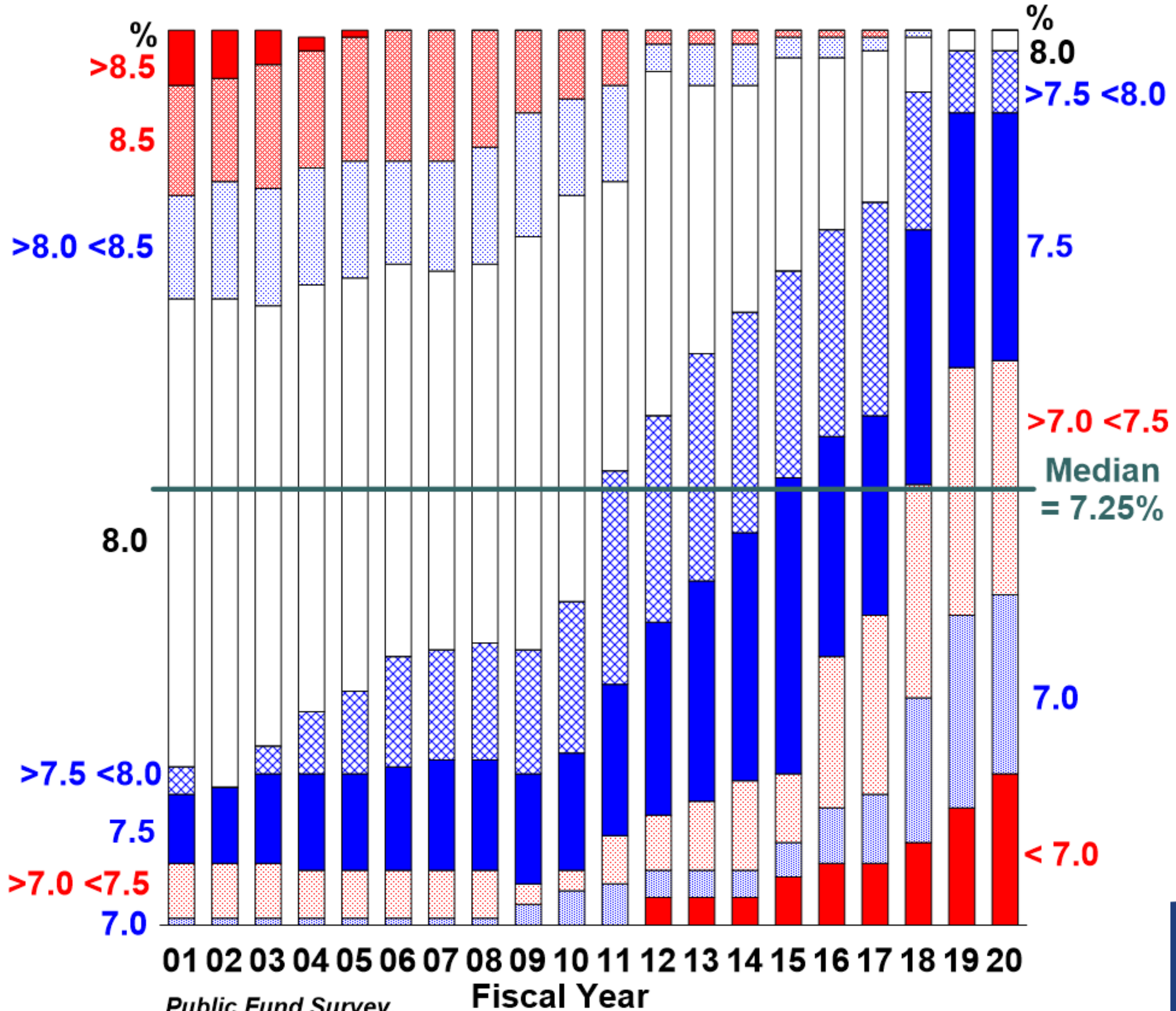
Investment Return Assumption - National Trends



Public Fund Survey, NASRA Feb-20

Investment Return Assumption

- Assumption is reviewed by mapping the investment policy to forward-looking return expectations:

Asset Class	Allocation
Equities	51%
Real Assets	12%
Credit Securities	15%
Rate Sensitive Credit	14%
Opportunistic	8%
Total	100%

Source: 2019 CAFR

Investment Return Assumption

- Expected geometric return based on Meketa Investment Group's 2020 Capital Market Expectations

	Short-Term (10-Year)	Long-Term (20-Year)
Expected Geometric Return	6.57%	7.44%

- While we did not have other sets of 2020 Capital Market Expectations from other firms to compare to, we did compare Maketa's 2019 expectations to a number of other firms and concluded Maketa's expectations were consistent with industry expectations

Investment Return Assumption

- Based on these forward looking expectations and input we received from the Retirement System Investment Commission, a 7.25% investment return assumption satisfies the requirements under ASOP #27 for being a reasonable assumption
- However, we recommend a 7.00% assumption be adopted for use in 2021 and beyond by the General Assembly:
  - 7.00% is the approximate mid point between the short term (6.57%) and long term (7.44%) expectations
  - If returns for first 10 years are close to 6.5%, returns after year ten have to rebound significantly to average 7.25% over the 20 year time horizon
  - 2017 Pension Reform: Scenario 5b already anticipated a decrease to 7.00% in 2021 and a contribution schedule was developed on this scenario
  - Assumption is set in Statute and may difficult to change before the year 2025

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Payroll Growth (Overall)

- Used to project contribution revenue growth over the funding period (does not impact the liability)
- 3.00% is the current total annual payroll assumption
  - 0.75% increase over price inflation to reflect productivity gains passed through wages (and membership change)
- Macroeconomic view
  - Productivity gains passed through as wages: Nationally, wage inflation measured by the SSA has exceeded price inflation by 0.55% per year for the last 10 years period
  - Membership change: South Carolina population has increased 1.2% per year for the last 10 years. Contributing membership in SCRS has increased 0.35% per year for the last 10 years.

Payroll Growth Assumption

Average Annual Payroll and Membership Increase Experience (SCRS)				
Time Period	Payroll	Membership	Actual Inflation	Increase over Inflation net of Membership Change
Last 3 Years	2.62%	0.65%	2.05%	-0.08%
Last 5 Years	3.26%	0.95%	1.45%	0.86%
Last 10 Years	1.27%	0.35%	1.73%	-0.81%

- Membership growth has been a payroll growth contributor
- Higher pension contribution rates may give incentive for some employers to reduce covered payroll
- Recommendation decrease the payroll growth assumption from 3.00% to 2.70% (i.e. inflation plus 0.45%)

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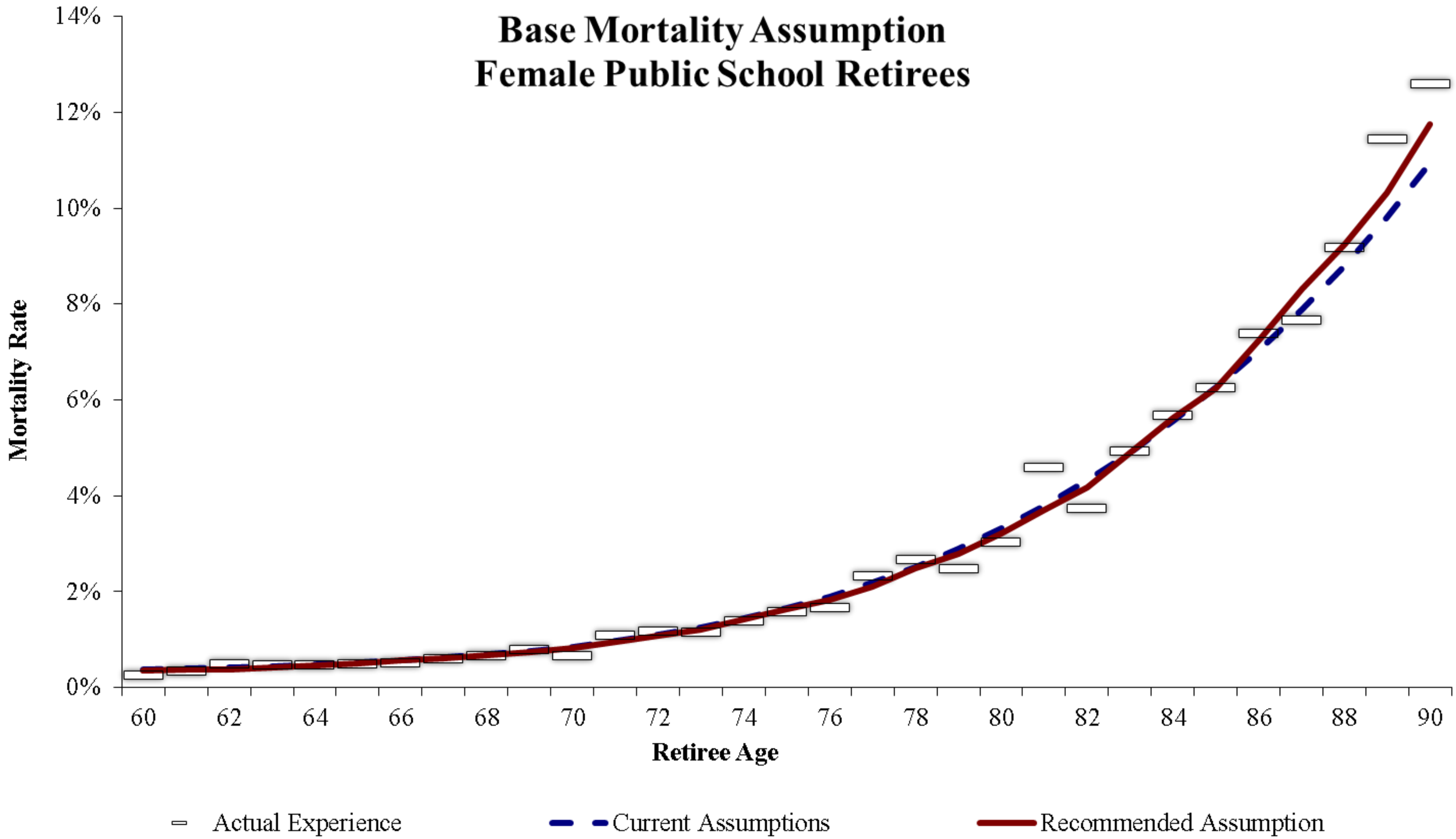
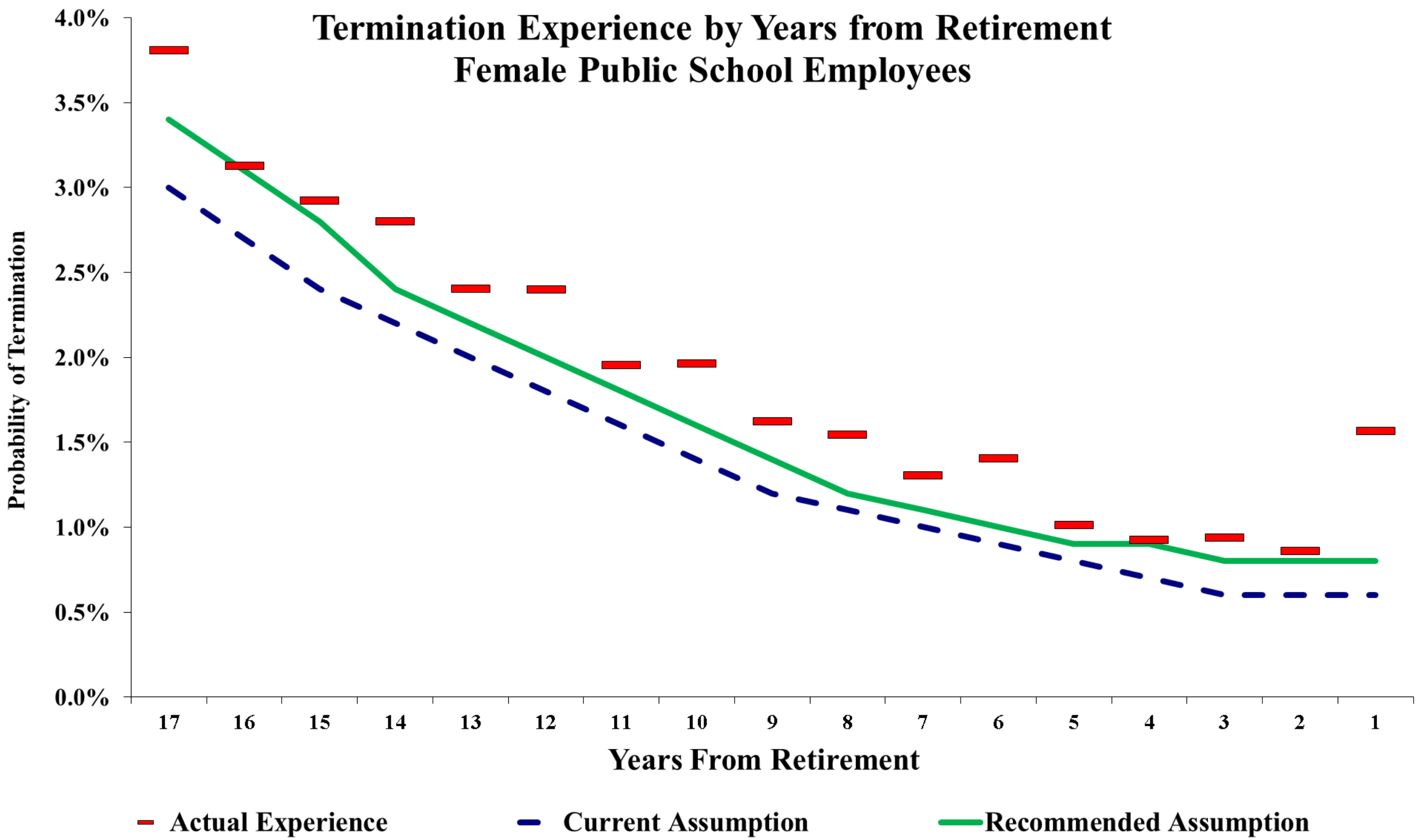
Post-Retirement Mortality – Base Table



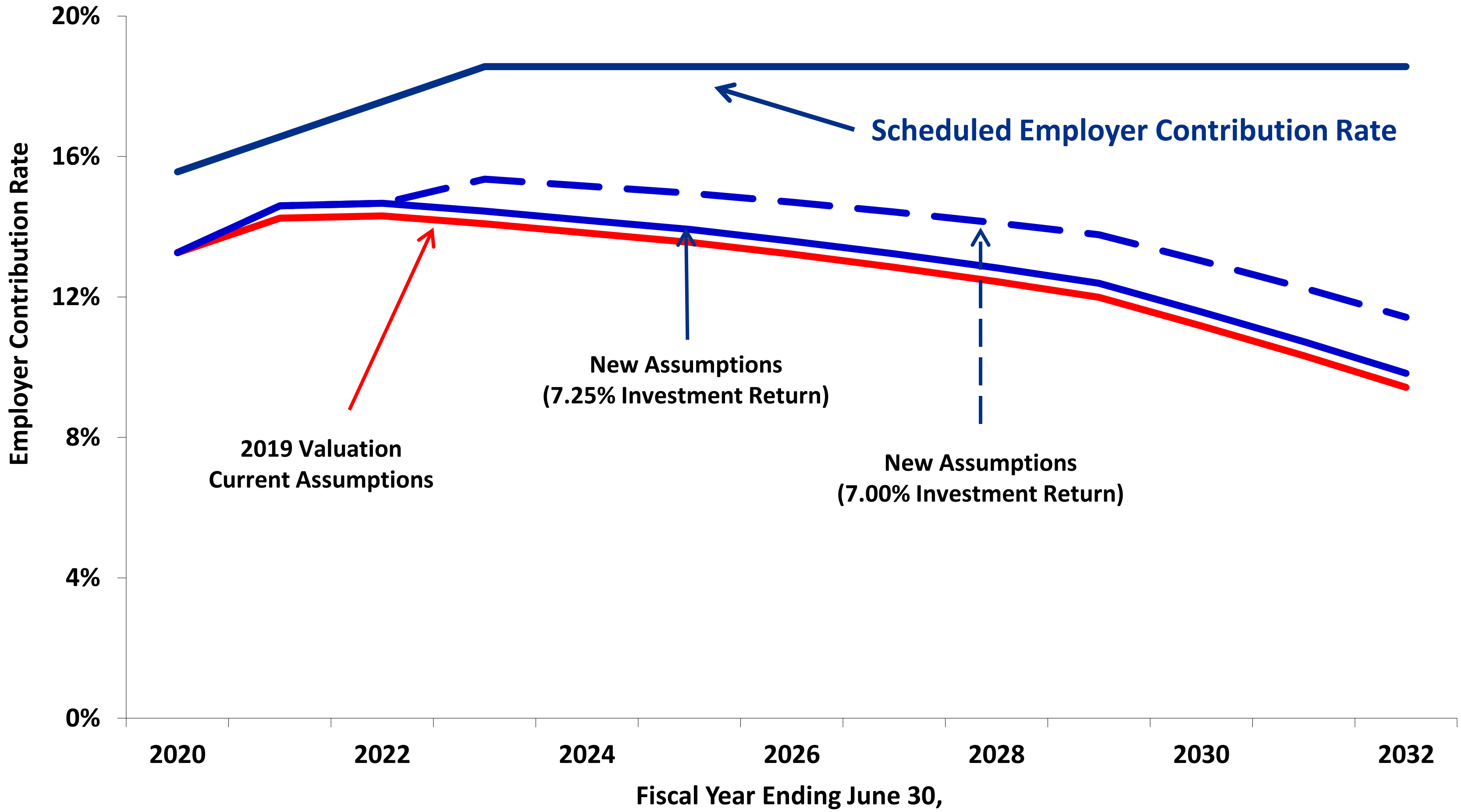
Termination Rates



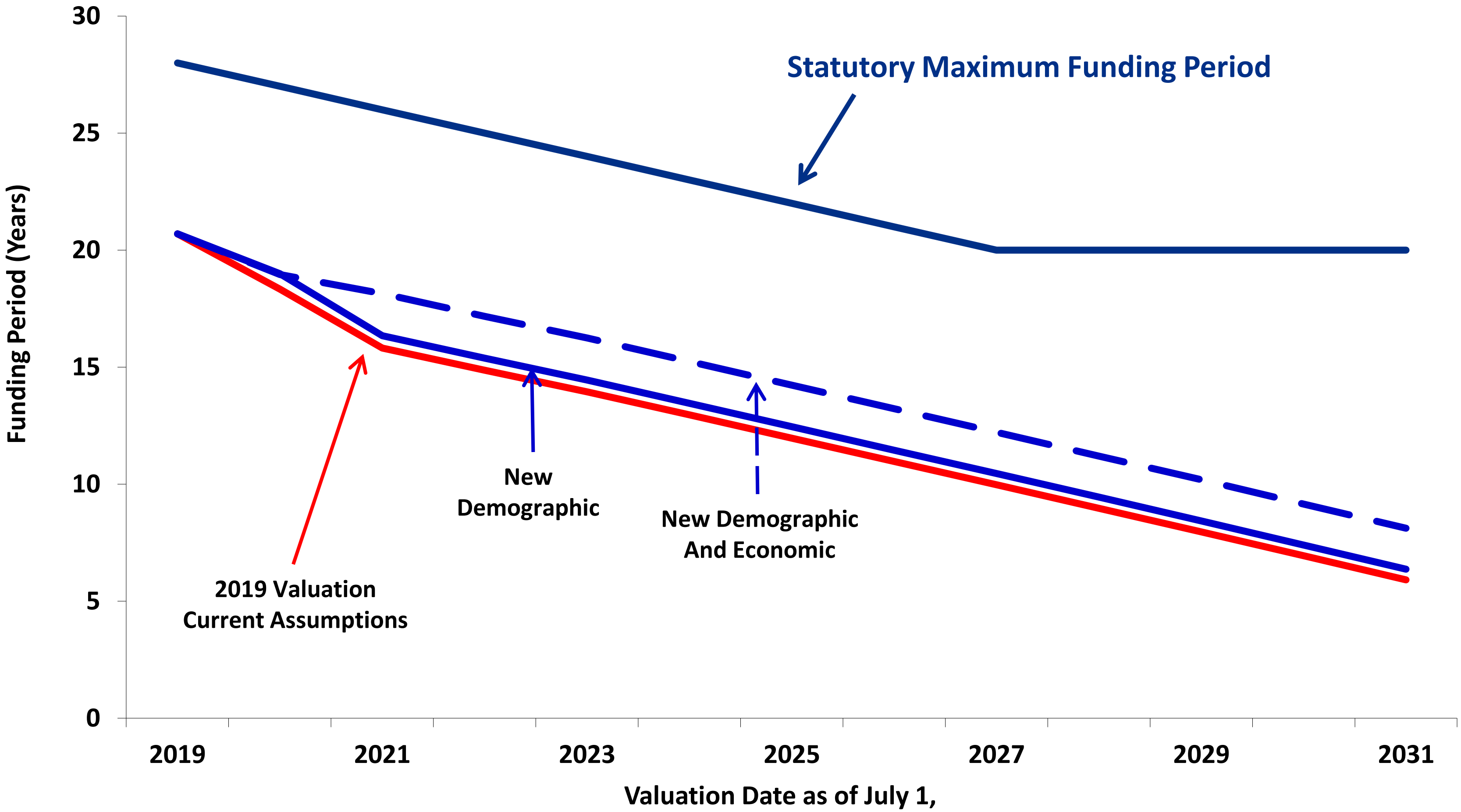
Cost Impact – SCRS ($ in millions)

Item	Projected 2021 Valuation Results (First Year New Interest Rate Assumption Effective) Current Assumptions	New Assumptions 7.25% Interest	New Assumptions 7.00% Interest
(1)	(2)	(3)	(4)
Projected Active Payroll	$9,757	$9,740	$9,740
Total Normal Cost Rate	10.57%	10.38%	10.91%
Actuarial Accrued Liability	$53,116	$53,203	$54,675
Actuarial Value of Assets	30,102	30,068	30,068
Unfunded liability (UAAL)	$23,014	$23,135	$24,607
Funded ratio	56.7%	56.5%	55.0%
Member contribution rate	9.00%	9.00%	9.00%
Employer contribution rate next FY	18.56%	18.56%	18.56%
Calculated funding period (based on FY 2023 contribution rate)	15.8 Years	16.3 Years	18.1 Years

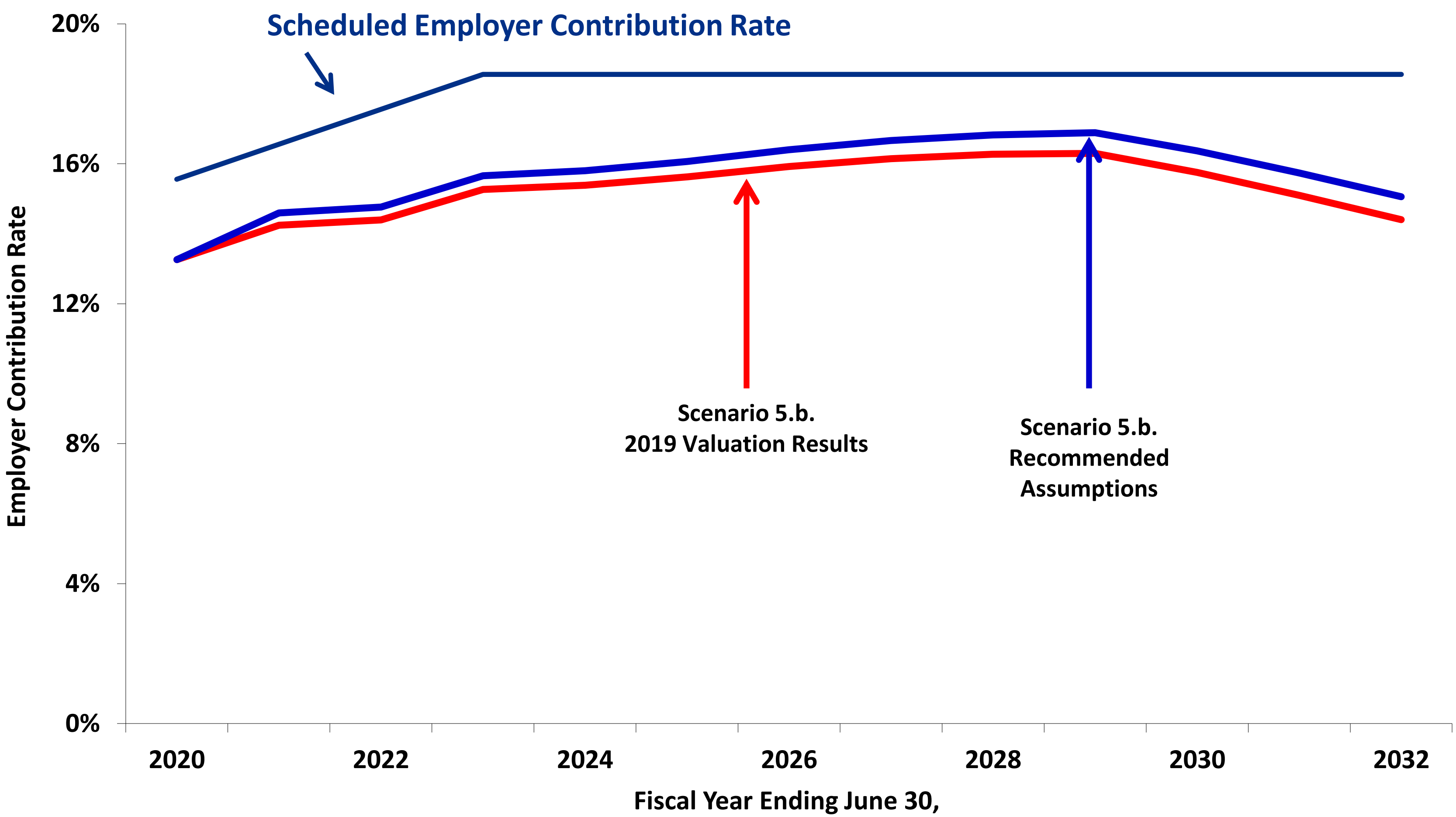
Projected Margin in Scheduled Contribution Rate – SCRS



Projected Calculated Funding Period – SCRS

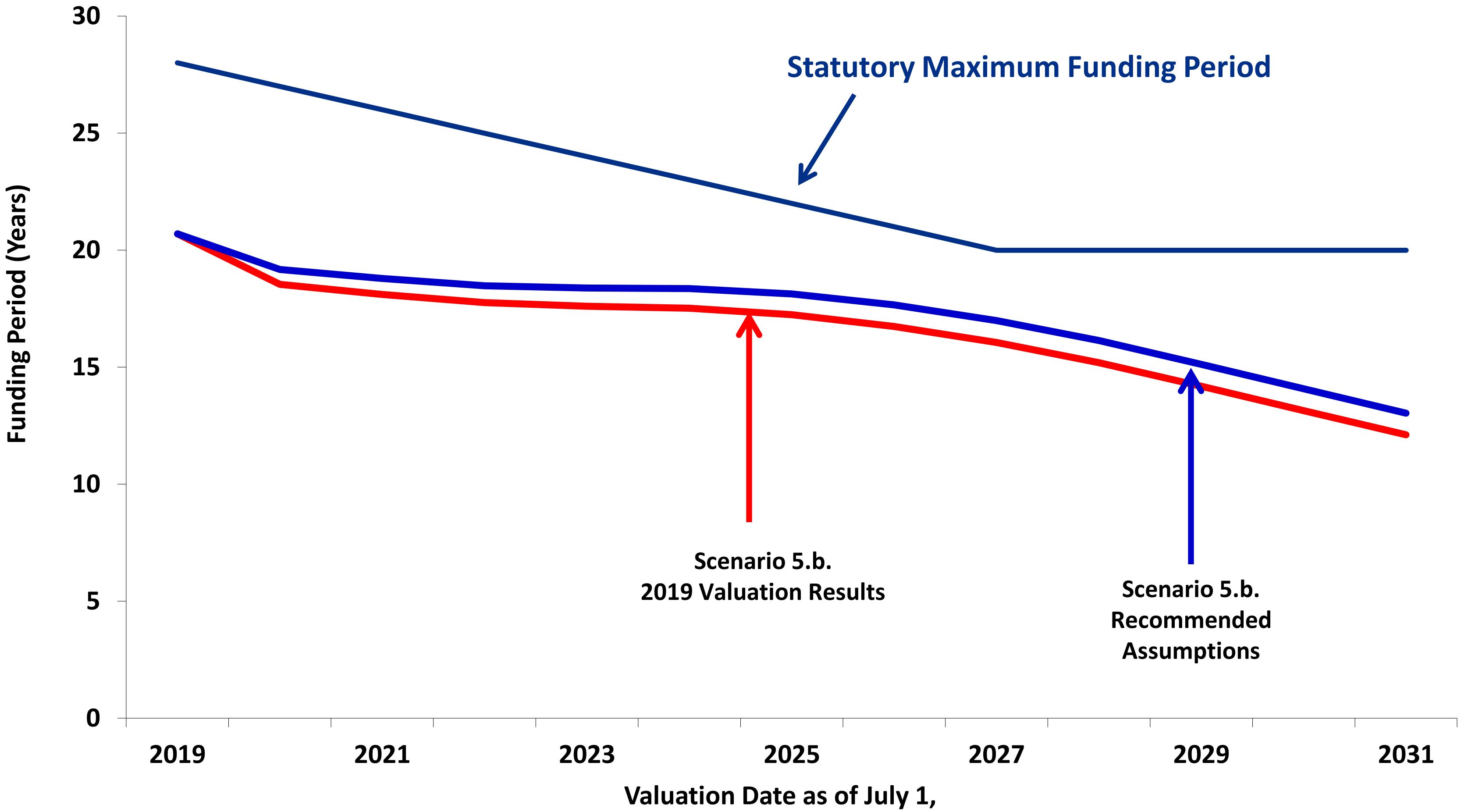


Projected Margin in Scheduled Contribution Rate - SCRS Based on Stressed Scenario



Note: Scenario 5.b assumes emerging investment experience of 4.00% returns each of the first 5 years (FY 2020 through FY 2025) and 7.00% returns each year there after. It also assumes the investment return assumption would decrease to 7.00% at July 1, 2021.

Projected Calculated Funding Period – SCRS Based on Stressed Scenario



Note: Scenario 5.b assumes emerging investment experience of 4.00% returns each of the first 5 years (FY 2020 through FY 2025) and 7.00% returns each year there after. It also assumes the investment return assumption would decrease to 7.00% at July 1, 2021.

Cost Impact - PORS ($ in millions)

Item	Projected 2021 Valuation Results (First Year New Interest Rate Assumption Effective) Current Assumptions	New Assumptions 7.25% Interest	New Assumptions 7.00% Interest
(1)	(2)	(3)	(4)
Projected Active Payroll	$1,459	$1,459	$1,459
Total Normal Cost Rate	14.42%	14.68%	15.39%
Actuarial Accrued Liability	$8,356	$8,346	$8,598
Actuarial Value of Assets	5,510	5,504	5,504
Unfunded liability (UAAL)	$2,846	$2,841	$3,094
Funded ratio	65.9%	66.0%	64.0%
Member contribution rate	9.75%	9.75%	9.75%
Employer contribution rate next FY	21.24%	21.24%	21.24%
Calculated funding period (based on FY 2023 contribution rate)	14.1 Years	14.8 Years	17.4 Years

Cost Impact - JSRS ($ in millions)

Item	Pro Forma Based on 2019 Valuation Results Current Assumptions	New Assumptions 7.25% Interest	New Assumptions 7.00% Interest
(1)	(2)	(3)	(4)
Projected Payroll	$30	$30	$30
Total Normal Cost Rate	29.57%	29.00%	30.54%
Actuarial Accrued Liability	$400	$405	$415
Actuarial Value of Assets	167	167	167
Unfunded liability (UAAL)	$233	$238	$249
Funded ratio	41.8%	41.3%	40.2%
Member contribution rate	10.00%	10.00%	10.00%
Employer contribution rate next FY	62.94%	62.94%	62.94%
Calculated funding period (based on FY 2021 contribution rate)	20.5 Years	20.2 Years	22.0 Years

Cost Impact - GARS ($ in thousands)

	Pro Forma Based on 2019 Valuation Results		
Item	Current Assumptions	New Assumptions 7.25% Interest	New Assumptions 7.00% Interest
(1)	(2)	(3)	(4)
Projected Payroll	$1,570	$1,570	$1,570
Total Normal Cost	360	332	350
Actuarial Accrued Liability	$72,055	$72,047	$73,561
Actuarial Value of Assets	35,140	35,140	35,140
Unfunded liability (UAAL)	$36,915	$36,907	$38,421
Funded ratio	48.8%	48.8%	47.8%
Member contribution	$173	$173	$173
Employer contribution	5,956	5,927	6,176
Funding period (Closed funding period)	8 Years	8 Years	8 Years

Cost Impact – SCNG ($ in thousands)

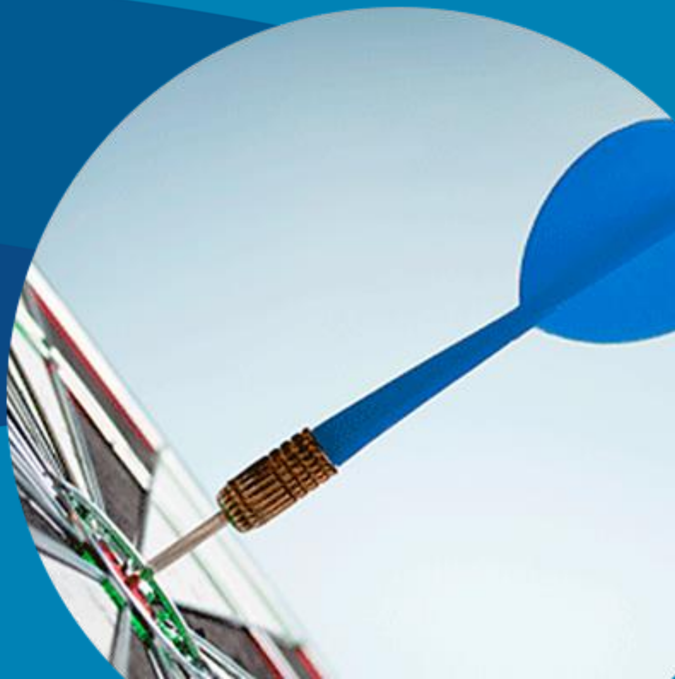
Item	Pro Forma Based on 2019 Valuation Results		
	Current Assumptions	New Assumptions 7.25% Interest	New Assumptions 7.00% Interest
(1)	(2)	(3)	(4)
Projected Payroll	N/A	N/A	N/A
Total Normal Cost Rate	$820	$769	$835
Actuarial Accrued Liability	$66,522	$65,700	$67,566
Actuarial Value of Assets	31,122	31,122	31,122
Unfunded liability (UAAL)	$35,400	$34,578	$36,444
Funded ratio	46.8%	47.4%	46.1%
Member contribution	$0	$0	$0
Employer contribution rate next FY	5,188	5,052	5,244
Funding period (Closed funding period)	17 Years	17 Years	17 Years

Disclaimers

- This presentation is intended to be used in conjunction with the 2020 experience study report. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- Readers are cautioned to examine original source materials and to consult with subject matter experts before making decisions related to the subject matter of this presentation.
- This presentation expresses the views of the author and does not necessarily express the views of Gabriel, Roeder, Smith & Company.

Retirement System Investment Commission Demographic Risks SCRS May Encounter

Joe Newton, FSA, EA, MAAA
Danny White, FSA, EA, MAAA
March 5, 2020



Historical Experience – Liability and Investment Experience

Investment Experience is Inherently More Volatile than Demographic Experience In All Retirement Systems

Actuarial Gains / (Losses) by Source - SCRS

	Valuation as of July 1,				
	2015	2016	2017	2018	2019
Economic (Investments)					
- MVA Basis	($1,533)	($2,027)	$1,031	$169	($391)
Demographic (Liability)					
- Salary	$77	$17	($147)	$154	$45
- Nonsalary[1]	(73)	9	175	43	43

$ in millions

[1] Due to termination, retirement, disability, and mortality.

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Demographic Risks SCRS May Encounter

- Membership behavior is predicable in large numbers
  - Plan design influences retirement behavior
  - Economy can have some influence on turnover behavior
  - Retiree mortality (and trend) is predictable
- Some increased employer participation risk in SCRS
  - Risk due to possible legislative action
  - Increased risk as the contribution rates increase
  - Risk may increase in years employer budgets are constrained

Implications of Increasing Contribution Rates

	SCRS Contribution Rate		PORS Contribution Rate	
	FY 2012	FY 2023	FY 2012	FY 2023
Member	6.50%	9.00%	6.50%	9.75%
Employer	10.60%	18.56%	12.30%	21.24%

- Increasing employer contribution rates provide incentive for some employers to reorganize their business structure that reduces their pension cost
  - Increased use of contract workers
  - Restructuring that reduces the number of employees reported to PEBA

Demographic Risk Due to Possible Legislation

- Employer groups may seek legislation that would result in lower pension cost
  - Senate 258 (2019 legislative session)
    - Allow part-time school cafeteria workers opt out of the System
  - House 4536 (2014 legislative session)
    - Provide employees of participating hospital employer the ability to opt out of membership in SCRS

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Senate 258 (2019 legislative session)

- Proposed legislation is not fiscally significant on a stand alone basis
  - Expect total payroll of part-time school cafeteria workers to be relatively small (position may also experience higher turnover)
- However the proposed legislation is significant on a principle basis
  - Potentially results in additional employers requesting similar type legislation for a group of their employees
  - Collective impact could become fiscally material

House 4536 (2014 Legislative Session)

- Financial Impact if there are no future hospital employees of participating in SCRS
  - Five hospitals participate in SCRS
  - Collectively these represent 16,900 employees currently earn benefits in SCRS $1.051B in covered payroll
    - 10,600 inactive members and
    - 6,400 retirees ($146M in annual benefit payments)
    - $3.4B in liability (54% funded)
  - Represents 8.6% of active membership and 11.5% of active covered payroll in SCRS
    - FY 2019 contributions were $100 million of which $89 million is to finance the unfunded actuarial accrued liability

Employer Participation Changes

	SCRS		PORS	
	2010	**2019**	**2010**	**2019**
Active Headcount	190,000	200,000	26,700	27,400
Active Payroll	$7.7B	$9.3B	$1.1B	$1.4B

- Change in headcount and payroll may look different at the employer level
- PEBA monitors the change at the employer level each on an annual basis

Possible Action – Create Risk Pools

- Reduce subsidy in contribution effort from other employers
- Create a new and separate risk pool
  - They are effective “quarantined” from the other employers and must continue to fund the liability attributable to their current and former employees
  - May require a different funding policy
- Will likely require legislation to provide PEBA authority

Possible Action – Cease Participation

- Currently SCRS and PORS do not permit employers to withdraw participation in the System
- Require these employers to cease being a participating employer in SCRS
  - Will require PEBA to create a policy to determine the actuarial cost to allow the employer to cease participation in SCRS
  - Can look to policies for Systems that allow employers to voluntarily opt-out of the System (CalPERS, Kentucky Retirement Systems, and New Hampshire)

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Possible Action – Cease Participation (Continued)

- PEBA's focus is to protect the remaining participating employers in the System
  - Using the investment return assumption is not appropriate for determining the actuarial cost of a ceasing employer
  - Must determine the liability on a solvency basis reflecting an appropriate risk-premium for opting out of the System.
    - CalPERS, New Hampshire, and KRS use an interest rate based on US Treasury securities or other high-quality fixed income index
  - Pay actuarial cost by lump-sum or installments

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Other Instances of Employer Opt-Out

- Possible for an employer to be forced to cease participation because they are no longer considered a governmental employer
- PEBA's focus should still be protecting the remaining participating employers in the System
  - Should the methodology / assumptions for determining the actuarial cost be different in a required opt-out (versus a voluntary opt-out)

Alternative Method for Collecting Contributions

- The current method for collecting contributions from employers on reported payroll has been reasonable and efficient
  - By far the most common method public retirement systems use for collecting contributions
- If there becomes a material number of employers who restructure their organization that results in reduced pension cost then it may be prudent to change the method for collecting contributions from participating employers

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Questions?

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SOUTH CAROLINA RETIREMENT SYSTEM INVESTMENT COMMISSION

CONSOLIDATED ANNUAL INVESTMENT PLAN AND STATEMENT OF INVESTMENT OBJECTIVES AND POLICIES

As amended and adopted on______________________, 2020

Role of this Document

The State of South Carolina administers five defined benefit pension plans: the South Carolina Retirement System ("SCRS"), the Police Officers Retirement System ("PORS"), the Retirement System for Members of the General Assembly ("GARS"), the Retirement System for Judges and Solicitors ("JSRS"), and the South Carolina National Guard Supplemental Plan ("SCNG") (together, the "Plan").

The South Carolina General Assembly established the Retirement System Investment Commission ("RSIC") as a state agency in 2005 and provided it with the exclusive authority to invest and manage the assets of the Plan which it does in one group trust. RSIC is governed by an eight-member board (the "Commission"). The Commission is a co-fiduciary of the assets of the Plan along with the South Carolina Public Employee Benefit Authority Board ("PEBA").

State law requires the Commission to adopt a Statement of Investment Objective and Policies ("SIOP") and to review it annually and to either amend it or reaffirm it. The SIOP establishes investment and performance objectives, policies and guidelines, roles, responsibilities, and delegation of authority for the management of plan assets. State law also requires RSIC's Chief Investment Officer ("CIO") to develop an Annual Investment Plan ("AIP") which must be presented to and adopted by the Commission prior to May 1st of each year. Pursuant to state law, relevant portions of the SIOP may constitute parts of the AIP.

In order to ensure consistency and agreement between the SIOP and AIP, the Commission has consolidated the requirements of both into one document which it will review annually prior to May 1st. As part of the annual review, the Commission will amend or reaffirm, as it deems appropriate, those portions of this document intended to meet the requirements of the SIOP and the Commission will consider the CIO's recommendation of any necessary changes to those portions of this document intended to meet the requirements of the AIP. In order to assist the Commission and the CIO in meeting their respective annual requirements, RSIC's Chief Executive Officer ("CEO") will provide a guide that designates those portions of this document that are required by the SIOP and those that are required by the AIP.

TABLE OF CONTENTS

I. STRATEGIC PURPOSE, INVESTMENT OBJECTIVE, AND BELIEFS

A. Purpose

The goal of the State's five defined benefit plans is to provide a lifetime of benefits in retirement to those who have dedicated a career of public service to the State and its political subdivisions. The funding to secure this promise of benefits comes from two sources - contributions made by the employee and employer and the investment return earned on the assets of the Plan. The General Assembly has provided the Retirement System Investment Commission with the sole authority to invest and manage the assets of the Plan. Thus, RSIC's purpose is to earn an investment return that aids in fulfilling the promise of benefit payments to our current and future retirees and their beneficiaries.

B. Investment Objective

RSIC's primary investment objective is to design an investment program that produces a long-term rate of return that when added to contributions, funds current and future benefit payments. In doing so, RSIC must remain mindful that the Commissioners, CEO, and CIO are named fiduciaries to the Plan's beneficiaries and must carry out their respective responsibilities to invest and manage the Plan's assets in keeping with the highest duty of care the law recognizes. As a result, the return the investment program seeks to achieve should involve taking a prudent amount of investment risk.

Further, RSIC cannot design an investment program in isolation, but must instead design a program consistent with the realities of the Plan that is guided by the Plan's particular design, structure, and risk factors. An important guiding consideration is that the Plan is mature and as a result experiences net negative cash flows, in that the amount of annual contributions into the Plan is less than the annual amount of benefit payments flowing out of the Plan. As a result, the investment program must be designed in a way to provide sufficient liquidity to fund the net benefit payments to current retirees.

The investment program also must be guided by the consideration that the respective systems comprising the Plan are underfunded, in that the discounted liabilities of each system exceed the actuarial value of each system's assets. The 2019 Actuarial Valuation report from the Plan's actuaries shows the funded status of each system as:

SCRS	PORS	GARS	JSRS	SCNG
54.4%	62.7%	48.8%	41.8%	46.8%

The underfunded nature of the Plan presents the risk that Plan's assets will be insufficient to support future benefit payments. As a result, the investment program must also be designed in a way to grow the assets of the Plan to support payments to future retirees and their beneficiaries. The General Assembly did take significant action to address the underfunded nature of the Plan in the 2017 Pension Reform Bill. The 2017 Pension Reform Bill requires that the UAAL amortization period for SCRS and PORS be reduced by one year each fiscal year until each plan reaches a twenty-year amortization period. In order to support meeting this requirement, the General Assembly significantly increased contributions into the SCRS and PORS.

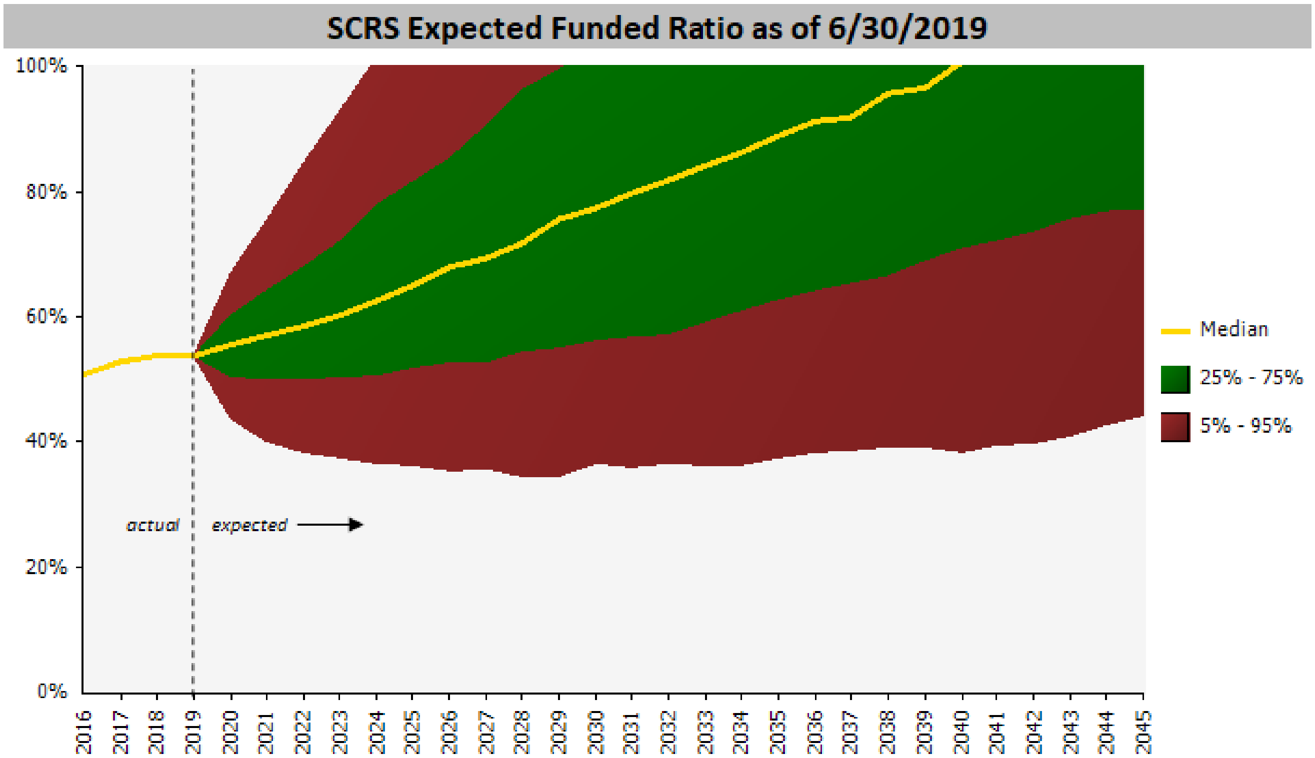
Thus, RSIC is tasked with designing an investment portfolio that balances the need to provide sufficient liquidity to fund current net benefit payments while also growing the portfolio in order to aid in providing benefits to future retirees.

Another guiding factor is that the General Assembly has set 7.25 percent as the assumed annual rate of investment return on the Plan's assets. The assumed rate of return not only serves as the discount rate to determine the net present value of the Plan's liabilities, but also serves as the primary driver of the Plan's funding policy. Investment performance relative to the assumed rate of return determines whether contribution rates are sufficient to meet the funding goals and requirements of the Plan.

RSIC realizes that investment performance will not meet or exceed the assumed rate of return every year, but rather strives to construct an investment portfolio that will meet or exceed this rate of return over time at a prudent level of market risk, in keeping with its fiduciary to duty to the Plan's beneficiaries. Given the historically low interest rate environment, RSIC recognizes that achieving a long-term rate of 7.25 percent requires investing the portfolio in a greater percentage of assets with higher expected volatility than would otherwise be required if interest were at historic average levels. As a result, the investment portfolio will experience greater market volatility which not only impacts the probability of the investment return exceeding the assumed rate over time, but also correspondingly impacts the probability of reaching the funded status goals of the Plan without requiring additional contribution rate increases.

As a result, RSIC works to design an investment program that maximizes the probability that the Plan will meet the General Assembly's funded status goals, but also given the high level of contribution rates, strives to minimize the probability that the Plan will require additional contributions above those already required. RSIC believes that it can design an investment program with a significant probability of meeting or making significant progress towards both concerns as demonstrated by the stochastic analysis of our funded status expectations for SCRS set out in Table 1 below and a similar analysis of our contribution rate expectations set out in Table 2 below.

TABLE 1



RSIC projections based on GRS actuarial assumptions as of 6/30/2019 and Meketa 2020 long-term capital market assumptions

Table 1 tracks the actual, as well as, expected funded status of SCRS since 2016, the year prior to the passage of the 2017 Pension Reform Bill. SCRS is used as the example because its assets comprise the greatest percentage of the total assets of the five systems. The reason for the stochastic approach to the expected funded status is to demonstrate the impact of market volatility on the probable funded status of SCRS through time. The model upon which the simulation is based incorporates the actual structure, components, and assumptions of SCRS, including the contribution policy put into effect by the 2017 Pension reform Bill. The model uses the Commission's Policy Portfolio described below as the investment portfolio and includes thousands of iterations based on the policy portfolio's 7.41 percent expected return and expected volatility of 12.9 percent. The expected return and volatility of the Policy Portfolio is based on long-term capital market and volatility expectations provided by the Commission's Investment Consultant which are updated and provided annually. Based upon these expectations, the Commission's Policy Portfolio has a 51.8 percent probability of achieving a twenty-year rate of return that exceeds the assumed rate of return of 7.25 percent.

As can be seen in this table, the base case scenario is that SCRS reaches fully funded status by 2042, well within the funded status goals set by the 2017 Pension Reform bill. However, if the Plan were to experience the 95th percentile scenario, the funded status of the Plan would not improve and would be expected to be in approximately the same funded position in thirty years that is currently.

The table also shows the actual improvement of the funded status of SCRS since 2016. The actual improvement shown on the table is attributable to additional contributions flowing into the Plan resulting from the 2017 Pension Reform Bill and better than forecast investment returns since the bill's passage. As of the 2019 Actuarial

Valuation, the amortization period for SCRS is twenty-one years which is ahead of the 2017 Pension Reform Bill's requirement of twenty-eight years. As for PORS, the amortization period is eighteen years which is ahead of the Pension Reform Bill's requirement of twenty-eight years.

TABLE 2

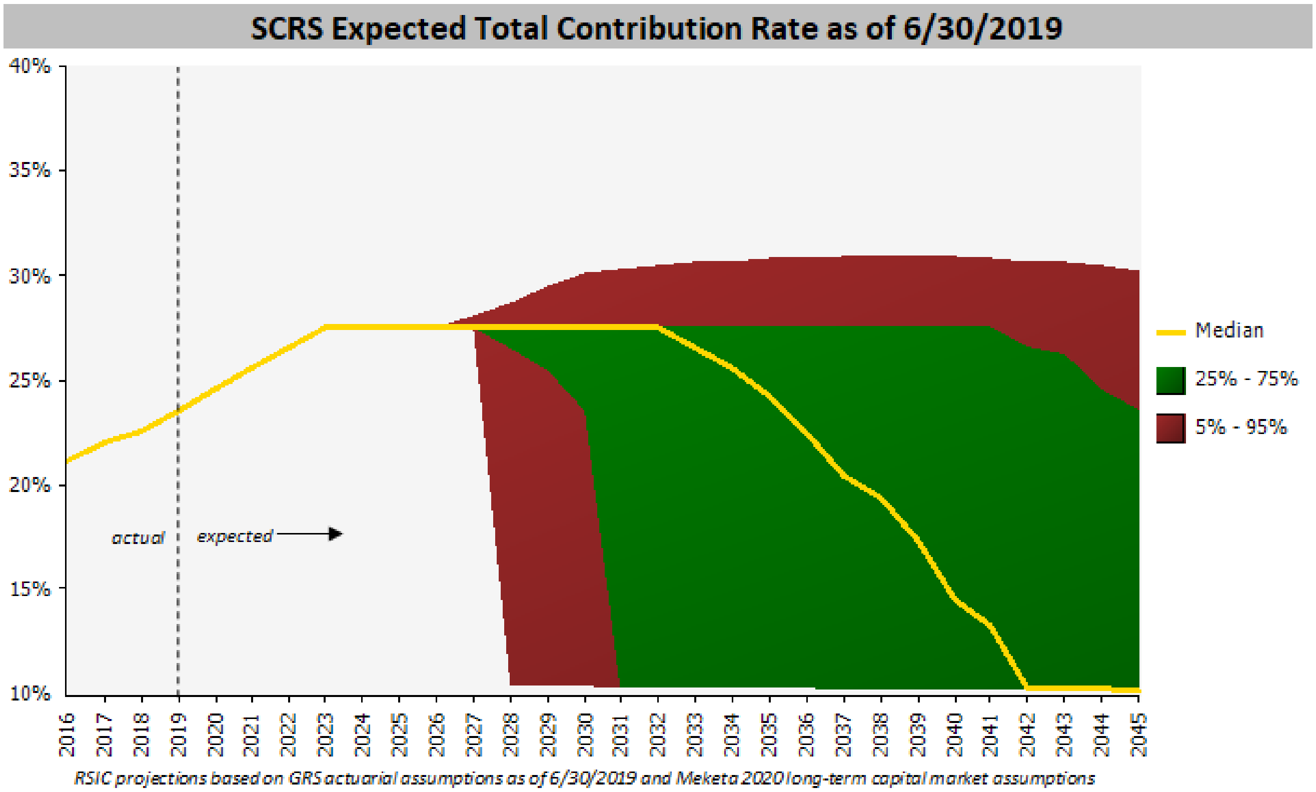


Table 2 tracks the actual, as well as, expected total employer and employee contribution rates for SCRS since 2016. This table also employs a stochastic approach to the expected combined contribution rate to more accurately demonstrate a range of probable outcomes due to market volatility. This analysis is based on the same assumptions used to produce Table 1.

As indicated in this table, the base case scenario shows combined employer and employee contribution rates increasing to 27.56 percent pursuant to the schedule required by the 2017 Pension Reform Bill. The contribution rates are then expected to level off and begin to decline in 2032 reaching the 10 percent normal cost contribution rate by 2042. However, the table does indicate that there is some probability that contribution rates may increase above the 27.56 combined contribution rate required by the 2017 Pension Reform Bill.

C. Beliefs

As fiduciaries, the Commission and staff of RSIC are charged with exercising their roles and responsibilities to the Plan's participants and beneficiaries with the highest duty of care that the law recognizes. In order to ensure consistency in approach to decision making that is commensurate with this fiduciary duty and focused on achieving the investment objective, the Commission and RSIC staff have adopted a set of core beliefs to ensure that we are collectively guided by a unifying set of principles.

Belief 1 – We believe that asset allocation is the main driver of an investment portfolio's risk, return, and cost.

Belief 2 – We believe that investors must be rewarded for incurring additional risk, cost, and complexity.

Belief 3 – We believe that we are long-term investors which requires us to instill *discipline* and *patience* into our investment decision making and assessment process.

Belief 4 – We believe that achieving our investment objective requires an organization with strong governance, that maintains core values, and employs talented professionals. In order to do this, we must:

1. establish a governance structure with clear lines of authority and means to assess the quality of decision making and resulting performance;
2. recruit and retain a talented investment and operational staff consistent with our Core Values of:
    a. Humility,
    b. Intellectual Curiosity, and
    c. Team Player
3. achieve a deep understanding of value creation through the investment process;
4. emphasize risk awareness and focus on mitigating investment and enterprise risk; and
5. provide the foundation, infrastructure, and systems necessary to meet the investment objective and mitigate risk.

II. ROLES AND RESPONSIBILITIES

1. In 2005, RSIC was established by South Carolina law to invest and manage the assets of the State's five defined benefit retirement plans. RSIC invests and manages the assets of all five plans in one group trust. RSIC is governed by an eight-member Commission. The Commission's primary purpose is to set the strategic direction for an investment program that is consistent with its fiduciary duty and strives to earns an investment return that when combined with contributions fulfills the promise of benefit payments to the Plan's current and future retirees and their beneficiaries. This includes setting a long-term asset allocation that meets the Commission's investment objective, oversight of the implementation of the investment portfolio, the business affairs of RSIC, approving certain investments, ensuring legal and ethical integrity, and maintaining accountability. The Commission also adopts a series of governance policies that define the roles and responsibilities of Commissioners and staff and provide general guidance for the operation of RSIC as an agency. (RSIC Governance Policies can be found at: https://www.rsic.sc.gov/_documents/2017.07.14%20Governance%20Policy%20Manual.pdf).

2. The Commission employs a CEO, who serves as the primary figure of accountability for RSIC. The CEO serves as the chief administrative officer of RSIC as an agency and is charged with the affirmative duty to carry out the mission, policies, and directives of the Commission. The CEO is delegated the Commission's authority necessary, reasonable, and prudent to carry out the operations and management of RSIC as an agency and to implement the Commission's decisions and directives. The CEO also serves as the chief risk officer for the organization. The CEO is charged with employing a CIO and all other agency staff who serve at the will of the CEO. The CEO is also delegated the final authority to close all investments and must certify that investments made pursuant to the Commission's Investment Authority Delegation Policy meet the requirements of the policy (*see* SECTION VI for the Investment Authority Delegation Policy).

3. The CIO manages RSIC's investment functions subject to the oversight of the CEO. RSIC primarily invests plan assets by allocating capital to external investment managers who implement specific investment strategies in order to provide the exposures necessary to meet the requirements of the Commission's strategic asset allocation. The Commission has implemented an Investment Authority Delegation Policy which provides the CIO with the final authority to invest with external investment managers subject to the limits of the policy. For a proposed investment that exceeds the delegation policy, the CIO determines whether the investment is presented to the Commission for final approval. The CIO is also granted certain authority to manage the implementation and exposure of the portfolio. The CIO through the management of the investment staff also oversees investment risk management, investment manager oversight, and other related activities.

4. The Executive Team is currently comprised of the CEO, CIO, Chief Operating Officer ("COO"), and Chief Legal Officer ("CLO") and serves as RSIC's primary management committee and aids the CEO in making strategic organizational and operational decisions.

5. The Internal Investment Committee ("IIC") is a committee of senior staff appointed by the CEO and is chaired by the CIO. The IIC's responsibilities are provided by the IIC Charter but the IIC is primarily responsible for serving as the committee that vets and recommends new investments to the CIO for approval and execution, or recommendation to the Commission for its approval.

6. The Commission engages a general investment consultant ("Investment Consultant"), who reports to the Commission and assists and advises the Commission on asset allocation, asset/liability study, performance reporting, benchmarking/peer group comparisons, and general investment education and advice. The CEO manages the day-to-day relationship with the Investment Consultant. RSIC Staff may rely on the Consultant for data resources, external analyst inputs, and access to educational materials. The CEO may also retain specialty consultants to serve as an extension of RSIC Staff in Private Equity, Private Debt, Real Estate, Infrastructure, and Hedge Funds.

7. The Internal Audit function is governed by the Commission's Audit and Enterprise Risk Management Committee and is primarily provided through external service providers. An internal staff member coordinates the relationship with external service providers and assists the committee with performing its duties and functions. The purpose of the Internal Audit function is to provide independent, objective assurance and recommendations designed to add value and improve RSIC operations. It assists the entity in accomplishing its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

8. The Enterprise Risk Management and Compliance ("ERM and Compliance") function reports to the CEO and serves as the primary staff to aid the CEO in fulfilling the role of chief risk officer. The ERM and Compliance function coordinates with the Executive Team and other staff on the assessment of, and provides oversight related to the identification and evaluation of, major strategic, operational, regulatory, informational, and external risks inherent in the business of RSIC. ERM and Compliance is also responsible for overseeing the process for monitoring compliance with RSIC policies and applicable laws.

9. The Public Employee Benefit Authority ("PEBA") is a separate agency that administers a comprehensive program of retirement benefits, performing fiduciary duties as stewards of the contributions and disbursements for the Retirement System. PEBA is responsible for producing GAAP basis financial statements for the Plan and maintains a general ledger to support that process. The financial statements that are produced by PEBA contain information regarding the investments made by the Commission and as such contain the official accounting records for Plan investments. The financial statements are presented in accordance with GAAP and comply with the Governmental Accounting Standards Board standards. The financial statements are audited annually by an independent audit firm hired by the State Auditor's Office.

10. The Commission and the PEBA Board serve as co-trustees of the Plan's assets. PEBA is the custodian of the Plan's assets and RSIC is responsible for the Plan's custodial banking relationship.

11. Subject to the approval of the State Fiscal Accountability Authority, PEBA designates the Retirement System's Actuary. The Commission is a third-party beneficiary to the contract with the Retirement System's Actuary, with full rights to all actuarial valuations prepared by the actuary.

12. The South Carolina General Assembly has the authority to control budget and staffing for RSIC and to set the actuarial annual assumed rate of return for the Plan. Starting in early 2021, and every four years thereafter, in consultation with the Commission and the Retirement System's Actuary, PEBA will propose an assumed annual rate of return to the General Assembly that will take effect at the beginning of the 2021-2022 fiscal year unless the General Assembly acts to amend or reject the recommendation. The General Assembly also conducts periodic legislative oversight hearings of RSIC.

III. ASSET ALLOCATION

A. Purpose

The Commission's primary responsibility is to establish an investment program that is designed to meet the Commission's investment objective. The most significant action the Commission takes in fulfilling this responsibility is by setting the long-term asset allocation. The Commission designs a portfolio that includes a mix of assets that it believes will likely generate a long-term rate return that meets its investment objective which is conditioned by its fiduciary duty to only expose the Plan's assets to a prudent level of market risk. The target, or Policy Portfolio, is established with a long-term perspective and the Commission does not expect to change the portfolio to react to short-term market conditions.

The Commission recognizes employing a long-term perspective has certain risk management benefits. Most notably, this discourages the temptation to react to short-term market trends, which can lead an investor to chase returns in asset classes that have become expensive due to recent appreciation. The Commission believes that adherence to this long-term perspective will produce its greatest benefits during periods of adverse market conditions, during which time the Policy Portfolio will serve as a stabilizing force for the investment program.

State law also requires the Commission to diversify the assets of the investment portfolio and to consider: (i) general economic conditions; (ii) the possible effect of inflation or deflation; (iii) the role that each investment or course of action plays within the overall portfolio; (iv) the needs for liquidity, regularity of income, and preservation or appreciation of capital; and (v) the adequacy of funding for the Plan based on reasonable actuarial factors.

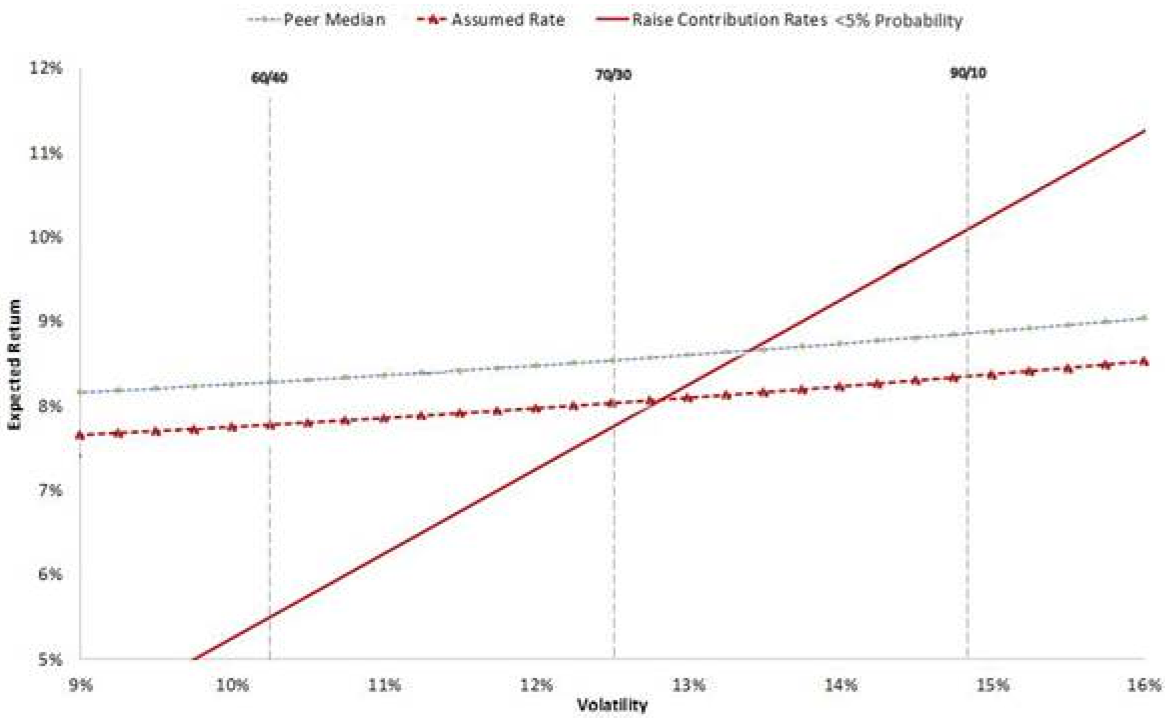
B. Background

The Commission undertook a review of the existing Policy Portfolio in early 2019. At the time the Commission began this process, the Policy Portfolio was comprised of eighteen separate asset classes with twenty-one different benchmarks. Many of the asset classes had small target weights – several with less than three percent. Both the CIO and the Investment Consultant expressed concern that the Policy Portfolio was over diversified and required a high level of complexity to exist in the Actual Portfolio without a clear improvement in risk or return. The Commission found this to be inconsistent with its investment belief that investors must be rewarded for incurring additional risk, cost, and complexity. The Commission also believed that the existing Policy Portfolio established the wrong balance between its role as setting the strategic direction of the investment program and investment staff's role in implementing the portfolio. As a result, the Commission determined that a more consolidated Policy Portfolio was in order which valued simplicity and required complexity in the Actual Portfolio to prove its value. The Commission determined that key to this effort was developing a series of benchmarks that would collectively form a Portfolio Framework to clearly determine the value of investment decisions.

C. Reference Portfolio

The Commission decided that it would begin the development of this framework by setting a Reference Portfolio. The Reference Portfolio would be a simple two asset class benchmark portfolio comprised of stocks and bonds. The point of the Reference Portfolio was not to limit the Actual Portfolio to a simple mix of stocks and bonds, but rather to set a risk reference for the Policy Portfolio. The Commission attempted to set the allocation of this portfolio to one consistent with a portfolio that most closely expressed the risk required to earn a return that is expected to exceed the assumed annual rate of return while also avoiding a greater than 5 percent probability of requiring additional contributions increases in the next five years (other plan risks were also contemplated but would also be avoided because these risks would either fall along the same line or to the right of the risk line represented on Table 3 below). The Commission considered the appropriate reference portfolio at its April and June 2019 meetings. As seen in Table 3, a 70 percent Global Public Equities (*MSCI ACWI IMI Net*) and 30 percent Bonds (*Bloomberg Barclays Aggregate*) portfolio best represented the volatility of a portfolio that met these criteria, and the Commission reached consensus on this allocation as the Reference Portfolio Benchmark.

Table 3



D. Policy Portfolio

The Commission then began establishing a Policy Portfolio that would serve as the Commission's long-term asset allocation. The Policy Portfolio would be a multi-asset class portfolio with the same expected volatility as the Reference Portfolio. The Policy Portfolio would be expected to consolidate the existing eighteen asset class Policy Portfolio into a more simplified allocation without substantially impacting the expected return, but with the same level of risk as the Reference Portfolio. The purpose of setting the Policy Portfolio's risk target to that of the Reference Portfolio was to reveal the performance impact gained through diversification.

However, unlike the Reference Portfolio, the Policy Portfolio would be a portfolio that could be held and, in any respect, would serve as the gravitational pull to a more simplified Actual Portfolio.

The Commission considered the transition to a more simplified Policy Portfolio at its April and June 2019 meetings and reached consensus on the transition to the simplified target allocation in Table 4 below.

Table 4

Legacy Asset Allocation	
Nominal IG Bonds	6
Treasuries	5
TIPS	2
Mixed Credit	4
EM Debt	4
Private Debt	7
US Equity	18
Developed Int'l Equity	11
EM Equity	6
Equity Options	7
Private Equity	9
Real Estate (Public)	1
Real Estate (Private)	8
Infrastructure (Public)	1
Infrastructure (Private)	2
PA Hedge Funds	10
GTAA	7
Other Opportunistic	1

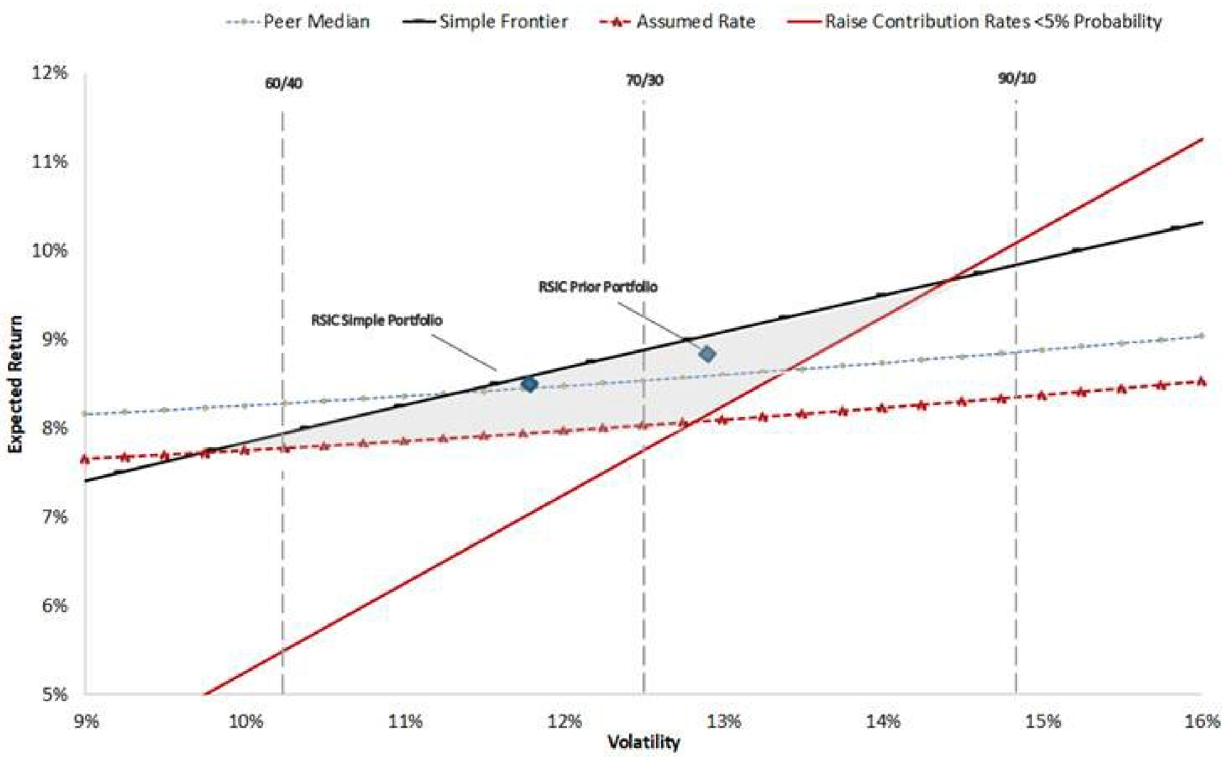
Current Asset Allocation	
Bonds	26
Private Debt	7
Global Equity	46
Private Equity	9
Real Assets	12

The Commission also analyzed whether the Policy Portfolio would meet the Commission's long-term investment objective in that it would likely exceed the assumed rate of return and avoid risks particular to the plan including not meeting the General Assembly's funded status objectives and avoiding a significant probability of requiring additional contribution increases. This analysis was based on the Investment Consultant's 2019 long-term annualized return and volatility expectations. As demonstrated in Table 5 the Policy Portfolio is projected to:

1. exceed the assumed rate of return,
2. compare favorably to the simple frontier[1],
3. compare favorably to the risk of the Reference Portfolio Benchmark; and
4. experience a less than 5 percent probability of requiring additional contributions increases in the next five years (again other plan risks were also contemplated but would also be avoided because these risks would either fall along the same line or to the right of the risk line represented on the table).

[1] The simple or efficient frontier comprises investment portfolios that offer the highest expected return for a specific level of risk. In this case, the investment portfolios along the simple frontier are limited to a mix of the five asset classes from the simplified portfolio shown in Table 4.

Table 5



Based on 2020 Capital Market Expectations provided by the Commission's Investment Consultant, the Policy Portfolio has an expected twenty-year rate of return of 7.41 percent and an expected volatility of 12.9 percent. This portfolio has a 51.8 percent probability of earning a twenty-year rate of return that meets or exceeds the annual assumed rate of return of 7.25 percent.

The Commission believes that this change in approach to a five asset-class Policy Portfolio shifts the paradigm to one which values simplicity and holds a more complex portfolio accountable for improving risk-adjusted returns. A crucial component to ensure this accountability is having the appropriate benchmarks for the Policy Portfolio. The Commission was guided by the CFA Institute's recommendations that benchmarks are (i) specified in advance, (ii) appropriate, (iii) measurable, (iv) unambiguous, (v) reflective of investment options, (vi) owned, and (vii) investable. At its September 2019 meeting, the Commission reached consensus on the benchmarks in Table 6 for the Policy Portfolio.

Table 6

Asset Class	Benchmark[2]
Public Equity	*MSCI ACWI IMI Net*
Bonds	*Bloomberg Barclays Aggregate*
Private Equity	*Burgiss Private Equity* [1]
Private Debt	*S&P LSTA +150 bps* [1]
Real Assets	*NCREIF ODCE Net*

[1] The Private Equity and Private Debt portfolios and benchmarks will be reported on a 3-month lag

E. Implementation Portfolio Benchmark

The Commission recognizes that the CIO and investment staff may add value by structuring the Actual Portfolio in a manner that deviates from the Policy Portfolio target weights or may also pursue a strategy that causes the composition of an asset class to differ from the policy benchmark. As a result, the Commission provides the CIO and the investment staff with the discretion to structure the portfolio within the asset class and sub-asset class ranges in Table 7. In order to measure the risk and return impact of these portfolio structure decisions, the Commission employs an Implementation Portfolio Benchmark that aggregates the underlying benchmarks of each asset class and sub-asset class strategy according to their actual weights. Providing this discretion while establishing a structure that measures the value of these decisions also sets the right balance of accountability for Commission decisions and those of the CIO and investment staff.

[2] MSCI ACWI IMI Net - Morgan Stanley Capital International All Country World Index Investable Market Index; S&P LSTA - Standard & Poor's Loan Syndication and Trading; and NCREIF ODCE – National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity

Table 7

Asset Class	Target	Range	
Public Equity	46%	30%	60%
Domestic	Index	Index +/- 6%	
Developed Non-US	Index	Index +/- 6%	
Emerging Market	Index	Index +/- 4%	
Equity Options	0%	0%	7%
Bonds	26%	15%	35%
Core Bonds (IG)	26%	10%	35%
Inflation-linked (IG)	0%	0%	5%
Mixed Credit (non-IG)	0%	0%	8%
EM Debt	0%	0%	6%
Private Equity	9%	5%	13%
Private Debt	7%	3%	11%
Real Assets	12%	6%	18%
Real Estate	9%	5%	13%
Infrastructure	3%	0%	5%
Net Cash/Short Duration	0%	0%	7%

F. Manager Selection

The Commission also recognizes that the CIO and investment staff strive to add additional value through manager selection. In September 2017, the Commission through the adoption of the Investment Delegation Policy delegated investment manager selection decisions to the CIO and investment staff within clearly defined limits and exceptions. The Investment Authority Delegation Policy is set out in Section VI. The value of manager selection is discernable by comparing the Implementation Portfolio Benchmark and the Actual Portfolio.

G. Performance Reporting

Essential to the Commission's oversight function is performance reporting that makes clear the value of three major investment decisions: diversification, portfolio structure, and implementation. The Commission charges staff with developing a Portfolio Reporting Framework that easily allows the Commission to judge the value of the three investment decisions by comparing the relative performance between the Reference Portfolio, Policy Portfolio, Implementation Portfolio, and Actual Portfolio:

1. *Diversification (Policy Portfolio Benchmark vs. Reference Portfolio Benchmark):* The comparison of the Policy and Reference Portfolios Benchmarks reveals the value from diversification beyond a simple two-asset portfolio. The benefit of designing these portfolios with the same level of expected volatility is that the performance differential is an indication of the impact of diversification, rather than being a function of an expected risk differential. The Commission should expect to see the value of diversification in this comparison over rolling five-year periods.

2. *Portfolio Structure (Implementation Portfolio Benchmark vs. Policy Portfolio Benchmark):* This comparison supports an assessment of the quality of the portfolio structure. It reveals the performance impact of the decisions to structure the portfolio differently than the Policy Portfolio Benchmark. These impacts can be broken down into those resulting from the *weights* of asset classes and those resulting from the *composition* of asset classes. The Commission should see the positive performance impact of implementation benchmark decisions over rolling three-year periods. The reporting framework also include risk reports to highlight whether and how changes in portfolio structure alter the risk characteristics of the portfolio.

3. *Implementation (Actual Portfolio vs. Implementation Portfolio Benchmark):* This comparison aids in the evaluation of the quality of implementation, a key component of which is the impact of manager selection. The Commission should expect to see differential individual manager performance as compared to the implementation benchmark over short periods of time, but the Commission should expect in aggregate to see consistent value added through manager selection. Providing this additional comparison between the Actual Portfolio and the Implementation Benchmarks also disaggregates the performance gained through portfolio structure and that gained through manager selection. As a result, the Commission may evaluate the quality of each of these portfolio decisions when previously the actual portfolio was simply compared to an individual policy benchmark that combined both portfolio structure and manager selection decisions. This additional look through provides the Commission with an enhanced ability to effectively exercise oversight over both portfolio structure and investment manager selection decisions made by the investment staff.

H. Asset Allocation Review

The Commission will conduct an Asset-Liability Management Study and asset allocation review every five years. The Commission will continue to receive long-term capital market expectations from the Investment Consultant annually and assess the impact to the expected return and volatility of the Reference and Policy Benchmark Portfolios. However, consistent with its beliefs and long-term approach to asset allocation, the Commission intends to limit interim asset allocation changes to those the Commission determines are absolutely critical to meeting its long-term investment objective and are commensurate with its risk tolerance and fiduciary duties.

IV. STRATEGIC INITIATIVES

The Strategic Initiatives described in this Section are major ongoing staff projects contemplated to last up to three years and are likely to have a more significant impact to the portfolio, asset class, or an investment strategy than typical decisions. The CIO will include changes to these initiatives as part of the annual AIP proposal and will provide a quarterly update on progress towards these initiatives at regular Commission meetings.

1. Asset Allocation Implementation – The CIO and investment staff will determine the portfolio adjustments that are required in response to the Policy Portfolio changes described in Section III and will develop a transition plan to implement the necessary adjustments.

2. Portfolio Reporting Framework – The performance reporting team will prioritize the development and implementation of the Portfolio Reporting Framework required by Section III and will work with the Quantitative Solutions Group[3] to incorporate risk reporting into the framework.

3. Comprehensive Review of Implementation Cost – Staff will continue to examine the mix of structural and variable costs throughout the Portfolio and pursue opportunities (such as the co-investment initiative outlined below) to improve the cost alignment of the investment program.

4. Secondaries Market – The Commission understands that the thoughtful use of secondaries opportunities can improve returns for a private markets portfolio. The Investment Team will design and execute a plan to incorporate the secondaries market into the investment strategy for private markets asset classes.

5. Risk Management – The Quantitative Solutions Group will continue to improve risk monitoring at the Portfolio, asset class, and manager levels. The team will place special emphasis on improving the quality of risk reporting at these levels.

6. Co-Investment Program – The Private Markets team will explore the expansion of the Co-Investment Program beyond Private Equity into the other private market asset classes, determine whether an additional partner or platform is needed for any proposed expansion, and implement any approved expansion plan.

[3] The Quantitative Solutions Group is a subset of the Investment Team responsible for conducting deep quantitative analysis on prospective investment managers as part of the investment due diligence process, and also for monitoring and reporting on investment risk.

V. INVESTMENT POLICIES

A. General

1. IIC and Investment Approval Process - State law provides that the AIP is to be implemented by the Commission through the CIO. The RSIC employs a team of investment professionals that support the CIO in carrying out investment management duties and responsibilities. One key component of this infrastructure is the IIC. The IIC assists the CIO by reviewing and providing recommendations to the CIO regarding proposed investments. The IIC also routinely monitors the Portfolio's investment performance and reviews relevant policies and procedures as part of its oversight function. The Commission adopted an Investment Authority Delegation Policy which grants the CIO the ability to approve those investments which fall within the parameters of this policy, subject to the oversight of the CEO. Other investments are presented to the Commission for its approval.

2. Due Diligence – The Investment Team maintains investment due diligence policies to provide consistency and oversight to the investment process. The Initial Due Diligence Policy outlines the key tenets of the RSIC's decision-making process in hiring investment managers. The Ongoing Due Diligence Policy outlines the process and criteria used to evaluate the retention/termination of external investment managers. Both due diligence policies are tested annually by either an Agreed Upon Procedures review by an independent auditor or by the Director of Enterprise Risk Management & Compliance. The results of this review are provided to the Audit and Enterprise Risk Management Committee.

3. Counterparty Risk Management – The Quantitative Solutions Group monitors two sources of potential counterparty risk: (1) the overlay program and (2) the System's master custodial bank. While the risk arising from the overlay program is actively monitored by its external manager, as an added layer of oversight, the Quantitative Solutions Group is responsible for reviewing and reporting on the external manager's prudent management of these counterparty risks.

4. Investment Strategies, Objectives, and Performance Standards:

   i. In accordance with State law, the AIP addresses the Commission's investment strategies, as well as its investment objectives and performance standards. The investment staff maintains a "Baseline" document designed to establish a clear, shared understanding of the rationale, goals, and characteristics for each asset class. In general, the annual plan for an asset class will often involve measures designed to improve its alignment with its Baseline. The following items are detailed in the Baseline document:

      a. Rationale and purpose of the asset class in the broader Portfolio;

      b. Target steady-state asset class exposures (including sub-strategies, geographies, or other relevant factors);

c. The target return, characteristics (income vs. appreciation), and expected active vs. passive implementation breakdown; and

d. An estimate of normal cost to implement the portfolio, and an estimate of the flex cost which may be incurred when market conditions present compelling opportunities.

ii. Baselines also address the following broader issues:

a. The role private investments play in the portfolio;

b. The mix of private vs. public market investments; and

c. How the portfolio is likely to change over time.

iii. The Baseline document is updated at least annually, and all RSIC employees are encouraged to present suggested revisions to any Baseline. Proposed changes to the Baseline documents are presented to the IIC for review and to the CIO for approval. In addition to addressing the investment objectives and performance standards for each asset class, the Baseline also serves as a guide to workflow and portfolio management decisions. Investment decisions are reviewed against the Baseline for portfolio fit.

iv. As part of the individual asset class in-depth examination at each Commission meeting, the investment staff will also provide a review of the particular asset class Baseline, progress towards attaining the Baseline, and any material deviations from the Baseline.

v. The Commission will be informed promptly of any material change to a Baseline at the next Commission meeting following the change.

5. Allowable Investments and Limitations:

i. With certain limitations discussed below, State law provides that RSIC may invest "in any kind of property or type of investment consistent with" Title 9, Chapter 16 of the S.C. Code and Section 9-1-1310. These investments include, but are not limited to, futures, forward contracts, swaps, and options, equities, bonds, loans, 144(A)'s, exchange traded funds, American Depository Receipts, real property, and real estate investment trusts. These investments may be listed, exchange traded, or over the counter, negotiated contracts or investments.

ii. In addition to the instruments outlined above, for every asset class, a variety of investment structures may be utilized depending on the nature of a particular investment. In accordance with the terms of the investment limitations outlined in this policy, these structures may include, but are not limited to, mutual funds, limited partnerships, limited liability companies, strategic partnerships, trusts, commingled vehicles, fund-of-funds, and separately managed accounts in which assets may be held by either the Retirement System's master custodial bank or an external custodian who is selected and monitored by the external manager or general partner.

iii. Any investment structure and the underlying instruments must be of a type generally expected to obtain exposure to an asset or sub-asset class contained in Table 7, Section III.

iv. State law imposes certain limited restrictions on the investment of the Portfolio. The managers of the Portfolio's accounts **other than** index funds, commingled funds, limited partnerships, derivative instruments or the like are required to assist the Commission in meeting its obligations under S.C. Code Ann. §9-16-55, which sets forth limitations on investment in certain types of companies that are engaged in active business operations in Sudan. See Section IX for additional information.

v. The Commission has also established a policy prohibiting an investment in any security or obligation issued by a company or a corporation that is a known sponsor of terrorist organizations or of a company domiciled in a country that is a recognized sponsor of terrorism or terrorist organizations as based on reports from the Office of Terrorism and Financial Intelligence of the Department of Treasury and the Country Reports on Terrorism by the Office of the Coordinator for Counterterrorism of the U.S. Department of State.

6. Internal Management and Overlay Program – Currently, the investment staff actively manages certain Cash and Short Duration accounts, and performs distribution management (management and disposition of in-kind distributions received from external investment managers or third parties). In addition, the CIO has discretion to use synthetic instruments, derivatives, equity baskets, and exchange traded funds in order to implement the asset allocation or otherwise manage the portfolio in accordance with the ranges established by the Commission. The Overlay program functions as a means by which the CIO and Investment Staff manage exposures and manage risk in an efficient manner using synthetic instruments, exchange-traded-funds/notes, equity or fixed income baskets, options, futures, swaps, and forward currency contracts.

7. Portable Alpha – The Commission provides the CIO with the discretion to use Portable Alpha Strategies not to exceed 12 percent of total plan assets. The use of Portable Alpha is an implementation decision that is reflected in the Implementation Policy Portfolio Benchmark. The benchmark for Portable Alpha Strategies is *HFRI Conservative Fund of Funds less LIBOR*[4].

8. GTAA - The Commission provides the CIO with the discretion to use Global Tactical Asset Allocation Strategies not to exceed 11 percent of total plan assets. The benchmark for GTAA strategies is the proportional weight of Global Public Equity and Bonds in the Policy Portfolio Benchmark.

9. Alternative Investments – The Commission has established guidelines applicable to its alternative investments, which include Hedge Funds and Private Markets Assets:

i. The Commission's initial commitment to a fund will not exceed 25 percent of the committed capital of that fund, unless the Commission specifically waives or suspends this restriction (a) in order to take advantage of a new firm or product that has not yet built an asset base or (b) in the case of a fund that has been created specifically for RSIC (e.g., a single LP fund);

ii. Unless otherwise approved by the Commission, no more than 15 percent of an alternative asset investment allocation may be invested with a single manager, general partner, or single fund, with the exception of Funds of One and Strategic Partnerships;

iii. Staff will notify the Commission if the collective exposure to Private Equity, Private Debt, Private Real Assets exceeds 25 percent of total plan assets; and

iv. Hedge funds may not exceed 20 percent of total plan assets.

[4] HFRI – Hedge Fund Research Performance Index

10. Equity investments not to exceed 70 percent – State law provides that the AIP must also include the minimum and maximum allocations to equity investments on an ongoing basis, not to exceed 70 percent. The allowable ranges for equity investments are set forth in Table 7, Section III. While State law does not stipulate whether the limitation of 70 percent is based on cost or market value, the Commission manages this limitation on a market value basis. Therefore, if the allocation to equity investments exceeds 70 percent of the total market value of the Portfolio, the CIO is required to rebalance the Portfolio.

11. Managing Cost – In accordance with State law, the AIP addresses methods for managing the costs of RSIC's investment activities. RSIC strives to earn the highest risk-adjusted return on a net of fees basis and recognizes that cost is an important variable to consider. The Investment Team actively engages in an array of strategies to reduce the cost of the Portfolio, including the following:

i. Increasing the initial investment size;

ii. Seeking aggregation discounts from firms with which we have multiple investment strategies;

iii. Utilizing co-investments in private markets;

iv. Quantifying and monitoring the effectiveness of active implementation across public market asset classes; and

v. Requesting reductions to, or elimination of, management fees, as appropriate.

12. Risk:

i. All investments carry some degree of risk. The focus of the RSIC risk function is managing and monitoring these risks to ensure that the Portfolio's risks are appropriate and that the overall level of risk taken is consistent with meeting the Commission's investment objective. Key risk initiatives are:

a. Incorporating the Plan's liability structure into the investment decision process; and

b. Developing and refining tools to facilitate the incorporation of System liabilities into portfolio management.

ii. RSIC Staff monitors risk levels both in absolute terms, but also in relation to the Reference Policy benchmark established by the Commission's asset allocation. This is accomplished using a mix of proprietary and third-party systems and tools.

iii. At the Portfolio level, Staff will:

a. Maintain the Portfolio's asset allocation within the limits established by this policy;

b. Employ an appropriate level of diversification and adhere to the limits within this policy or as contracted with the manager;

c. Adhere to policies and procedures established by the Commission; and

d. Maintain adequate liquidity for benefit payments and capital calls.

iv. Staff provides the Commission with risk reporting as part of the Portfolio Performance Framework to ensure that risk remains within acceptable levels and to judge the value of portfolio structure and manager selection decisions on a risk adjusted basis.

13. Manager Monitoring Guidelines - RSIC Staff maintains an Ongoing Due Diligence Policy that outlines the manager monitoring requirements in detail. In summary, the Investment Team is required to perform periodic reviews of each active manager. These reviews contribute to the decision to either retain or terminate that manager. These reviews involve both quantitative and qualitative assessments in order to ensure that any decision is made fairly and consistently, and to avoid untimely or undisciplined decisions that may adversely impact returns. Additionally, the Investment Team reviews audited financial statements, compliance certifications, and investment fees on an annual basis. Compliance with the Ongoing Due Diligence Policy is reviewed annually through an Agreed Upon Procedures audit performed by an independent auditor.

14. Proxy Voting - Managers of separate accounts are authorized and directed to vote all proxies, or to direct the Physical Custodian to vote proxies, in keeping with the manager's duties under federal and state law to act in the best interest of the Plan and to maximize shareholder value, and generally to exercise any of the powers of an owner with respect to the assets under the manager's control, subject at all times to the absolute right of the Commission to direct the voting of proxies upon written notification to the manager. Those separate account managers which vote proxies must provide a written annual summary to RSIC summarizing proxy votes cast during the previous year. The report shall also detail any changes to the manager's proxy voting practices and explain any instance in which proxies were not voted in accordance with the best interests of the Plan.

B. Compliance

1. Placement Agent Policy – State law prohibits RSIC from making an investment where a placement agent receives compensation in connection with RSIC's investment. The Commission' Placement Agent Policy is set out in Section VIII.

2. Investment Manager Sourcing and Conflict Disclosure Policy – In order to enhance transparency and avoid even the appearance of impropriety, before an investment recommendation is made to the Commission or CIO, any Commissioner or RSIC staff member involved in the sourcing or due diligence of a new investment completes a Sourcing and Conflict Disclosure Form. The CEO and CIO must complete a Sourcing and Conflict Disclosure form for each investment.

3. Annual Certification and Ongoing Testing of Guideline Compliance – The Ongoing Due Diligence Policy requires each manager to annually certify its compliance with the contractually

specified guidelines. These certifications are reviewed by RSIC's Compliance function, as well as the Investment Team, and are subject to an annual audit. There is also ongoing testing of guideline compliance for those public markets mandates which are governed by an Investment Management Agreement and custodied with the master custodial bank.

C. Governance and Oversight

1. Performance Standards and Reporting - As noted above, State law requires that the AIP address the Commission's performance standards. The performance standards and benchmarks are described in Section III. In addition, the Commission receives monthly performance reports from the custody bank and quarterly performance reports prepared by RSIC's performance reporting staff and the general investment consultant. The performance reporting prepared by RSIC performance reporting staff must incorporate the Portfolio Performance Framework required in Section III.

2. Diversification – State law requires that the AIP address the topic of diversification, including sectors, issues and other allocations of assets that provide diversification in accordance with prudent investment standards. The Commission provides the CIO with parameters regarding its diversification objectives through the asset allocation, asset and sub-asset allocation ranges, and performance standards set out in Section III. The Portfolio Reporting Framework required in Section III also provides the Commission the ability to oversee the implementation of the long-term portfolio strategy, as well as the actual implementation of the Commission's diversification directives.

3. Procedures regarding consultants, managers, service providers selections and terminations

   i. Selection - State law requires that the AIP include procedures and policies for selecting, monitoring, compensating, and terminating investment consultants, equity investment managers, and other necessary professional service providers. Investment managers are primarily selected by the CIO, subject to the oversight of the CEO, pursuant to the Investment Authority Delegation Policy through an investment process that also complies with the Investment and Operational Due Diligence Polices. The CIO recommends to the Commission for its approval the selection of any manager of an investment that exceeds the limits of or falls into one of the exceptions to the investment delegation policy. Any investment recommended to the Commission for its approval must also comply with the Investment and Operational Due Diligence Policies. All other service provides are selected pursuant to the Commission's Service Provider Selection Policy which is included in the Commission's Governance Policies (RSIC Governance Policies can be found at: https://www.rsic.sc.gov/_documents/2017.07.14%20Governance%20Policy%20Manual.pdf).

   ii. Compensation, Fees and Expenses – Service providers, including consultants and investment managers, will be compensated commensurate with the services provided and industry practices. The Commission will pursue cost savings through structural efficiencies and will strive for fee reductions through negotiations. Investment management fees are evaluated utilizing several metrics or tests. First, fees are examined relative to industry/peer standards. Second, when it reviews potential new mandates or restructurings of existing allocations, the investment staff assesses fees based on the cost relative to other implementation options. For example, in global public equities, the fees charged by active managers (as well as their expected performance and risk) are compared to other methods of obtaining similar market exposure, while in the private markets, fees (as well as expected performance and risk) are compared to public market implementation alternatives. Lastly, to the extent practicable, fees will also be evaluated based on an assessment of the manager's ability to generate excess returns. Investment Staff gathers actual fees and provides annual public disclosure of all fees paid to external managers. The Commission receives an annual report on the cost of its investment program from an independent expert, and may also call upon its investment consultants for assistance in analyzing and addressing issues relating to investment fees. Operating expenses applicable to internal investment operations and the general business of the RSIC are managed by the CEO within the parameters of the annual budget approved by the General Assembly.

iii. Term and Termination -The Commission or the CIO, as applicable, may terminate an investment manager whenever the Commission or CIO determines that its objectives can more efficiently or effectively be met by the selection of another manager or under a different management mandate. The Commission and CIO retain the right to terminate a manager with or without cause and at any time. It should be noted that termination rights may not apply to certain types of investment structures (e.g., typical private markets funds). Circumstances which suggest an immediate review and a possible termination include, but are not limited to, the following:

a. Manager changes strategy or investment style;

b. Critical elements of the investment process have deteriorated;

c. Transaction costs are unreasonable;

d. Management fees are higher than similarly styled managers for similarly sized portfolios;

e. Manager is unable to meet the performance expectations within the risk tolerance specified;

f. Material organizational or personnel changes;

g. Manager is not complying with the applicable provisions of the Commission's SIOP; and

h. Manager is not complying with the applicable provisions of the Commission's AIP.

4. Delegation of Authority to CIO - State law requires that the AIP and SIOP contain a detailed description of the delegation of final authority to invest made by the Commission. The

Commission has delegated its final authority to invest to the CIO, subject to the oversight of the CEO, generally in the following amounts:

i. not to exceed 75 bps of plan value per investment for illiquid structures; and

ii. not to exceed 200 bps of plan value per investment for liquid structures.

The Commission's full Investment Authority Delegation Policy is set out in Section VI.

5. Policies and Procedures to Adapt Portfolio to Market Contingencies - State law requires that the AIP include policies and procedures providing flexibility in responding to market contingencies. The ranges included with the Commission's asset and sub-asset class allocation ranges established in Section III provide the CIO with extensive flexibility to adapt the portfolio to market conditions. Similarly, the Commission's Investment Authority Delegation Policy provides the CIO the ability to adapt the Portfolio to changes in market conditions. To the extent that the CIO deems the scope of the authority delegated to the CIO insufficient, the CIO with the approval of CEO may take action deemed necessary to protect the Portfolio in an extreme market environment. The CIO will promptly inform the Commission of any such actions.

6. Portfolio Rebalancing - The Commission delegates to the CIO or his designee the authority to execute manager and/or securities transactions to implement rebalancing, manage liquidity, or to otherwise manage exposures within the allowable ranges. As part of this delegation, the Commission expects the CIO to articulate, implement and provide reporting to the Commission regarding the Portfolio's rebalancing and exposure management activities as requested. A high-level summary of the rebalancing and exposure management guidelines include:

i. The asset allocation is reviewed on an ongoing (typically weekly) basis by Staff and the CIO to ensure that the Portfolio is within its allocation ranges and to identify appropriate actions necessary to maintain compliance and to provide for the Plan's liquidity needs.

ii. The goal of the rebalancing and exposure management activities is to implement the investment strategy at a reasonable cost within the targets and ranges established by the Commission, recognizing that constant rebalancing to the exact target may not be economically justifiable. The following guidelines are used:

a. Rebalancing is currently performed monthly unless a case has been made ***not*** to rebalance. Potential rebalancing activity is flagged for consideration based upon exposure reporting that is updated by RSIC's performance reporting staff. Rebalancing the portfolio incurs costs (trading commissions, bid-ask spread, and market impact) which are taken into consideration when rebalancing the Portfolio;

b. When an asset class reaches its minimum or maximum allocation, Staff will initiate rebalancing transactions to keep allocations within the approved ranges. Otherwise, Staff must seek Commission approval to remain outside the range; and

c. Concentration risk with respect to significant reliance on any single external manager is reviewed regularly by Staff. Mitigation of performance, operational, headline/reputational, or other fiduciary risks is typically achieved by maintaining a diversified allocation approach both within and across asset classes.

iii. RSIC Staff must balance the risks noted above with the economic benefits associated with a streamlined approach that uses fewer, larger allocations. Additional analyses of the costs and benefits of passive vs. active market exposure are an important input in these decisions.

D. Investment Manager Guidelines

1. General - In keeping with the responsibilities assigned to the CIO by State law and the Commission's Governance Policies, the Commission authorizes the CIO and his designees to develop and revise investment management guidelines for each internally and externally managed investment manager. In making this delegation, the Commission acknowledges that discretion in implementing the investment strategy, within the parameters of all applicable guidelines, will typically be granted to the Commission's investment managers. This discretion is usually limited to the selection of securities and the timing of transactions within the portion of the Portfolio allocated to each manager.

2. Funds of One - A Fund of One is an investment structure in which there is typically a majority investor in a specific vehicle or fund. The Commission or CIO as applicable may elect to use a Fund of One structure when the structure will have lower costs, customized exposure advantages, and/or other beneficial considerations. The CIO is responsible for the day-to-day investment responsibilities with respect to Funds of One, including providing affirmative or negative consent for underlying investments, as required.

3. Pooled or Commingled Funds:

i. Commingled investment vehicles can often provide lower costs and better diversification than can be obtained with a separately managed account pursuing the same investment objectives. However, commingled investment funds cannot customize investment policies and guidelines to the specific needs of individual clients. Recognizing these trade-offs, the Commission or the CIO, as applicable, may accept the policies of such funds in order to achieve the lower costs and diversification benefits of commingled vehicles, and exempt commingled investment vehicles from the requirements and guidelines of this policy if:

a. The investment practices of the commingled vehicle are consistent with the spirit of this policy and are not significantly different in letter; and

b. The benefits of using a commingled vehicle rather than a separate account are material.

ii. The Commission or CIO, as applicable, may structure a portfolio as a separate account that allows for the advantages of commingled vehicles, but with RSIC as the only investor. With international assets, commingled vehicles save the Commission from having to provide additional resources for currency and foreign custody issues as the manager will assume responsibility for these functions.

iii. If an investment mandate is structured through a commingled vehicle, the investment policies of that vehicle will be the legal governing policies of the investment of assets allocated to that vehicle.

4. Strategic Partnerships - The Commission may elect to establish Strategic Partnerships with certain asset managers who are believed to possess specific expertise, knowledge, and capabilities for a limited or broad range of investment strategies. The performance of each Strategic Partnership will be reviewed by the Commission periodically, with a more comprehensive review occurring approximately every 3 to 5 years. The investment approval and evaluation process within the Strategic Partnership is similar to that followed for other investments, however, in addition to passing RSIC's internal process, the investment must also be approved by the investment committee of the strategic partnership.

5. Trade Execution - For all accounts, the Commission expects the purchase and sale of its securities to be conducted in a manner designed to receive the best combination of price and execution. The Commission may evaluate policies that provide for the most efficient and effective trading process. The compliance with investment guidelines must be monitored by the investment managers on an ongoing basis and be based on then-current market values. Securities that, if purchased, would constitute a compliance violation may not be purchased. In the event of a compliance violation, the manager will be expected to promptly notify investment staff. If for some reason the manager does not believe that it is prudent to immediately bring the account back into compliance, the manager will be expected to present a justification as well as a proposal for bringing the account composition back into compliance.

E. Compliance with Section 9-16-320 of South Carolina Code:

1. S.C. Code Section 9-16-320 requires the Commission to meet at least once each fiscal quarter for the purpose of reviewing the performance of investments, assessing compliance with the annual investment plan, and determining whether to amend the plan.

2. The Commission has adopted a strategic calendar that sets a meeting schedule of five meetings per year with a least one meeting every fiscal quarter. The strategic calendar also contains standing agenda items for each meeting to ensure compliance with this Section to include:

i. Quarterly Investment Performance Review – at each meeting the Commission receives a report and presentation on the quarterly, fiscal year to date, one, five, and ten-year plan investment performance. The quarterly performance reports and presentations are based on the Portfolio Performance Reporting Framework described in Section III and are designed to provide the Commission with the ability to judge the absolute value of performance as well as the relative performance between the benchmark portfolios and actual portfolio's performance. The Commission also receives risk reports to judge the absolute and relative risk of the of these portfolios.

ii. AIP Compliance Review – At each meeting the Commission receives reports detailing compliance with the Annual Investment Plan to include:

a. A review of the asset class exposures and sub-asset class components of the portfolio to ensure compliance with the allowable ranges contained in Section III, Table 7, and to ensure adequate diversification of the portfolio and that the portfolio is not concentrated in any one industry sector, market sector, or issuer;

b. A review of the progress towards the Strategic Initiatives in Section IV;

c. Any significant market contingencies and review of any responsive action that resulted in a decision not to rebalance the portfolio pursuant to Section V.C.6 or any action taken to protect the Portfolio which fell outside the allowable ranges in Section III, Table 7;

d. Action resulting in significant cost savings to the portfolio;

e. Any material deviation from the general operational and investment policies, and

f. As part of an in-depth review of one of the Policy Portfolio asset classes at each meeting, a review of the asset class baseline and progress towards meeting the baseline.

iii. The Commission retains the authority to amend any portion of relating to the AIP requirements at any meeting and is required to consider amendments proposed by the CIO at its April meeting. However, if the Commission does not act to amend the AIP at any other meeting, it should be presumed that it determined not to amend the plan.

F. General Provisions Related to Alternative Investments

1. South Carolina law, the Employee Retirement Income Security Act of 1974 ("ERISA"), and the Uniform Management of Public Employee Retirement Systems Act of 1997 ("UMPERSA") each have similar or compatible, but not identical, definitions and responsibilities of fiduciaries with respect to managing and investing assets of retirement systems. For clarity and consistency, it is prudent for the Commission to declare standards for interpretation of certain terms used in these sources.

2. As relating to the use of alternative investment strategies, the "Plan Assets" of the Retirement System include the System's ownership interest in the following entities (e.g., a share or a unit), but do not include the underlying assets owned by the entity itself:

i. a registered investment company;

ii. a registered security that is widely held and freely transferable;

iii. an entity in which "benefit plan investors" hold less than 25% of the equity interest as defined and determined by ERISA §3(42);

iv. an "operating company" engaged in the production or sale of a product or service other than the investment of capital;

v. a "real estate operating company" or REOC (which actively manages and develops real estate consistent with U.S. Department of Labor ERISA regulations);

vi. a "venture capital operating company" or VCOC (which actively manages "venture capital investments" consistent with U.S. Department of Labor ERISA regulations); or

vii. a private investment partnership or offshore investment corporation the offering memorandum of which allows for the entity to take both long and short positions, use leverage and derivatives, and invest in many markets.

3. Whenever RSIC invests in an entity that does not hold Retirement System's assets, the decision to invest in the entity will be subject, *inter alia*, to the South Carolina fiduciary rules and ethics standards provided by state law, but the transactions engaged in by the entity generally will not be subject to the same rules.

4. RSIC will at times need to interpret statutes while implementing and administering the investment program. Whenever the South Carolina statutes are substantively similar to provisions of ERISA or UMPERSA, and to the extent practicable and consistent with South Carolina law and other principles of general application relating to public pension plans, RSIC intends to use (1) pertinent provisions of ERISA; (2) interpretive rules and regulations of the U.S. Department of Labor relating to ERISA; and (3) the Reporter's official comments to UMPERSA for guidance.

VI. Investment Authority Delegation Policy

A. Pursuant to Section 9-16-330(B) of the 1976 Code, the Commission delegates to the CIO the final authority to invest subject to the oversight of the CEO and the requirements and limitations of this policy. The size of any one investment made pursuant to this policy is limited to the percentage of total plan assets that applies to the particular asset class to which the investment pertains as provided in Section C of this policy and subject to any other limitation the Commission may place on this authority at any given time. The value of total plan assets to which the percentage limitations apply must be the estimated total value of plan assets included in the most recent quarterly investment performance report prepared pursuant to Section 9-16-90(A). For purposes of this policy, a co-investment is considered a separate and distinct investment from an investment in a commingled fund, fund of one structure, or an amount committed to a separately managed account and is separately subject to the limitations and requirements of this policy. Individual investments made in a separately managed account or a fund of one structure are not considered separate investments for purposes of this policy and are subject in aggregate to the limitations and requirements of this policy regardless of whether some degree of discretion is retained by staff regarding individual investments to be included in the applicable account.

B. The investment process for any investment made pursuant to this policy must be substantially similar to the investment process employed prior to the adoption of this policy, but for the requirement that the Commission approve the investment prior to closing the investment and must adhere to RSIC's Due Diligence Guidelines and Policies. Notwithstanding the authority granted by this policy, an investment must be presented to the Commission for its approval if it meets any of the following criteria:
   1. The investment is the initial investment in a new asset class;
   2. The majority of the underlying assets comprising the investment have not been previously included in the investment portfolio;
   3. The strategy to be employed by the investment manager is not substantially similar to an investment that has been previously subject to the Commission's investment due diligence process; or
   4. The investment strategy, other than in publicly traded assets, has important direct connections to South Carolina residents, state policymakers, or South Carolina focused businesses, and/or a majority of the assets of the investments would be principally located in South Carolina.

C. The amount of delegation for new investments approved pursuant to this policy shall not exceed 5% of the total value of Plan assets between regularly scheduled Commission meetings. The size of an individual investment made pursuant this policy is subject to the following limitations provided for the asset class applicable to the investment:
   1. Public Markets - 2% of the total value of plan assets, unless it is reasonable to believe that due to the particulars of the investment strategy that liquidating the investment would ordinarily require longer than ninety days and, in such case, the limit is 1% of the total value of plan assets, for:
      i. Global Public Equity,
      ii. Equity Options,
      iii. Portable Alpha,
      iv. Global Asset Allocation,

v. Mixed Credit,
vi. Emerging Market Debt,
vii. Other Opportunistic Strategies,
viii. Core Fixed Income, and
ix. Cash and Short Duration.

2. Publicly-Traded Real Estate - 1% of the total value of plan assets.
3. Private Markets - 75 bps of the total value of plan assets for:
    i. Private Equity,
    ii. Private Debt,
    iii. Private Real Estate,
    iv. Infrastructure, and
    v. Opportunistic Hedge Funds.
4. For purposes of this policy, the asset classes indicated in this section are as they are described in the Annual Investment Plan.

D. Pursuant to Section 9-16-330(B)(2), the closing documentation of any investment made pursuant to this policy must include the CEO's certification that the investment conforms to the amount and extent of delegation provided by this policy.

E. The Commission must be informed of a proposed investment to be made pursuant to this policy no less than three days before the closing of the investment and must be provided with all applicable documentation and reports produced or relied upon by staff when making the investment recommendation including, but not limited to:
1. investment due diligence report,
2. operational due diligence report,
3. key terms sheet,
4. memorandum and/or reports from the general or specialty consultant,
5. Internal Investment Committee action summary,
6. Completeness check certification, and
7. Final draft versions of pertinent legal documents, including the Investment contract, limited partnership agreement, and/or other applicable closing documents.

F. An investment made pursuant to this policy must be reviewed with the Commission at the next regularly scheduled Commission meeting.

G. The CIO must provide the Commission with an updated proposed investment pipeline on a monthly basis.

H. The delegation of the final authority to invest pursuant to this section includes the authority to terminate an investment manager if the investment was made pursuant to this policy or the amount of capital committed to the manager by the Commission would fall within the applicable limits provided in Section C. The CIO must approve any termination of a manager made pursuant to this policy, subject to the oversight of the CEO. The CIO must provide a memorandum to the Commission summarizing his justification for terminating the manager within three days of terminating the manager. The CIO must provide a review of the termination to the Commission at the next Commission meeting.

I. The Commission will review this policy annually to ensure that it remains relevant and appropriate, or when there has been an amendment to state law relevant to any section of this policy, or a Commission approved change in the responsibilities, duties or operations of the Commission or its Committee generally, or as otherwise deemed appropriate by the Commission.

J. No provision of this policy shall apply to the extent that it is in conflict with any provision of the Code of Laws of South Carolina, 1976, as amended. In the event of such conflict, the applicable Code provision shall apply in all respects.

K. This policy was adopted by the Commission on September 28, 2017, subject to final approval by the Chair of the incorporation of certain amendments into the policy. The Chair issued final approval of the policy on October 23, 2017.

VII. SECURITIES LITIGATION POLICY ("POLICY")

A. Purpose and General Principles

a. The purpose of this Policy is to set forth the South Carolina Retirement System Investment Commission's[1] guidelines with respect to securities litigation. Interests in securities litigation matters will be managed as assets of the South Carolina Retirement Systems Group Trust (the "Trust") with the goal of enhancing the long-term value of the Trust.

b. The Commission acknowledges that it has a fiduciary duty to take reasonable actions to pursue and collect on legal claims held as an asset of the Trust. The Commission also recognizes that most, if not all, of the securities litigation claims in which the Trust may have an interest will be pursued by law firms from the class action bar regardless of whether RSIC takes an active role in the litigation.

c. This Policy outlines the Commission's procedures for monitoring the Trust's portfolio for potentially actionable losses, protecting the Trust's interests in litigation related to portfolio losses, and maximizing recoveries attainable by the Trust from such actionable losses.

d. This policy consists of four sections: 1) a section relating to asset recovery as passive class members in U.S.-based securities actions; 2) a section for litigation of securities listed on domestic exchanges where RSIC deems active participation is warranted; 3) a section for litigation of securities listed on foreign exchanges; and 4) a section related to the monitoring process for both foreign and domestic claims in which the Trust takes an active role.

B. Part One: Securities Litigation Policy for Filing Proofs of Claim ("Passive Participation")

a. Under U.S. federal law, securities class action lawsuits function as "opt-out" cases. This means that the Trust does not need to participate as a named party in order to recover its *pro rata* share of a class action recovery so long as the certified class claims include the losses incurred by the Trust. This type of participation is called Passive Participation. When notified of a class action settlement in which the Trust has suffered a loss, RSIC need only submit a timely and valid proof of claim in order to be included in any recovery.

b. The Trust's custodial bank, The Bank of New York Mellon ("BNY Mellon"), is responsible for completing and filing all proofs of claim, including the necessary supporting documents and information in every securities class action pending in the U.S. in which the Trust has a direct interest (i.e., for Trust assets that are custodied at BNY Mellon ("In-Bank Assets")). BNY Mellon is not responsible for filing proofs of claim for, or otherwise reporting on the management of, securities class action litigation for assets that are not custodied at BNY Mellon ("Out-of-Bank Assets").

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[1] "Commission" refers to the commission of seven members responsible for managing the South Carolina Retirement System Investment Commission, as specified in S.C. Code of Laws Ann. Section 9-16-315.

"South Carolina Retirement System Investment Commission" or "RSIC" refers to the agency established by South Carolina law for the purpose of investing and managing all assets held in trust for the participants and beneficiaries of the state's five separate defined benefit plans.

c. BNY Mellon's claims filing responsibilities are set forth in more detail in the Service Level Description, dated July 21, 2019, between the Trust by and through RSIC and BNY Mellon (the "SLD"). The SLD outlines the process for: (i) identifying and reviewing all class action recoveries (whether by settlement or trial); (ii) providing timely notice of each settlement recovery to RSIC and the Commission; (ii) filing complete and accurate proofs of claim forms in a timely fashion on behalf of the Trust; (iv) providing quarterly reports outlining all claims filed on behalf of the Trust during the quarter; and (v) providing quarterly reports identifying all securities litigation proceeds recovered by the Trust directly or on its behalf. In the event of a claim involving securities that are not identified by a specific security identifier (e.g., CUSIP, ISIN, SEDOL, etc.), BNY Mellon will use commercially reasonable efforts to identify impacted securities recorded in BNY Mellon's records relating to the security named in the documentation received. In the event that BNY Mellon is unable to file a claim on the Trust's behalf (e.g., involving anti-trust claims), BNY Mellon, or in some cases a third party, will forward the relevant claim information to RSIC, and RSIC will utilize the services of third-party claims filing services that specialize in analyzing and filing such claims.

C. Part Two: Securities Litigation Policy for Securities Listed on a Domestic Exchange

a. While the Commission has a fiduciary obligation to take reasonable action to collect on legal claims held by the Trust, the Trust, acting by RSIC, may need to engage in active participation ("Active Participation") on occasion. This type of participation involves serving as lead plaintiff in cases in the domestic exchange context. Active Participation in domestic securities class actions must be balanced with the Commission and RSIC's primary obligation to maximize the investment returns of the Trust. This determination must also be weighed against the additional costs and burden on staff that may result by becoming lead plaintiff in a securities litigation case as well as the recognition that the Trust's position as a lead plaintiff will not, in and of itself, entitle the Trust to any greater recovery.

b. **Authority to Seek Lead Plaintiff Designation:** Due to the time-sensitive nature of electing to seek a lead plaintiff designation and the Chief Executive Officer's ("CEO") statutory designation as the chief administrative officer of RSIC, the Commission, through this Policy, has delegated to the Executive Leadership Team the authority to elect to seek a lead plaintiff designation where appropriate, reasonable, and prudent to protect the interests of the Trust.

c. **Decision-Making Guidance for Active Participation:** The Executive Leadership Team will generally consider seeking lead plaintiff status ("Active Participation") in a domestic class action when: (i) the Trust's projected losses exceed $5 million U.S. Dollars (the "Loss Threshold"); or (ii) when the loss is substantial but less than the Loss Threshold and there are significant special factors justifying the Trust's involvement. The determination of special factors will be made in the discretion of the Executive Leadership Team.

d. **Monitoring Procedures:** In addition to the reporting provided by BNY Mellon for class action litigation involving In-Bank Assets, the Trust may retain three or more securities litigation monitoring law firms (the "Firms") to advise RSIC via periodic reporting of recently-filed class actions in which the Trust has sustained losses and which appear to have merit. The Firms will generally be engaged for up to five years, with the option to terminate earlier or renew for additional periods. Each of the Firms will provide reporting on at least a quarterly basis outlining all recently filed claims in which the Trust has sustained losses. Additionally, the Firms will submit written memos to RSIC on certain cases, including any cases exceeding the Loss Threshold, regarding the alleged facts of the case, the estimated losses, the Firm's view on the merits of the allegations, and a recommendation as to whether RSIC should seek a lead plaintiff position in the matter. RSIC Legal will perform an initial review of all reports and memos received from the Firms. Any reports or memos indicating a loss that exceeds the Loss Threshold will be forwarded to the CLO for further review. The CLO will review the reports and will follow up with the Firms that have provided the memorandum to get additional insight and information about potential claims exceeding the Loss Threshold ("Reviewable Claims") and will make additional inquiries or conduct additional research as needed.

e. After review by the CLO, the CLO will confer with the Executive Leadership Team regarding the merits of Reviewable Claims, including the projected losses incurred by the Trust, the specifics of the related investment(s), available staff resources, and the recommendations of the Firms regarding whether the Trust should seek a lead plaintiff position. Any decision to seek a lead plaintiff designation for a claim exceeding the Loss Threshold or based on special circumstances must be made by a unanimous vote of the Executive Leadership Team. The Executive Leadership Team will notify the Chair and Vice- Chair of the Commission about any decision to seek a lead plaintiff position and will update the Commission via reporting to the Commission's secure portal.

f. **Selection of Outside Counsel for Securities Litigation** If the Executive Leadership Team determines that it is prudent to hire one of the Firms or other legal counsel to represent the Trust in a securities litigation action to protect the assets of the Trust, all selection of counsel and retainer agreements shall be negotiated, executed, and monitored by the CEO with assistance from the CLO. The CEO may engage one of the Firms hired to monitor the Trust's portfolio, or the CEO may seek to engage other counsel after consultation with the CLO and notice and consultation with the Office of the South Carolina Attorney General, as required by S.C. Code Ann. Section 9-16-315(I). When RSIC first engages the Firms, RSIC will pre-negotiate a proposed engagement agreement for potential litigation, which must be approved by the CEO.

D. Part Three: Securities Litigation for Securities Listed on a Foreign Exchange

a. Due to the 2010 Supreme Court case, *Morrison v. National Australia Bank Ltd.*,[2] investors no longer have the protections of U.S. securities laws for securities that were purchased on a non-U.S. exchange. Unlike the U.S. class action process, foreign securities actions generally require investors to join as a named-plaintiff or "opt-in" at the commencement of the case in order to be entitled to a share of any recovery. This "opt-in" process requires affirmative decisions early in the process to join the lawsuit in order to participate in any recovery. In many cases, investors may be required to make these decisions before a foreign action is even filed.

[2] *Morrison v. National Australia Bank Ltd.,* 561 U.S. 247 (2010).

b. **Decision-Making Guidance for Active Management:** Because there is rarely an option for passive participation in foreign securities actions, the review for participation in these actions differs from those explained in Part Two of this Policy. The CLO will review notices of potential claims in foreign securities actions and will review recommendation memos received from the Firms or other sources in those cases where the loss threshold exceeds $1 million (the "Foreign Loss Threshold"). In foreign jurisdictions, various groups, including non-law firm litigation funding organizations, may act as a funding source for the litigation and work with a certain legal team to initiate litigation. In some cases, the group that first files a lawsuit may become a founding group ("Founding Group"). Founding Groups may impose differing terms and conditions in order to participate in a lawsuit. The CLO will review all available factors relating to participating in foreign actions for claims exceeding the Foreign Loss Threshold, including but not limited to: (i) the amount of the loss; (ii) the potential litigation fees; (iii) the litigation funding requirements; (iv) whether more than one litigation funding group is proposing participation; (v) the risk of adverse costs; (vi) the legal merits of the case; (vii) the contractual requirements for joining and/or bringing a claim; and (viii) the potential cost of staff's time. . After reviewing the above factors and the documentation required to elect to participate in the applicable foreign jurisdiction, the CLO will make a recommendation to the CEO on whether to participate, and if applicable, which Founding Group to elect based on the most suitable contract terms available for the Trust. The CEO, after reviewing the CLO's recommendation, will elect (A) whether or not to pursue participation in foreign litigation that exceeds the Foreign Loss Threshold; and (B) which funding group to select based on the terms and legal requirements of each. The CLO, working with the Firm(s), as applicable, will negotiate the required documentation and retain the right to change a recommendation to participate if suitable contract terms cannot be negotiated with the Founding Group.

E. Part Four: Litigation Monitoring for Active Participation in Domestic and Foreign Litigation

a. The CEO, acting via the CLO, will monitor any pending domestic or foreign cases in which RSIC is actively participating. The CLO will request quarterly written status updates from any Firms representing RSIC in Active Participation cases. The CLO will actively participate in discussions with the Firms regarding any participation by RSIC Staff or document production needs. The CEO and CLO will be actively involved in settlement discussions for any domestic litigation action. The CLO will submit periodic updates to the CEO and the Commission regarding such cases. In accordance with the CEO's statutory authority as chief administrative officer of the Commission, the CEO retains the ultimate authority related to the direction of any class action litigation and/or settlement pursuant to this Policy. The CEO may consult the Commission on any matter related to the initiation of or conduct of any lawsuit pursuant to this Policy. The CEO shall have full authority to approve a proposed settlement of any litigation. In addition, the CEO shall have full authority to execute all contracts, legal documents, settlements, certifications, and authorizations required to pursue litigation authorized by the Executive Leadership Team.

F. The Commission shall review this policy at least once every three (3) years to ensure that it remains relevant and appropriate.

VIII. Placement Agent Policy

A. Purpose. It is the intent of this Policy to comply with S.C. Code Ann. §9-16-100, which prohibits compensation being paid to a Placement Agent (as defined below) as a result of an investment by the Retirement System (as defined below).

B. Definitions. For purposes of this Policy, the following capitalized terms will have the defined meaning set forth below:

- **a.** Pursuant to §9-16-100(B), a "Placement Agent" means any individual directly or indirectly hired, engaged, or retained by, or serving for the benefit of or on behalf of an external manager or an investment fund managed by an external manager and who acts or has acted for compensation as a finder, solicitor, marketer, consultant, broker, or other intermediary in connection with making an investment with or investing in a fund managed by the external investment manager.
- **b.** "Placement Agent Policy Compliance Letter" means that letter which will be requested from prospective external investment management firms in accordance with the terms of this Policy.
- **c.** "Policy" means this Placement Agent Policy.
- **d.** "Retirement System" means the South Carolina Retirement Systems Group Trust.
- **e.** "RSIC" means the South Carolina Retirement System Investment Commission.

C. Procedure

- **a.** RSIC staff will inform prospective external investment management firms ("Investment Managers") as to the RSIC's Placement Agency Policy and statutory requirements as soon as practicable after RSIC staff begins the due diligence review of any potential investment. The RSIC staff member leading the due diligence review for the investment is responsible for sending written notice (paper, fax or email) to the Investment Manager requesting a Placement Agent Policy Compliance Letter. If a copy of this Policy has not already been provided to the Investment Manager, then this Policy will be made available to the Investment Manager prior to or at the time notice is given to the Investment Manager.
- **b.** The Placement Agent Policy Compliance Letter must be included in the RSIC investment Due Diligence Report packet.
- **c.** Investments will not be voted on by the Commission, Internal Investment Committee, or otherwise approved pursuant to RSIC policies, prior to receipt of the completed Placement Agent Policy Compliance Letter and confirmation from RSIC compliance staff that the letter is sufficient per Section G below.
- **d.** The following entities must complete the Placement Agent Policy Compliance Letter as outlined below:
    - **i.** Investment Managers that have a direct contractual investment management relationship with the RSIC or with an investment vehicle in which the RSIC is invested.
    - **ii.** Investment Managers that have an indirect contractual investment management relationship with the RSIC through an investment vehicle that invests in funds or other pooled investment vehicles or other assets.

D. Placement Agent Policy Compliance Letter. The Investment Manager will provide disclosure in the form of a letter addressing all requirements specified below:

- **a.** Certification that, in compliance with §9-16-100, no Placement Agent (as defined by State law) received, or will receive, compensation in connection with the RSIC making an investment with or investing in a fund managed by the Investment Manager.
- **b.** Representation that the Investment Manager has reviewed the applicable law and has not relied on the counsel or advice of RSIC or any employee, representative, agent or officer of RSIC regarding the interpretation and application of the applicable law.
- **c.** Representation that all information contained in the Placement Agent Policy Compliance Letter is true, correct and complete in all material respects.

E. Open Records Law. RSIC may be required to disclose information in the Placement Agent Policy Compliance Letter under the South Carolina Freedom of Information Act.

F. Investments with Separate Account Investment Management Agreements ("IMAs"). If, after closing, the RSIC determines that the Placement Agent Policy Compliance Letter contains a material inaccuracy or omission, the RSIC will, to the fullest extent possible, seek the option, in its sole discretion and without liability to the Investment Manager or any third party, to terminate the IMA and to pursue all remedies that may otherwise be available to the RSIC without incurring any penalty under any agreement to which it is a party.

G. Investments in commingled investment structures (LPAs, LLCs, Trusts, etc.). The RSIC will endeavor to have provisions incorporated into the transaction documents for commingled investment structures which would permit the RSIC to take those actions described in the next sentence. If, after closing, the RSIC determines that the Placement Agent Policy Compliance Letter contains a material inaccuracy or omission, the RSIC will seek to obtain the option, in its sole discretion and without liability to the commingled investment structure, the General Partner or equivalent management entity, any other investor in the structure or third party, to cease making further capital contributions and/or direct payments to the investment and to pursue all remedies that may otherwise be available to the RSIC without being deemed to be a defaulting Limited Partner under the transaction documents and without incurring any other penalty under any agreement to which it is a party.

H. Review. RSIC's compliance staff will review Placement Agent Policy Compliance Letters and will determine whether each letter is sufficient. Any questions regarding the sufficiency of the letter will be referred to the RSIC legal department and will be reported to the CIO and applicable RSIC Staff.

I. Staff Contact. RSIC staff will provide notice about the prohibition in the state law to any party that contacts RSIC staff regarding a potential investment and appears to be acting in the role of a Placement Agent.

J. Obligation to Update. It is the Investment Manager's obligation to promptly inform RSIC staff of any material changes to a prior-filed Placement Agent Policy Compliance Letter, and to submit an updated Placement Agent Policy Compliance Letter where warranted prior to the RSIC's closing on an investment.

K. Review and History

- **a.** The Commission will review this policy at least every three years to ensure that it remains relevant and appropriate, or when there has been an amendment to state law relevant to any section of this policy, or a Commission approved change in the responsibilities, duties, or operations of the Commission or its committees generally, or as otherwise deemed appropriate by the Commission.
- **b.** No provision of this policy shall apply to the extent that it is in conflict with any provision of the Code of Laws of South Carolina, 1976, as amended. In the event of such conflict, the applicable Code provision shall apply in all respects.
- **c.** This policy was initially adopted on September 20, 2012.
- **d.** This policy was amended on June 22, 2017 and will take effect on July 1, 2017.

IX. SUDAN DIVESTMENT POLICY

A. Background. The State of South Carolina has enacted a Sudan divestment law, codified at S.C. Code Ann. §9-16-55 ("Act"). The uncodified preamble to the Act notes that "[d]ivestment is a course of last resort that should be used sparingly and under extraordinary circumstances," but states that "the genocide occurring in the Sudan is reprehensible and abhorrent," warranting this type of legislative response. The Act, which applies solely to the South Carolina Retirement Systems Group Trust ("Group Trust") managed by the South Carolina Retirement System Investment Commission ("Commission" as the governing body, "RSIC" as the agency), sets forth various criteria that are to be considered by the Commission in making the determinations required by the Act.

B. Purpose. The purpose of this Sudan Divestment Policy ("Policy") is to document the manner in which the Act is administered. The Commission has the exclusive authority to invest and manage the assets of the Group Trust pursuant to S.C. Code Ann. §9-16-20. The Commission also has the fiduciary duty to manage the assets of the Group Trust solely in the interests of the retirement systems, participants, and beneficiaries. The Commission must discharge these responsibilities in a manner consistent with all applicable statutes, regulations, and policies, including the Act.

C. Definitions. The Act utilizes the following defined terms:

- **a.** "Active Business Operations" means a Company engaged in Business Operations that provide revenue to the Government of Sudan or a Company engaged in Oil-Related Activities.
- **b.** "Business Operations" means maintaining, selling, or leasing equipment, facilities, personnel, or any other apparatus of business or commerce in Sudan, including the ownership or possession of real or personal property located in Sudan.
- **c.** "Company" means a sole proprietorship, organization, association, corporation, partnership, venture, or other entity, its subsidiary or affiliate that exists for profit-making purposes or to otherwise secure economic advantage. "Company" also means a Company owned or controlled, either directly or indirectly, by the Government of Sudan, that is established or organized under the laws of or has its principal place of business in the Sudan.
- **d.** "Government of Sudan" means the Government of Sudan or its instrumentalities as further defined in the Darfur Peace and Accountability Act of 2006.
- **e.** "Investment" means the purchase, ownership, or control of stock of a Company, association, or corporation, the capital stock of a mutual water Company or corporation, bonds issued by the government or a political subdivision of Sudan, corporate bonds, or other debt instruments issued by a Company.
- **f.** "Military Equipment" means weapons, arms, or military defense supplies.
- **g.** "Oil-Related Activities" means, but is not limited to, the export of oil, extracting or producing oil, exploration for oil, or the construction or maintenance of a pipeline, refinery, or other oil field infrastructure.
- **h.** "Public Employee Retirement Funds" means those assets as defined in §9-16-10(1).
- **i.** "Scrutinized Companies" means any of the following:

i. The Company is engaged in Active Business Operations in Sudan; and
ii. The Company is engaged in Oil-Related Activities or energy or power-related operations, or contracts with another Company with Business Operations in the oil, energy, and power sectors of Sudan, and the Company has failed to take Substantial Action related to the Government of Sudan because of the Darfur genocide; or
iii. The Company has demonstrated complicity in the Darfur genocide.
iv. The Company is not engaged in Oil-Related Activities and lacks significant Business Operations in the eastern, southern, and western regions of Sudan; and
v. The Company is engaged in Oil-Related Activities or energy or power-related operations, or contracts with another Company with Business Operations in the oil, energy, and power sectors of Sudan, and the Company has failed to take Substantial Action related to the Government of Sudan because of the Darfur genocide; or
vi. The Company has demonstrated complicity in the Darfur genocide.
vii. The Company supplies Military Equipment within the borders of Sudan.[3]

j. "State" means the State of South Carolina.
k. "Substantial Action" means a boycott of the Government of Sudan, curtailing business in Sudan until that time described in Section I of this Policy, selling Company assets, equipment, or real and personal property located in Sudan, or undertaking significant humanitarian efforts in the eastern, southern, or western regions of Sudan.
l. "Sudan" means the Republic of the Sudan, a territory under the administration or control of the Government of Sudan, including, but not limited to, the Darfur region, or an individual, Company, or public agency located in Khartoum, northern Sudan, or the Nile River Valley that supports the Republic of the Sudan.

D. Identification of Companies

a. Identifying Scrutinized Companies. RSIC Staff ("Staff") has engaged the services of a specialized research firm ("Advisor") to (i) identify companies doing business in Sudan, as defined in the Act, and (ii) provide Staff with a list of such Scrutinized Companies ("Scrutinized Companies List").
b. Updates to Scrutinized Companies List. Staff shall ensure that the Scrutinized Companies List is updated on or about January 1 and July 1 of each year.

E. Engagement

a. Determining Scrutinized Status. For each Company identified by the Advisor pursuant to Section D of this Policy, RSIC (either via Staff or the Advisor) shall send a written notice informing the Company that it may become subject to divestment by RSIC. The notice

[3] If a Company provides equipment within the borders of Sudan that may be readily used for military purposes, including but not limited to, radar systems and military-grade transport vehicles, there is a strong presumption against investing in the Company unless that Company implements safeguards to prevent the use of that equipment for military purposes.

shall offer the Company the opportunity to clarify its Sudan-related activities within 90 days in order to avoid qualifying for potential divestment.

b. Compliance. If, following RSIC's notification (either via Staff or the Advisor) to a Company pursuant to Section E. a. of this Policy, that Company ceases the activities that caused the Company to be added to the Scrutinized Companies List, as determined by the Advisor, the Company shall be removed from the Scrutinized Companies List, and the provisions of this Section E shall cease to apply to the Company unless it resumes the activities that caused the Company to be added to the Scrutinized Companies List.

F. Determinations to be made by the Chief Investment Officer

a. Delegation to the Chief Investment Officer. The Commission has delegated authority to the Chief Investment Officer ("CIO") to, in consultation with RSIC's Chief Executive Officer, make the determinations required under the Act and to take actions necessary to implement this Policy.

b. General. If, following RSIC's engagement with a Company pursuant to Section E. a. of this Policy, the Company continues to be a Scrutinized Company, Staff will present the CIO with detailed information gathered from the Advisor, affected investment managers, and others regarding the Company, its Business Operations, the Group Trust's holdings, and any other information required by the Act and this Policy. The CIO will make determinations as to (i) whether Staff should sell, redeem, divest, or withdraw the Group Trust's interests in the Company, and (ii) the timing of any such sale, redemption, divestment, or withdrawal. The CIO will also make the determinations described in Section I of this Policy.

G. Prohibition. RSIC shall not use Public Employee Retirement Funds to acquire new Investments in Companies on the Scrutinized Companies List, except as provided in this Policy.

H. Permissible Investments under the Act

a. The Act does not apply to the following types of Investments:

i. Investments in a Company that is primarily engaged in supplying goods or services intended to relieve human suffering in Sudan;

ii. Investments in a Company that promotes health, education, journalistic, or religious activities in or welfare in the western, eastern, or southern regions of Sudan;

iii. Investments in a United States Company that is authorized by the federal government to have Business Operations in Sudan; and

iv. Investments that constitute indirect beneficial ownership through index funds, commingled funds, limited partnerships, derivative instruments, or the like.

b. In developing the Scrutinized Companies List, the Advisor shall determine, in good faith and with due professional care, whether any of the foregoing exemptions and exclusions set forth in the Act apply.

I. Determinations required to be made by the CIO pursuant to §9-16-55(D)(1). The Act states that nothing in the Act "requires the [C]ommission to take action as described in [the Act] unless the

[C]ommission determines, in good faith, that the action described in [the Act] is consistent with the fiduciary responsibilities of the [C]ommission as described in [Title 9, Chapter 16 of the Code] and there are appropriated funds of the State to absorb the expenses of the [C]ommission to implement this [Act]." §9-16-55(D)(1). Accordingly, whenever the CIO is asked to consider taking action under the terms of the Act or this Policy, Staff will assist the CIO in making the determinations required to be made as described in this Section.

J. Reporting. Staff shall, following the close of RSIC's fiscal year, prepare a formal report to the Commission regarding actions taken pursuant to the Act. RSIC shall also publish the report. The report shall include all of the following information with respect to the previous fiscal year:

- **a.** The Scrutinized Companies List;
- **b.** A list of all Companies added to or removed from the Scrutinized Companies List;
- **c.** A summary of correspondence with Companies engaged by RSIC under the Act;
- **d.** A list of all Companies that RSIC will continue to engage concerning their Business Operations in Sudan;
- **e.** A summary of all Investments sold, redeemed, divested, or withdrawn under the Act; and
- **f.** A list of all Investments that were retained by RSIC pursuant to a determination by the CIO as set forth in Section I.

K. Expiration. The restrictions in the Act shall apply only until:

- **a.** The Government of Sudan halts the genocide in Darfur for twelve months as determined by both the Department of State and the Congress of the United States; or
- **b.** The United States revokes its current sanctions against Sudan.

L. Indemnification. The Act provides that present and former board members, officers, and employees of the State Fiscal Accountability Authority, present, future, and former directors, officers, and employees of the South Carolina Public Employee Benefit Authority, the Commission, and contract investment managers retained by the Commission must be indemnified from the general fund of the State and held harmless by the State from all claims, demands, suits, actions, damages, judgments, costs, charges, and expenses, including court costs and attorney's fees, and against all liability, losses, and damages of any nature whatsoever that these present, future, or former board members, officers, employees, or contract investment managers shall or may at any time sustain by reason of any decision to restrict, reduce, or eliminate Investments pursuant to the Act.

X. LONG-TERM ANNUALIZED RETURN AND VOLATILITY EXPECTATIONS

(NOTE: This section will be updated with 2020 Capital Market Expectations prior to the March 2020 Commission meeting. Current 2019 Capital Market Expectations can be found in the February 2019 Combined Commission Meeting Materials at https://www.rsic.sc.gov/_documents/2019.02.21%20Combined%20Commission%20Materials.pdf).

SOUTH CAROLINA RETIREMENT SYSTEM INVESTMENT COMMISSION

CONSOLIDATED ANNUAL INVESTMENT PLAN AND STATEMENT OF INVESTMENT OBJECTIVES AND POLICIES

As amended and adopted on________________________, 2020

Role of this Document

The State of South Carolina administers five defined benefit pension plans: the South Carolina Retirement System ("SCRS"), the Police Officers Retirement System ("PORS"), the Retirement System for Members of the General Assembly ("GARS"), the Retirement System for Judges and Solicitors ("JSRS"), and the South Carolina National Guard Supplemental Plan ("SCNG") (together, the "Plan").

The South Carolina General Assembly established the Retirement System Investment Commission ("RSIC") as a state agency in 2005 and provided it with the exclusive authority to invest and manage the assets of the Plan which it does in one group trust. RSIC is governed by an eight-member board (the "Commission"). The Commission is a co-fiduciary of the assets of the Plan along with the South Carolina Public Employee Benefit Authority Board ("PEBA").

State law requires the Commission ~~Retirement System Investment Commission ("RSIC")~~ to adopt a Statement of Investment Objective and Policies ("SIOP") and to review it annually and to either amend it or reaffirm it. The SIOP establishes investment and performance objectives, policies and guidelines, roles, responsibilities, and delegation of authority for the management of plan assets. State law also requires RSIC's Chief Investment Officer ("CIO") to develop an Annual Investment Plan ("AIP") which must be presented to and adopted by ~~RSIC's board ("~~the Commission ~~")~~ prior to May 1st of each year. Pursuant to state law, relevant portions of the SIOP may constitute parts of the AIP.

In order to ensure consistency and agreement between the SIOP and AIP, the Commission has consolidated the requirements of both into one document which it will review annually prior to May 1st. As part of the annual review, the Commission will amend or reaffirm, as it deems appropriate, those portions of this document intended to meet the requirements of the SIOP and the Commission will consider the CIO's recommendation of any necessary changes to those portions of this document intended to meet the requirements of the AIP. In order to assist the Commission and the CIO in meeting their respective annual requirements, RSIC's ~~the~~ Chief Executive Officer ("CEO") will provide a guide that designates those portions of this document that are required by the SIOP and those that are required by the AIP.

TABLE OF CONTENTS

I. STRATEGIC PURPOSE, INVESTMENT OBJECTIVE, AND BELIEFS

A. Purpose

The goal of the State's five defined benefit plans is to provide a lifetime of benefits in retirement to those who have dedicated a career of public service to the State and its political subdivisions. The funding to secure this promise of benefits comes from two sources - contributions made by the employee and employer and the investment return earned on the assets of the Plan~~five plans~~. The General Assembly has provided the Retirement System Investment Commission with the sole authority to invest and manage the assets of the Plan~~five plans~~. Thus, R~~I~~SIC's purpose is to earn an investment return that~~, that when combined with contributions,~~ aids~~fulfills~~ in fulfilling the promise of benefit payments to our current and future retirees and their beneficiaries.

B. Investment Objective

RSIC's primary investment objective is to design an investment program that produces a long-term rate of return that when added to contributions, funds current and future benefit payments. In doing so, RSIC must remain mindful that the Commissioners, CEO, and CIO are named fiduciaries to the Plan's beneficiaries and must carry out their respective responsibilities to invest and manage the Plan's assets in keeping with the highest duty of care the law recognizes. As a result, the return the investment program seeks to achieve should involve taking a prudent amount of investment risk.

Further, RSIC cannot design an investment program in isolation, but must instead design a program consistent with the realities of the Plan that is guided by the Plan's particular design, structure, and risk factors. An important guiding consideration is that the Plan is mature and as a result experiences net negative cash flows, in that the amount of annual contributions into the Plan is less than the annual amount of benefit payments flowing out of the Plan. As a result, the investment program must be designed in a way to provide sufficient liquidity to fund the net benefit payments to current retirees.~~. In order to achieve this objective,~~

The investment program also must be guided by the consideration that the respective systems comprising the Plan are underfunded, in that the discounted liabilities of each system exceed the actuarial value of each system's assets. The 2019 Actuarial Valuation report from the Plan's actuaries shows the funded status of each system as:

SCRS	PORS	GARS	JSRS	SCNG
54.4%	62.7%	48.8%	41.8%	46.8%

The underfunded nature of the Plan presents the risk that Plan's assets will be insufficient to support future benefit payments. As a result, the investment program must also be designed in a way to grow the assets of the Plan to support payments to future retirees and their beneficiaries. The General Assembly did take significant action to address the underfunded nature of the Plan in the 2017 Pension Reform Bill. The 2017 Pension Reform Bill requires that the UAAL amortization period for SCRS and PORS be reduced by one year each fiscal year until each plan reaches a twenty-year amortization period. In order to support meeting this requirement, the General Assembly significantly increased contributions into the SCRS and PORS.

Thus, RSIC is tasked with designing an investment portfolio that balances the need to provide sufficient liquidity to fund current net benefit payments while also growing the portfolio in order to aid in providing benefits to future retirees.
~~RSIC must design an asset allocation and manage the investment portfolio in a manner that provides sufficient liquidity to fund benefit payments to current retirees while also growing the plan in order to meet the obligation to future beneficiaries. RSIC's investment objective is achieved by earning the investment return necessary to make our plan work and as a result investment decisions should be guided by the particular design, structure, and risk factors of the plan.~~

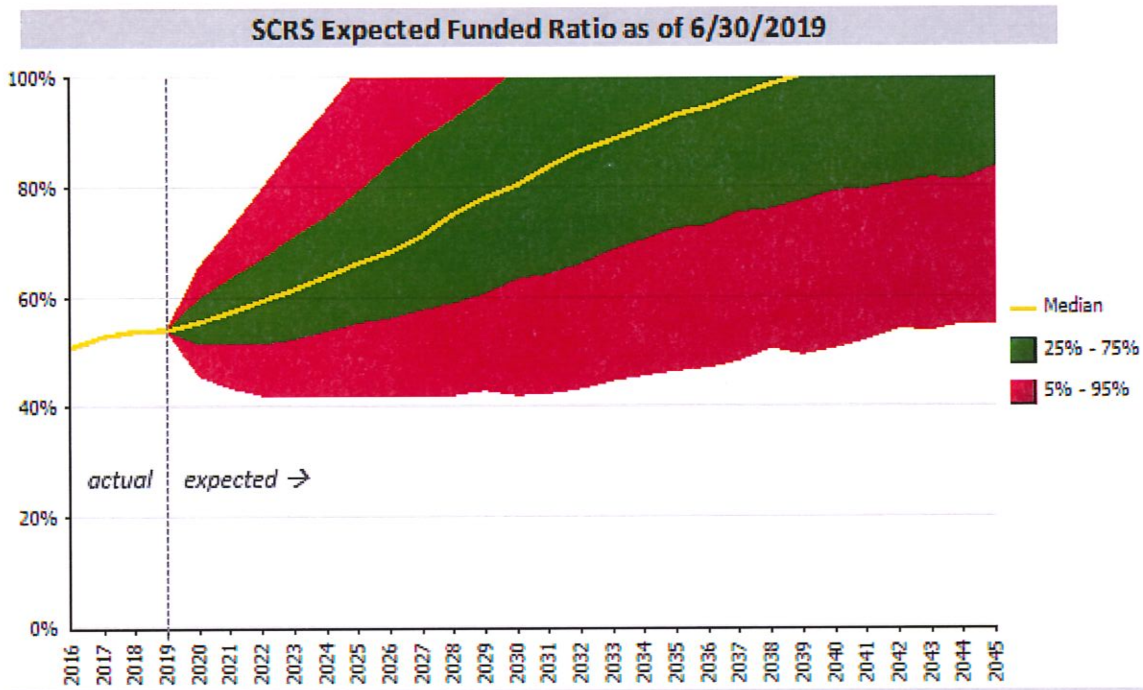
~~A guiding factor is achieving the General Assembly's funded status expectation set out in the 2017 Pension Reform Bill. The 2017 Pension Reform Bill requires that the UAAL amortization period for SCRS and PORS to be reduced by one year each fiscal year until each plan reaches a twenty-year amortization period. As of the 2018 Actuarial Valuation, the amortization period for SCRS was twenty-two years which was ahead of the 2017 Pension Reform Bill's requirement of twenty-nine years. As for PORS, the amortization period was twenty years which was ahead of the Pension Reform Bill's requirement of twenty-nine years.~~

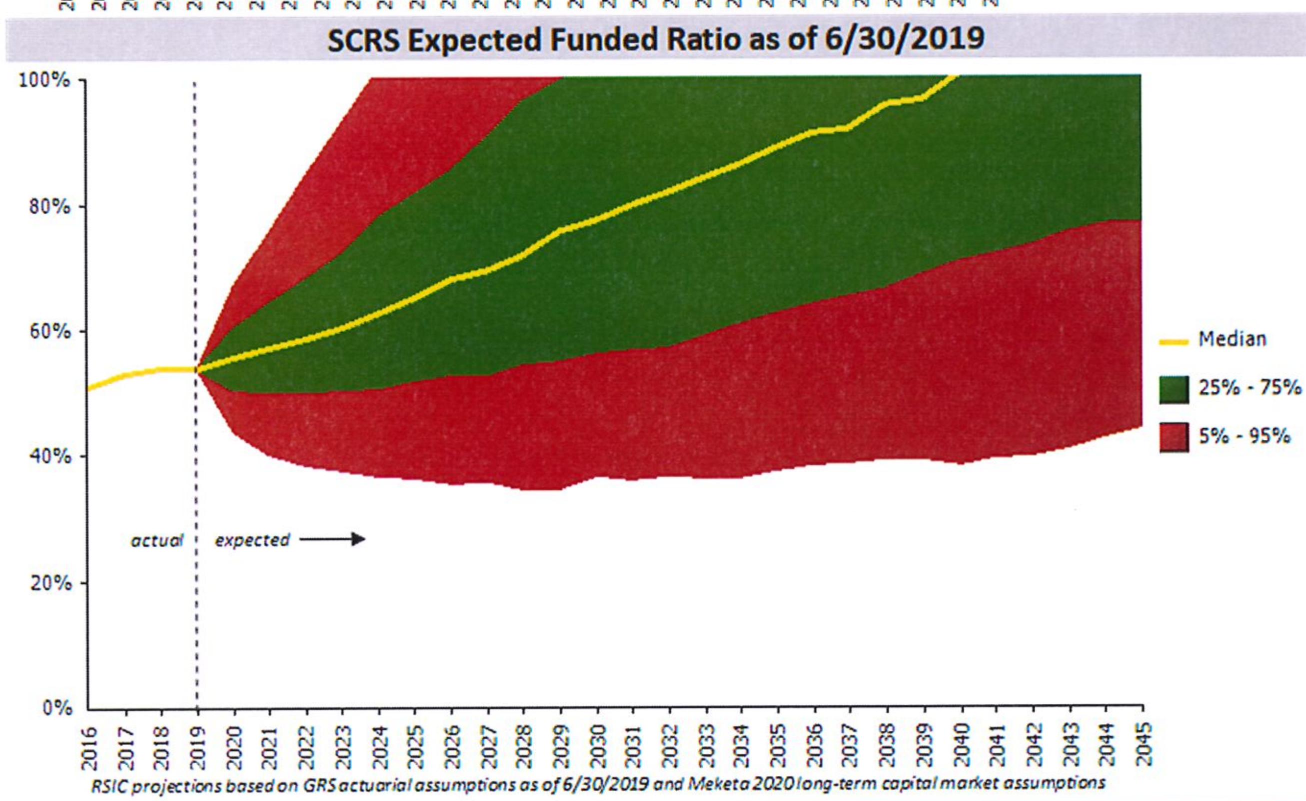
Another guiding factor is that the General Assembly has set 7.25 percent as the~~-~~ assumed annual rate of investment return on the Plan's assets. The assumed rate of return not only serves as the discount rate to determine the net present value of the Plan's liabilities, but also serves as the primary driver of the Plan's funding policy. Investment performance relative to the assumed rate of return determines whether contribution rates are sufficient to meet the funding goals and requirements of the Plan.

RSIC realizes that investment performance will not meet or exceed the assumed rate of return every year, but rather ~~7.25 percent every year. However, RSIC~~ strives to construct an investment portfolio that will meet or exceed this rate of return over time at a prudent level of market risk, in keeping with its fiduciary to duty to the Plan's beneficiaries. ~~necessary, when combined with contributions, to provide benefit payments to current retirees and to meet the funded status goals for the plan.~~ Given the historically low interest rate environment, RSIC recognizes that achieving a long-term rate of 7.25 percent ~~this goal~~ requires investing the portfolio in a greater percentage of assets with higher expected volatility ~~taking on more investment risk~~ than would otherwise be required if interest were at historic average~~s~~ levels. As a result, the investment portfolio will experience greater market volatility which not only impacts the probability of the investment return exceeding the assumed rate over time, but also correspondingly impacts the probability of reaching the funded status goals of the Plan without requiring additional contribution rate increases.

As a result, RSIC works ~~7.25 percent every year. However, RSIC strives to construct an investment portfolio that will meet or exceed this rate of return over time at a prudent level of market risk. The objective is~~ to design an investment program that maximizes the probability that the P~~p~~lan will meet the General Assembly's funded status goals, but also given the high level of contribution rates, strives to ~~and~~ minimize the probability that the P~~p~~lan will require additional contributions above those already required ~~by statute~~. RSIC believes that it can design an investment program with a significant probability of meeting or making significant progress towards both concerns ~~these objectives can be accomplished~~ as demonstrated by the stochastic analysis of our funded status expectations for ~~the South Carolina Retirement System (~~SCRS~~)~~ set out in Table 1~~A~~ below and a similar analysis of our contribution rate expectations set out in Table 2~~B~~ below.

TABLE 1





~~TABLE A~~

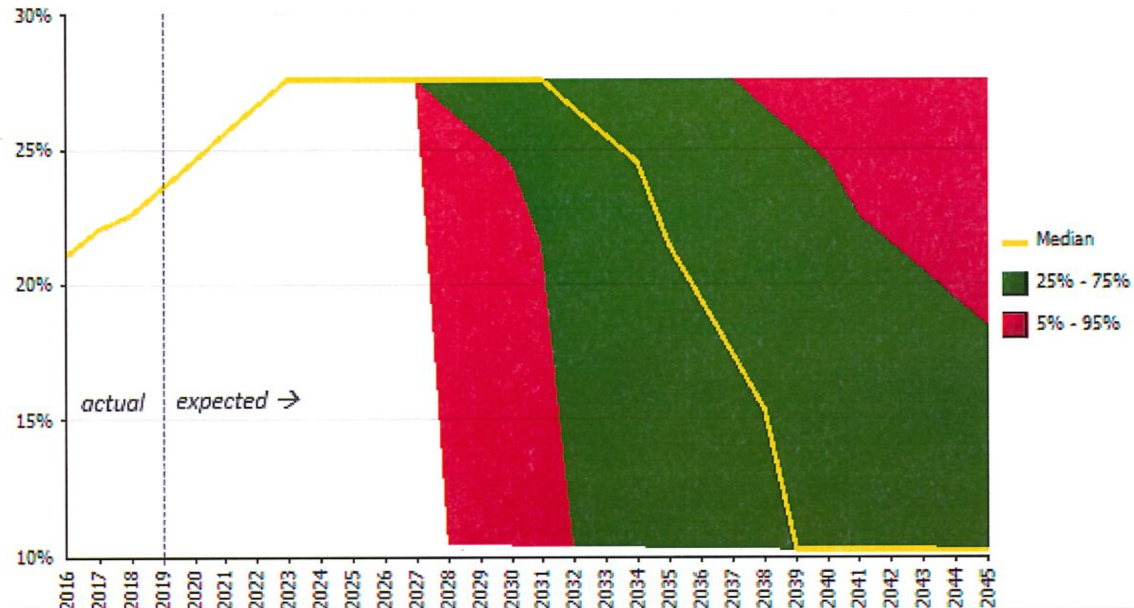
Table 1~~A~~ tracks the actual, as well as, expected funded status of SCRS since 2016, the year prior to the passage of the 2017 Pension Reform Bill. SCRS is used as the example because its assets comprise the greatest percentage of the total assets of the five systems~~plans~~. The reason for the stochastic approach to the expected funded status is to demonstrate the impact of ~~compensate for~~ market volatility on the probable funded status of SCRS through time~~which recognizes a range of probable outcomes~~. The model upon which the simulation is based incorporates the actual structure, components, and assumptions of SCRS, including the contribution policy put into effect by the 2017 Pension reform Bill. The model uses the Commission's Policy Portfolio described below as the investment portfolio and includes thousands of iterations based on the policy portfolio's 7.41 percent expected return and expected volatility of 12.9 percent. The expected return and volatility of the Policy Portfolio is based on long-term capital market and volatility expectations provided by the Commission's Investment Consultant which are updated and provided annually. Based upon these expectations, the Commission's Policy Portfolio has a 51.8 percent probability of achieving a twenty-year rate of return that exceeds the assumed rate of return of 7.25 percent.

As can be seen in this table, the base case scenario is that SCRS reaches fully funded status by 2042~~39~~, well within the funded status goals set by the 2017 Pension R~~r~~eform bill. However, ~~Even~~ if the P~~p~~lan were to experience the 95th percentile scenario, the funded status of the ~~p~~Plan would not improve and would be ~~is~~ expected to be in approximately the same funded position in thirty years that is currently~~to improve over the thirty-year time frame represented~~.

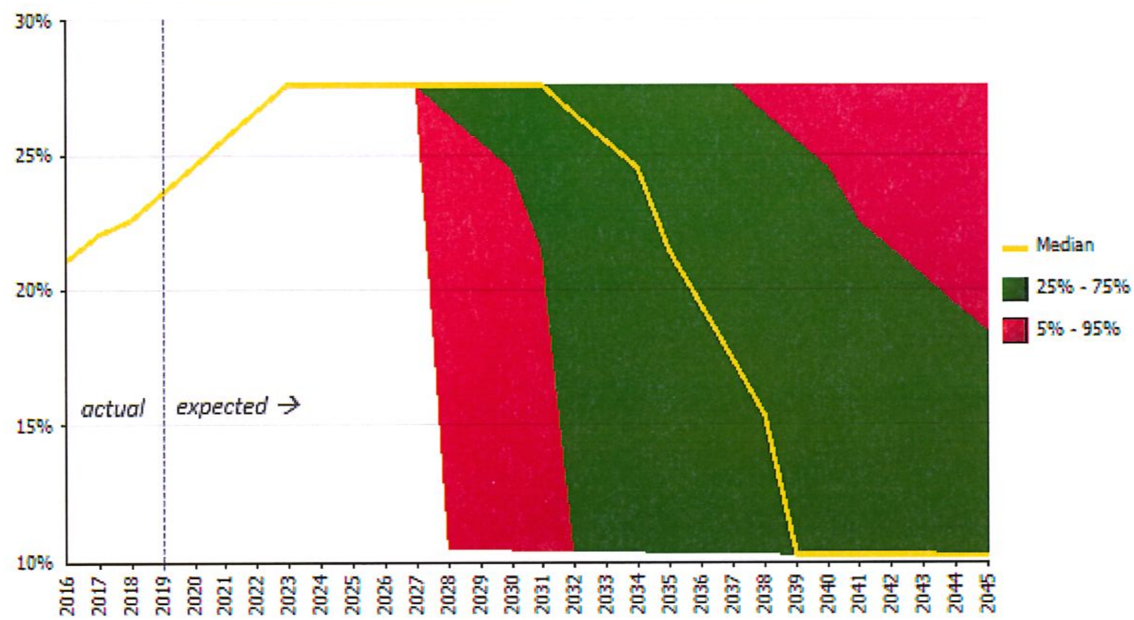
The table also shows the actual improvement of the funded status of SCRS since 2016. The actual improvement shown on the table is attributable to additional contributions flowing into the Plan resulting from the 2017 Pension Reform Bill and better than forecast investment returns since the bill's passage. As of the 2019 Actuarial Valuation, the amortization period for SCRS is twenty-one years which is ahead of the 2017 Pension Reform Bill's requirement of twenty-eight years. As for PORS, the amortization period is eighteen years which is ahead of the Pension Reform Bill's requirement of twenty-eight years.

TABLE ~~2B~~

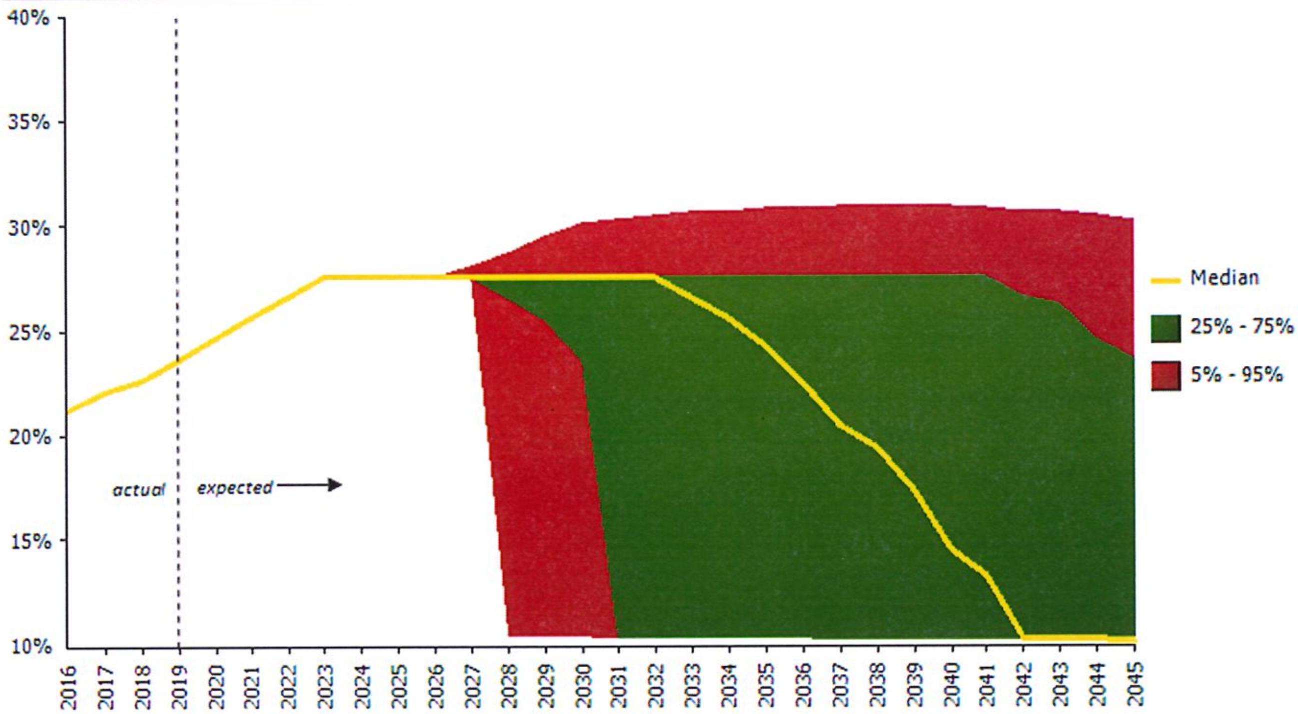
SCRS Expected Total Contribution Rate as of 6/30/2019



SCRS Expected Total Contribution Rate as of 6/30/2019



SCRS Expected Total Contribution Rate as of 6/30/2019



RSIC projections based on GRS actuarial assumptions as of 6/30/2019 and Meketa 2020 long-term capital market assumptions

Table 2~~B~~ tracks the actual, as well as, expected total employer and employee contribution rates for SCRS since 2016. This table also employs a stochastic approach to the expected combined contribution rate to more accurately demonstrate a range of probable outcomes due to market volatility. This analysis is based on the same assumptions used to produce Table 1.

~~-~~As indicated in this table, the base case scenario shows combined employer and employee contribution rates increasing to 27.56 percent pursuant to the schedule required ~~the level required~~ by the 2017 Pension Reform Bill. The contribution rates are then expected to level off and ~~and then~~ begin~~ning~~ to decline in 2032 reaching the ~~normal cost of~~ 10 percent normal cost contribution rate by 2042~~39~~. However, the~~Even if the plan were to experience the~~ table does indicate that there is some probability that contribution rates may increase above the 27.56 combined contribution rate required by the 2017 Pension Reform Bill.~~95th percentile scenario, contribution rates would not decrease from the level required by the reform bill, but rates would not be expected to increase above this level.~~

C. Beliefs

As fiduciaries, the Commission and staff of RSIC are charged with exercising their roles and responsibilities to the Plan's participants and ~~plan and its~~ beneficiaries with the highest duty of care that the law recognizes. In order to ensure consistency in approach to decision making that is commensurate with this fiduciary duty and focused on achieving the investment objective, the Commission and ~~-~~RSIC staff have~~s~~ adopted a set of core beliefs to ensure that we are collectively ~~the organization is~~ guided by a unifying set of principles.

Belief 1 – We believe that asset allocation is the main driver of an investment portfolio's risk, return, and cost.

Belief 2 – We believe that investors must be rewarded for incurring additional risk, cost, and complexity.

Belief 3 – We believe that we are long-term investors which requires us to instill *discipline* and *patience* into our investment decision making and assessment process.

Belief 4 – We believe that achieving our investment objective requires an organization with strong governance, that maintains core values, and employs talented professionals. In order to do this, we~~RSIC~~ must:

1. establish a governance structure with clear lines of authority and means to assess the quality of decision making and resulting ~~performance;~~performance;
2. recruit and retain a talented investment and operational staff consistent with our Core Values of:
   a. Humility,~~;~~
   b. Intellectual Curiosity, and
   c. Team Player~~.~~
3. achieve a deep understanding of value creation through the investment process;
4. emphasize risk awareness and focus on mitigating investment and enterprise risk; and
5. provide the foundation, infrastructure, and systems necessary to meet the investment objective and mitigate risk.

II. ROLES AND RESPONSIBILITIES

~~1.~~ In 2005, ~~the Retirement System Investment Commission (“~~RSIC~~”)~~ was established by South Carolina law to invest and manage the assets of the State’s~~Retirement System’s~~ five defined benefit retirement plans. RSIC invests and manages the assets of all five plans in one group trust~~ (“the Plan” or “the Trust”)~~. RSIC is governed by an eight-member Commission. The Commission’s primary purpose is to set the strategic direction for an investment program that is consistent with its fiduciary duty and strives to ~~-~~earns an investment return that when combined with contributions ~~return, when combined with contributions,~~ fulfills~~s~~ the promise of benefit payments to the Plan’s~~our~~ current and future retirees and their beneficiaries. This includes setting a long-term asset allocation that meets the Commission’s investment objective, oversight of the implementation of the investment portfolio, the ~~and~~ business affairs of RSIC~~the agency~~, approving certain investments, ensuring legal and ethical integrity, and maintaining accountability. The Commission also adopts a series of governance policies that define the roles and responsibilities of Commissioners and staff and provide general guidance for the operation of RSIC as an agency.

1. (RSIC Governance Policies can be found at: https://www.rsic.sc.gov/_documents/2017.07.14%20Governance%20Policy%20Manual.pdf).

2. The Commission employs a ~~Chief Executive Officer (“~~CEO~~”)~~, who serves as the primary figure of accountability for RSIC. The CEO serves as the chief administrative officer of RSIC as an agency and is charged with the affirmative duty to carry out the mission, policies, and directives of the Commission. The CEO is delegated ~~all~~ the Commission’s authority necessary, reasonable, and prudent to carry out the operations and management of RSIC as an agency and to implement the Commission’s decisions and directives. The CEO also serves as the chief risk officer for the organization. The CEO is charged with employing a ~~Chief Investment Officer (“~~CIO~~”)~~ and all other agency staff who serve at the will of the CEO. The CEO is also delegated the final authority to close all investments and must certify that investments made pursuant to the Commission’s Investment Authority Delegation Policy meet the requirements of the policy (*see* SECTION VI for the Investment Authority Delegation Policy).

3. The CIO manages RSIC’s investment functions subject to the oversight of the CEO. RSIC primarily invests plan assets by allocating capital to external investment managers who implement specific investment strategies in order to provide the exposures necessary to meet the requirements of the Commission’s strategic asset allocation. The Commission has implemented an Investment Authority Delegation Policy which provides the CIO with the final authority to invest with external investment managers subject to the limits of the policy. For a proposed investment that exceeds the delegation policy, the CIO determines whether the investment is presented to ~~The CIO approves investments which fall within the parameters of the delegation policy and decides whether investments that do not fall within the delegation policy are presented to~~ the Commission for final~~its~~ approval. The CIO is also granted certain authority to manage the implementation and exposure of the portfolio. The CIO through the management of the investment staff also oversees investment risk management, investment manager oversight, and other related activities.

4. The Executive Team is currently comprised of the CEO, CIO, Chief Operating Officer (“COO”), and Chief Legal Officer (“CLO”) and serves as RSIC’s primary management committee and aids the CEO in making strategic organizational~~ strategic~~ and operational decisions.

5. The Internal Investment Committee (“IIC”) is a ~~six-member~~ committee of senior staff appointed

by the CEO and is chaired by the CIO. The IIC's responsibilities are provided by the IIC Charter but the IIC is primarily responsible for serving as the committee that vets and recommends new investments to the CIO for approval and execution, or recommendation to the Commission for its approval.

6. The Commission engages a general investment consultant (“Investment Consultant”), who reports to the Commission and assists and advises the Commission on asset allocation, asset/liability study, performance reporting, benchmarking/peer group comparisons, and general investment education and advice. The CEO manages the day-to-day relationship with the Investment Consultant. RSIC Staff may rely on the Consultant for data resources, external analyst inputs, and access to educational materials. The CEO may also retain~~s a~~ specialty consultants to serve as an extension of RSIC Staff in Private Equity, Private Debt, Real Estate, Infrastructure, and Hedge Funds~~ (“Alternative Investments Consultant”)~~.

7. The Internal Audit function is governed by the Commission’s Audit and Enterprise Risk Management Committee and ~~-~~is primarily provided through ~~an~~ external service providers. An internal staff member coordinates the relationship with external service providers and assists the committee with performing its duties and functions. The purpose of the Internal Audit function is to provide independent, objective assurance and recommendations designed to add value and improve RSIC operations. It assists the entity in accomplishing its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

8. The Enterprise Risk Management and Compliance (“ERM and Compliance”) function reports to the CEO and serves as the primary staff to aid the CEO in fulfilling the role of chief risk officer. The ERM and Compliance function coordinates with the Executive Team and other staff on the assessment of, and provides oversight related to the identification and evaluation of, major strategic, operational, regulatory, informational, and external risks inherent in the business of RSIC. ERM and Compliance is also responsible for overseeing the process for monitoring compliance with RSIC policies and applicable laws.

9. The Public Employee Benefit Authority (“PEBA”) is a separate agency that administers a comprehensive program of retirement benefits, performing fiduciary duties as stewards of the contributions and disbursements for the Retirement System. PEBA is~~has the responsibil~~responsible for ~~ity of~~ producing GAAP basis financial statements for the Plan~~Retirement System~~ and maintains a general ledger to support that process. The financial statements that are produced by PEBA contain information regarding the investments made by the Commission and as such contain the official accounting records for Plan ~~the Retirement System~~investments. The financial statements are presented in accordance with GAAP and comply with the Governmental Accounting Standards Board standards. The financial statements are audited annually by an independent audit firm hired by the State Auditor’s Office.

10. The Commission~~RSIC~~ and the PEBA Board serve as co-trustees of the Plan’s~~Retirement System’s~~ assets. PEBA is the custodian of the Plan~~Retirement System~~’s assets and RSIC is responsible for the Plan~~Retirement System~~’s custodial banking relationship~~arrangement~~.

11. Subject to the approval of the State Fiscal Accountability Authority, PEBA designates the Retirement System’s Actuary. The Commission is a third-party beneficiary to~~of~~ the contract with the Retirement System’s Actuary, with full rights to all actuarial valuations prepared by the actuary.

~~12.~~ The South Carolina General Assembly has the authority to control budget and staffing for RSIC and to set the actuarial annual assumed rate of return for the Plan~~Portfolio~~. Starting in early 2021, and every four years thereafter, in consultation with the Commission and the Retirement System’s

Actuary, PEBA will propose an assumed annual rate of return to the General Assembly that will take effect at thee

12. beginning of the 2021-2022 fiscal year unless the General Assembly acts to amend or reject the recommendation. The General Assembly also conducts periodic legislative oversight hearings of RSIC.

III. ASSET ALLOCATION

A. Purpose

The Commission's primary responsibility is to establish an investment program that is designed to meet the Commission's investment objective. The most significant action the Commission takes in fulfilling this responsibility is by setting the long-term asset allocation. The Commission designs a portfolio that includes a mix of assets that it believes~~, over time,~~ will likely generate a long-term rate return that meets its investment objective which is conditioned by its fiduciary duty to only expose the Plan's assets to a prudent level of market risk~~makes the plan work~~. The target, or Policy Portfolio, is established with a long-term perspective and the Commission does not expect to change the portfolio to react to short-term market conditions~~therefore is less sensitive to current market conditions~~.

The Commission recognizes employing a long-term perspective has certain risk management benefits. Most notably, this discourages the temptation to react to short-term market trends, which can lead an investor to chase returns in asset classes that have become expensive due to recent appreciation. The Commission believes that adherence to this long-term perspective will produce its greatest benefits during periods of adverse market conditions, during which time the Policy Portfolio will serve as a stabilizing force for the investment program.

State law also requires the Commission to diversify the assets of the investment portfolio and to consider: (i) general economic conditions; (ii) the possible effect of inflation or deflation; (iii) the role that each investment or course of action plays within the overall p~~P~~ortfolio; (iv) the needs for liquidity, regularity of income, and preservation or appreciation of capital; and (v) the adequacy of funding for the Plan based on reasonable actuarial factors.

B. Background

The Commission undertook a review of the existing Policy ~~-~~Portfolio in early 2019. At the time the Commission began this process, the Policy ~~-~~Portfolio was comprised of eighteen~~seventeen~~ separate asset classes with twenty-one different benchmarks. Many of the asset classes had small target weights – several with less than three percent. Both the CIO and the Investment Consultant expressed concern that the Policy ~~-~~Portfolio was over diversified and required~~was over-diversified, requiring~~ a high level of complexity to exist in the Actual Portfolio without a clear improvement in risk or return. The Commission found this to be inconsistent with its investment belief that investors must be rewarded for incurring additional risk, cost, and complexity. The Commission also believed~~determined~~ that the existing Policy ~~-~~Portfolio established the wrong balance between its role as setting the strategic direction of the investment program and investment staff's role in implementing the portfolio. As a result, the Commission determined that a more consolidated Policy ~~-~~Portfolio was in order which valued simplicity and required complexity in the Actual Portfolio~~portfolio~~ to prove its value. The Commission determined that key to this effort was developing a series of benchmarks that would collectively form a Portfolio Framework to clearly determine the value of investment decisions.

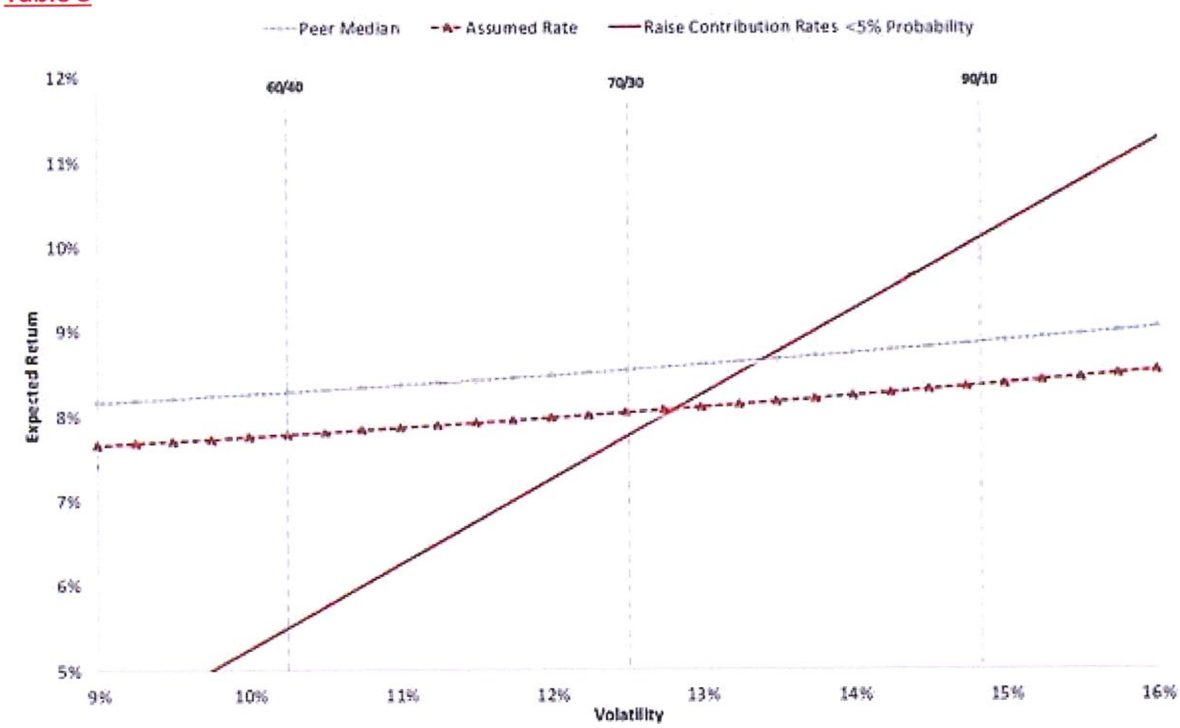
C. Reference Portfolio~~Reference Portfolio Benchmark~~

~~The Commission determined that inherent in assessing the value of complexity and risk in the portfolio was to develop a framework by which the value would be readily discernable.~~ The Commission decided that it would begin the development of this framework by setting a

Reference Portfolio~~ Benchmark~~. The Reference Portfolio~~ Benchmark~~ would be a simple two asset class benchmark portfolio comprised of stocks and bonds. The point of the Reference Portfolio was not to limit the Actual Portfolio to a simple mix of stocks and bonds, but rather to set a risk reference for the Policy Portfolio. The Commission attempted to set the allocation of this portfolio to one consistent with a portfolio that most closely expressed~~closely represented~~ the ~~expected volatility of the P~~risk required to earn a return that ~~olic~~is~~y~~ expected to exceed the assumed annual rate of return while also avoiding a greater than 5 percent probability of requiring additional contributions increases in the next five years (other plan risks were also contemplated but would also be avoided because these risks would either fall along the same line or to the right of the risk line represented on Table 3 below)~~ Portfolio based on the Investment Consultant's long-term capital market expectations~~. The Commission considered the appropriate reference portfolio at its April and June 2019 meetings. As seen in Table 3, a ~~At its April 2019 meeting, the Commission reached consensus that a two-asset class portfolio comprised of~~ 70 percent Global Public Equities (*MSCI ACWI IMI Net*) and 30 percent Bonds (*Bloomberg Barclays Aggregate*) portfolio best ~~t~~

represented~~ed~~ the volatility of a portfolio that met these criteria~~the existing Policy Portfolio,~~ ~~-~~and the Commission reached consensus on this allocation as the Reference Portfolio Benchmark.~~The Commission also determined that this reference portfolio best represented the market risk required to achieve a long-term return that met the Commission's investment objective. Inherent in this consideration was that the return was likely to exceed the assumed rate of return and avoid risks particular to the plan including not meeting the General Assembly's funded status objectives and avoiding a significant probability of requiring additional contribution increases.~~

Table 3



D. Policy Portfolio ~~Benchmark~~

The Commission then began establishing a Policy Portfolio that would serve as the Commission's long-term asset allocation. The Policy Portfolio would be a multi-asset class portfolio with the same expected volatility as the Reference Portfolio. The Policy Portfolio would be expected to consolidate the existing ~~that would not be limited to two asset classes but would also consolidate the~~ eighteen ~~seventeen~~ asset class Policy P~~p~~ortfolio into a more simplified allocation without substantially impacting the expected return, but with the same level of risk as the Reference Portfolio~~by which to judge the value of additional complexity in the actual portfolio~~. The purpose of setting the Policy Portfolio's risk target to that of the Reference Portfolio was to reveal the performance impact gained through diversification.

However, unlike the Reference Portfolio, the Policy Portfolio would be a portfolio that could be held and, in any respect, would serve as the gravitational pull to a more simplified Actual Portfolio. -

The Commission considered the transition to a more simplified Policy Portfolio at its April and June 2019 meetings and reached consensus on the transition to the simplified target allocation in Table 4~~C~~ below.

Table 4~~C~~

Legacy Asset Allocation	
Nominal IG Bonds	6
Treasuries	5
TIPS	2
Mixed Credit	4
EM Debt	4
Private Debt	7
US Equity	18
Developed Int'l Equity	11
EM Equity	6
Equity Options	7
Private Equity	9
Real Estate (Public)	1
Real Estate (Private)	8
Infrastructure (Public)	1
Infrastructure (Private)	2
PA Hedge Funds	10
GTAA	7
Other Opportunistic	1

Current Asset Allocation	
Bonds	26
Private Debt	7
Global Equity	46
Private Equity	9
Real Assets	12

The Commission also analyzed whether the Policy Portfolio would meet the Commission's long-term investment objective in that it would likely exceed the assumed rate of return and avoid risks particular to the plan including not meeting the General Assembly's funded status objectives and avoiding a significant probability of requiring additional contribution increases. This analysis was based on the Investment Consultant's 2019 long-term annualized return and volatility expectations. As demonstrated in Table 5~~D~~ ~~below~~ the Policy Portfolio is projected to:

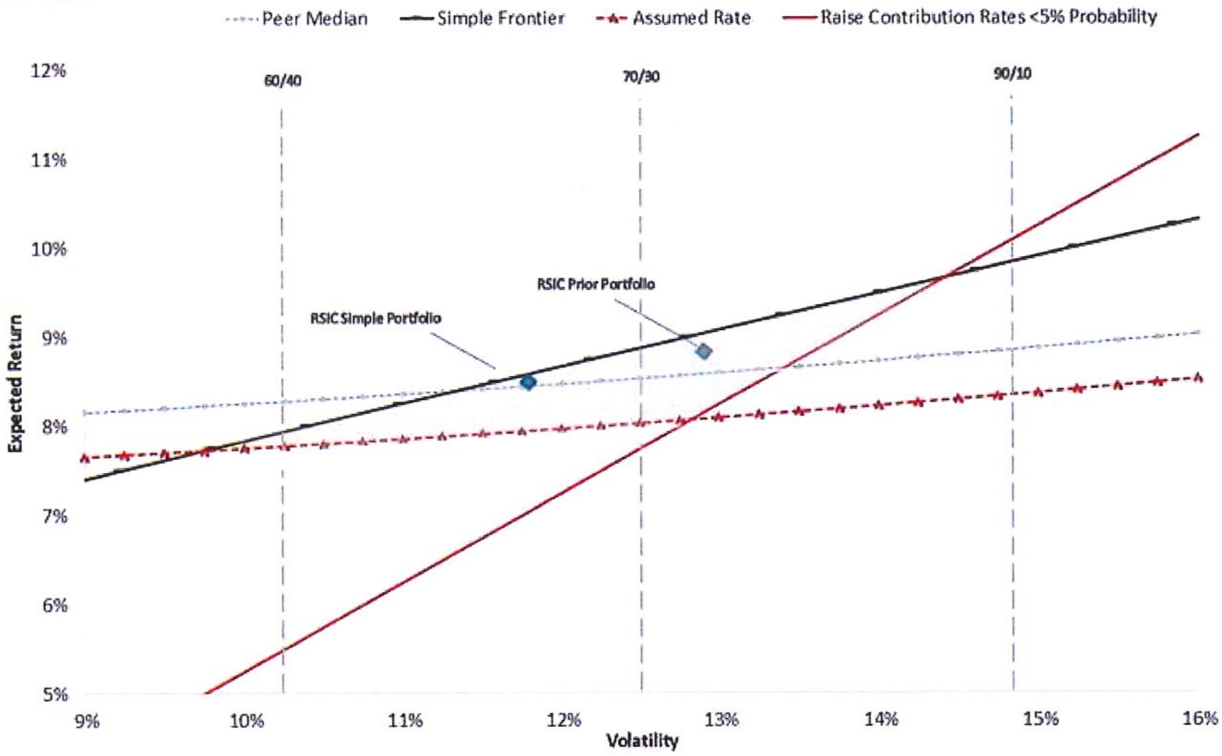
1. exceed the assumed rate of return,
2. compare favorably to the simple frontier[1],

~~2.~~

[1] The simple or efficient frontier comprises investment portfolios that offer the highest expected return for a specific level of risk. In this case, the investment portfolios along the simple frontier are limited to a mix of the five asset classes from the simplified portfolio shown in Table 4.

3. compare favorably to the risk of the Reference Portfolio Benchmark; and
4. experience a less than 5 percent probability of requiring additional contributions increases in the next five years (again other plan risks were also contemplated but would also be avoided because these risks would either fall along the same line or to the right of the risk line represented on the table).

Table 5~~D~~



Based on 2020 Capital Market Expectations provided by the Commission's Investment Consultant, the Policy Portfolio has an expected twenty-year rate of return of 7.41 percent and an expected volatility of 12.9 percent. This portfolio has a 51.8 percent probability of earning a twenty-year rate of return that meets or exceeds the annual assumed rate of return of 7.25 percent.

The Commission believes that this change in approach to a five asset-class Policy Portfolio shifts the paradigm~~paradigm~~ to one which values simplicity and holds a more complex portfolio accountable for improving risk-adjusted returns. A crucial component to ensure this accountability is having the appropriate benchmarks for the Policy Portfolio. The Commission was guided by the CFA Institute's recommendations that benchmarks are
(i) specified in advance, (ii) appropriate, (iii) measurable, (iv) unambiguous, (v) reflective of investment options, (vi) owned, and (vii) investable. At its September 2019 meeting, the Commission reached consensus on the benchmarks in Table 6~~E~~ for the Policy Portfolio.

Table ~~E~~6

Asset Class	Benchmark[2]
Public Equity	*MSCI ACWI IMI Net*
Bonds	*Bloomberg Barclays Aggregate*
Private Equity	*Burgiss Private Equity* [1]
Private Debt	*S&P LSTA +150 bps* [1]
Real Assets	*NCREIF ODCE Net*

[1] *The Private Equity and Private Debt portfolios and benchmarks will be reported on a 3-month lag*

[2] *MSCI ACWI IMI Net - Morgan Stanley Capital International All Country World Index Investable Market Index; S&P LSTA - Standard & Poor's Loan Syndication and Trading; and NCREIF ODCE – National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity*

E. Implementation Portfolio Benchmark

The Commission recognizes that the CIO and investment staff may add value by structuring the Actual P~~p~~ortfolio in a manner that deviates from the Policy Portfolio target weights or may also pursue a strategy that causes the composition of an asset class to differ from the policy benchmark. As a result, the Commission provides the CIO and the investment staff with the discretion to structure the portfolio within the asset class and sub-asset class ranges in Table 7~~F~~. In order to measure the risk and return impact of these portfolio structure decisions, the Commission employs an Implementation ~~Benchmark~~ Portfolio Benchmark that aggregates the underlying benchmarks of each asset class and sub-asset class strategy according to their actual weights. Providing this discretion while establishing a structure that measures the value of these decisions also sets the right balance of accountability for Commission decisions and those of the CIO and investment staff.

Table 7~~F~~

Asset Class	Target	Range	
Public Equity	46%	30%	60%
Domestic	Index	Index +/- 6%	
Developed Non-US	Index	Index +/- 6%	
Emerging Market	Index	Index +/- 4%	
Equity Options	0%	0%	7%
Bonds	26%	15%	35%
Core Bonds (IG)	26%	10%	35%
Inflation-linked (IG)	0%	0%	5%
Mixed Credit (non-IG)	0%	0%	8%
EM Debt	0%	0%	6%
Private Equity	9%	5%	13%
Private Debt	7%	3%	11%
Real Assets	12%	6%	18%
Real Estate	9%	5%	13%
Infrastructure	3%	0%	5%
Net Cash/Short Duration	0%	0%	7%

F. Manager Selection

The Commission also recognizes that the CIO and investment staff strive to add additional ~~may add additional~~ value through manager selection. In September 2017, the Commission through the adoption of the Investment Delegation Policy delegated investment manager selection decisions to the CIO and investment staff within clearly defined limits and exceptions. The Investment Authority Delegation Policy is set out in Section VI. The value of manager selection is discernable by comparing the Implementation Portfolio Benchmark and the Actual Portfolio.

G. Performance Reporting

Essential to the Commission's oversight function is performance reporting that makes clear the value of three major investment decisions: diversification, portfolio structure, and implementation. The Commission charges staff with developing a Portfolio Reporting Framework that easily allows thee

Commission to judge the value of the three investment decisions by comparing the relative performance between the Reference Portfolio, Policy Portfolio, Implementation Portfolio, and ~~different benchmark~~ Actual P~~p~~ortfolio~~s~~:

1. *Diversification (Policy Portfolio Benchmark vs. Reference Portfolio Benchmark):* The comparison of the Policy and Reference P~~p~~ortfolios Benchmarks reveals the value from diversification beyond a simple two-asset portfolio. The benefit of designing these portfolios with the same level of expected volatility is that the performance differential is an indication of the impact of diversification, rather than being a function of an expected risk differential. The Commission should expect to see the value of diversification in this comparison over rolling five-year periods.

2. *Portfolio Structure (Implementation Portfolio Benchmark vs. Policy Portfolio Benchmark):* This comparison supports an assessment of the quality of the portfolio structure. It reveals the performance impact of the decisions to structure the portfolio differently than the Policy Portfolio Benchmark. These impacts can be broken down into those resulting from the *weights* of asset classes and those resulting from the *composition* of asset classes. The Commission should see the positive performance impact of implementation benchmark decisions over rolling three-year periods. The reporting framework also include risk reports to highlight whether and how changes in portfolio structure alter the risk characteristics of the portfolio.

3. *Implementation (Actual Portfolio vs. Implementation Portfolio Benchmark):* This comparison aids in the evaluation of the quality of implementation, a key component of which is the impact of manager selection. The Commission should expect to see differential individual manager performance as compared to the implementation benchmark over short periods of time, but the Commission should expect in aggregate to see consistent value added through manager selection. Providing this additional comparison between the Actual Portfolio and the Implementation Benchmarks also disaggregates the performance gained through portfolio structure and that gained through manager selection. As a result, the Commission may evaluate the quality of each of these portfolio decisions when previously the actual portfolio was simply compared to an individual policy benchmark that combined both portfolio structure and manager selection decisions. This additional look through provides the Commission with an enhanced ability to effectively exercise oversight over both portfolio structure and investment manager selection decisions made by the -investment staff ~~decisions~~.

H. Asset Allocation Review

The Commission will conduct an Asset-Liability Management Study and asset allocation review every five years. The Commission will continue to receive long-term capital market expectations from the I~~i~~nvestment C~~c~~onsultant annually and assess the impact to the expected return and volatility of the Reference and Policy ~~rtfolio~~ Benchmark Portfolios. However, consistent with its beliefs and long-term approach to asset allocation, the Commission intends to limit ~~will limit~~ interim asset allocation changes to those the Commission determines are absolutely critical to meeting its long-term investment objective and are commensurate with its risk tolerance and fiduciary duties.

IV. STRATEGIC INITIATIVES

The Strategic Initiatives described in this Section are major ongoing staff projects contemplated to last up to three years and are likely to have a more significant impact to the portfolio, asset class, or an investment strategy than typical decisions. The CIO will include changes to these initiatives as part of the annual AIP proposal and will provide a quarterly update on progress towards these initiatives at regular Commission meetings.

1. Asset Allocation Implementation – The CIO and investment staff will determine the portfolio adjustments that are required in response to the Policy Portfolio changes described in Section III and will develop a transition plan to implement the necessary adjustments.

2. Portfolio Reporting Framework – The performance reporting team will prioritize the development and implementation of the Portfolio Reporting Framework required by Section III and will work with the Quantitative Solutions Group[3] to incorporate risk reporting into the framework.

3. Comprehensive Review of Implementation Cost – Staff will continue to examine the mix of structural and variable costs throughout the Portfolio and pursue opportunities (such as the co-investment initiative outlined below) to improve the cost alignment of the investment program.

4. Secondaries Market – The Commission understands that the thoughtful use of secondaries opportunities can improve returns for a private markets portfolio. The Investment Team will design and execute a plan to incorporate the secondaries market into the investment strategy for private markets asset classes.

5. Risk Management – The Quantitative Solutions Group will continue to improve risk monitoring at the Portfolio, asset class, and manager levels. The team will place special emphasis on improving the quality of risk reporting at these levels.

6. Co-Investment Program – The Private Markets team will explore the expansion of the Co-Investment Program beyond Private Equity into the other private market asset classes, determine whether an additional partner or platform is needed for any proposed expansion, and implement any approved expansion plan.

[3] The Quantitative Solutions Group is a subset of the Investment Team responsible for conducting deep quantitative analysis on prospective investment managers as part of the investment due diligence process, and also for monitoring and reporting on investment risk.

V. INVESTMENT POLICIES

A. General

1. IIC and Investment Approval Process - State law provides that the AIP is to be implemented by the Commission through the CIO. The RSIC employs a team of investment professionals that support the CIO in carrying out investment management duties and responsibilities. One key component of this infrastructure is the IIC. The IIC assists the CIO by reviewing and providing recommendations to the CIO regarding proposed investments. The IIC also routinely monitors the Portfolio's investment performance and reviews relevant policies and procedures as part of its oversight function. The Commission adopted an Investment Authority Delegation Policy which grants the CIO the ability to approve those investments which fall within the parameters of this policy, subject to the oversight of the CEO. Other investments are presented to the Commission for its approval.

2. Due Diligence – The Investment Team maintains investment due diligence policies to provide consistency and oversight to the investment process. The Initial Due Diligence Policy outlines the key tenets of the RSIC's decision-making process in hiring investment managers. The Ongoing Due Diligence Policy outlines the process and criteria used to evaluate the retention/termination of external investment managers. Both due diligence policies are tested annually by either an Agreed Upon Procedures review by an independent auditor or by the Director of Enterprise Risk Management & Compliance. The results of this review are provided to the Audit and Enterprise Risk Management Committee.

3. Counterparty Risk Management – The Quantitative Solutions Group monitors two sources of potential counterparty risk: (1) the overlay program and (2) the System's master custodial bank. While the risk arising from the overlay program is actively monitored by its external manager, as an added layer of oversight, the Quantitative Solutions Group is responsible for reviewing and reporting on the external manager's prudent management of these counterparty risks.

4. Investment Strategies, Objectives, and Performance Standards:

   i. In accordance with State law, the AIP addresses the Commission's investment strategies, as well as its investment objectives and performance standards. The investment staff maintains a "Baseline" document designed to establish a clear, shared understanding of the rationale, goals, and characteristics for each asset class. In general, the annual plan for an asset class will often involve measures designed to improve its alignment with its Baseline. The following items are detailed in the Baseline document:

      a. Rationale and purpose of the asset class in the broader Portfolio;

      b. Target steady-state asset class exposures (including sub-strategies, geographies, or other relevant factors);

c. The target return, characteristics (income vs. appreciation), and expected active vs. passive implementation breakdown; and

d. An estimate of normal cost to implement the portfolio, and an estimate of the flex cost which may be incurred when market conditions present compelling opportunities.

ii. Baselines also address the following broader issues:

a. The role private investments play in the portfolio;

b. The mix of private vs. public market investments; and

c. How the portfolio is likely to change over time.

iii. The Baseline document is updated at least annually, and all RSIC employees are encouraged to present suggested revisions to any Baseline. Proposed changes to the Baseline documents are presented to the IIC for review and to the CIO for approval. In addition to addressing the investment objectives and performance standards for each asset class, the Baseline also serves as a guide to workflow and portfolio management decisions. Investment decisions are reviewed against the Baseline for portfolio fit.

iv. As part of the individual asset class in-depth examination at each Commission meeting, the investment staff will also provide a review of the particular asset class Baseline, progress towards attaining the Baseline, and any material deviations from the Baseline.

v. The Commission will be informed promptly of any material change to a Baseline at the next Commission meeting following the change.

5. Allowable Investments and Limitations:

i. With certain limitations discussed below, State law provides that RSIC may invest "in any kind of property or type of investment consistent with" Title 9, Chapter 16 of the S.C. Code and Section 9-1-1310. These investments include, but are not limited to, futures, forward contracts, swaps, and options, equities, bonds, loans, 144(A)'s, exchange traded funds, American Depository Receipts, real property, and real estate investment trusts. These investments may be listed, exchange traded, or over the counter, negotiated contracts or investments.

ii. In addition to the instruments outlined above, for every asset class, a variety of investment structures may be utilized depending on the nature of a particular investment. In accordance with the terms of the investment limitations outlined in this policy, these structures may include, but are not limited to, mutual funds, limited partnerships, limited liability companies, strategic partnerships, trusts, commingled vehicles, fund-of-funds, and separately managed accounts in which assets may be held by either the Retirement System's master custodial bank or an external custodian who is selected and monitored by the external manager or general partner.

iii. Any investment structure and the underlying instruments must be of a type generally expected to obtain exposure to an asset or sub-asset class contained in Table 7~~F~~, Section III.

iv. State law imposes certain limited restrictions on the investment of the Portfolio. The managers of the Portfolio's accounts **other than** index funds, commingled funds, limited partnerships, derivative instruments or the like are required to assist the Commission in meeting its obligations under S.C. Code Ann. §9-16-55, which sets forth limitations on investment in certain types of companies that are engaged in active business operations in Sudan. See Section IX for additional information.

v. The Commission has also established a policy prohibiting an investment in any security or obligation issued by a company or a corporation that is a known sponsor of terrorist organizations or of a company domiciled in a country that is a recognized sponsor of terrorism or terrorist organizations as based on reports from the Office of Terrorism and Financial Intelligence of the Department of Treasury and the Country Reports on Terrorism by the Office of the Coordinator for Counterterrorism of the U.S. Department of State.

6. Internal Management and Overlay Program – Currently, the investment staff actively manages certain Cash and Short Duration accounts, and performs distribution management (management and disposition of in-kind distributions received from external investment managers or third parties). In addition, the CIO has discretion to use synthetic instruments, derivatives, equity baskets, and exchange traded funds in order to implement the asset allocation or otherwise manage the portfolio in accordance with the ranges established by the Commission. The Overlay program functions as a means by which the CIO and Investment Staff manage exposures and manage risk in an efficient manner using synthetic instruments, exchange-traded-funds/notes, equity or fixed income baskets, options, futures, swaps, and forward currency contracts.

7. Portable Alpha – The Commission provides the CIO with the discretion to use Portable Alpha Strategies not to exceed 12 percent of total plan assets. The use of Portable Alpha is an implementation decision that is reflected in the Implementation Policy Portfolio Benchmark. The benchmark for Portable Alpha Strategies is *H~~R~~FRI Conservative Fund of Funds less LIBOR*[4].

8. GTAA - The Commission provides the CIO with the discretion to use Global Tactical Asset Allocation Strategies not to exceed 11 percent of total plan assets. The benchmark for GTAA strategies is the proportional weight of Global Public Equity and Bonds in the Policy Portfolio Benchmark.

9. Alternative Investments – The Commission has established guidelines applicable to its alternative investments, which include Hedge Funds and Private Markets Assets:

i. The Commission's initial commitment to a fund will not exceed 25 percent of the committed capital of that fund, unless the Commission specifically waives or suspends this restriction (a) in order to take advantage of a new firm or product that has not yet built an asset base or (b) in the case of a fund that has been created specifically for RSIC (e.g., a single LP fund);

ii. Unless otherwise approved by the Commission, no more than 15 percent of an alternative asset investment allocation may be invested with a single manager, general partner, or single fund, with the exception of Funds of One and Strategic Partnerships;

iii. Staff will notify the Commission if the collective exposure to~~of~~ Private Equity, Private Debt, Private Real Assets exceeds 25 percent of total plan assets; and

iv. Hedge funds may not exceed 20 percent of total planassets.

[4] HFRI – Hedge Fund Research Performance Index

10. Equity investments not to exceed 70 percent – State law provides that the AIP must also include the minimum and maximum allocations to equity investments on an ongoing basis, not to exceed 70 percent. The allowable ranges for equity investments are set forth in Table 7~~F~~, Section III. While State law does not stipulate whether the limitation of 70 percent is based on cost or market value, the Commission manages this limitation on a market value basis. Therefore, if the allocation to equity investments exceeds 70 percent of the total market value of the Portfolio, the CIO is required to rebalance the Portfolio.

11. Managing Cost – In accordance with State law, the AIP addresses methods for managing the costs of RSIC's investment activities. RSIC strives to earn the highest risk-adjusted return on a net of fees basis and recognizes that cost is an important variable to consider. The Investment Team actively engages in an array of strategies to reduce the cost of the Portfolio, including the following:

i. Increasing the initial investment size;

ii. Seeking aggregation discounts from firms with which we have multiple investment strategies;

iii. Utilizing co-investments in private markets;

iv. Quantifying and monitoring the effectiveness of active implementation across public market asset classes; and

v. Requesting reductions to, or elimination of, management fees, as appropriate.

12. Risk:

i. All investments carry some degree of risk. The focus of the RSIC risk function is managing and monitoring these risks to ensure that the Portfolio's risks are appropriate and that the overall level of risk taken is consistent with meeting the Commission's investment objective. Key risk initiatives are:

a. Incorporating the Plan's liability structure into the investment decision process; and

b. Developing and refining tools to facilitate the incorporation of System liabilities into portfolio management.

ii. RSIC Staff monitors risk levels both in absolute terms, but also in relation to the Reference Policy benchmark established by the Commission's asset allocation. This is accomplished using a mix of proprietary and third-party systems and tools.

iii. At the Portfolio level, Staff will:

a. Maintain the Portfolio's asset allocation within the limits established by this policy;

b. Employ an appropriate level of diversification and adhere to the limits within this policy or as contracted with the manager;

c. Adhere to policies and procedures established by the Commission; and

d. Maintain adequate liquidity for benefit payments and capital calls.

iv. Staff provides the Commission with risk reporting as part of the Portfolio Performance Framework to ensure that risk remains within acceptable levels and to judge the value of portfolio structure and manager selection decisions on a risk adjusted basis.

13. Manager Monitoring Guidelines - RSIC Staff maintains an Ongoing Due Diligence Policy that outlines the manager monitoring requirements in detail. In summary, the Investment Team is required to perform periodic reviews of each active manager. These reviews contribute to the decision to either retain or terminate that manager. These reviews involve both quantitative and qualitative assessments in order to ensure that any decision is made fairly and consistently, and to avoid untimely or undisciplined decisions that may adversely impact returns. Additionally, the Investment Team reviews audited financial statements, compliance certifications, and investment fees on an annual basis. Compliance with the Ongoing Due Diligence Policy is reviewed annually through an Agreed Upon Procedures audit performed by an independent auditor.

14. Proxy Voting - Managers of separate accounts are authorized and directed to vote all proxies, or to direct the Physical Custodian to vote proxies, in keeping with the manager's duties under federal and state law to act in the best interest of the Plan and to maximize shareholder value, and generally to exercise any of the powers of an owner with respect to the assets under the manager's control, subject at all times to the absolute right of the Commission to direct the voting of proxies upon written notification to the manager. Those separate account managers which vote proxies must provide a written annual summary to RSIC summarizing proxy votes cast during the previous year. The report shall also detail any changes to the manager's proxy voting practices and explain~~note~~ any instance in which proxies were not voted in accordance with the best interests of the Plan.

B. Compliance

1. Placement Agent Policy – State law prohibits RSIC from making an investment where a placement agent receives compensation in connection with RSIC's investment. The Commission' ~~has a~~ Placement Agent Policy is ~~is~~ set out in Section VIII.

2. Investment Manager Sourcing and Conflict Disclosure Policy – In order to enhance transparency and avoid even the appearance of impropriety, before an investment recommendation is made to the Commission or CIO, any Commissioner or RSIC staff member involved in the sourcing or due diligence of a new investment completes a Sourcing and Conflict Disclosure Form. The CEO and CIO must complete a Sourcing and Conflict Disclosure form for each investment.

3. Annual Certification and Ongoing Testing of Guideline Compliance – The Ongoing Due Diligence Policy requires each manager to annually certify its compliance with the contractually

specified guidelines. These certifications are reviewed by RSIC's Compliance function, as well as the Investment Team, and are subject to an annual audit. There is also ongoing testing of guideline compliance for those public markets mandates which are governed by an Investment Management Agreement and custodied with the master custodial bank.

C. Governance and Oversight

1. Performance Standards and Reporting - As noted above, State law requires that the AIP address the Commission's performance standards. The performance standards and benchmarks are described in Section III. In addition, the Commission receives monthly performance reports from the custody bank and quarterly performance reports prepared by RSIC's performance reporting staff and the general investment consultant. The performance reporting prepared by RSIC performance reporting staff must incorporate the Portfolio Performance Framework required in Section III.

2. Diversification – State law requires that the AIP address the topic of diversification, including sectors, issues and other allocations of assets that provide diversification in accordance with prudent investment standards. The Commission provides the CIO with parameters regarding its diversification objectives through the asset allocation, asset and sub-asset allocation ranges, and performance standards set out in Section III. The Portfolio Reporting Framework required in Section III also provides the Commission the ability to oversee the implementation of the long-term portfolio strategy, as well as the actual implementation of the Commission's diversification directives.

3. Procedures regarding consultants, managers, service providers selections and terminations

~~i.~~ Selection - State law requires that the AIP include procedures and policies for selecting, monitoring, compensating, and terminating investment consultants, equity investment managers, and other necessary professional service providers. Investment managers are primarily selected by the CIO, subject to the oversight of the CEO, pursuant to the Investment Authority Delegation Policy through an investment process that also complies with the Investment and Operational Due Diligence Polices. The CIO recommends to the Commission for its approval the selection of any manager of an investment that exceeds the limits of or falls into one of the exceptions to the investment delegation policy. Any investment recommended to the Commission for its approval must also comply with the Investment and Operational Due Diligence Policies. All other service provides are selected pursuant to the Commission's Service Provider Selection Policy which is included in the Commission's Governance ~~——~~ Policies

(RSIC Governance Policies can be found at: https://www.rsic.sc.gov/_documents/2017.07.14%20Governance%20Policy%20Manual.pdf

i.)~~)~~.

ii. Compensation, Fees and Expenses – Service providers, including consultants and investment managers, will be compensated commensurate with the services provided and industry practices. The Commission will pursue cost savings through structural efficiencies and will strive for fee reductions through negotiations. Investment management fees are evaluated utilizing several metrics or tests. First, fees are examined relative to industry/peer standards. Second, when it reviews potential new mandates or restructurings of existing allocations, the investment staff assesses fees based on the cost relative to other implementation options. For example, in global public equities, the fees charged by active managers (as well as their expected performance and risk) are compared to other methods of obtaining similar market exposure, while in the private markets, fees (as well as expected performance and risk) are compared to public market implementation alternatives. Lastly, to the extent practicable, fees will also be evaluated based on an assessment of the manager's ability to generate excess returns. Investment Staff gathers actual fees and provides annual public disclosure of all fees paid to external managers. The Commission receives an annual report on the cost of its investment program from an independent expert, and may also call upon its investment consultants for assistance in analyzing and addressing issues relating to investment fees. Operating expenses applicable to internal investment operations and the general business of the RSIC are managed by the CEO within the parameters of the annual budget approved by the General Assembly.

iii. Term and Termination -The Commission or the CIO, as applicable, may terminate an investment manager whenever the Commission or CIO determines that its objectives can more efficiently or effectively be met by the selection of another manager or under a different management mandate. The Commission and CIO retain the right to terminate a manager with or without cause and at any time. It should be noted that termination rights may not apply to certain types of investment structures (e.g., typical private markets funds). Circumstances which suggest an immediate review and a possible termination include, but are not limited to, the following:

a. Manager changes strategy or investment style;

b. Critical elements of the investment process have deteriorated;

c. Transaction costs are unreasonable;

d. Management fees are higher than similarly styled managers for similarly sized portfolios;

e. Manager is unable to meet the performance expectations within the risk tolerance specified;

f. Material organizational or personnel changes;

g. Manager is not complying with the applicable provisions of the Commission's SIOP; and

h. Manager is not complying with the applicable provisions of the Commission's AIP.

4. Delegation of Authority to CIO - State law requires that the AIP and SIOP contain a detailed description of the delegation of final authority to invest made by the Commission. The

Commission has delegated its final authority to invest to the CIO, subject to the oversight of the CEO, generally in the following amounts:

i. not to exceed 75 bps of plan value per investment for illiquid structures; and

ii. not to exceed 200 bps of plan value per investment for liquid structures.

The Commission's full Investment Authority Delegation Policy is set out in Section VI.

5. Policies and Procedures to Adapt Portfolio to Market Contingencies - State law requires that the AIP include policies and procedures providing flexibility in responding to market contingencies. The ranges included with the Commission's asset and sub-asset class allocation ranges established in Section III provide the CIO with extensive flexibility to adapt the portfolio to market conditions. Similarly, the Commission's Investment Authority Delegation Policy provides the CIO the ability to adapt the Portfolio to changes in market conditions. To the extent that the CIO deems the scope of the authority delegated to the CIO insufficient, the CIO with the approval of CEO may take action deemed necessary to protect the Portfolio in an extreme market environment. The CIO will promptly inform the Commission of any such actions.

6. Portfolio Rebalancing - The Commission delegates to the CIO or his designee the authority to execute manager and/or securities transactions to implement rebalancing, manage liquidity, or to otherwise manage exposures within the allowable ranges. As part of this delegation, the Commission expects the CIO to articulate, implement and provide reporting to the Commission regarding the Portfolio's rebalancing and exposure management activities as requested. A high-level summary of the rebalancing and exposure management guidelines include:

i. The asset allocation is reviewed on an ongoing (typically weekly) basis by Staff and the CIO to ensure that the Portfolio is within its allocation ranges and to identify appropriate actions necessary to maintain compliance and to provide for the Plan's liquidity needs.

ii. The goal of the rebalancing and exposure management activities is to implement the investment strategy at a reasonable cost within the targets and ranges established by the Commission, recognizing that constant rebalancing to the exact target may not be economically justifiable. The following guidelines are used:

a. Rebalancing is currently performed monthly unless a case has been made ***not*** to rebalance. Potential rebalancing activity is flagged for consideration based upon exposure reporting that is updated by RSIC's performance reporting staff. Rebalancing the portfolio incurs costs (trading commissions, bid-ask spread, and market impact) which are taken into consideration when rebalancing the Portfolio;

b. When an asset class reaches its minimum or maximum allocation, Staff will initiate rebalancing transactions to keep allocations within the approved ranges. Otherwise, Staff must seek Commission approval to remain outside the range; and

c. Concentration risk with respect to significant reliance on any single external manager is reviewed regularly by Staff. Mitigation of performance, operational, headline/reputational, or other fiduciary risks is typically achieved by maintaining a diversified allocation approach both within and across asset classes.

iii. RSIC Staff must balance the risks noted above with the economic benefits associated with a streamlined approach that uses fewer, larger allocations. Additional analyses of the costs and benefits of passive vs. active market exposure are an important input in these decisions.

D. Investment Manager Guidelines

1. General - In keeping with the responsibilities assigned to the CIO by State law and the Commission's Governance Policies, the Commission authorizes the CIO and his designees to develop and revise investment management guidelines for each internally and externally managed investment manager. In making this delegation, the Commission acknowledges that discretion in implementing the investment strategy, within the parameters of all applicable guidelines, will typically be granted to the Commission's investment managers. This discretion is usually limited to the selection of securities and the timing of transactions within the portion of the Portfolio allocated to each manager.

2. Funds of One - A Fund of One is an investment structure in which there is typically a majority investor in a specific vehicle or fund. The Commission or CIO as applicable may elect to use a Fund of One structure when the structure will have lower costs, customized exposure advantages, and/or other beneficial considerations. The CIO is responsible for the day-to-day investment responsibilities with respect to Funds of One, including providing affirmative or negative consent for underlying investments, as required.

3. Pooled or Commingled Funds:

i. Commingled investment vehicles can often provide lower costs and better diversification than can be obtained with a separately managed account pursuing the same investment objectives. However, commingled investment funds cannot customize investment policies and guidelines to the specific needs of individual clients. Recognizing these trade-offs, the Commission or the CIO, as applicable, may accept the policies of such funds in order to achieve the lower costs and diversification benefits of commingled vehicles, and exempt commingled investment vehicles from the requirements and guidelines of this policy if:

a. The investment practices of the commingled vehicle are consistent with the spirit of this policy and are not significantly different in letter; and

b. The benefits of using a commingled vehicle rather than a separate account are material.

ii. The Commission or CIO, as applicable, may structure a portfolio as a separate account that allows for the advantages of commingled vehicles, but with RSIC as the only investor. With international assets, commingled vehicles save the Commission from having to provide additional resources for currency and foreign custody issues as the manager will assume responsibility for these functions.

iii. If an investment mandate is structured through a commingled vehicle, the investment policies of that vehicle will be the legal governing policies of the investment of assets allocated to that vehicle.

4. Strategic Partnerships - The Commission may elect to establish Strategic Partnerships with certain asset managers who are believed to possess specific expertise, knowledge, and capabilities for a limited or broad range of investment strategies. The performance of each Strategic Partnership will be reviewed by the Commission periodically, with a more comprehensive review occurring approximately every 3 to 5 years. The investment approval and evaluation process within the Strategic Partnership is similar to that followed for other investments, however, in addition to passing RSIC's internal process, the investment must also be approved by the investment committee of the strategic partnership.

5. Trade Execution - For all accounts, the Commission expects the purchase and sale of its securities to be conducted in a manner designed to receive the best combination of price and execution. The Commission may evaluate policies that provide for the most efficient and effective trading process. The compliance with investment guidelines must be monitored by the investment managers on an ongoing basis and be based on then-current market values. Securities that, if purchased, would constitute a compliance violation may not be purchased. In the event of a compliance violation, the manager will be expected to promptly notify investment staff. If for some reason the manager does not believe that it is prudent to immediately bring the account back into compliance, the manager will be expected to present a justification as well as a proposal for bringing the account composition back into compliance.

E. Compliance with Section 9-16-320 of South Carolina Code:

1. S.C. Code Section 9-16-320 requires the Commission to meet at least once each fiscal quarter for the purpose of reviewing the performance of investments, assessing compliance with the annual investment plan, and determining whether to amend the plan.

2. The Commission has adopted a strategic calendar that sets a meeting schedule of five meetings per year with a least one meeting every fiscal quarter. The strategic calendar also contains standing agenda items for each meeting to ensure compliance with this Section to include:

i. Quarterly Investment Performance Review – at each meeting the Commission receives a report and presentation on the quarterly, fiscal year to date, one, five, and ten-year plan investment performance. The quarterly performance reports and presentations are based on the Portfolio Performance Reporting Framework described in Section III and are designed to provide the Commission with the ability to judge the absolute value of performance as well as the relative performance between the benchmark portfolios and actual portfolio's performance. The Commission also receives risk reports to judge the absolute and relative risk of the of these portfolios.

ii. AIP Compliance Review – At each meeting the Commission receives reports detailing compliance with the Annual Investment Plan to include:

a. A review of the asset class exposures and sub-asset class components of the portfolio to ensure compliance with the allowable ranges contained in Section III, Table 7~~F~~, and to ensure adequate diversification of the portfolio and that the portfolio is not concentrated in any one industry sector, market sector, or issuer;

b. A review of the progress towards the Strategic Initiatives in Section IV;

c. Any significant market contingencies and review of any responsive action that resulted in a decision not to rebalance the portfolio pursuant to Section V.C.6 or any action taken to protect the Portfolio which fell outside the allowable ranges in Section III, Table 7~~F~~;

d. Action resulting in significant cost savings to the portfolio;

e. Any material deviation from the general operational and investment policies, and

f. As part of an in-depth review of one of the Policy Portfolio asset classes at each meeting, a review of the asset class baseline and progress towards meeting the baseline.

iii. The Commission~~s~~ retains the authority to amend any portion of relating to the AIP requirements at any meeting and is required to consider amendments proposed by the CIO at its April meeting. However, if the Commission does not act to amend the AIP at any other meeting, it should be presumed that it determined not to amend the plan.

F. General Provisions Related to Alternative Investments

1. South Carolina law, the Employee Retirement Income Security Act of 1974 ("ERISA"), and the Uniform Management of Public Employee Retirement Systems Act of 1997 ("UMPERSA") each have similar or compatible, but not identical, definitions and responsibilities of fiduciaries with respect to managing and investing assets of retirement systems. For clarity and consistency, it is prudent for the Commission to declare standards for interpretation of certain terms used in these sources.

2. As relating to the use of alternative investment strategies, the "Plan Assets" of the Retirement System include the System's ownership interest in the following entities (e.g., a share or a unit), but do not include the underlying assets owned by the entity itself:

i. a registered investment company;

ii. a registered security that is widely held and freely transferable;

iii. an entity in which "benefit plan investors" hold less than 25% of the equity interest as defined and determined by ERISA §3(42);

iv. an "operating company" engaged in the production or sale of a product or service other than the investment of capital;

v. a "real estate operating company" or REOC (which actively manages and develops real estate consistent with U.S. Department of Labor ERISA regulations);

vi. a "venture capital operating company" or VCOC (which actively manages "venture capital investments" consistent with U.S. Department of Labor ERISA regulations); or

vii. a private investment partnership or offshore investment corporation the offering memorandum of which allows for the entity to take both long and short positions, use leverage and derivatives, and invest in many markets.

3. Whenever RSIC invests in an entity that does not hold Retirement System's assets, the decision to invest in the entity will be subject, *inter alia*, to the South Carolina fiduciary rules and ethics standards provided by state law, but the transactions engaged in by the entity generally will not be subject to the same rules.

4. RSIC will at times need to interpret statutes while implementing and administering the investment program. Whenever the South Carolina statutes are substantively similar to provisions of ERISA or UMPERSA, and to the extent practicable and consistent with South Carolina law and other principles of general application relating to public pension plans, RSIC intends to use (1) pertinent provisions of ERISA; (2) interpretive rules and regulations of the U.S. Department of Labor relating to ERISA; and (3) the Reporter's official comments to UMPERSA forguidance.

VI. Investment Authority Delegation Policy

A. Pursuant to Section 9-16-330(B) of the 1976 Code, the Commission delegates to the CIO the final authority to invest subject to the oversight of the CEO and the requirements and limitations of this policy. The size of any one investment made pursuant to this policy is limited to the percentage of total plan assets that applies to the particular asset class to which the investment pertains as provided in Section C of this policy and subject to any other limitation the Commission may place on this authority at any given time. The value of total plan assets to which the percentage limitations apply must be the estimated total value of plan assets included in the most recent quarterly investment performance report prepared pursuant to Section 9-16-90(A). For purposes of this policy, a co-investment is considered a separate and distinct investment from an investment in a commingled fund, fund of one structure, or an amount committed to a separately managed account and is separately subject to the limitations and requirements of this policy. Individual investments made in a separately managed account or a fund of one structure are not considered separate investments for purposes of this policy and are subject in aggregate to the limitations and requirements of this policy regardless of whether some degree of discretion is retained by staff regarding individual investments to be included in the applicable account.

B. The investment process for any investment made pursuant to this policy must be substantially similar to the investment process employed prior to the adoption of this policy, but for the requirement that the Commission approve the investment prior to closing the investment and must adhere to RSIC's Due Diligence Guidelines and Policies. Notwithstanding the authority granted by this policy, an investment must be presented to the Commission for its approval if it meets any of the following criteria:
   1. The investment is the initial investment in a new asset class;
   2. The majority of the underlying assets comprising the investment have not been previously included in the investment portfolio;
   3. The strategy to be employed by the investment manager is not substantially similar to an investment that has been previously subject to the Commission's investment due diligence process; or
   4. The investment strategy, other than in publicly traded assets, has important direct connections to South Carolina residents, state policymakers, or South Carolina focused businesses, and/or a majority of the assets of the investments would be principally located in South Carolina.

C. The amount of delegation for new investments approved pursuant to this policy shall not exceed 5% of the total value of Plan assets between regularly scheduled Commission meetings. The size of an individual investment made pursuant this policy is subject to the following limitations provided for the asset class applicable to the investment:
   1. Public Markets - 2% of the total value of plan assets, unless it is reasonable to believe that due to the particulars of the investment strategy that liquidating the investment would ordinarily require longer than ninety days and, in such case, the limit is 1% of the total value of plan assets, for:
      i. Global Public Equity,
      ii. Equity Options,
      iii. Portable Alpha,
      iv. Global Asset Allocation,

v. Mixed Credit,
vi. Emerging Market Debt,
vii. Other Opportunistic Strategies,
viii. Core Fixed Income, and
ix. Cash and Short Duration.

2. Publicly-Traded Real Estate - 1% of the total value of plan assets.
3. Private Markets - 75 bps of the total value of plan assets for:
   i. Private Equity,
   ii. Private Debt,
   iii. Private Real Estate,
   iv. Infrastructure, and
   v. Opportunistic Hedge Funds.
4. For purposes of this policy, the asset classes indicated in this section are as they are described in the Annual Investment Plan.

D. Pursuant to Section 9-16-330(B)(2), the closing documentation of any investment made pursuant to this policy must include the CEO's certification that the investment conforms to the amount and extent of delegation provided by this policy.

E. The Commission must be informed of a proposed investment to be made pursuant to this policy no less than three days before the closing of the investment and must be provided with all applicable documentation and reports produced or relied upon by staff when making the investment recommendation including, but not limited to:
   1. investment due diligence report,
   2. operational due diligence report,
   3. key terms sheet,
   4. memorandum and/or reports from the general or specialty consultant,
   5. Internal Investment Committee action summary,
   6. Completeness check certification, and
   7. Final draft versions of pertinent legal documents, including the Investment contract, limited partnership agreement, and/or other applicable closing documents.

F. An investment made pursuant to this policy must be reviewed with the Commission at the next regularly scheduled Commission meeting.

G. The CIO must provide the Commission with an updated proposed investment pipeline on a monthly basis.

H. The delegation of the final authority to invest pursuant to this section includes the authority to terminate an investment manager if the investment was made pursuant to this policy or the amount of capital committed to the manager by the Commission would fall within the applicable limits provided in Section C. The CIO must approve any termination of a manager made pursuant to this policy, subject to the oversight of the CEO. The CIO must provide a memorandum to the Commission summarizing his justification for terminating the manager within three days of terminating the manager. The CIO must provide a review of the termination to the Commission at the next Commission meeting.

I. The Commission will review this policy annually to ensure that it remains relevant and appropriate, or when there has been an amendment to state law relevant to any section of this policy, or a Commission approved change in the responsibilities, duties or operations of the Commission or its Committee generally, or as otherwise deemed appropriate by the Commission.

J. No provision of this policy shall apply to the extent that it is in conflict with any provision of the Code of Laws of South Carolina, 1976, as amended. In the event of such conflict, the applicable Code provision shall apply in all respects.

K. This policy was adopted by the Commission on September 28, 2017, subject to final approval by the Chair of the incorporation of certain amendments into the policy. The Chair issued final approval of the policy on October 23, 2017.

VII. SECURITIES LITIGATION POLICY ("POLICY")

A. Purpose and General Principles

a. The purpose of this Policy is to set forth the South Carolina Retirement System Investment Commission's[1] guidelines with respect to securities litigation. Interests in securities litigation matters will be managed as assets of the South Carolina Retirement Systems Group Trust (the "Trust") with the goal of enhancing the long-term value of the Trust.

b. The Commission acknowledges that it has a fiduciary duty to take reasonable actions to pursue and collect on legal claims held as an asset of the Trust. The Commission also recognizes that most, if not all, of the securities litigation claims in which the Trust may have an interest will be pursued by law firms from the class action bar regardless of whether RSIC takes an active role in the litigation.

c. This Policy outlines the Commission's procedures for monitoring the Trust's portfolio for potentially actionable losses, protecting the Trust's interests in litigation related to portfolio losses, and maximizing recoveries attainable by the Trust from such actionable losses.

d. This policy consists of four sections: 1) a section relating to asset recovery as passive class members in U.S.-based securities actions; 2) a section for litigation of securities listed on domestic exchanges where RSIC deems active participation is warranted; 3) a section for litigation of securities listed on foreign exchanges; and 4) a section related to the monitoring process for both foreign and domestic claims in which the Trust takes an active role.

B. Part One: Securities Litigation Policy for Filing Proofs of Claim ("Passive Participation")

a. Under U.S. federal law, securities class action lawsuits function as "opt-out" cases. This means that the Trust does not need to participate as a named party in order to recover its *pro rata* share of a class action recovery so long as the certified class claims include the losses incurred by the Trust. This type of participation is called Passive Participation. When notified of a class action settlement in which the Trust has suffered a loss, RSIC need only submit a timely and valid proof of claim in order to be included in any recovery.

b. The Trust's custodial bank, The Bank of New York Mellon ("BNY Mellon"), is responsible for completing and filing all proofs of claim, including the necessary supporting documents and information in every securities class action pending in the U.S. in which the Trust has a direct interest (i.e., for Trust assets that are custodied at BNY Mellon ("In-Bank Assets")). BNY Mellon is not responsible for filing proofs of claim for, or otherwise reporting on the management of, securities class action litigation for assets that are not custodied at BNY Mellon ("Out-of-Bank Assets").

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[1] "Commission" refers to the commission of seven members responsible for managing the South Carolina Retirement System Investment Commission, as specified in S.C. Code of Laws Ann. Section 9-16-315.

"South Carolina Retirement System Investment Commission" or "RSIC" refers to the agency established by South Carolina law for the purpose of investing and managing all assets held in trust for the participants and beneficiaries of the state's five separate defined benefit plans.

c. BNY Mellon's claims filing responsibilities are set forth in more detail in the Service Level Description, dated July 21, 2019, between the Trust by and through RSIC and BNY Mellon (the "SLD"). The SLD outlines the process for: (i) identifying and reviewing all class action recoveries (whether by settlement or trial); (ii) providing timely notice of each settlement recovery to RSIC and the Commission; (ii) filing complete and accurate proofs of claim forms in a timely fashion on behalf of the Trust; (iv) providing quarterly reports outlining all claims filed on behalf of the Trust during the quarter; and (v) providing quarterly reports identifying all securities litigation proceeds recovered by the Trust directly or on its behalf. In the event of a claim involving securities that are not identified by a specific security identifier (e.g., CUSIP, ISIN, SEDOL, etc.), BNY Mellon will use commercially reasonable efforts to identify impacted securities recorded in BNY Mellon's records relating to the security named in the documentation received. In the event that BNY Mellon is unable to file a claim on the Trust's behalf (e.g., involving anti-trust claims), BNY Mellon, or in some cases a third party, will forward the relevant claim information to RSIC, and RSIC will utilize the services of third-party claims filing services that specialize in analyzing and filing such claims.

C. Part Two: Securities Litigation Policy for Securities Listed on a Domestic Exchange

a. While the Commission has a fiduciary obligation to take reasonable action to collect on legal claims held by the Trust, the Trust, acting by RSIC, may need to engage in active participation ("Active Participation") on occasion. This type of participation involves serving as lead plaintiff in cases in the domestic exchange context. Active Participation in domestic securities class actions must be balanced with the Commission and RSIC's primary obligation to maximize the investment returns of the Trust. This determination must also be weighed against the additional costs and burden on staff that may result by becoming lead plaintiff in a securities litigation case as well as the recognition that the Trust's position as a lead plaintiff will not, in and of itself, entitle the Trust to any greater recovery.

b. **Authority to Seek Lead Plaintiff Designation:** Due to the time-sensitive nature of electing to seek a lead plaintiff designation and the Chief Executive Officer's ("CEO") statutory designation as the chief administrative officer of RSIC, the Commission, through this Policy, has delegated to the Executive Leadership Team the authority to elect to seek a lead plaintiff designation where appropriate, reasonable, and prudent to protect the interests of the Trust.

c. **Decision-Making Guidance for Active Participation:** The Executive Leadership Team will generally consider seeking lead plaintiff status ("Active Participation") in a domestic class action when: (i) the Trust's projected losses exceed $5 million U.S. Dollars (the "Loss Threshold"); or (ii) when the loss is substantial but less than the Loss Threshold and there are significant special factors justifying the Trust's involvement. The determination of special factors will be made in the discretion of the Executive Leadership Team.

d. **Monitoring Procedures:** In addition to the reporting provided by BNY Mellon for class action litigation involving In-Bank Assets, the Trust may retain three or more securities litigation monitoring law firms (the "Firms") to advise RSIC via periodic reporting of recently-filed class actions in which the Trust has sustained losses and which appear to have merit. The Firms will generally be engaged for up to five years, with the option to terminate earlier or renew for additional periods. Each of the Firms will provide reporting on at least a quarterly basis outlining all recently filed claims in which the Trust has sustained losses. Additionally, the Firms will submit written memos to RSIC on certain cases, including any cases exceeding the Loss Threshold, regarding the alleged facts of the case, the estimated losses, the Firm's view on the merits of the allegations, and a recommendation as to whether RSIC should seek a lead plaintiff position in the matter. RSIC Legal will perform an initial review of all reports and memos received from the Firms. Any reports or memos indicating a loss that exceeds the Loss Threshold will be forwarded to the CLO for further review. The CLO will review the reports and will follow up with the Firms that have provided the memorandum to get additional insight and information about potential claims exceeding the Loss Threshold ("Reviewable Claims") and will make additional inquiries or conduct additional research as needed.

e. After review by the CLO, the CLO will confer with the Executive Leadership Team regarding the merits of Reviewable Claims, including the projected losses incurred by the Trust, the specifics of the related investment(s), available staff resources, and the recommendations of the Firms regarding whether the Trust should seek a lead plaintiff position. Any decision to seek a lead plaintiff designation for a claim exceeding the Loss Threshold or based on special circumstances must be made by a unanimous vote of the Executive Leadership Team. The Executive Leadership Team will notify the Chair and Vice- Chair of the Commission about any decision to seek a lead plaintiff position and will update the Commission via reporting to the Commission's secure portal.

f. **Selection of Outside Counsel for Securities Litigation** If the Executive Leadership Team determines that it is prudent to hire one of the Firms or other legal counsel to represent the Trust in a securities litigation action to protect the assets of the Trust, all selection of counsel and retainer agreements shall be negotiated, executed, and monitored by the CEO with assistance from the CLO. The CEO may engage one of the Firms hired to monitor the Trust's portfolio, or the CEO may seek to engage other counsel after consultation with the CLO and notice and consultation with the Office of the South Carolina Attorney General, as required by S.C. Code Ann. Section 9-16-315(I). When RSIC first engages the Firms, RSIC will pre-negotiate a proposed engagement agreement for potential litigation, which must be approved by the CEO.

D. Part Three: Securities Litigation for Securities Listed on a Foreign Exchange

a. Due to the 2010 Supreme Court case, *Morrison v. National Australia Bank Ltd.*,[2] investors no longer have the protections of U.S. securities laws for securities that were purchased on a non-U.S. exchange. Unlike the U.S. class action process, foreign securities actions generally require investors to join as a named-plaintiff or "opt-in" at the commencement of the case in order to be entitled to a share of any recovery. This "opt-in" process requires affirmative decisions early in the process to join the lawsuit in order to participate in any recovery. In many cases, investors may be required to make these decisions before a foreign action is even filed.

[2] *Morrison v. National Australia Bank Ltd.*, 561 U.S. 247 (2010).

b. **Decision-Making Guidance for Active Management:** Because there is rarely an option for passive participation in foreign securities actions, the review for participation in these actions differs from those explained in Part Two of this Policy. The CLO will review notices of potential claims in foreign securities actions and will review recommendation memos received from the Firms or other sources in those cases where the loss threshold exceeds $1 million (the "Foreign Loss Threshold"). In foreign jurisdictions, various groups, including non-law firm litigation funding organizations, may act as a funding source for the litigation and work with a certain legal team to initiate litigation. In some cases, the group that first files a lawsuit may become a founding group ("Founding Group"). Founding Groups may impose differing terms and conditions in order to participate in a lawsuit. The CLO will review all available factors relating to participating in foreign actions for claims exceeding the Foreign Loss Threshold, including but not limited to: (i) the amount of the loss; (ii) the potential litigation fees; (iii) the litigation funding requirements; (iv) whether more than one litigation funding group is proposing participation; (v) the risk of adverse costs; (vi) the legal merits of the case; (vii) the contractual requirements for joining and/or bringing a claim; and (viii) the potential cost of staff's time. . After reviewing the above factors and the documentation required to elect to participate in the applicable foreign jurisdiction, the CLO will make a recommendation to the CEO on whether to participate, and if applicable, which Founding Group to elect based on the most suitable contract terms available for the Trust. The CEO, after reviewing the CLO's recommendation, will elect (A) whether or not to pursue participation in foreign litigation that exceeds the Foreign Loss Threshold; and (B) which funding group to select based on the terms and legal requirements of each. The CLO, working with the Firm(s), as applicable, will negotiate the required documentation and retain the right to change a recommendation to participate if suitable contract terms cannot be negotiated with the Founding Group.

E. Part Four: Litigation Monitoring for Active Participation in Domestic and Foreign Litigation

a. The CEO, acting via the CLO, will monitor any pending domestic or foreign cases in which RSIC is actively participating. The CLO will request quarterly written status updates from any Firms representing RSIC in Active Participation cases. The CLO will actively participate in discussions with the Firms regarding any participation by RSIC Staff or document production needs. The CEO and CLO will be actively involved in settlement discussions for any domestic litigation action. The CLO will submit periodic updates to the CEO and the Commission regarding such cases. In accordance with the CEO's statutory authority as chief administrative officer of the Commission, the CEO retains the ultimate authority related to the direction of any class action litigation and/or settlement pursuant to this Policy. The CEO may consult the Commission on any matter related to the initiation of or conduct of any lawsuit pursuant to this Policy. The CEO shall have full authority to approve a proposed settlement of any litigation. In addition, the CEO shall have full authority to execute all contracts, legal documents, settlements, certifications, and authorizations required to pursue litigation authorized by the Executive Leadership Team.

F. The Commission shall review this policy at least once every three (3) years to ensure that it remains relevant and appropriate.

VIII. Placement Agent Policy

A. Purpose. It is the intent of this Policy to comply with S.C. Code Ann. §9-16-100, which prohibits compensation being paid to a Placement Agent (as defined below) as a result of an investment by the Retirement System (as defined below).

B. Definitions. For purposes of this Policy, the following capitalized terms will have the defined meaning set forth below:

- **a.** Pursuant to §9-16-100(B), a "Placement Agent" means any individual directly or indirectly hired, engaged, or retained by, or serving for the benefit of or on behalf of an external manager or an investment fund managed by an external manager and who acts or has acted for compensation as a finder, solicitor, marketer, consultant, broker, or other intermediary in connection with making an investment with or investing in a fund managed by the external investment manager.
- **b.** "Placement Agent Policy Compliance Letter" means that letter which will be requested from prospective external investment management firms in accordance with the terms of this Policy.
- **c.** "Policy" means this Placement Agent Policy.
- **d.** "Retirement System" means the South Carolina Retirement Systems Group Trust.
- **e.** "RSIC" means the South Carolina Retirement System Investment Commission.

C. Procedure

- **a.** RSIC staff will inform prospective external investment management firms ("Investment Managers") as to the RSIC's Placement Agency Policy and statutory requirements as soon as practicable after RSIC staff begins the due diligence review of any potential investment. The RSIC staff member leading the due diligence review for the investment is responsible for sending written notice (paper, fax or email) to the Investment Manager requesting a Placement Agent Policy Compliance Letter. If a copy of this Policy has not already been provided to the Investment Manager, then this Policy will be made available to the Investment Manager prior to or at the time notice is given to the Investment Manager.
- **b.** The Placement Agent Policy Compliance Letter must be included in the RSIC investment Due Diligence Report packet.
- **c.** Investments will not be voted on by the Commission, Internal Investment Committee, or otherwise approved pursuant to RSIC policies, prior to receipt of the completed Placement Agent Policy Compliance Letter and confirmation from RSIC compliance staff that the letter is sufficient per Section G below.
- **d.** The following entities must complete the Placement Agent Policy Compliance Letter as outlined below:
    - **i.** Investment Managers that have a direct contractual investment management relationship with the RSIC or with an investment vehicle in which the RSIC is invested.
    - **ii.** Investment Managers that have an indirect contractual investment management relationship with the RSIC through an investment vehicle that invests in funds or other pooled investment vehicles or other assets.

D. Placement Agent Policy Compliance Letter. The Investment Manager will provide disclosure in the form of a letter addressing all requirements specified below:

- **a.** Certification that, in compliance with §9-16-100, no Placement Agent (as defined by State law) received, or will receive, compensation in connection with the RSIC making an investment with or investing in a fund managed by the Investment Manager.
- **b.** Representation that the Investment Manager has reviewed the applicable law and has not relied on the counsel or advice of RSIC or any employee, representative, agent or officer of RSIC regarding the interpretation and application of the applicable law.
- **c.** Representation that all information contained in the Placement Agent Policy Compliance Letter is true, correct and complete in all material respects.

E. Open Records Law. RSIC may be required to disclose information in the Placement Agent Policy Compliance Letter under the South Carolina Freedom of Information Act.

F. Investments with Separate Account Investment Management Agreements ("IMAs"). If, after closing, the RSIC determines that the Placement Agent Policy Compliance Letter contains a material inaccuracy or omission, the RSIC will, to the fullest extent possible, seek the option, in its sole discretion and without liability to the Investment Manager or any third party, to terminate the IMA and to pursue all remedies that may otherwise be available to the RSIC without incurring any penalty under any agreement to which it is a party.

G. Investments in commingled investment structures (LPAs, LLCs, Trusts, etc.). The RSIC will endeavor to have provisions incorporated into the transaction documents for commingled investment structures which would permit the RSIC to take those actions described in the next sentence. If, after closing, the RSIC determines that the Placement Agent Policy Compliance Letter contains a material inaccuracy or omission, the RSIC will seek to obtain the option, in its sole discretion and without liability to the commingled investment structure, the General Partner or equivalent management entity, any other investor in the structure or third party, to cease making further capital contributions and/or direct payments to the investment and to pursue all remedies that may otherwise be available to the RSIC without being deemed to be a defaulting Limited Partner under the transaction documents and without incurring any other penalty under any agreement to which it is a party.

H. Review. RSIC's compliance staff will review Placement Agent Policy Compliance Letters and will determine whether each letter is sufficient. Any questions regarding the sufficiency of the letter will be referred to the RSIC legal department and will be reported to the CIO and applicable RSIC Staff.

I. Staff Contact. RSIC staff will provide notice about the prohibition in the state law to any party that contacts RSIC staff regarding a potential investment and appears to be acting in the role of a Placement Agent.

J. Obligation to Update. It is the Investment Manager's obligation to promptly inform RSIC staff of any material changes to a prior-filed Placement Agent Policy Compliance Letter, and to submit an updated Placement Agent Policy Compliance Letter where warranted prior to the RSIC's closing on an investment.

K. Review and History

- **a.** The Commission will review this policy at least every three years to ensure that it remains relevant and appropriate, or when there has been an amendment to state law relevant to any section of this policy, or a Commission approved change in the responsibilities, duties, or operations of the Commission or its committees generally, or as otherwise deemed appropriate by the Commission.
- **b.** No provision of this policy shall apply to the extent that it is in conflict with any provision of the Code of Laws of South Carolina, 1976, as amended. In the event of such conflict, the applicable Code provision shall apply in all respects.
- **c.** This policy was initially adopted on September 20, 2012.
- **d.** This policy was amended on June 22, 2017 and will take effect on July 1, 2017.

IX. SUDAN DIVESTMENT POLICY

A. Background. The State of South Carolina has enacted a Sudan divestment law, codified at S.C. Code Ann. §9-16-55 ("Act"). The uncodified preamble to the Act notes that "[d]ivestment is a course of last resort that should be used sparingly and under extraordinary circumstances," but states that "the genocide occurring in the Sudan is reprehensible and abhorrent," warranting this type of legislative response. The Act, which applies solely to the South Carolina Retirement Systems Group Trust ("Group Trust") managed by the South Carolina Retirement System Investment Commission ("Commission" as the governing body, "RSIC" as the agency), sets forth various criteria that are to be considered by the Commission in making the determinations required by the Act.

B. Purpose. The purpose of this Sudan Divestment Policy ("Policy") is to document the manner in which the Act is administered. The Commission has the exclusive authority to invest and manage the assets of the Group Trust pursuant to S.C. Code Ann. §9-16-20. The Commission also has the fiduciary duty to manage the assets of the Group Trust solely in the interests of the retirement systems, participants, and beneficiaries. The Commission must discharge these responsibilities in a manner consistent with all applicable statutes, regulations, and policies, including the Act.

C. Definitions. The Act utilizes the following defined terms:

- **a.** "Active Business Operations" means a Company engaged in Business Operations that provide revenue to the Government of Sudan or a Company engaged in Oil-Related Activities.
- **b.** "Business Operations" means maintaining, selling, or leasing equipment, facilities, personnel, or any other apparatus of business or commerce in Sudan, including the ownership or possession of real or personal property located in Sudan.
- **c.** "Company" means a sole proprietorship, organization, association, corporation, partnership, venture, or other entity, its subsidiary or affiliate that exists for profit-making purposes or to otherwise secure economic advantage. "Company" also means a Company owned or controlled, either directly or indirectly, by the Government of Sudan, that is established or organized under the laws of or has its principal place of business in the Sudan.
- **d.** "Government of Sudan" means the Government of Sudan or its instrumentalities as further defined in the Darfur Peace and Accountability Act of 2006.
- **e.** "Investment" means the purchase, ownership, or control of stock of a Company, association, or corporation, the capital stock of a mutual water Company or corporation, bonds issued by the government or a political subdivision of Sudan, corporate bonds, or other debt instruments issued by a Company.
- **f.** "Military Equipment" means weapons, arms, or military defense supplies.
- **g.** "Oil-Related Activities" means, but is not limited to, the export of oil, extracting or producing oil, exploration for oil, or the construction or maintenance of a pipeline, refinery, or other oil field infrastructure.
- **h.** "Public Employee Retirement Funds" means those assets as defined in §9-16-10(1).
- **i.** "Scrutinized Companies" means any of the following:

i. The Company is engaged in Active Business Operations in Sudan; and
ii. The Company is engaged in Oil-Related Activities or energy or power-related operations, or contracts with another Company with Business Operations in the oil, energy, and power sectors of Sudan, and the Company has failed to take Substantial Action related to the Government of Sudan because of the Darfur genocide; or
iii. The Company has demonstrated complicity in the Darfur genocide.
iv. The Company is not engaged in Oil-Related Activities and lacks significant Business Operations in the eastern, southern, and western regions of Sudan; and
v. The Company is engaged in Oil-Related Activities or energy or power-related operations, or contracts with another Company with Business Operations in the oil, energy, and power sectors of Sudan, and the Company has failed to take Substantial Action related to the Government of Sudan because of the Darfur genocide; or
vi. The Company has demonstrated complicity in the Darfur genocide.
vii. The Company supplies Military Equipment within the borders of Sudan.[3]

j. "State" means the State of South Carolina.
k. "Substantial Action" means a boycott of the Government of Sudan, curtailing business in Sudan until that time described in Section I of this Policy, selling Company assets, equipment, or real and personal property located in Sudan, or undertaking significant humanitarian efforts in the eastern, southern, or western regions of Sudan.
l. "Sudan" means the Republic of the Sudan, a territory under the administration or control of the Government of Sudan, including, but not limited to, the Darfur region, or an individual, Company, or public agency located in Khartoum, northern Sudan, or the Nile River Valley that supports the Republic of the Sudan.

D. <u>Identification of Companies</u>

a. Identifying Scrutinized Companies. RSIC Staff ("Staff") has engaged the services of a specialized research firm ("Advisor") to (i) identify companies doing business in Sudan, as defined in the Act, and (ii) provide Staff with a list of such Scrutinized Companies ("Scrutinized Companies List").
b. Updates to Scrutinized Companies List. Staff shall ensure that the Scrutinized Companies List is updated on or about January 1 and July 1 of each year.

E. <u>Engagement</u>

a. Determining Scrutinized Status. For each Company identified by the Advisor pursuant to Section D of this Policy, RSIC (either via Staff or the Advisor) shall send a written notice informing the Company that it may become subject to divestment by RSIC. The notice

[3] If a Company provides equipment within the borders of Sudan that may be readily used for military purposes, including but not limited to, radar systems and military-grade transport vehicles, there is a strong presumption against investing in the Company unless that Company implements safeguards to prevent the use of that equipment for military purposes.

shall offer the Company the opportunity to clarify its Sudan-related activities within 90 days in order to avoid qualifying for potential divestment.

b. Compliance. If, following RSIC's notification (either via Staff or the Advisor) to a Company pursuant to Section E. a. of this Policy, that Company ceases the activities that caused the Company to be added to the Scrutinized Companies List, as determined by the Advisor, the Company shall be removed from the Scrutinized Companies List, and the provisions of this Section E shall cease to apply to the Company unless it resumes the activities that caused the Company to be added to the Scrutinized Companies List.

F. Determinations to be made by the Chief Investment Officer

a. Delegation to the Chief Investment Officer. The Commission has delegated authority to the Chief Investment Officer ("CIO") to, in consultation with RSIC's Chief Executive Officer, make the determinations required under the Act and to take actions necessary to implement this Policy.

b. General. If, following RSIC's engagement with a Company pursuant to Section E. a. of this Policy, the Company continues to be a Scrutinized Company, Staff will present the CIO with detailed information gathered from the Advisor, affected investment managers, and others regarding the Company, its Business Operations, the Group Trust's holdings, and any other information required by the Act and this Policy. The CIO will make determinations as to (i) whether Staff should sell, redeem, divest, or withdraw the Group Trust's interests in the Company, and (ii) the timing of any such sale, redemption, divestment, or withdrawal. The CIO will also make the determinations described in Section I of this Policy.

G. Prohibition. RSIC shall not use Public Employee Retirement Funds to acquire new Investments in Companies on the Scrutinized Companies List, except as provided in this Policy.

H. Permissible Investments under the Act

a. The Act does not apply to the following types of Investments:

i. Investments in a Company that is primarily engaged in supplying goods or services intended to relieve human suffering in Sudan;

ii. Investments in a Company that promotes health, education, journalistic, or religious activities in or welfare in the western, eastern, or southern regions of Sudan;

iii. Investments in a United States Company that is authorized by the federal government to have Business Operations in Sudan; and

iv. Investments that constitute indirect beneficial ownership through index funds, commingled funds, limited partnerships, derivative instruments, or the like.

b. In developing the Scrutinized Companies List, the Advisor shall determine, in good faith and with due professional care, whether any of the foregoing exemptions and exclusions set forth in the Act apply.

I. Determinations required to be made by the CIO pursuant to §9-16-55(D)(1). The Act states that nothing in the Act "requires the [C]ommission to take action as described in [the Act] unless the

[C]ommission determines, in good faith, that the action described in [the Act] is consistent with the fiduciary responsibilities of the [C]ommission as described in [Title 9, Chapter 16 of the Code] and there are appropriated funds of the State to absorb the expenses of the [C]ommission to implement this [Act]." §9-16-55(D)(1). Accordingly, whenever the CIO is asked to consider taking action under the terms of the Act or this Policy, Staff will assist the CIO in making the determinations required to be made as described in this Section.

J. Reporting. Staff shall, following the close of RSIC's fiscal year, prepare a formal report to the Commission regarding actions taken pursuant to the Act. RSIC shall also publish the report. The report shall include all of the following information with respect to the previous fiscal year:

- **a.** The Scrutinized Companies List;
- **b.** A list of all Companies added to or removed from the Scrutinized Companies List;
- **c.** A summary of correspondence with Companies engaged by RSIC under the Act;
- **d.** A list of all Companies that RSIC will continue to engage concerning their Business Operations in Sudan;
- **e.** A summary of all Investments sold, redeemed, divested, or withdrawn under the Act; and
- **f.** A list of all Investments that were retained by RSIC pursuant to a determination by the CIO as set forth in Section I.

K. Expiration. The restrictions in the Act shall apply only until:

- **a.** The Government of Sudan halts the genocide in Darfur for twelve months as determined by both the Department of State and the Congress of the United States; or
- **b.** The United States revokes its current sanctions against Sudan.

L. Indemnification. The Act provides that present and former board members, officers, and employees of the State Fiscal Accountability Authority, present, future, and former directors, officers, and employees of the South Carolina Public Employee Benefit Authority, the Commission, and contract investment managers retained by the Commission must be indemnified from the general fund of the State and held harmless by the State from all claims, demands, suits, actions, damages, judgments, costs, charges, and expenses, including court costs and attorney's fees, and against all liability, losses, and damages of any nature whatsoever that these present, future, or former board members, officers, employees, or contract investment managers shall or may at any time sustain by reason of any decision to restrict, reduce, or eliminate Investments pursuant to the Act.

X. LONG-TERM ANNUALIZED RETURN AND VOLATILITY EXPECTATIONS

(NOTE: This section will be updated with 2020 Capital Market Expectations prior to the March 2020 Commission meeting. Current 2019 Capital Market Expectations can be found in the February 2019 Combined Commission Meeting Materials at https://www.rsic.sc.gov/_documents/2019.02.21%20Combined%20Commission%20Materials.pdf).

BRIDGEWATER

RSIC
SOUTH CAROLINA
RETIREMENT SYSTEM
INVESTMENT COMMISSION
Investing for the future of South Carolina

Global Outlook

Bob Prince
Co-Chief Investment Officer
March 5, 2020

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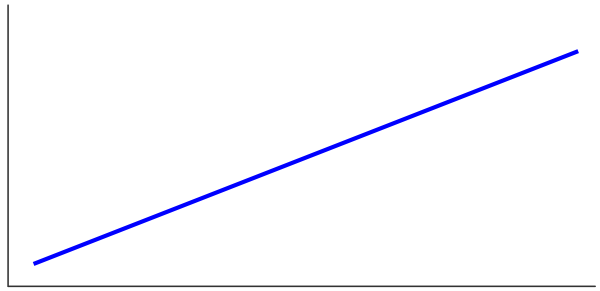
SUMMARY

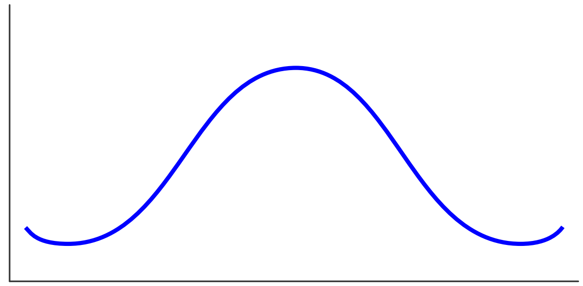
- Secular debt/deflationary forces are prominent and having a significant impact on outcomes.
- We've transitioned from an extended, weak expansion to a new cycle that won't look like cycles of the past (paradigm shift).
- Monetary policy as a tool for stimulation has reached the end of its useful life, it now must be teamed with fiscal stimulation (MP3).
- Central banks are pushing on the accelerator and the clutch is engaging badly, but the lack of inflation is license to rev the engine.
- We now live in a tri-polar world, with three dominant monetary/credit systems driving economic outcomes.
- Divergences in secular growth rates will have compounded wealth, power and conflict effects over the coming decade.
- Markets discount existing conditions and react to change.

OUR TEMPLATE

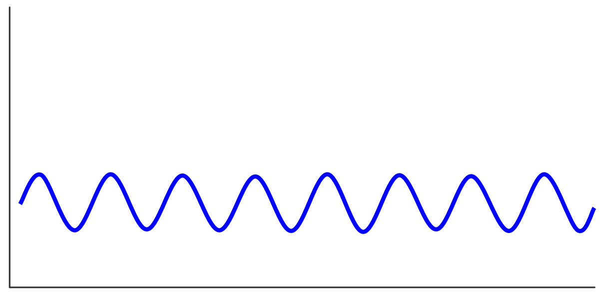
1. **PRODUCTIVITY**



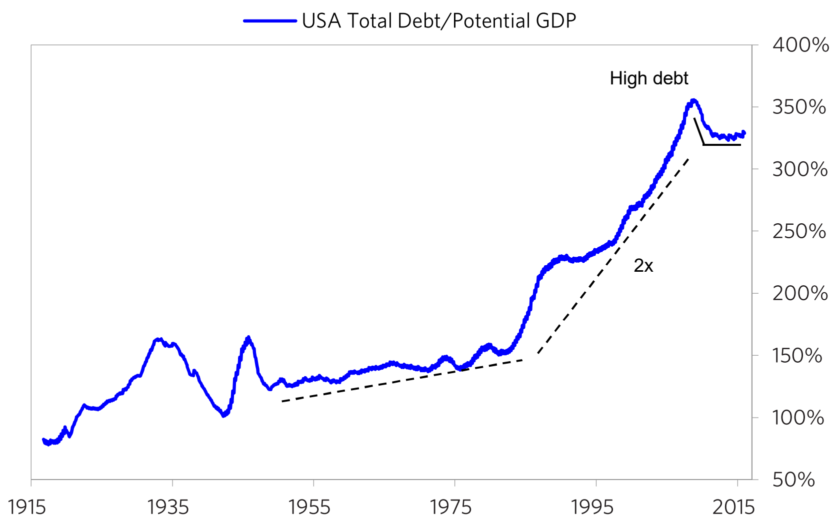
2. **THE LONG-TERM DEBT CYCLE**
   (50 – 75 years)

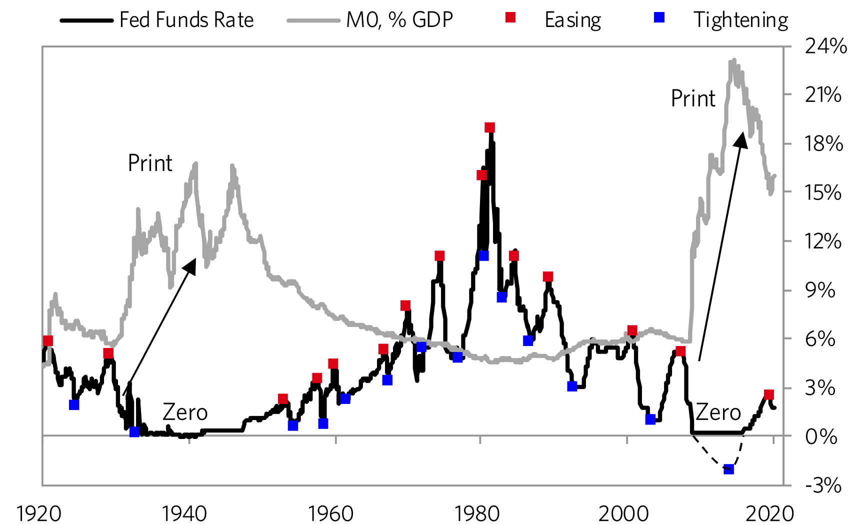


3. **THE SHORT-TERM DEBT CYCLE**
   (5 – 8 years)



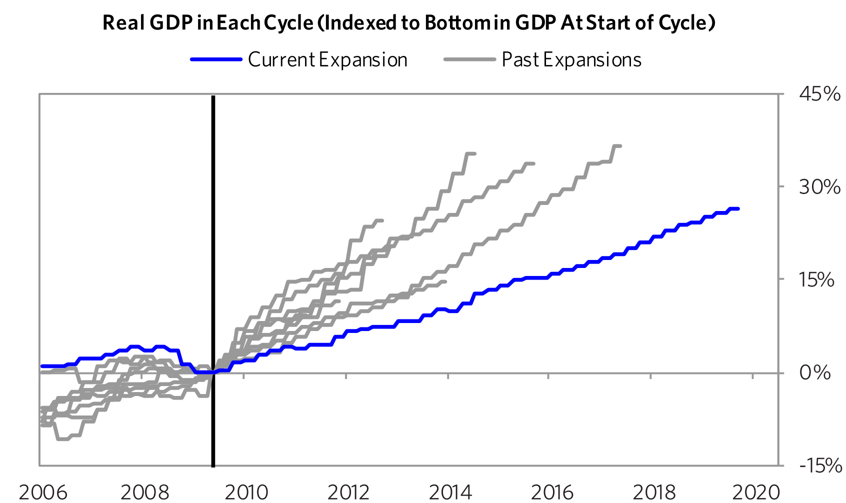
DEVELOPED ECONOMIES ARE IN THE LATTER STAGES OF THE LONG-TERM DEBT CYCLE AND THE BUSINESS CYCLE



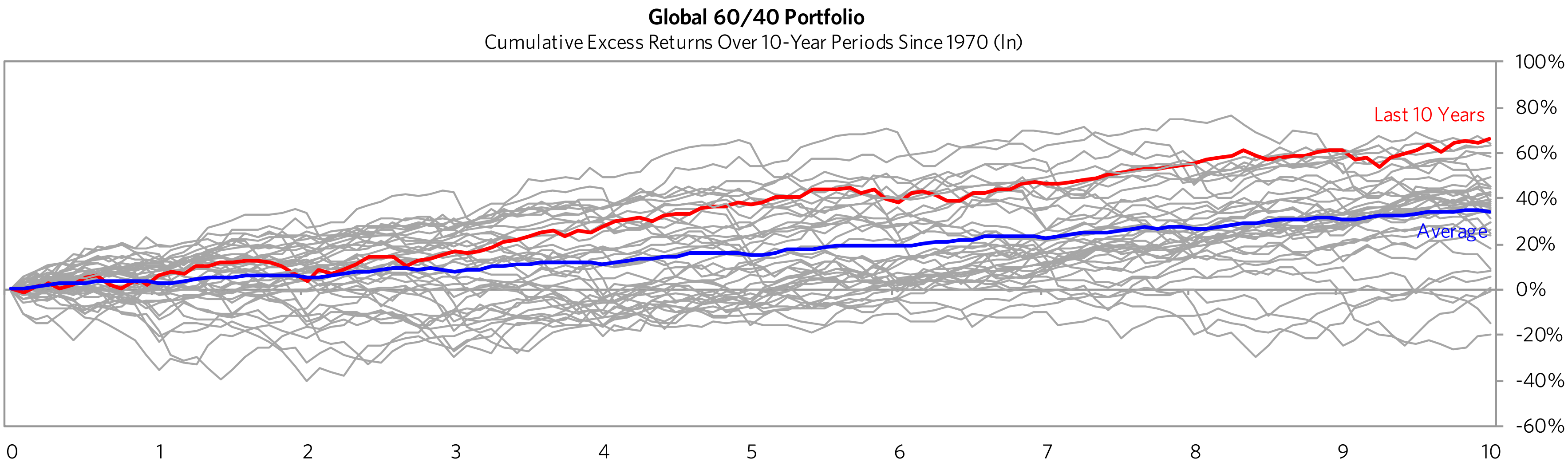


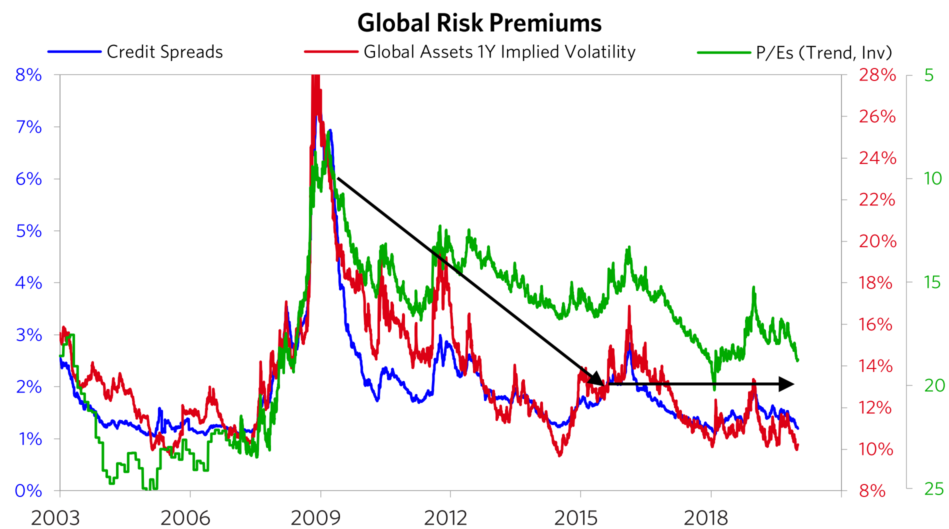
Growth and Inflation when Debt Burdens are Rising / Not Rising

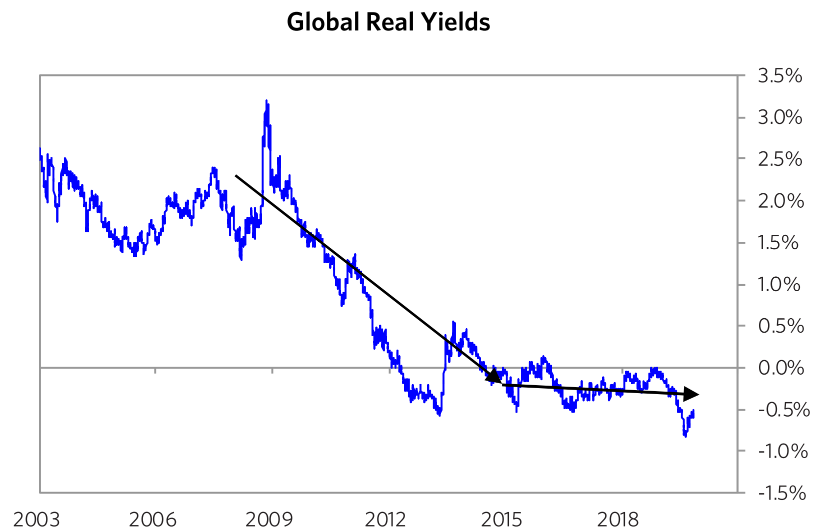
Debt Levels	Real Growth	Inflation	Nominal Growth
Rising	2.6%	3.1%	5.8%
Not Rising	1.4%	2.4%	3.8%



FALLING YIELDS PRODUCED HIGH ASSET RETURNS, NOW YIELDS ARE LOW

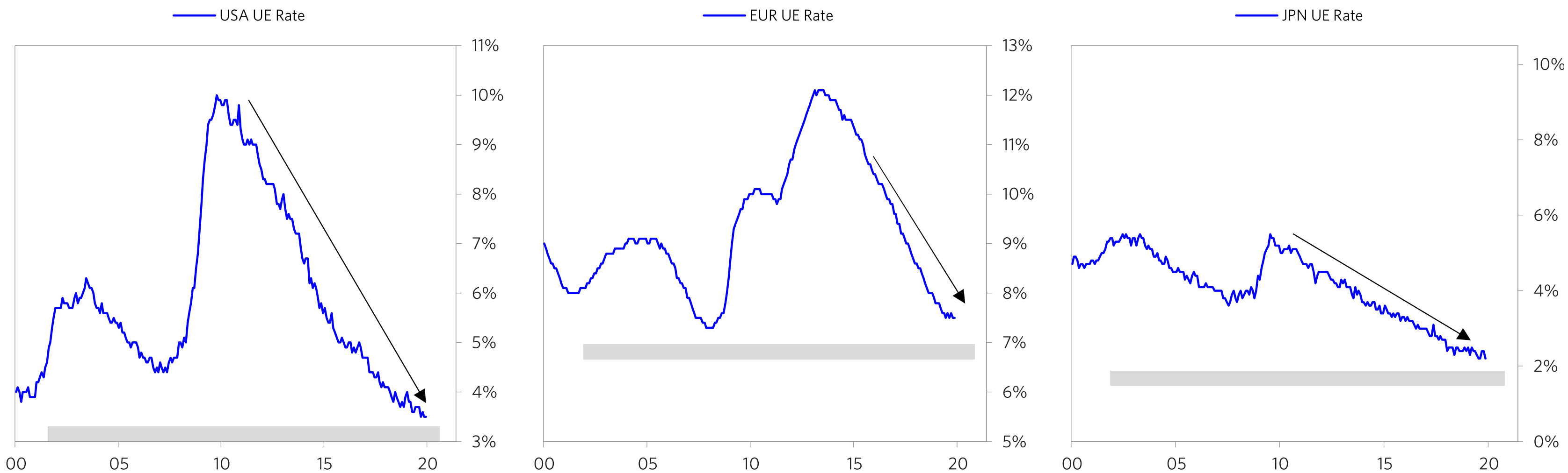


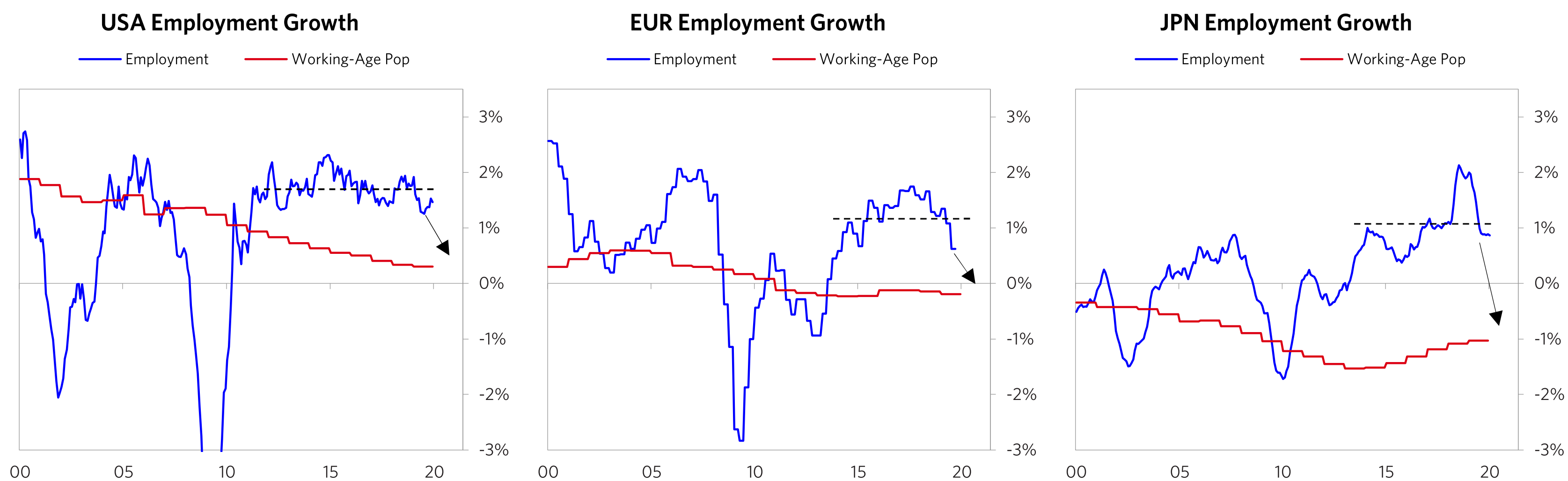




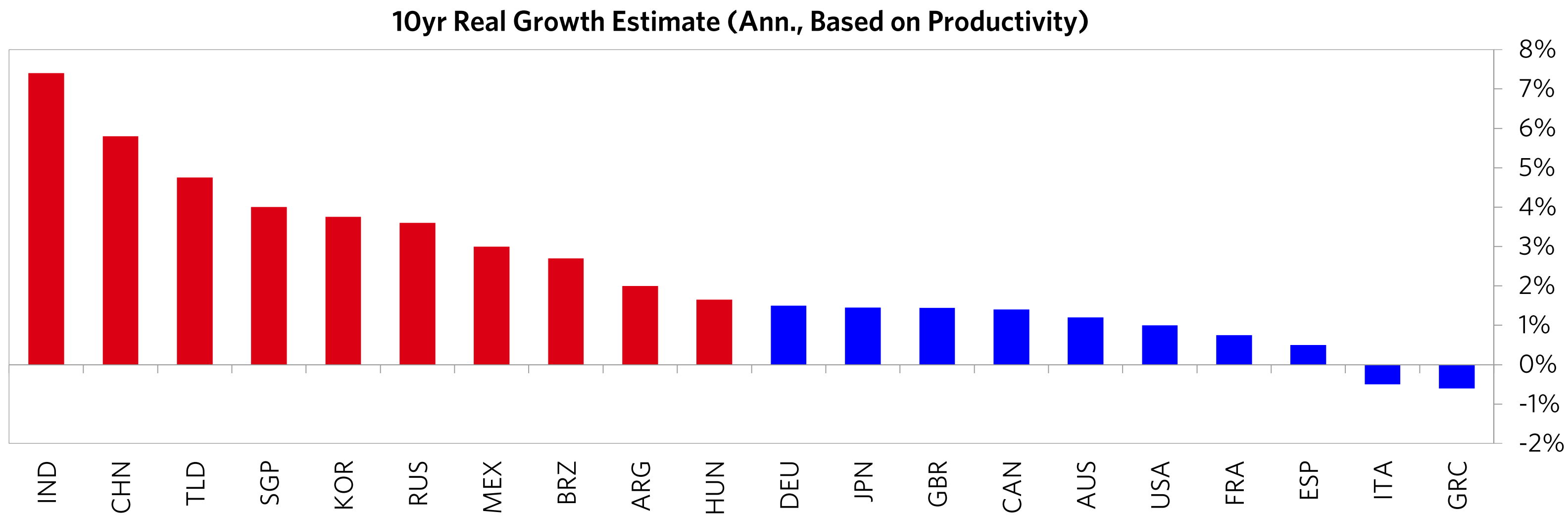
Global 60/40 returns are based on a portfolio of 60% global equities and 40% nominal bonds, hedged to USD, shown. through December 2019. Please review the “Important Disclosures and Other Information” located at the end of this presentation.

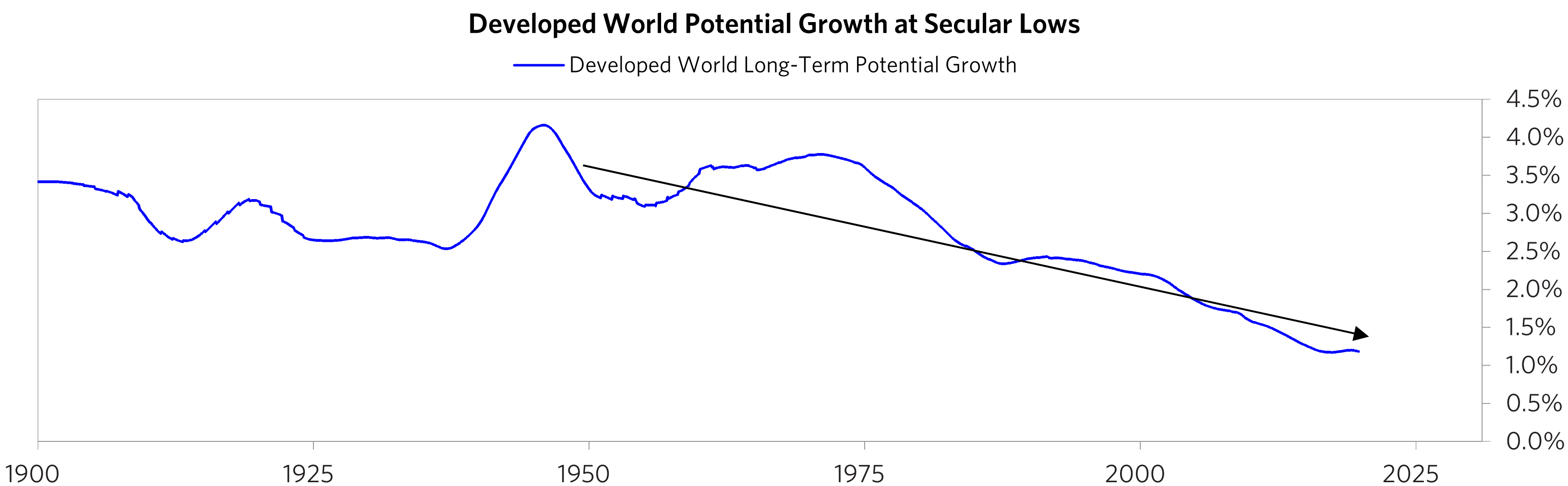
AS THE DECLINE IN UNEMPLOYMENT REACHES LIMITS, GROWTH WILL CONVERGE TOWARDS LONG-TERM POTENTIAL





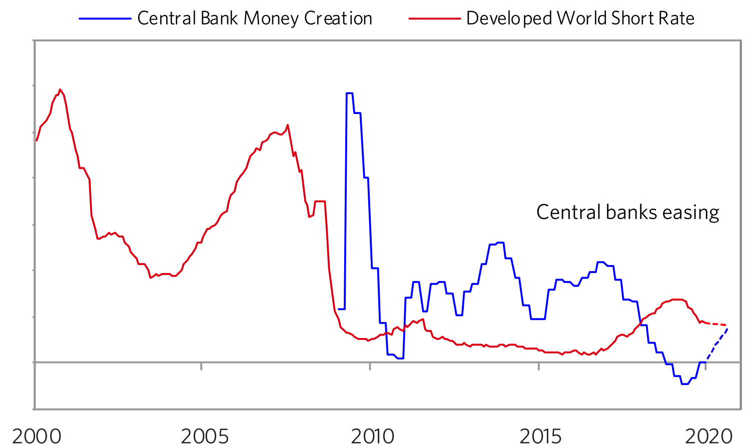
LOW POTENTIAL GROWTH IN THE DEVELOPED WORLD

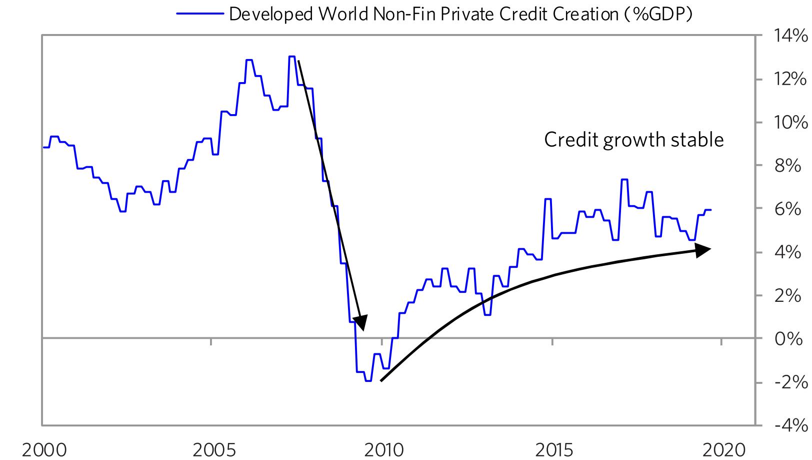


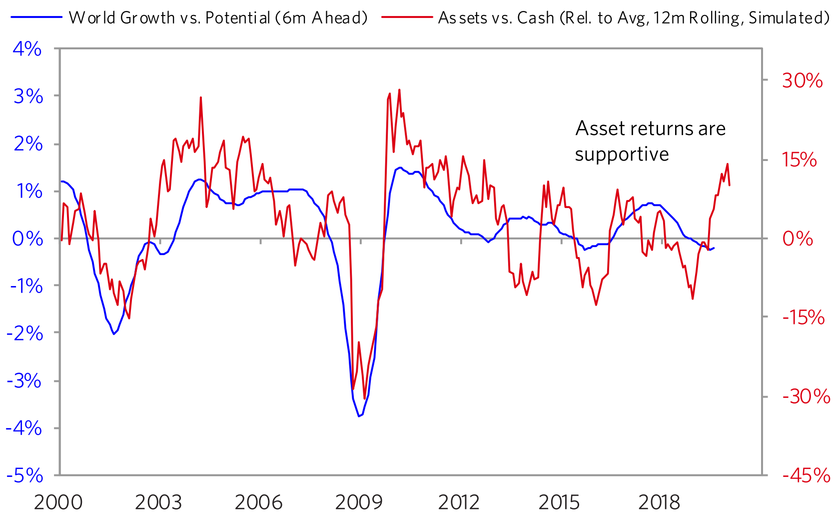


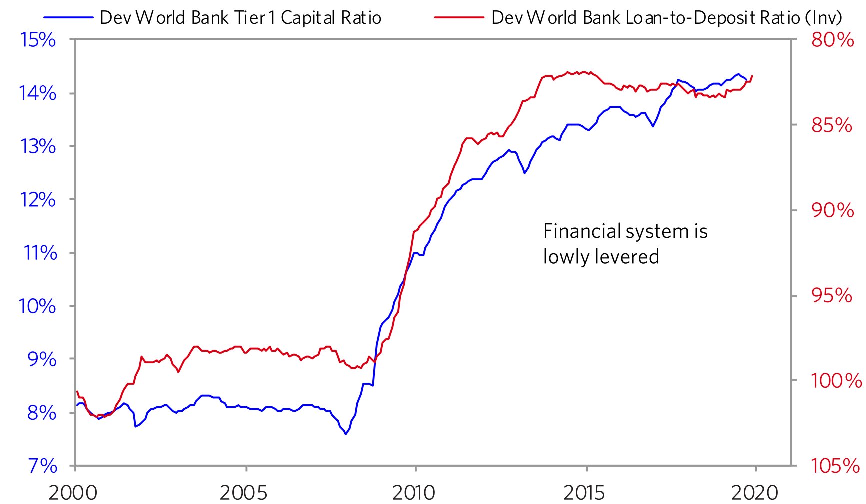
Estimates are based on Bridgewater analysis. Please review the “Important Disclosures and Other Information” located at the end of this presentation.

LIQUIDITY DRIVES CYCLES:
THREE STAGES OF THE LIQUIDITY PIPELINE



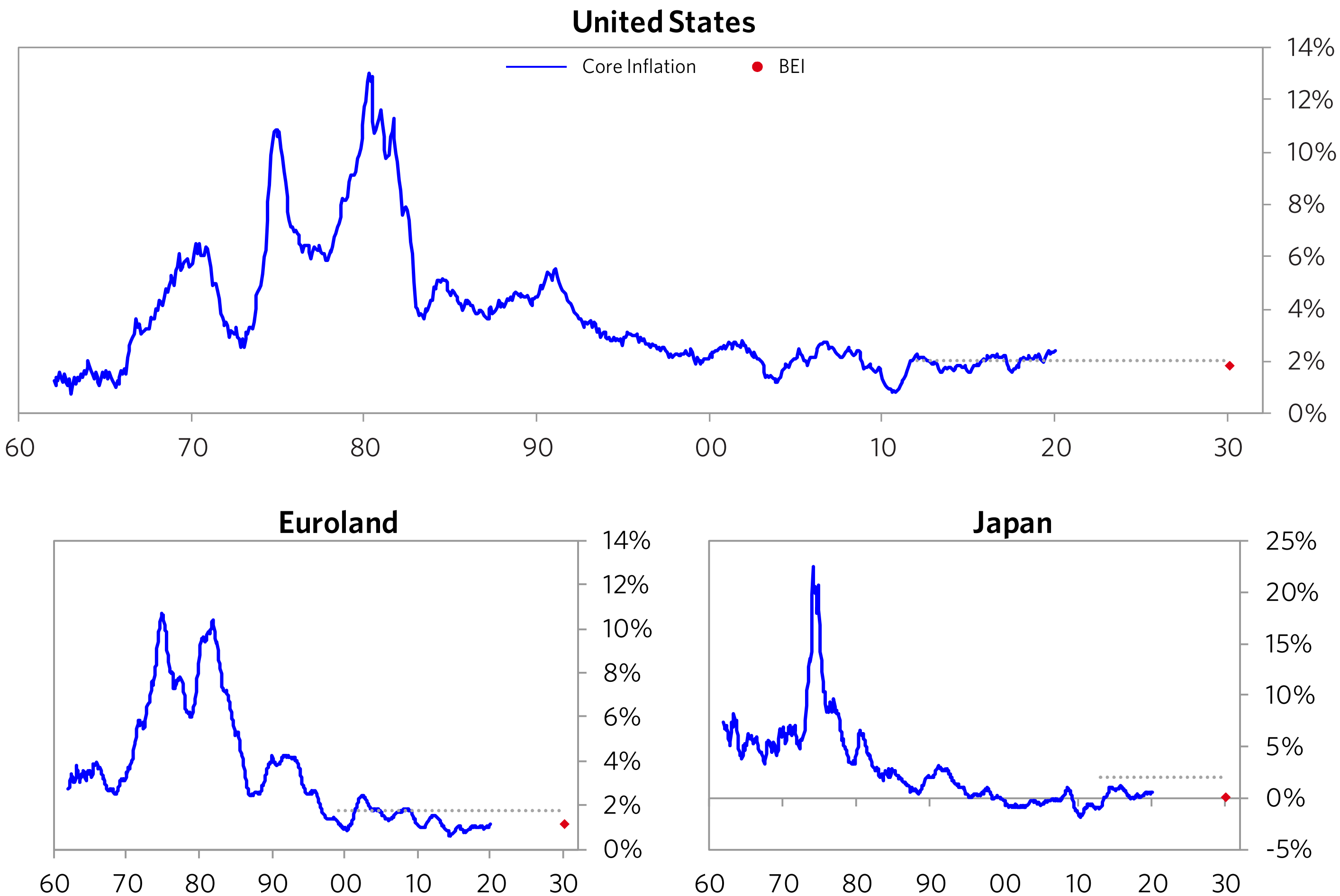






Returns through January 2020. Asset vs. Cash is based on the All Weather Asset Mix, which is simulated, and is shown gross of fees (see “All Weather Asset Mix Disclosure”). It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS. Past performance is not indicative of future results. Please review the “Important Disclosures and Other Information” located at the end of this presentation.

LOW AND STABLE INFLATION ENABLES MONETARY ACCOMMODATION (UNTIL IT DOESN'T)



Please review the "Important Disclosures and Other Information" located at the end of this presentation.

LIMITED ROOM FOR CENTRAL BANKS TO STIMULATE FURTHER THROUGH INTEREST RATES OR QE

Estimates are based on Bridgewater analysis. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

TRANSITIONING TO A NEW MONETARY POLICY REGIME

- Developed economies are in the latter stages of their long-term debt cycles and business cycles.
  - Slow growth
  - Low inflation
  - Near zero interest rates
  - Plenty of liquidity

- Monetary policy is now a weak lever, increasing dependence on fiscal policy coordinated with accommodative monetary policy - MP3.
  - Policy asymmetry
  - No pre-emptive tightening with respect to inflation
  - Keep the expansion going

CHANNELS BY WHICH MP1, MP2 & MP3 STIMULATE SPENDING

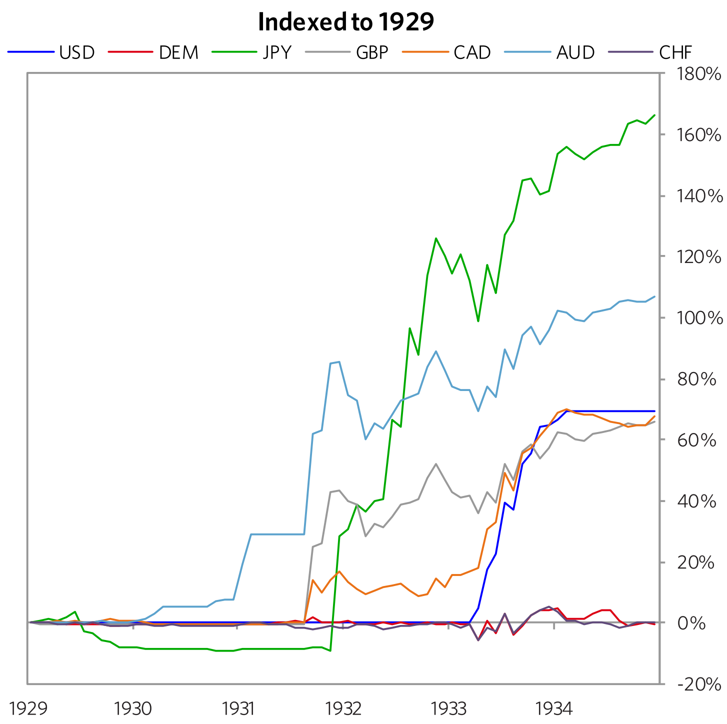
MP1 (interest rate policy)	→	Borrowers (interest rate induced spending)
MP2 (QE)	→	Savers (asset/liquidity induced spending)
MP3 (coordinated fiscal-monetary actions)	→	Government (direct spending financed by money printing)

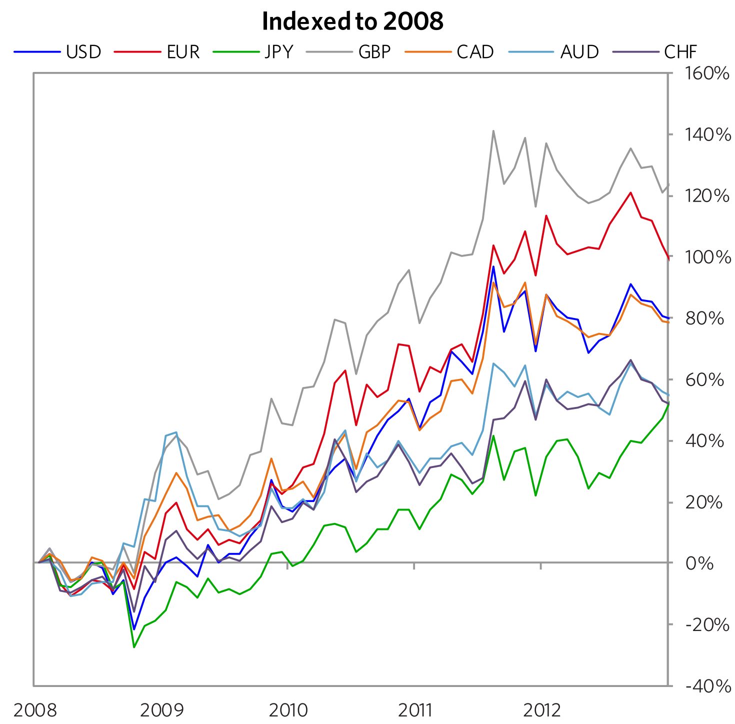
WHERE THINGS STAND

	MP1	MP2	MP3
USA	Close to done	Close to done	Next
Euroland	Done	Done	Next
Japan	Done	Done	Next
China	Modest fuel	Modest fuel	Ample fuel
UK	Close to done	Close to done	Next
Switzerland	Done	Done	Next

THERE IS ALSO THE CURRENCY LEVER

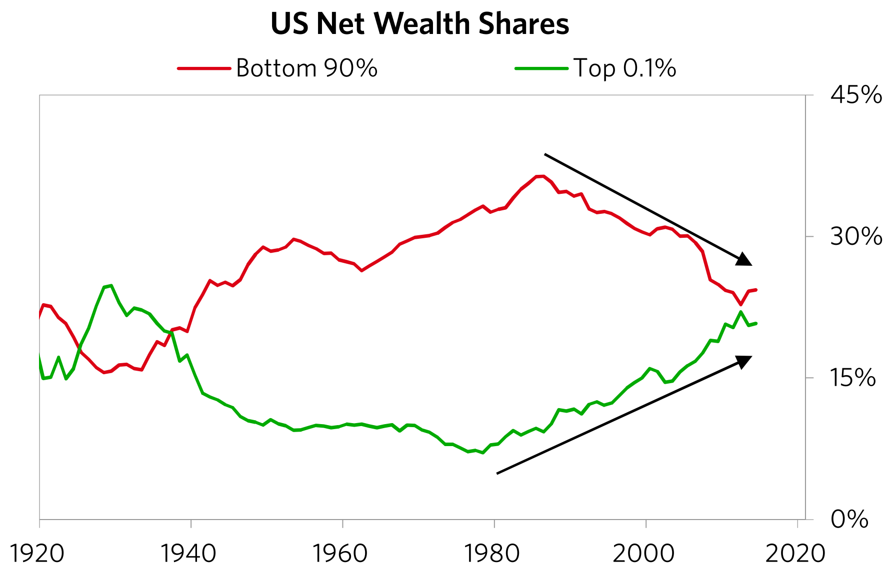
Gold vs. Fiat Currency in the Great Depression and Financial Crisis

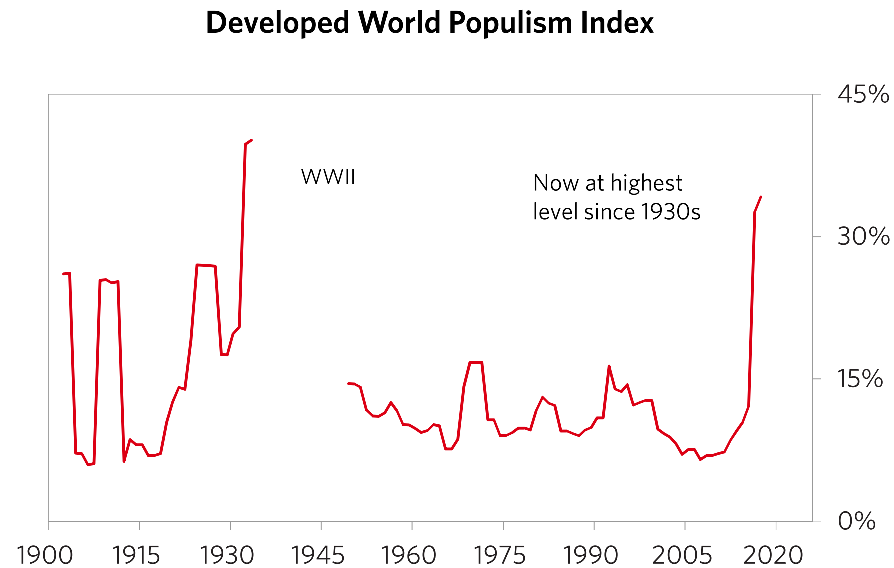


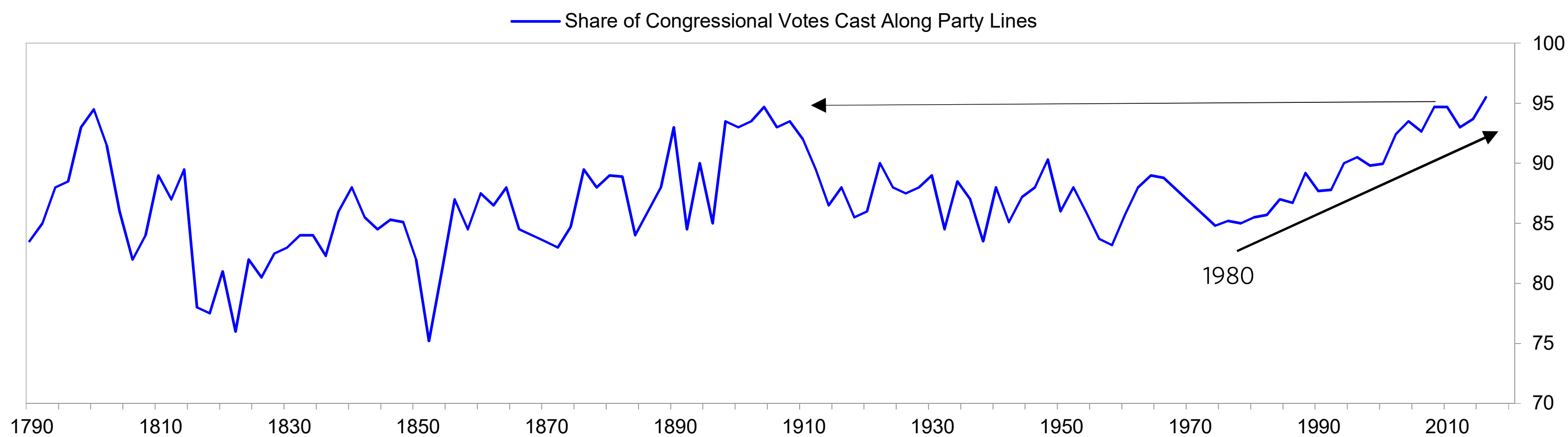


Please review the "Important Disclosures and Other Information" located at the end of this presentation.

RISING INEQUALITY, POPULISM, AND INTERNAL CONFLICT





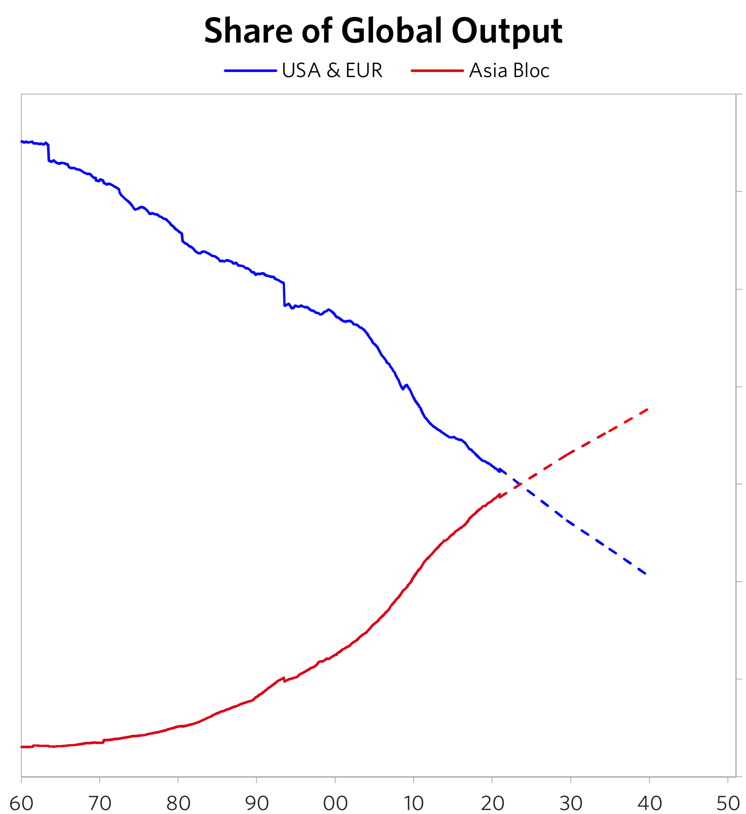


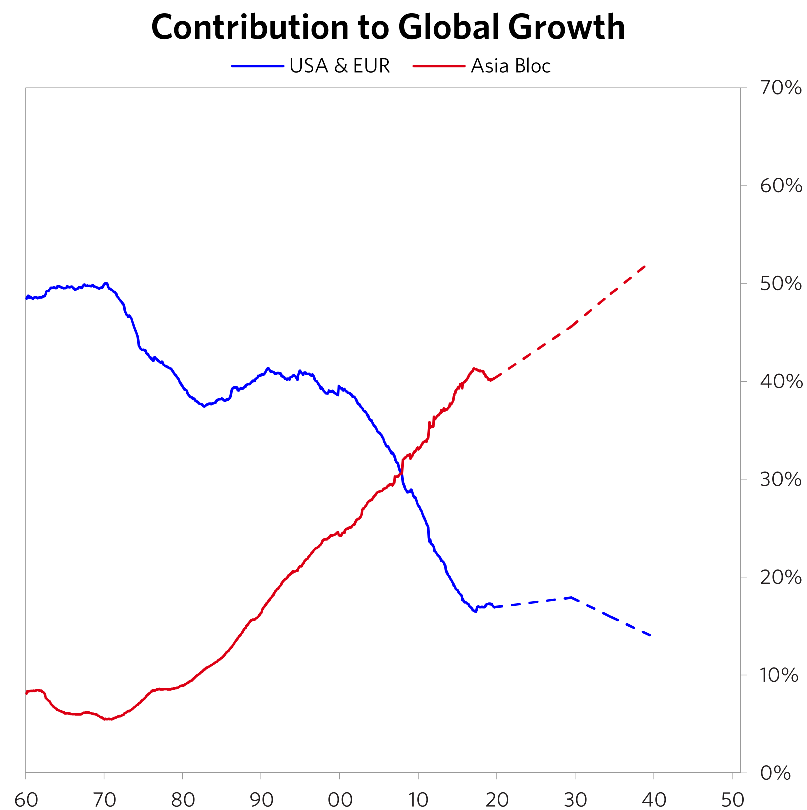
HOWEVER, WE NOW LIVE IN A TRI-POLAR WORLD WITH THREE DOMINANT MONETARY/CREDIT SYSTEMS

Viewed through the lens of our template…

	U.S. Dollar	Euro	Renminbi
The Three Forces			
LT Debt Cycle	Downwave	Downwave	Upwave
ST Debt Cycle	Exhaustion	Languish	Moderation
Productivity	Low	Low	High
Policy Levers Available			
Monetary Policy	MP3	MP3	MP1, MP2, MP3
Fiscal Policy	Available	Available	Available
Incentives to Invest			
Yield Curve	Flat	Flat	Normal
Risk Curve	Low	Medium	High

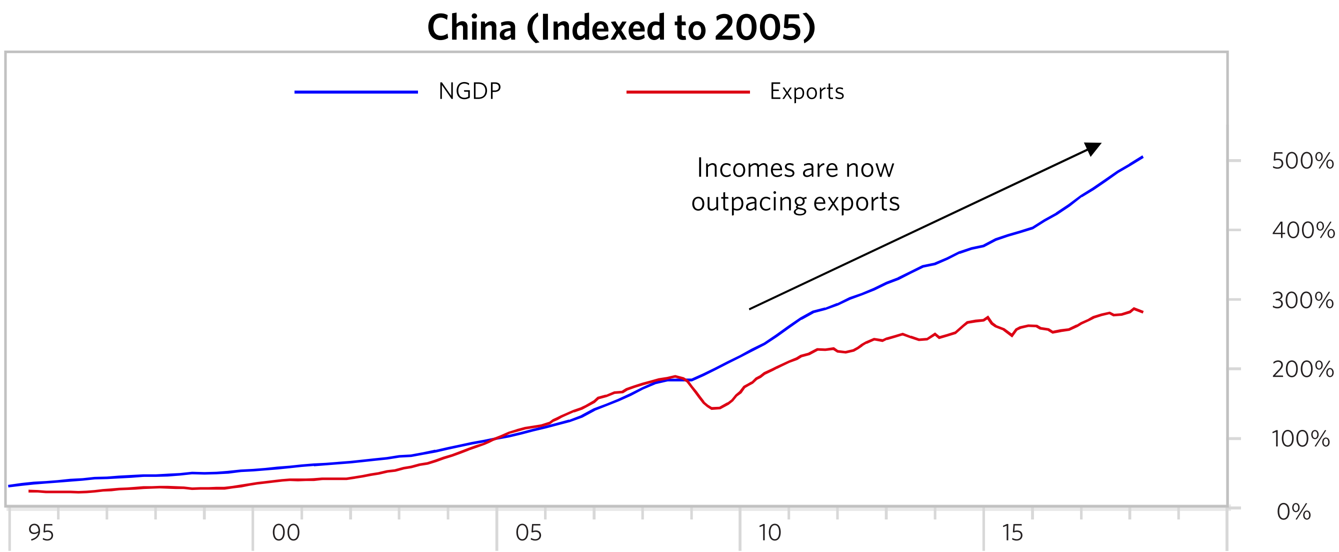
DIVERGING SECULAR TRENDS AND THE RISE OF AN INCREASINGLY POWERFUL ASIA ECONOMIC BLOC

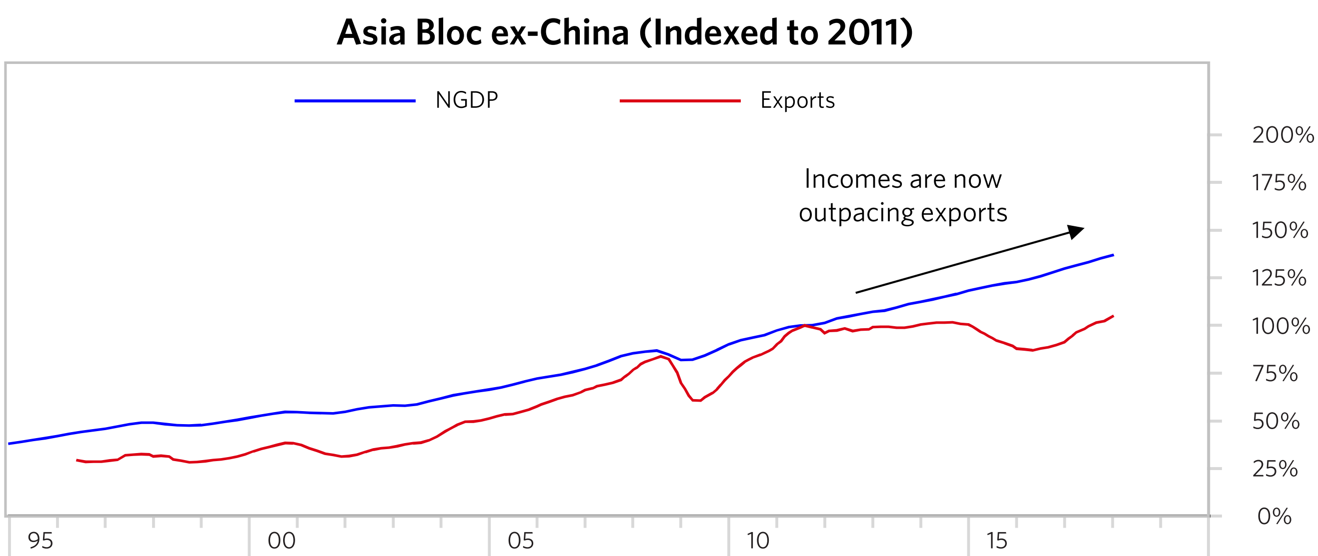




Asia Bloc includes the following regions: China, Hong Kong, Korea, Malaysia, Singapore, Taiwan, and Thailand. Please review the “Important Disclosures and Other Information” located at the end of this presentation.

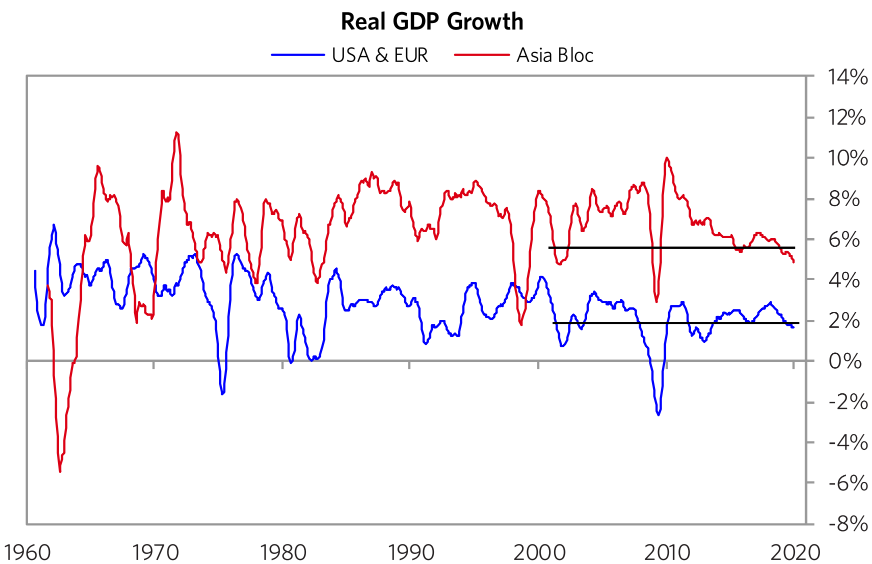
INCREASINGLY INDEPENDENT AND INWARDLY FOCUSED

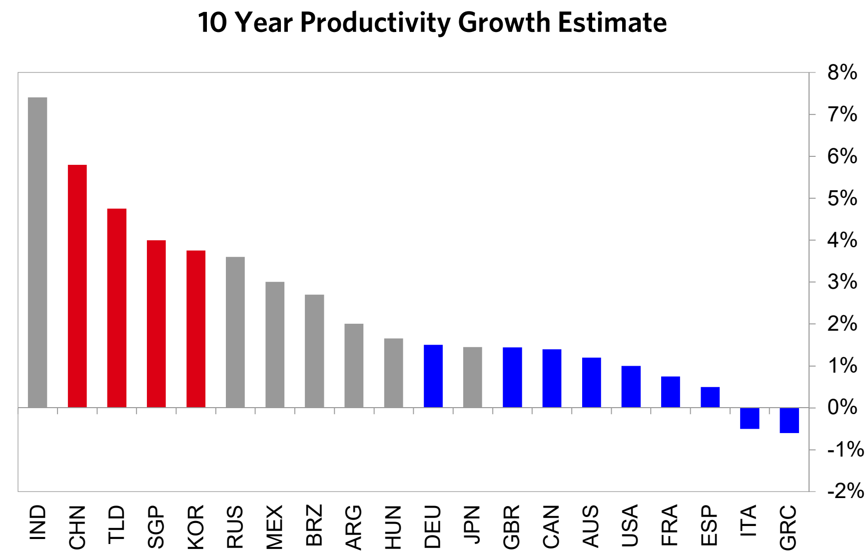


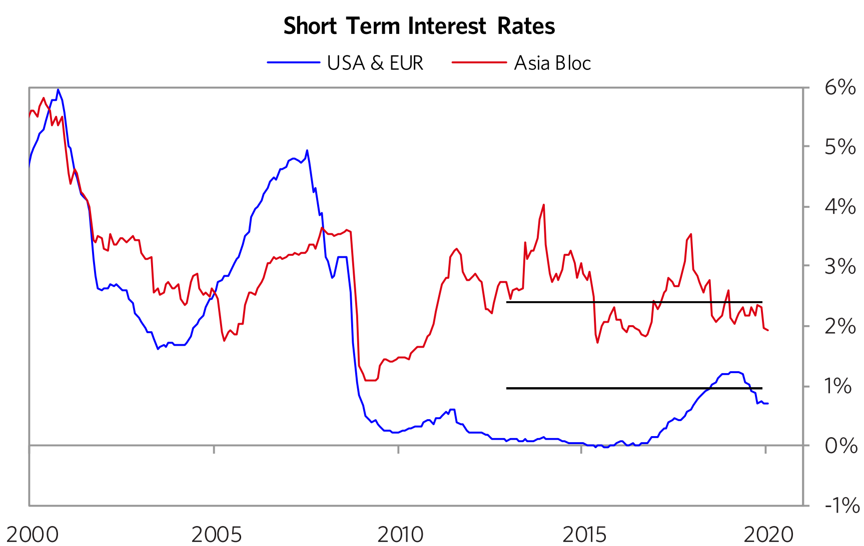


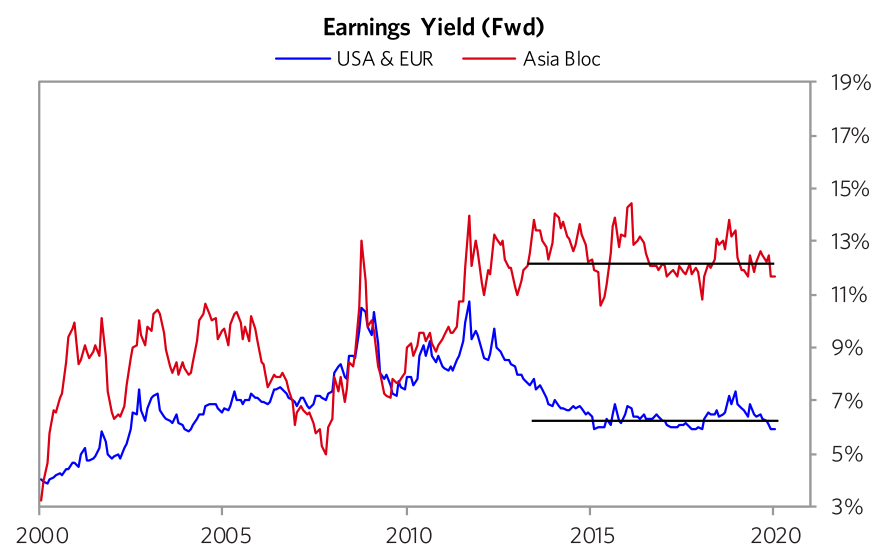
Asia Bloc includes the following regions: China, Hong Kong, Korea, Malaysia, Singapore, Taiwan, and Thailand. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

CONTRASTING EAST AND WEST









Estimates are based on Bridgewater analysis. Asia Bloc includes the following regions: China, Hong Kong, Korea, Malaysia, Singapore, Taiwan, and Thailand. West includes United States and the Eurozone. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

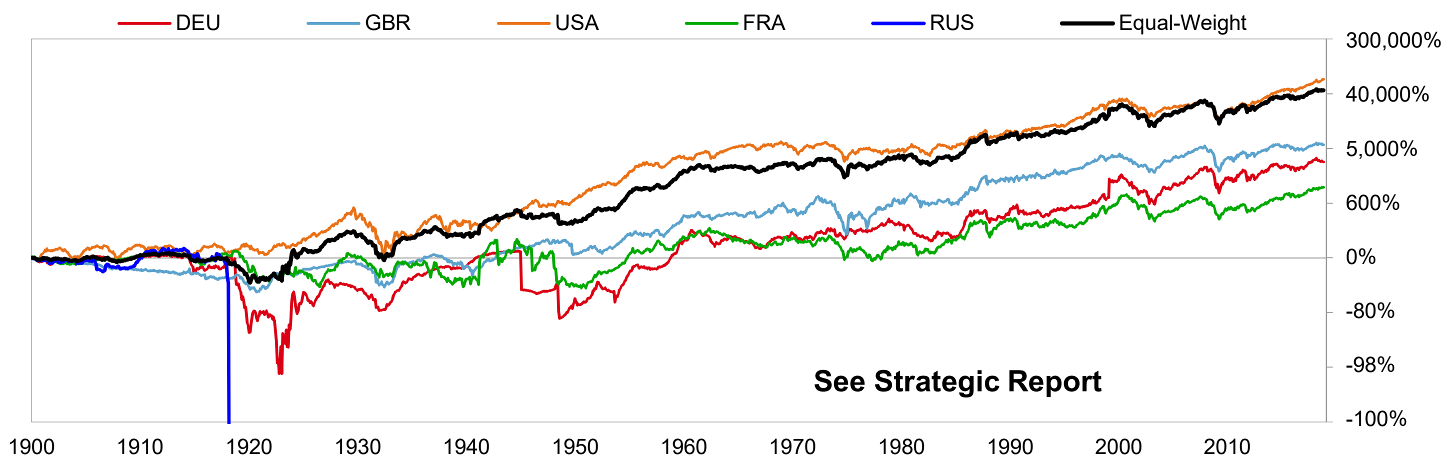
STRUCTURAL CONFLICT THAT WILL BE DIFFICULT TO MANAGE

- Conflict between US and China is an ideological conflict of comparable powers in a small world.
- The two countries have two different systems – the US is bottom-up and China is top-down.
- “Thucydides Trap” (Graham Allison): An upstart to challenge the incumbent.
  - 12 of the last 16 instances of a Thucydides Trap led to war, but this time all are aware.
- In a win-lose situation, picking a winner will not be obvious.

FUNDAMENTALLY BASED DIVERSIFICATION WILL BE RELIABLE

- By environment, growth and inflation
- By monetary/credit system
- By stage of the long-term debt cycle
- By stage of the business cycle
- By position in geopolitical conflict
- By geographic region and trade relationships
- By technology infrastructure
- By source of return (alpha and beta)

Equity Market Cumulative Excess Returns Since 1900 (In Scale)



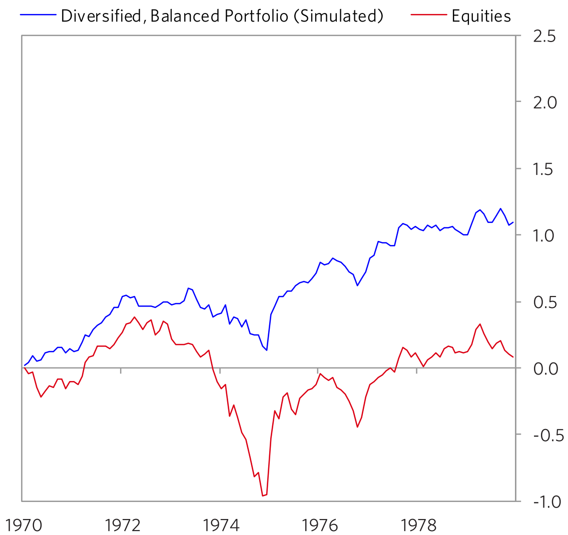
Analysis through December 2018. Past performance is not indicative of future results. Please review the "Important Disclosures and Other Information" located at the end of this document.

DIVERSIFY AND STRESS-TEST ACROSS A WIDE RANGE OF POTENTIAL OUTCOMES

Inflation Amidst Pro-Labor Policies

The UK in the 1970s

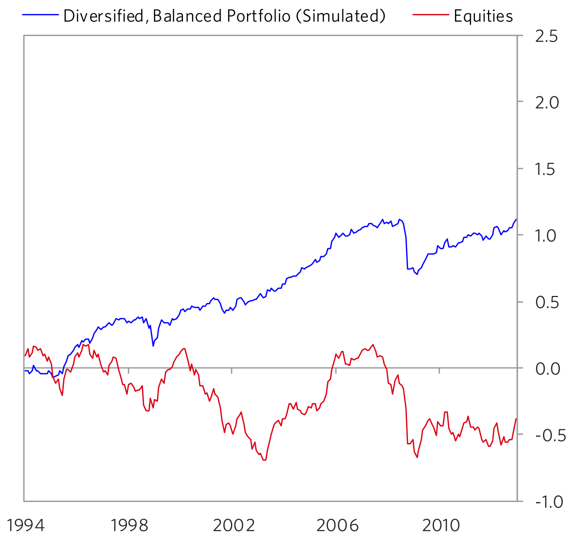
Cumulative Excess Returns in the Period



Deflation with Inadequate Policy Response

Japan in the 1990s and 00s

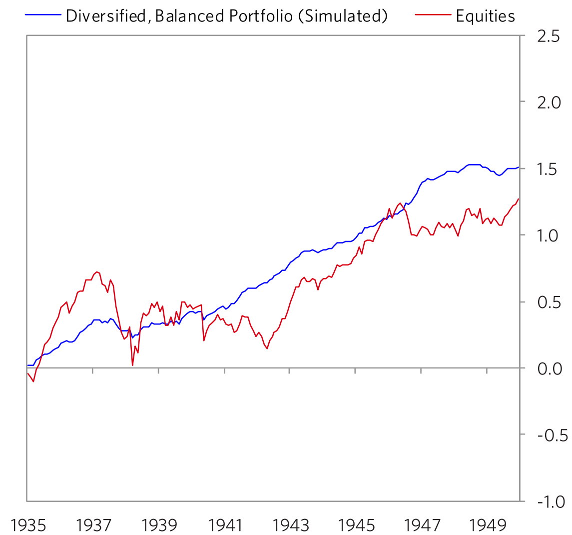
Cumulative Excess Returns in the Period



Coordinated Monetary and Fiscal Policy

US in the 1930s and 40s

Cumulative Excess Returns in the Period



PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.
Diversified, Balanced Portfolio returns are simulated using the All Weather Asset Mix, as described in the "All Weather Asset Mix Disclosure." It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

APPENDIX

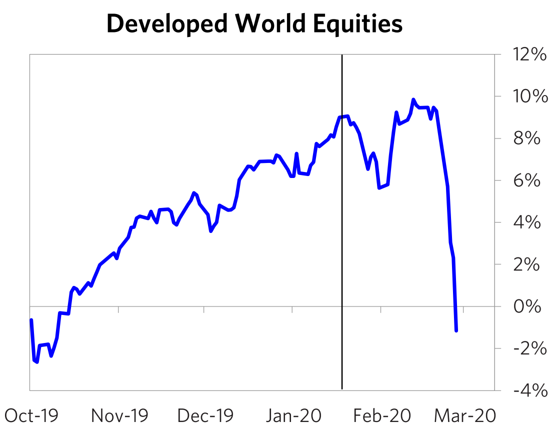
MARKET IMPACT OF THE CORONAVIRUS

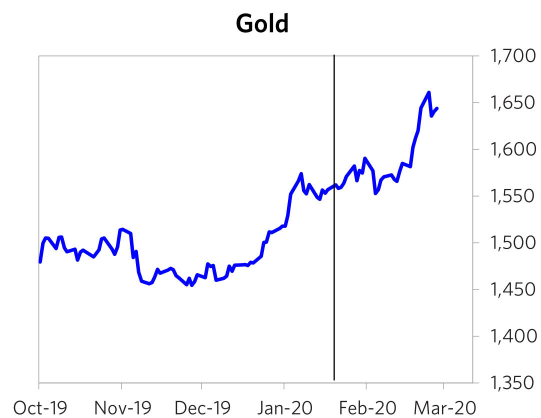
Equity-Implied Coronavirus Impact

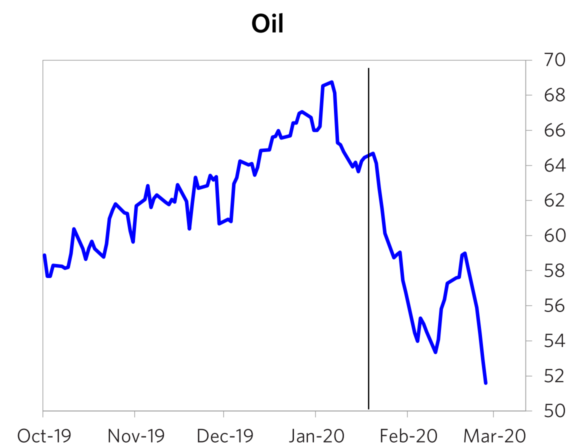
Economy	Equity Price Chg Since 1/20/20		2020 Full Year Impact*	
	Actual	Ex-Discount Rates	On Earnings	On GDP
United States	-10.5%	-13.5%	-45%	-4.5%
Korea	-9.2%	-12.1%	-40%	-4.0%
Japan	-10.8%	-11.3%	-36%	-3.6%
Euroland	-9.0%	-10.6%	-33%	-3.3%
Australia	-8.2%	-9.6%	-31%	-3.1%
China**	-5.8%	-8.4%	-26%	-2.6%

**We assume a bit more than half of the impact on prices comes from risk premiums*

***Note: For China we used MSCI*







Data updated as of February 27, 2020. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

TRACKING THE EFFECTS OF THE CORONAVIRUS

A big, virus-related disruption is already baked in for much of Asia…

…but so far, much less of a drag baked in for the other major economies

Coronavirus Estimated Drag on 2020 Growth (First-Order)

		Impact From Disruption to Date		Downstream Risks
Economies	Annual Growth Impact	Domestic Virus Disruption	Lost Demand from Shutdown Economies	Supply Chain Disruptions
HKG	-3.6%	Large	Extremely Large	Large
TAI	-3.2%	Large	Extremely Large	Very Large
KOR	-2.6%	Very Large	Large	Large
CHN	-2.5%	Extremely Large	Small	Medium
TLD	-2.3%	Large	Very Large	Large
SGP	-2.0%	Very Large	Very Large	Medium
MAL	-1.8%	Large	Very Large	Large
ITA	-1.2%	Very Large	Small	Medium
PHP	-1.1%	Medium	Large	Large
JPN	-1.1%	Large	Large	Large
EUR ex-ITA	-0.9%	Small	Medium	Large
IDR	-0.8%	Small	Large	Large
AUS	-0.8%	Medium	Medium	Medium
USA	-0.3%	Small	Small	Medium

Estimates are based on Bridgewater analysis as of February 25, 2020. Please review the “Important Disclosures and Other Information” located at the end of this presentation.

POLICY MAKERS ARE RESPONDING TO CORONAVIRUS RISKS

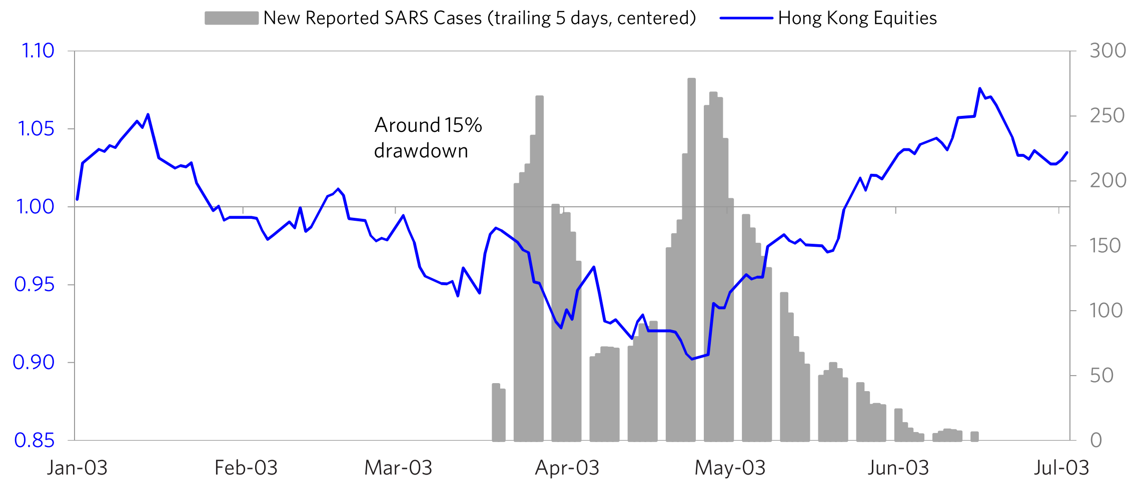
Fed – "The question for us really is: what will be the effects on the US economy? Will they be persistent, will they be material?...We know that there will be some, very likely to be some effects on the United States. I think it's just too early to say." (Chairman Powell, 2/19)

BoJ – "We will monitor the impact of the coronavirus on the economy, inflation, and financial markets with maximum attention...We will continue to gather information by attending international meetings like the G-20 and <u>we will be well-prepared to act when we need to act</u>." (Governor Kuroda, 2/23)

	Monetary Policy				Fiscal Measures			Room to Ease Further
	Rate Cuts So Far	Rate Cuts Priced in Over Next 12m	Other CB Liquidity Measures	FX Intervention	Tax Cuts and Subsidies	Loans	Consumer Incentives	Current Short Rate
China		0.1%	Yes		Yes	Yes		2.4%
Hong Kong		0.4%	Yes		Yes		Yes	1.0%
Singapore		0.2%		Yes	Yes	Yes	Yes	0.1%
Taiwan		0.3%			Yes	Yes	Yes	1.4%
Thailand	0.25%	0.1%			Yes		Yes	1.0%
Malaysia	0.25%	0.4%				Yes	Yes	2.7%
Korea		0.3%	Yes		Yes	Yes	Yes	1.3%
Philippines	0.25%	0.3%						3.8%
Indonesia	0.25%	0.1%		Yes				4.7%
Australia		0.4%						0.8%
Japan		0.1%						0.0%
Euroland		0.1%						-0.5%
US		0.6%						1.6%
UK		0.4%						0.8%

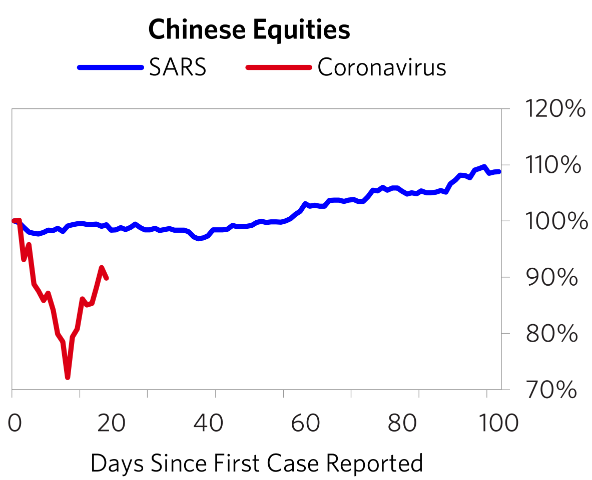
CASE STUDY: COMPARING THE CURRENT SITUATION TO SARS

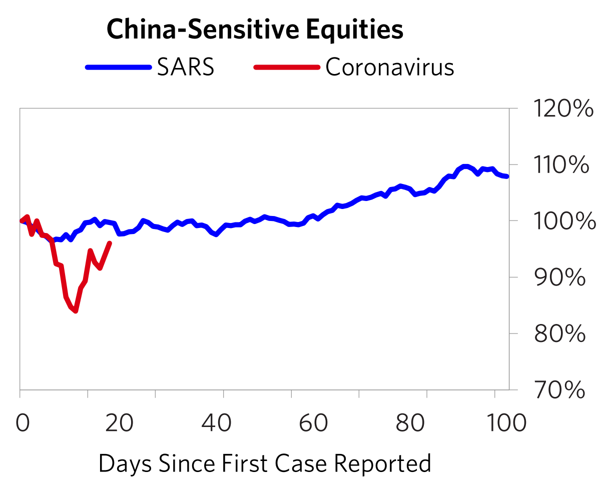
SARS GDP growth impacts were about -2% in China and -7% in Hong Kong. Coronavirus impacts are likely to be larger and longer-lasting.



Market Response (Coronavirus vs SARS, Indexed to Start of Crisis)

Market action has been bigger than during SARS, especially in China and China-exposed countries





SWINE FLU AS AN ANALOGUE

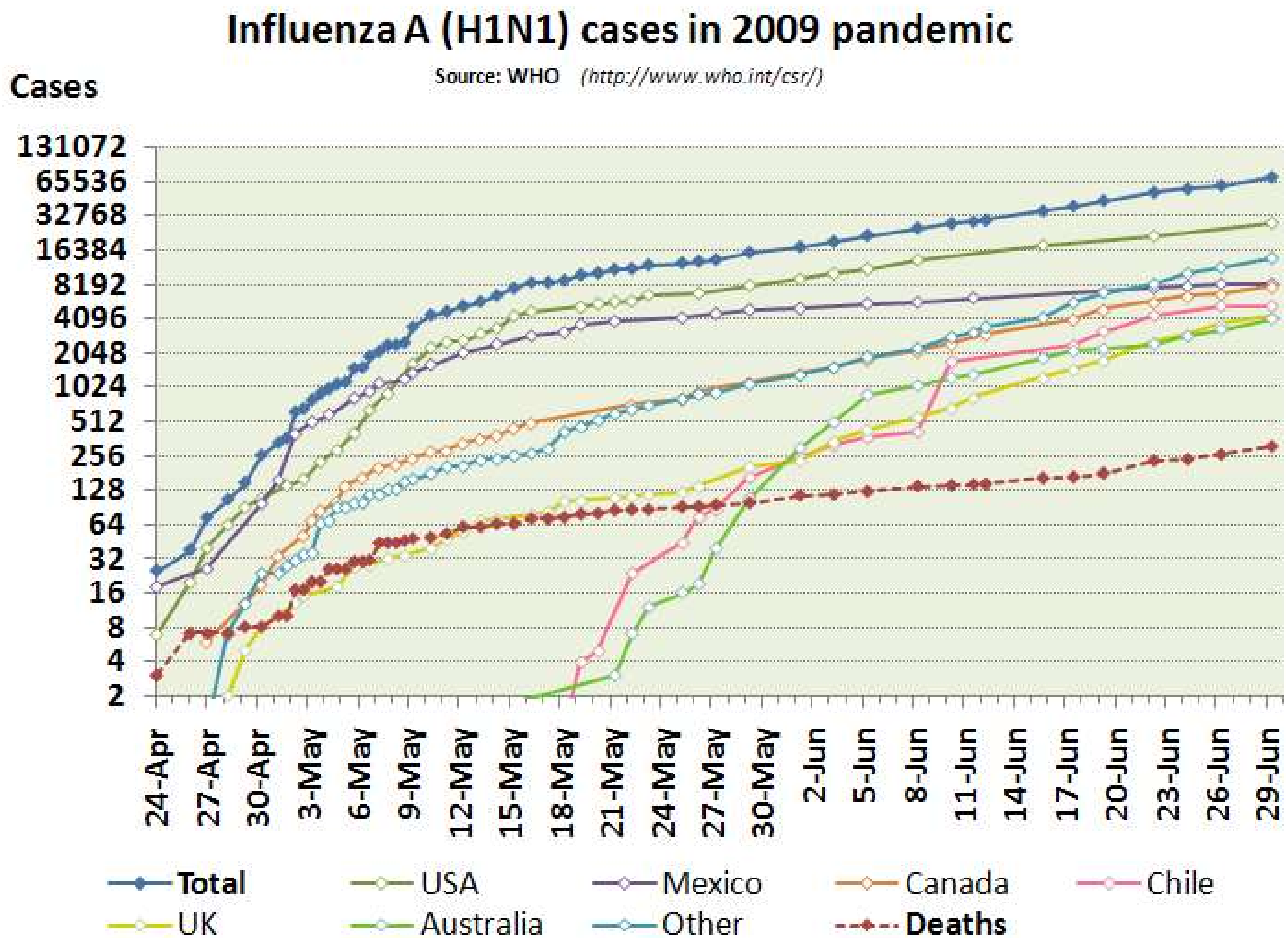
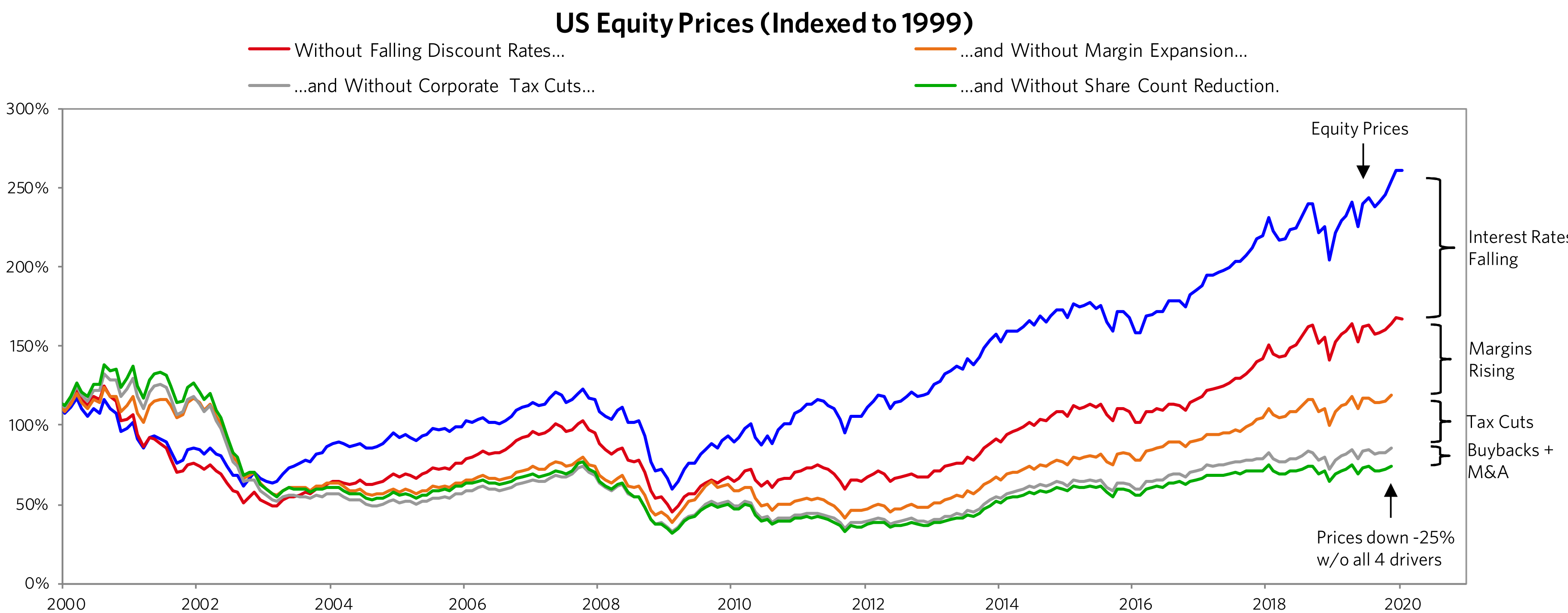


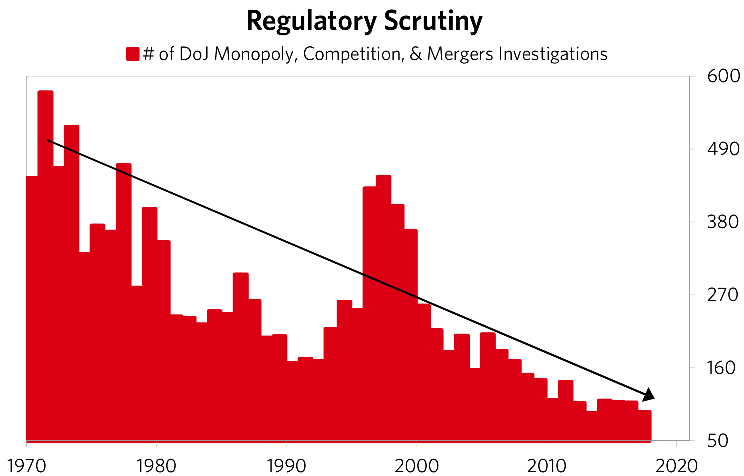
Chart courtesy of Wikipedia: https://en.wikipedia.org/wiki/2009_flu_pandemic_by_country. Please review the “Important Disclosures and Other Information” located at the end of this presentation.

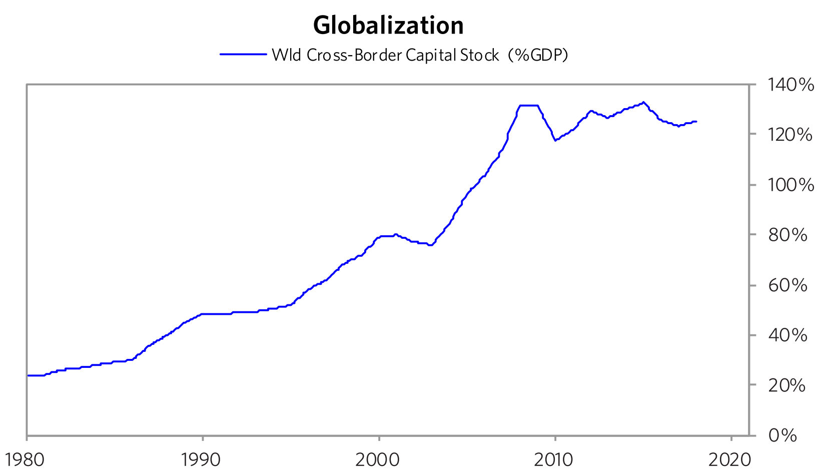
DRIVERS OF STRONG ASSET PERFORMANCE ARE BEHIND US

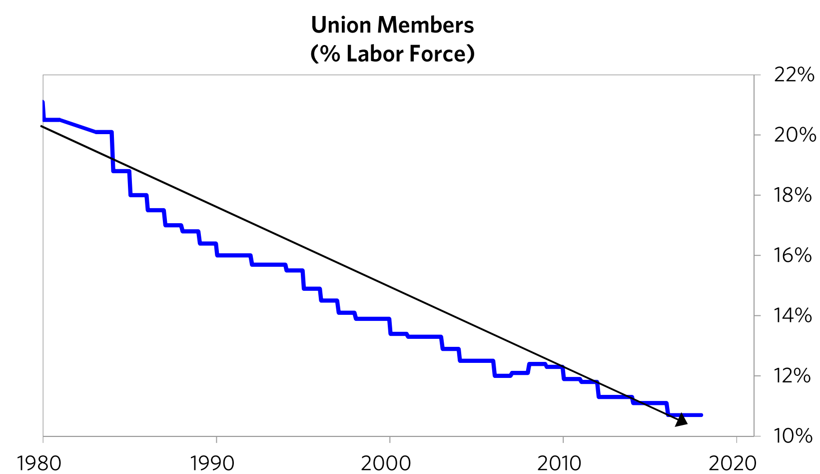


Based on Bridgewater analysis. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

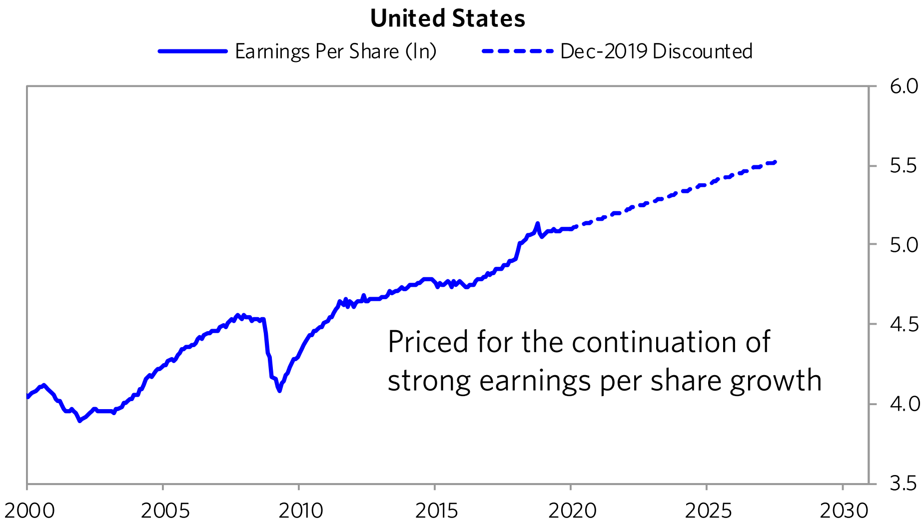
THE PRO-BUSINESS PENDULUM IS REVERSING

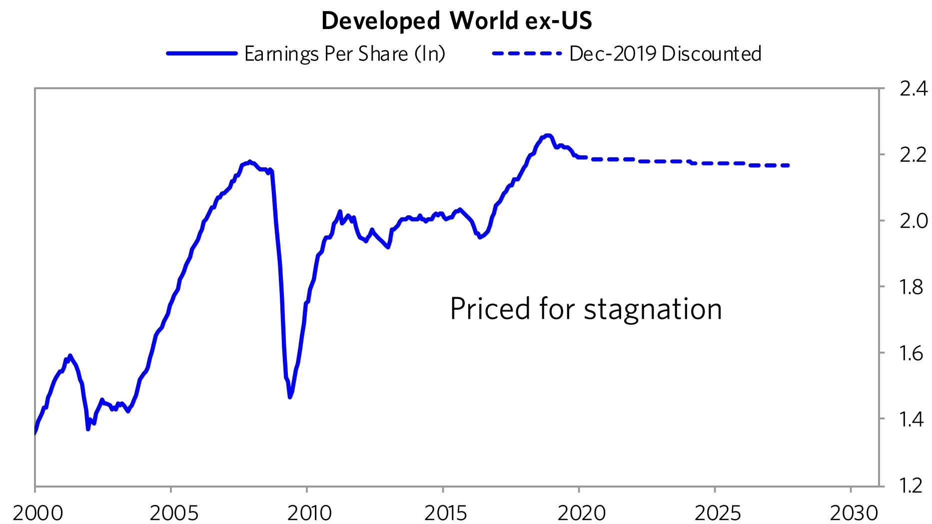


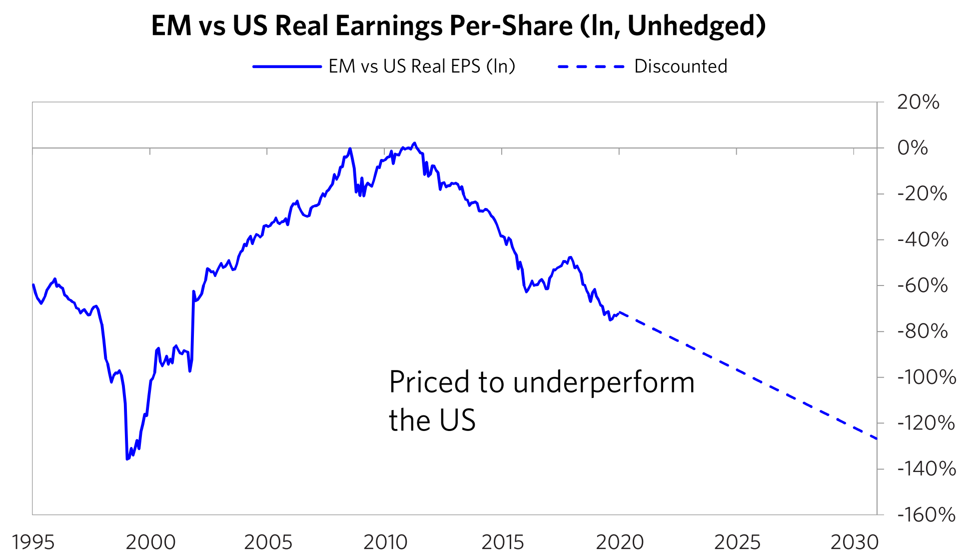




THERE ARE MEANINGFUL DIVERGENCES IN MARKET PRICING

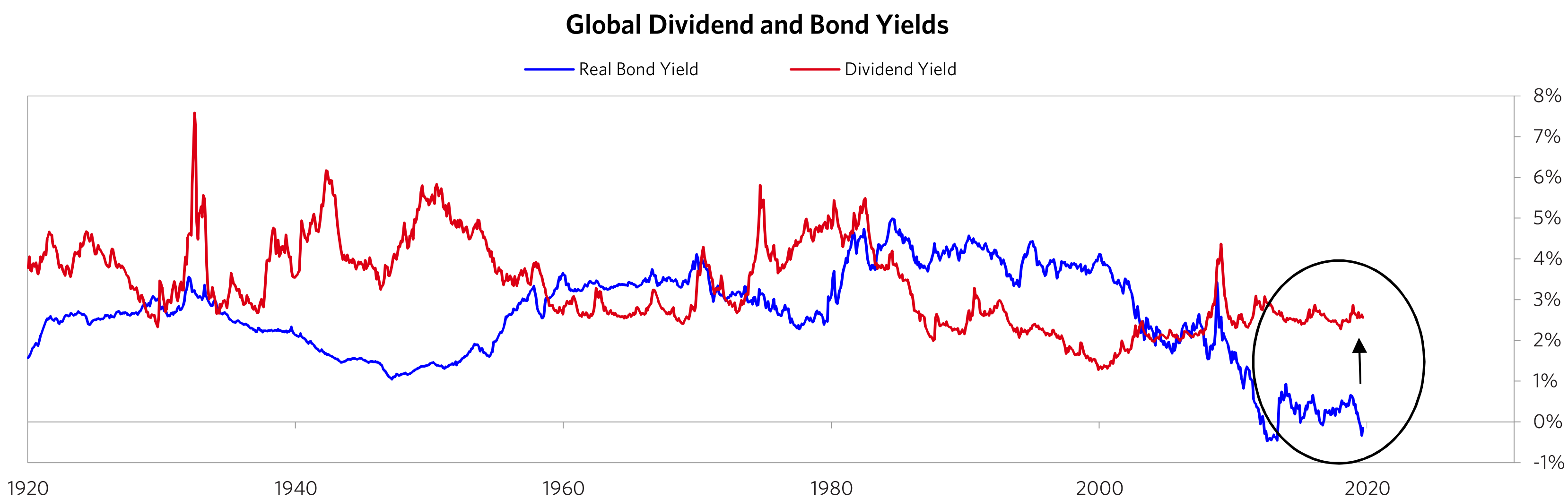


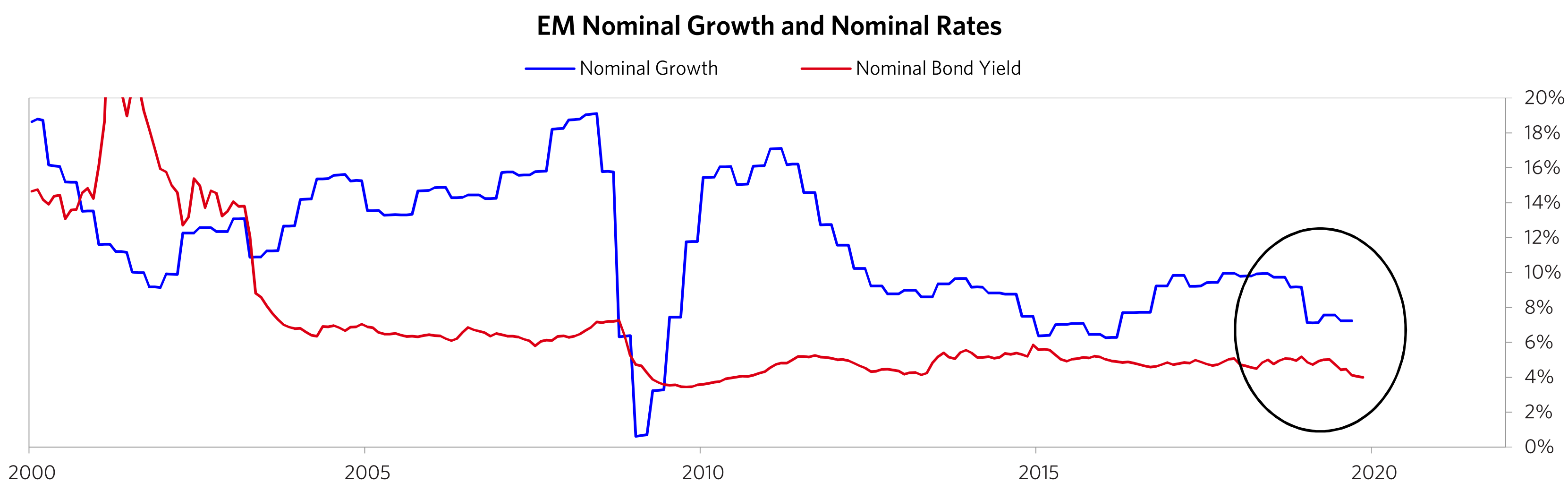




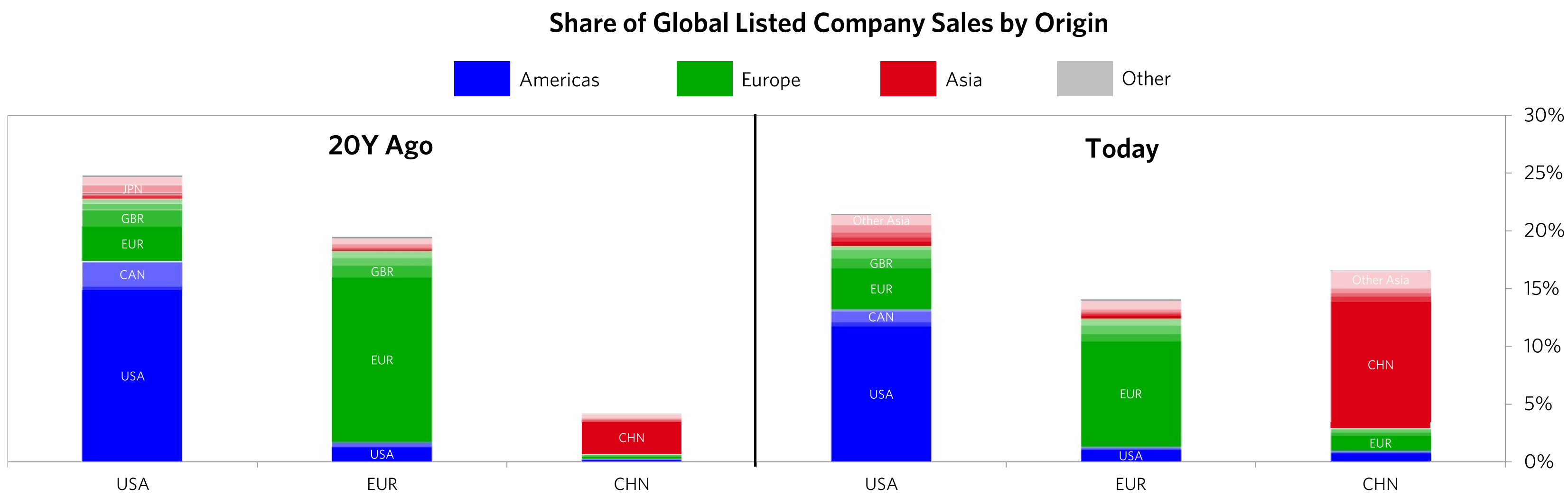
Estimates are based on Bridgewater analysis. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

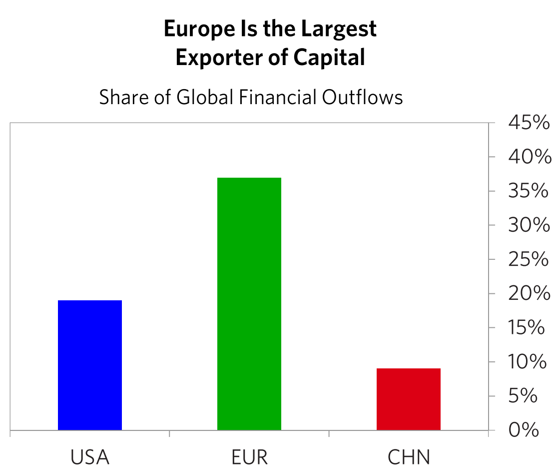
LOW INTEREST RATES RELATIVE TO CASH FLOWS

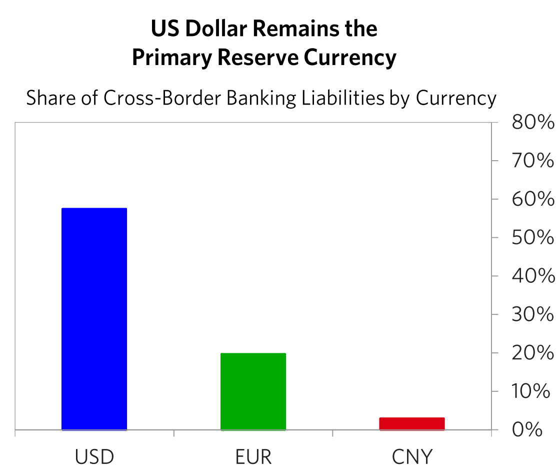


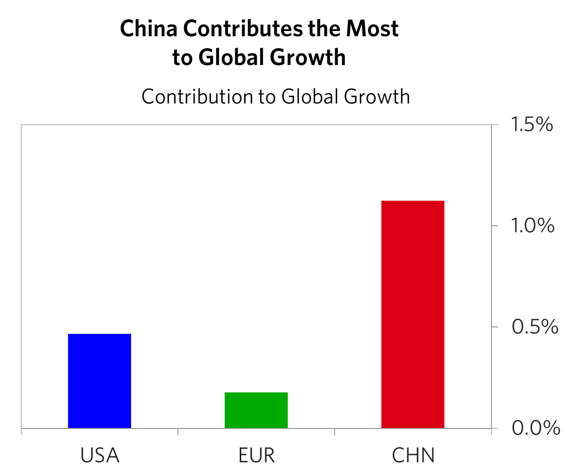


SUMMARY PROFILE OF THE TRI-POLAR WORLD



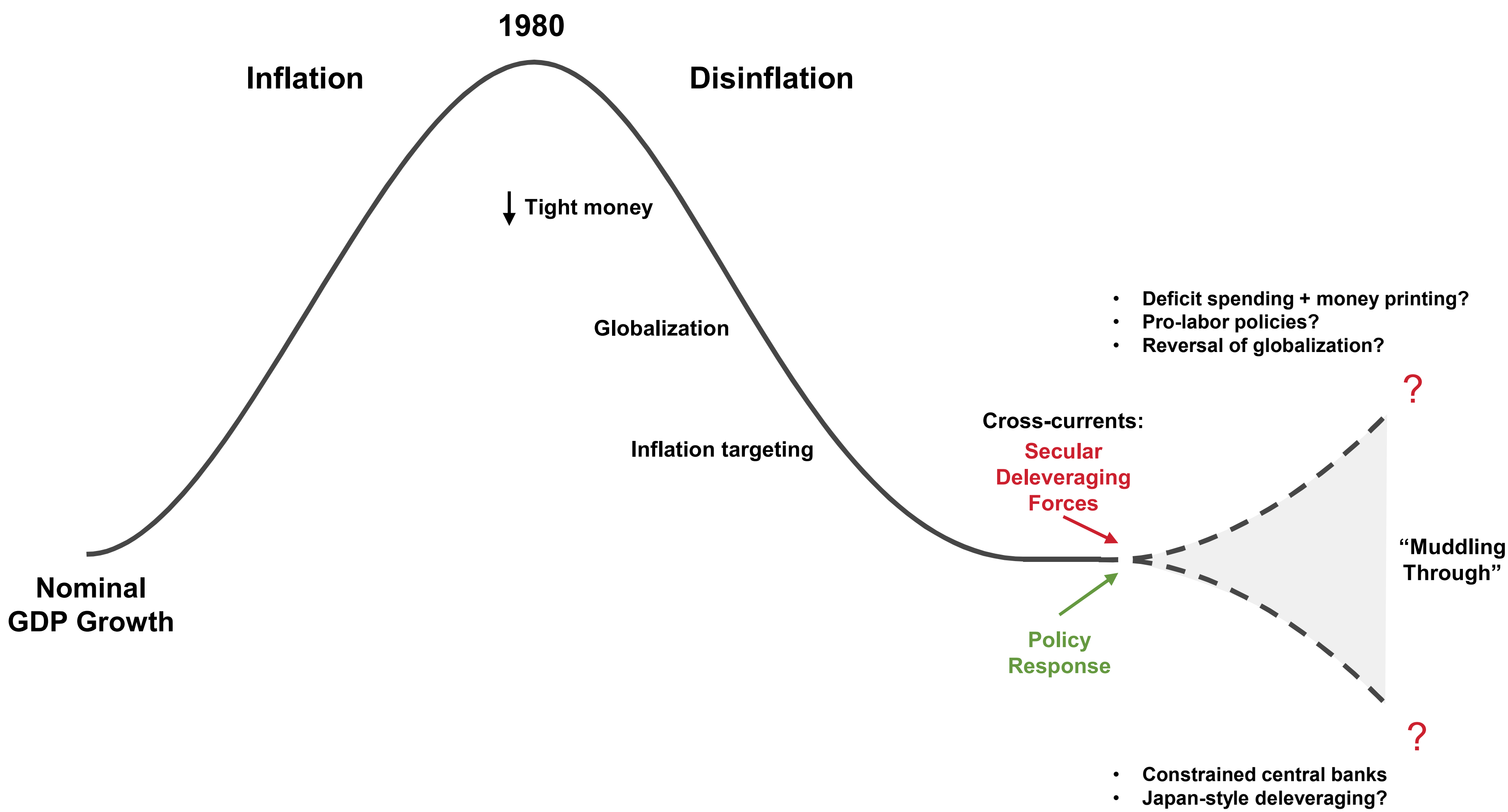






Data as of November 2019. Please review the “Important Disclosures and Other Information” located at the end of this presentation.

A WIDE RANGE OF POSSIBLE OUTCOMES



STRESS TESTING ASSETS THROUGH PARADIGM SHIFTS

Local Asset Excess Returns by Case (Ann)

	Nominal Growth	Growth vs Exp	Inflation vs Exp	Equities	Bonds	IL Bonds	Gold
US 1940-1951: stimulation/right	↑	↑	↑	10.9%	2.4%	7.4%	0.5%
US 1971-1979: stimulation/right	↑	↓	↑	-0.5%	-0.9%	4.1%	26.4%
UK 1947-1959: stimulation/left	↑	↑	↑	9.9%	0.1%	3.1%	-0.9%
US 1966-1970: stimulation/left	↑	↑	↑	1.7%	-1.9%	3.4%	-4.4%
UK 1970-1979: stimulation/left	↑	↓	↑	0.8%	0.1%	9.5%	21.1%
JP 2014-2019: muddling through	→	→	→	7.5%	2.3%	0.3%	4.7%
JP 1994-2003: insufficient/ineffective	↓	↓	↓	-3.8%	3.0%	3.9%	-0.8%
US 1936-1939: insufficient/ineffective	↓	↓	↓	-0.6%	4.2%	4.2%	-0.1%

Inconsistent asset performance across different cases

Growth versus expectations and inflation versus expectations analyses are based on the All Weather Lens, which is an analytical approach to assess the behavior of the major drivers of asset performance and their impact on markets during any given period based on Bridgewater's understanding of global financial markets. Information shown is the result of analyses of actual and simulated market data. Asset performance updated through December 2019. Please review the "Important Disclosures and Other Information" at the end of this document.

STRESS TESTING PORTFOLIOS THROUGH PARADIGM SHIFTS

Balanced Portfolio vs Illustrative Portfolio Excess Returns During Cases

(Simulated, Beta Only)

	Annualized Return			Worst Drawdown		
	Balanced	Illustrative	Diff	Balanced	Illustrative	Diff
Since 1935	8.2%	5.2%	+3.0%	-46%	-44%	-2%
Avg Across All Stress-Test Cases	6.8%	3.1%	+3.8%	-20%	-32%	+12%
US 1940-1951: stimulation/right	10.9%	8.5%	+2.3%	-11%	-16%	+5%
US 1971-1979: stimulation/right	9.3%	-0.3%	+9.6%	-18%	-41%	+23%
UK 1947-1959: stimulation/left	5.8%	6.9%	-1.1%	-28%	-17%	-11%
US 1966-1970: stimulation/left	2.4%	1.1%	+1.3%	-21%	-29%	+8%
UK 1970-1979: stimulation/left	11.1%	1.8%	+9.3%	-30%	-62%	+32%
JP 2014-2019: muddling through	3.8%	6.2%	-2.4%	-11%	-13%	+2%
JP 1994-2003: insufficient/ineffective	6.5%	-1.1%	+7.6%	-20%	-38%	+18%
US 1936-1939: insufficient/ineffective	5.0%	1.6%	+3.5%	-18%	-37%	+19%

Equity concentrated portfolio had lower average returns than balance....

...with more extreme periods of weak performance (<2% return).

Asset performance updated through December 2019. Illustrative Portfolio simulated based on the Illustrative Portfolio regionalized to the respective case's assets—e.g., in a UK case, we use only UK assets. For more on the Illustrative Portfolio, please see the Illustrative Portfolio disclosure. Balanced Portfolio simulates an All Weather-like asset allocation in regional terms using local assets and is gross of fees (please see the "All Weather Asset Mix Disclosure"). It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS. Note that the All Weather Asset Mix is being shown to demonstrate how a balanced portfolio of assets has performed. The All Weather Asset Mix does not represent a product or service that is available for purchase by any investor. Past performance is not indicative of future results.
Please review the "Important Disclosures and Other Information" at the end of this document.

Important Disclosures and Other Information

Please read carefully the following important disclosures and other information as they provide additional information relevant to understanding the assumptions, research and performance information presented herein. Additional information is available upon request except where the proprietary nature of the information precludes its dissemination.

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Bridgewater's investment process seeks to understand the cause and effect linkages that drive markets over time. To assess and refine its understanding of these linkages, Bridgewater performs historical stress tests across a wide range of timeframes and market environments. From these stress tests, Bridgewater is able to simulate how its strategies would have performed prior to their inception. For strategies that include active decision making, Bridgewater often "humbles" its simulated alpha returns (by systematically adjusting downward the simulated results that Bridgewater's current alpha investment logic produces) to account for the possibility that it could be wrong. Because this stress testing is a core component of Bridgewater's investment process, it shares these simulations with current and prospective investors to demonstrate its thinking. However, because they do not demonstrate actual results, these simulations are inherently limited and should not be relied upon to make an investment decision.

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM.

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Bridgewater believes that a particular return stream should be evaluated against its expected performance or its benchmark. To that end, Bridgewater demonstrates whether its strategies are operating as expected via a cone chart, which shows the performance of a particular strategy over time relative to the strategy's benchmark and also within bands of standard deviation from that benchmark. Separately, to demonstrate the impact of market conditions on the strategies it manages, Bridgewater explains the macro-economic pressures and market conditions that effected performance in the context of client letters, account reviews, or other publications that Bridgewater provides to each current and prospective investor on a regular basis. Additional information about how Bridgewater thinks about setting expectations for its strategies via a benchmark is available upon request.

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Any tables, graphs or charts relating to past performance, whether hypothetical, simulated or actual, included in this presentation are intended only to illustrate the performance of indices, strategies, or specific accounts for the historical periods shown. When creating such tables, graphs and charts, Bridgewater may incorporate assumptions on trading, positions, transactions costs, market impact estimations and the benefit of hindsight. For example, transaction cost estimates used in simulations are based on historical measured costs and/or modeled costs, and attribution is derived from a process of attributing positions held at a point in time to specific market views and is inherently imprecise. Such tables, graphs and charts are not intended to predict future performance and should not be used as a basis for making any investment decision. Bridgewater has no obligation to update or amend such tables, graphs or charts.

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Where shown, information related to markets traded may not necessarily indicate the actual historical or current strategies of Bridgewater. Markets listed may or may not be currently traded and are subject to change without notice. Markets used for illustrative purposes may not represent the universe of markets traded or results available and may not include actual trading results of Bridgewater. Other markets or trading, not shown herein, may have had materially different results. Attribution of performance or designation of markets and the analysis of performance or other performance with respect to scenario analysis or the determination of biases is based on Bridgewater's analysis. Statements made with respect to the ability of Bridgewater, a fund, a strategy, a market or instrument to perform in relation to any other market, instrument or manager in absolute terms or in any specific manner in the future or any specified time period are not a guarantee of the desired or targeted result.

Bridgewater research utilizes data and information from public, private and internal sources, including data from actual Bridgewater trades. Sources include the Australian Bureau of Statistics, Bloomberg Finance L.P., Capital Economics, CBRE, Inc., CEIC Data Company Ltd., Consensus Economics Inc., Corelogic, Inc., CoStar Realty Information, Inc., CreditSights, Inc., Dealogic LLC, DTCC Data Repository (U.S.), LLC, Ecoanalitica, EPFR Global, Eurasia Group Ltd., European Money Markets Institute – EMMI, Evercore ISI, Factset Research Systems, Inc., The Financial Times Limited, GaveKal Research Ltd., Global Financial Data, Inc., Haver Analytics, Inc., ICE Data Derivatives, IHSMarkit, The Investment Funds Institute of Canada, International Energy Agency, Lombard Street Research, Mergent, Inc., Metals Focus Ltd, Moody's Analytics, Inc., MSCI, Inc., National Bureau of Economic Research, Organisation for Economic Cooperation and Development, Pensions & Investments Research Center, Refinitiv, Renwood Realtytrac, LLC, Rystad Energy, Inc., S&P Global Market Intelligence Inc., Sentix Gmbh, Spears & Associates, Inc., State Street Bank and Trust Company, Sun Hung Kai Financial (UK), Totem Macro, United Nations, US Department of Commerce, Wind Information (Shanghai) Co Ltd, Wood Mackenzie Limited, World Bureau of Metal Statistics, and World Economic Forum. While we consider information from external sources to be reliable, we do not assume responsibility for its accuracy.

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ALL WEATHER ASSET MIX DISCLOSURE

All Weather Asset Mix Performance (Net of Fees)

	Total Return in USD
Last 1 Year	18.2%
Last 3 Years	9.2%
Last 5 Years	6.3%
Last 7 Years	5.9%
Last 10 Years	9.1%

Annualized Returns (Jan-70 through Jan-20)

Net Since Inception Jan-70 through Jan-20

	Total Return in USD
Annualized Return	12.3%
Standard Deviation	10.6%
Sharpe Ratio	0.69

Standard deviation is calculated using gross of fees performance. Past results are not necessarily indicative of future results. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM.

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All Weather Asset Mix Simulation Performance Disclosure

Where shown all performance of the Bridgewater All Weather Asset Mix is based on simulated, hypothetical performance and not the returns of Bridgewater's All Weather strategy. Bridgewater's investment selection and trading strategies are systematic and rules-based. However, they are not fully automated and they do include human input. As a result, back-tested returns are designed based on assumptions about how Bridgewater would have implemented the All Weather Asset Mix, prior to its existence. These assumptions are intended to approximate such implementation, but are inherently speculative.

The simulated performance for the All Weather Asset Mix was derived by applying Bridgewater's current investment systems and portfolio construction logic to historical market returns across the markets selected for the All Weather Asset Mix. A table of the markets used appears below. We use actual market returns when available as an input for our hypothetical returns and otherwise use Bridgewater Associates' proprietary estimates, based on other available data and our fundamental understanding of asset classes. In certain cases, market data for an exposure which otherwise would exist in the simulation may be omitted if the relevant data is unavailable, deemed unreliable, immaterial or accounted for using proxies. Proxies are assets that existed and for which data is available, which Bridgewater believes would approximate returns for an asset that did not exist or for which reliable data is not available. For example, before reliable commodity futures returns data can be found Bridgewater estimates futures returns by using the spot commodity returns and their typical relationship to futures returns. Examples of omitted markets or accounted for using proxies include, but are not limited to, emerging market equities, emerging market debt, and certain commodities. The mix and weightings of markets traded for All Weather Asset Mix are subject to change in the future.

The All Weather Asset Mix maintains the desired strategic asset allocation and level of risk regardless of market conditions. Accordingly, the All Weather Asset Mix does not alter the desired strategy asset allocation and level of risk based on the strategic management process employed in the All Weather Strategy.

Simulated asset returns are subject to considerable uncertainty and potential error, as a great deal cannot be known about how assets would have performed in the absence of actual returns. The All Weather Asset Mix is an approximation of our current process but not an exact replication and may have differences including but not limited to the precise mix of markets used and the weights applied to those markets. It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology (including the addition/removal of asset classes) and the underlying market data. There is no guarantee that previous results would not be materially different. Future strategy changes could materially change previous simulated returns in order to reflect the changes accurately across time.

Transaction costs are accounted for and are estimates themselves based on historical measured costs and/or modeled costs. Actual transaction costs experienced could have been higher or lower than those reflected. Where noted, the All Weather Asset Mix net of fees returns have been calculated using our standard fee schedule for a minimum size account, which are the highest fees we have or would currently charge an account. Investment advisory fees are described in Bridgewater's ADV Part 2A. Gross of fees performance (i) excludes the deduction of management fees, and other operating expenses (the "fees and expenses") and (ii) includes the reinvestment of interest, gains and losses. Including the fees and expenses would lower performance. There is no guarantee regarding the All Weather Asset Mix's ability to perform in absolute returns or relative to any market in the future, during market events not represented or during market events occurring in the future. Market conditions and events vary considerably, are unpredictable and can have unforeseen impacts resulting in materially adverse results.

Markets included in the All Weather Asset Mix Simulation

The All Weather Asset Mix Simulation includes returns from the following markets: global nominal interest rates, global inflation linked bonds, emerging market credit spreads, corporate credit spreads, global equities, and commodities.

ILLUSTRATIVE PORTFOLIO DISCLOSURE

This page contains the allocation information for the historical simulation of the Illustrative Portfolio, from 1925 onwards, as well as forward looking assumptions for expected returns, volatility, tracking error, and correlations used in this analysis. The portfolio capital allocation weights (illustrated below) are estimates based either upon Bridgewater Associates' understanding of standard asset allocation (which may change without notice) or information provided by or publicly available from the recipient of this presentation. Asset class returns are actual market returns where available and otherwise a proxy index constructed based on Bridgewater Associates understanding of global financial markets. Information regarding specific indices and simulation methods used for proxies is available upon request (except where the proprietary nature of information precludes its dissemination). Results are hypothetical or simulated and gross of fees unless otherwise indicated. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS.

Asset Type	Asset	Nominal Exposure	% Hedged FX	Beta Volatility	Beta Ratio	Alpha Volatility	Alpha Ratio
Equities	World Equities	58.3%	0%	13.3%	0.31	5.0%	0.30
Nominal Government Bonds	Developed World Bonds	11.2%	0%	3.9%	0.31	2.0%	0.30
Real Estate	Developed World Real Estate	7.1%	0%	15.8%	0.31	6.0%	0.30
MBS	United States MBS	6.1%	0%	3.9%	0.25	-	-
Corporate Bonds	World Corporate Bonds	5.1%	0%	5.4%	0.33	3.0%	0.30
Absolute Return	Absolute Return	5.1%	0%	-	-	7.0%	0.50
Equities	Emerging Market Equities	3.1%	0%	20.0%	0.25	5.0%	0.30
High Yield Bonds	United States High Yield Bonds	2.0%	0%	9.8%	0.30	-	-
IL Bonds	Developed World IL Bonds	2.0%	0%	5.1%	0.30	1.0%	0.30

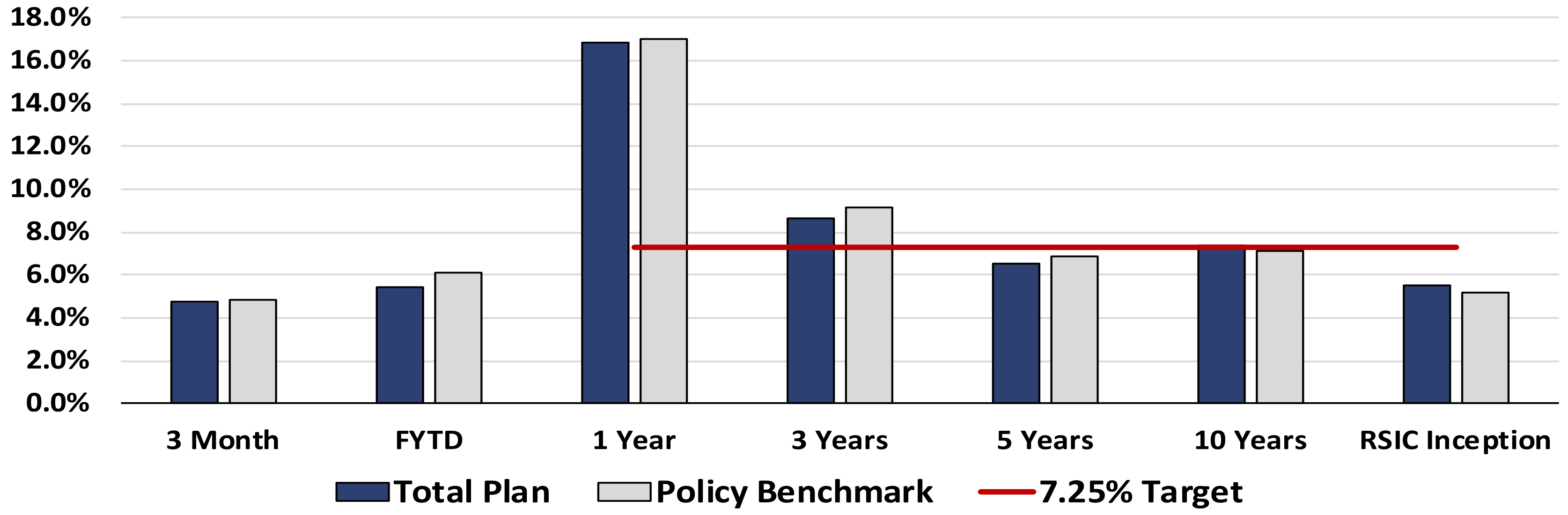
RSIC RETIREMENT SYSTEM INVESTMENT COMMISSION

Performance Update

RSIC 03/05/2020 Investment Commission Meeting
Data as of December 31st, 2019

Performance - Plan & Policy Benchmark[2]

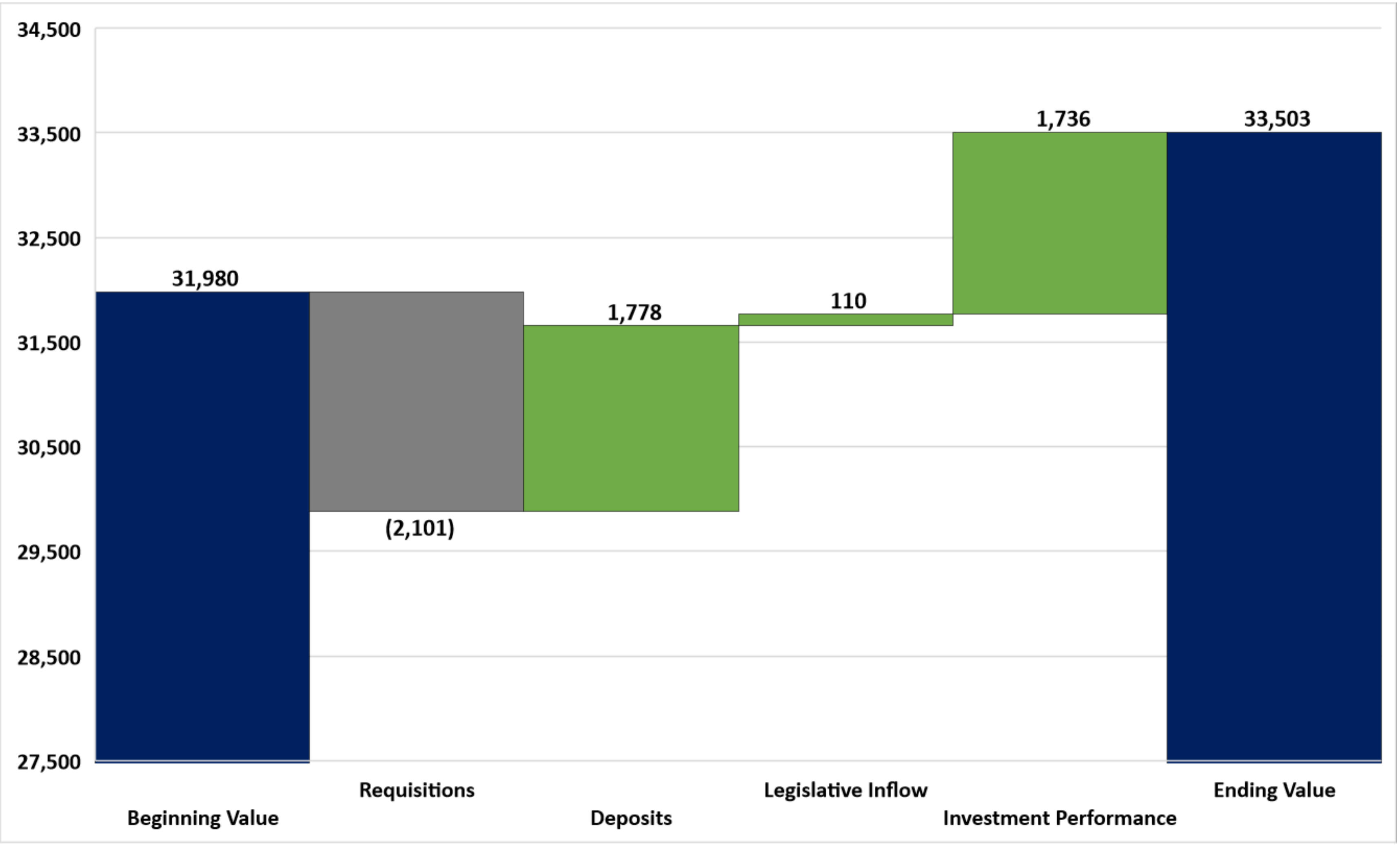
As of December 31, 2019



Historic Plan Performance As of 12/31/2019	Market Value (In Millions)	3 Month	FYTD	1 Year	Annualized 3 Years	5 Years	10 Years	RSIC Inception
Total Plan	**$33,503**	**4.79%**	**5.44%**	**16.81%**	**8.68%**	**6.55%**	**7.41%**	**5.54%**
Policy Benchmark		4.87%	6.07%	17.05%	9.18%	6.89%	7.11%	5.18%
Excess Return		-0.08%	-0.63%	-0.24%	-0.50%	-0.34%	0.30%	0.36%
Net Benefit Payments (In Millions)		($228)	($213)	($645)	($3,006)	($5,179)	($10,122)	($13,680)
Current 3-month Roll off Return:		*0.62%*	*N/A*	*-6.65%*	*1.33%*	*0.20%*	*3.26%*	*N/A*
Next 3-month Roll off Return:		*4.79%*	*N/A*	*7.92%*	*4.24%*	*1.98%*	*2.82%*	*N/A*

FYTD Benefits and Performance

FYTD December 31, 2019



Performance – Plan & Asset Classes[1,3,4,10]

As of December 31, 2019

Asset Class / Benchmark returns as of 12/31/2019	Plan Weight	3 Month	YTD	FYTD	Annualized 1 Year	Annualized 3 Years	Annualized 5 Years
Total Plan	100.0%	4.79%	16.81%	5.44%	16.81%	8.68%	6.55%
Policy Benchmark		4.87%	17.05%	6.07%	17.05%	9.18%	6.89%
Global Public Equity	39.4%	9.04%	25.91%	8.45%	25.91%	11.73%	7.89%
Global Public Equity Blend		9.21%	25.81%	8.73%	25.81%	12.01%	8.23%
Equity Options	5.8%	4.38%	14.68%	5.47%	14.68%	7.14%	n/a
Blended Equity Options BM		4.39%	14.59%	4.98%	14.59%	7.06%	n/a
Private Equity	6.2%	-0.87%	5.03%	0.91%	5.03%	10.48%	9.36%
Private Equity Blend		1.49%	5.09%	6.47%	5.09%	14.59%	12.03%
GTAA	7.7%	8.20%	22.13%	7.80%	22.13%	7.25%	5.03%
GTAA Benchmark Blend		5.72%	19.64%	6.34%	19.64%	8.05%	5.94%
Other Opportunistic	1.6%	-2.43%	4.88%	-0.53%	4.88%	n/a	n/a
GTAA Benchmark Blend		5.72%	19.64%	6.34%	19.64%	n/a	n/a
Core Fixed Income	6.9%	0.14%	8.28%	2.34%	8.28%	4.14%	3.10%
Barclays US Aggregate Bond Index		0.18%	8.72%	2.45%	8.72%	4.03%	3.05%
TIPS	1.9%	0.74%	8.35%	2.07%	8.35%	n/a	n/a
Barclays US Treasury Inflations Notes		0.79%	8.43%	2.15%	8.43%	n/a	n/a
Cash and Short Duration (Net)	4.0%	0.61%	2.98%	1.23%	2.98%	1.79%	1.36%
ICE BofA Merrill Lynch 3-Month T-Bill		0.46%	2.28%	1.03%	2.28%	1.67%	1.07%
Mixed Credit	4.3%	1.62%	7.71%	2.28%	7.71%	4.96%	4.07%
Mixed Credit Blend		2.17%	11.46%	3.36%	11.46%	5.36%	5.35%
Private Debt	6.6%	0.19%	4.62%	1.24%	4.62%	4.23%	4.64%
S&P/LSTA Leveraged Loan + 150 Bps on a 3-month lag		1.34%	4.60%	3.46%	4.60%	6.03%	5.48%
Emerging Markets Debt	3.9%	3.88%	13.40%	3.15%	13.40%	6.34%	4.91%
Emerging Markets Debt Blend		3.51%	14.31%	3.89%	14.31%	6.92%	4.57%
Private Real Estate	7.5%	1.62%	6.06%	3.75%	6.06%	8.74%	10.50%
Private Real Estate Custom Benchmark		1.43%	5.39%	2.79%	5.39%	7.47%	9.74%
Public Real Estate	1.2%	-1.49%	27.51%	6.89%	27.51%	9.26%	n/a
FTSE NAREIT Equity REITs Index		-0.76%	26.00%	6.98%	26.00%	8.14%	n/a
Public Infrastructure	2.2%	4.36%	29.47%	7.14%	29.47%	11.05%	n/a
Private Infrastructure	0.8%	2.09%	1.22%	-1.71%	1.22%	n/a	n/a
Dow Jones Brookfield Global Infrastructure Net Index		3.97%	28.69%	6.60%	28.69%	11.14%	n/a
PA Hedge Fund Excess Return (Net LIBOR)	8.6%	1.37%	1.92%	1.92%	1.92%	2.30%	3.21%
Portable Alpha HF Blend		0.62%	2.50%	1.24%	2.50%	1.24%	1.23%
PA Collateral Excess Return (Net LIBOR)	15.0%	0.94%	1.64%	1.31%	1.64%	1.37%	n/a
Portable Alpha Benchmark		0.39%	1.48%	0.80%	1.48%	0.74%	n/a

Asset Allocation and SIOP Compliance

FYTD December 31, 2019

Asset Allocation	Market Value as of 12/31/19	Overlay Exposures	Net Position	% of Total Plan	Policy Targets	Difference	Allowable Ranges	SIOP Compliance
Equities	**14,365**		**17,196**	**51.3%**	**51.0%**	**0.3%**	**31% - 59%**	YES
Global Public Equity	10,364	2,831	13,195	39.4%	37.8%	1.6%	22% - 50%	YES
Equity Options	1,927	0	1,927	5.8%	7.0%	-1.2%	5% - 9%	YES
Private Equity	2,074	0	2,074	6.2%	6.2%	0.0%	5% - 13%	YES
Real Assets	**3,942**		**3,942**	**11.8%**	**12.0%**	**-0.2%**	**7% - 17%**	YES
Private Real Estate	2,525		2,525	7.5%	7.5%	0.0%	0% - 13%	YES
Public Real Estate	412		412	1.2%	1.5%	-0.2%	0% - 13%	YES
Private Infrastructure	284		284	0.8%	0.8%	0.0%	0% - 5%	YES
Public Infrastructure	722		722	2.2%	2.2%	0.0%	0% - 5%	YES
Opportunistic	**3,086**		**3,112**	**9.3%**	**8.0%**	**1.3%**		
GTAA	2,592	0	2,592	7.7%	7.0%	0.7%	3% - 11%	YES
Other Opportunistic	494	26	520	1.6%	1.0%	0.6%	0% - 3%	YES
Credit	**4,961**		**4,961**	**14.8%**	**15.0%**	**-0.2%**	**10% - 20%**	YES
Mixed Credit	1,425		1,425	4.3%	4.4%	-0.1%	0% - 8%	YES
Emerging Markets Debt	1,317		1,317	3.9%	4.0%	-0.1%	2% - 6%	YES
Private Debt	2,220		2,220	6.6%	6.6%	0.0%	3% - 11%	YES
Rate Sensitive	**4,255**		**4,291**	**12.8%**	**14.0%**	**-1.2%**	**4% - 24%**	YES
Core Fixed Income	782	2,173	2,956	8.8%	13.0%	-4.2%	6% - 20%	YES
Cash and Short Duration (Net)	3,473	-2,138	1,335	4.0%	1.0%	3.0%	0% - 7%	YES
PA HF Excess Return (Net LIBOR)	2,893	-2,893	0	8.6%*	10.0%	-1.4%	0% - 12%	YES
Total Plan	**$33,503**	-	**$33,503**	**100.0%**	**110.0%**			
Total Hedge Funds	3,123		**$3,123**	**9.3%**	n/a	n/a	0% - 20%	YES
Total Private Markets	7,102	-	**$7,102**	**21.2%**	n/a	n/a	14% - 25%	YES

Total Hedge Fund exposure: 9.3% and consisted of: 8.6% PA Hedge Fund Excess Return (Net LIBOR), 0.7% to a hedge fund in Mixed Credit *PA Hedge Fund Excess Return (Net LIBOR) are expressed and benchmarked as gross exposure but employed in conjunction with the Overlay Program and are offset when looking at total plan market value.

Footnotes & Disclosures

Footnotes

1. Represents asset class benchmarks as of reporting date. Benchmarks for asset classes may have changed over time.
2. Benefit payments are the net of Plan contributions and disbursements.
3. "Cash" market value is the aggregate cash held at the custodian, Russell Investments, and strategic partnerships.
4. Asset class exposures and returns include blended physical and synthetic returns and current notional values (EM Debt, GTAA, Global Public Equity, Real Estate, Core Fixed Income, Private Equity, TIPS, Equity Options, and Commodities). Synthetic returns are provided by Russell Investments gross of financing costs. To accommodate for financing costs, LIBOR is added to the synthetic returns and removed from the collateral return.
5. Performance contribution methodology: Contribution is calculated by taking the sum of the [beginning weight] X [monthly return].
6. Source: Russell Investments; Net notional exposure.
7. Allocation Effect: [Asset Class Weight – Policy Weight] * [Benchmark Return – Plan Policy Benchmark]
   Selection Effect: [Asset Class Return – Policy Benchmark Return] * Asset Class Weight in Plan
8. The target weights to Private Equity, Private Debt, and Private Real Estate will be equal to their actual weights, reported by the custodial bank, as of the prior month end. When flows have occurred in the asset classes, flow adjusted weights are used to more accurately reflect the impact of the asset class weights. In the case of Private Equity, the use of the flow adjusted weight will affect the target allocation to Public Equity, such that the combined target weight of both asset classes shall equal 44% of the Plan. For Private Debt, the use of the flow adjusted weight will affect the target allocation to Mixed Credit, such that the combined target weight of both asset classes shall equal 11% of the Plan. For Private Real Estate, the use of the flow adjusted weight will affect the target allocation to Public Real Estate, such that the combined target weight of both asset classes shall equal 9% of the Plan. For Private Infrastructure, the use of the flow adjusted weight will affect the target allocation to Public Infrastructure, such that the combined target weight of both asset classes shall equal 3% of the Plan.
9. Policy Ending Value is an estimate of the Plan NAV had it earned the Policy Benchmark return.
10. Collateral held to support the overlay program represents opportunity cost associated with financing the overlay program. The Overlay collateral consists of Ported Cash, Ported Short Duration, and Portable Alpha Hedge Funds. The cost of holding these assets is proxied using 3 Month LIBOR. This benchmark is not a component of the Policy benchmark.
11. RSIC Peer Universe is Bank of New York Public Plans Greater than $5 Billion. The universe includes fund returns that are gross of invoiced fees. The RSIC percentile rank represents the RSIC return gross of invoiced fees.

Disclosures

- Returns are provided by BNY Mellon and are time-weighted, total return calculations. Net of fee performance is calculated and presented after the deduction of fees and expenses. Periods greater than one year are annualized. Past performance is no guarantee of future results. Policy benchmark is the blend of asset class policy benchmarks using policy weights. Asset class benchmarks and policy weights are reviewed annually by the Commission's consultant and adopted by the Commission and have changed over time. The policy benchmark return history represents a blend of these past policies.
- Overlay allocation detail is provided by Russell Investments.
- This report was compiled by the staff of the South Carolina Retirement System Investment Commission and has not been reviewed, approved or verified by the external investment managers. No information contained herein should be used to calculate returns or compare multiple funds, including private equity funds.
- Effective October 1, 2005, the State Retirement System Preservation and Investment Reform Act ("Act 153") established the Commission and devolved fiduciary responsibility for investment and management of the assets of the South Carolina Retirement Systems upon RSIC.
- Allocation / exposure percentages might not add up to totals due to rounding.

Footnotes & Disclosures

Benchmarks

- **Global Public Equity Blend**:
  7/2018 – Present: Weighted average of regional sub-asset class targets in Policy Portfolio. 51.4% MSCI US IMI Index for U.S. Equity, 31.4% MSCI World ex-US IMI Index for Developed Market Equity (non-U.S.), and 17.1% MSCI Emerging Markets IMI Index for Emerging Market Equity
  7/2016 – 6/2018: MSCI All-Country World Investable Markets Index (net of dividends)
  Prior to 7/2016: MSCI All-Country World Index (net of dividends)

- **Equity Options Strategies:**
  7/2018 – Present: 50% CBOE S&P Buy Write Index (BXM) / 50% CBOE S&P 500 Put Write Index (PUT)
  Prior to 6/2018: CBOE S&P 500 Buy Write Index (BXM)

- **Private Equity Blend**: 80% Russell 3000 Index on a 3-month lag / 20% MSCI EAFE (net of dividends) on a 3-month lag Plus 300 basis points

- **Core Fixed Income**: Bloomberg Barclays US Aggregate Bond Index

- **Emerging Market Debt**: 50% JP Morgan EMBI Global Diversified (US Dollar) / 50% JP Morgan GBIEM Global Diversified (Local)

- **Private Debt** : S&P/LSTA Leveraged Loan Index + 150 basis points on a 3-month lag

- **Mixed Credit Blend**:
  7/2016 – Present: 1/2 Bloomberg Barclays US Corporate High Yield 2% Issuer Capped Bond Index
  1/2 S&P/LSTA Leveraged Loan Index
  Prior to 6/2016: 1/3 Bloomberg Barclays US Corporate High Yield 2% Issuer Capped Bond Index
  1/3 S&P/LSTA Leveraged Loan Index
  1/3 Bloomberg Barclays US Mortgage Backed Securities (MBS) Index

- **GTAA Blend**:
  7/2018 – Present: Total System Policy Benchmark ex-Private Markets and Portable Alpha
  7/2016 – 6/2018: 50% MSCI World Index (net of dividends)
  50% Bloomberg Barclays US Aggregate Bond Index
  Prior to 7/2016: 50% MSCI World Index (net of dividends)
  50% FTSE World Government Bond Index (WGBI)

- **Other Opportunistic**:
  7/2018 – Present: Total System Policy Benchmark ex-Private Markets and Portable Alpha
  7/2016 – 6/2018: 50% MSCI World Index (net of dividends)
  50% Bloomberg Barclays US Aggregate Bond Index

- **Private Real Estate Blend:**
  7/2018 – Present: NCREIF Open-End Diversified Core (ODCE) Index *Net of Fees* + 100 basis points
  Prior to 6/2018: NCREIF Open-end Diversified Core (ODCE) Index *Gross of Fees* + 75 basis points

- **Public Real Estate:** FTSE NAREIT Equity REITs Index

- **Infrastructure:** Dow Jones Brookfield Global Infrastructure Index

- **Cash & Short Duration**: ICE BofA Merrill Lynch 3-Month US Treasury Bill Index

- **Portable Alpha Hedge Fund Blend**:
  7/2018 – Present: ICE BofA Merrill Lynch 3-Month T-Bills + 250 basis points
  7/2016-6/2018: *Prior to FY 2019, there was not a benchmark for Portable Alpha Hedge Funds, so effectively* zero
  Prior to 7/2016 HFRI Fund Weighted Composite Index (NOTE: PA HFs were considered Low Beta Hedge Funds at this time).

- **Portable Alpha Benchmark**:
  7/2018 – Present: *Weighted average of monthly weights for PA Hedge Funds* ICE BofA Merrill Lynch 3-Month T-Bills + 250 basis points, and Zero for Ported Cash and Short Duration
  7/2016-6/2018: *Prior to FY 2019, there was not a benchmark for Portable Alpha Hedge Funds, so effectively* zero

RETIREMENT SYSTEM
INVESTMENT COMMISSION

RSIC Performance Analysis

Data as of December 31, 2019

Portfolio Framework - Current Policy Benchmark

Reference	Portfolio
FYTD	6.96%
YTD	21.05%
1-year	21.05%
2-years	6.13%
3-years	9.46%

Policy Benchmark	
FYTD	6.07%
YTD	17.05%
1-year	17.05%
2-years	6.58%
3-years	9.17%

Implementation Benchmark	
FYTD	5.88%
YTD	17.99%
1-year	17.99%
2-years	6.40%
3-years	8.93%

RSIC Portfolio Return	
FYTD	5.44%
YTD	16.81%
1-year	16.81%
2-years	5.78%
3-years	8.68%

Value From Diversification	
FYTD	-0.89%
YTD	-4.00%
1-year	-4.00%
2-years	0.46%
3-years	-0.28%

Quality of Portfolio Structure	
FYTD	-0.19%
YTD	0.94%
1-year	0.94%
2-years	-0.18%
3-years	-0.24%

Quality of Manager Selection	
FYTD	-0.44%
YTD	-1.17%
1-year	-1.17%
2-years	-0.62%
3-years	-0.25%

Actual VS Reference	
FYTD	-1.52%
YTD	-4.24%
1-Year	-4.24%
2-years	-0.34%
3-years	-0.78%

Actual vs Policy	
FYTD	-0.63%
YTD	-0.23%
1-Year	-0.23%
2-years	-0.80%
3-years	-0.50%

Bottom Line Up Front

- Reference portfolio significantly outperformed in 2019 (both calendar and FYTD)
- Top-down portfolio structure decisions added value in 1H 2019 (slightly negative FYTD)
- Manager selection impact negative
- Framework helps identify patterns (currently limited to trailing four quarters)

Quarterly Attribution – Portfolio Structure

Quality of Portfolio Structure - Quarter	Asset Class Impact (BPS)	Impact to Plan (BPS)
Global Public Equity	52	24
Core Fixed Income	7	20
PA Hedge Fund	55	9
Equity Options	4	2
World Infrastructure	0	1
GTAA	0	0
TIPS	0	0
Emerging Markets Debt	1	0
Private Debt	0	0
Private Real Estate	0	0
Public Real Estate	4	0
Mixed Credit	40	-2
Private Equity	-28	-2
Other Opportunistic	-419	-6
Cash and Short Duration (Net)	1	-12
Total Plan		34

Equity overweight and underweight to options strategies both helped

Underweight to Core Fixed Income helped

Continued drag from MLP exposure

Overweight position to cash hurt during what was a strong quarter

[1]Asset class contributions are displayed as snapshots of RSIC's quarterly attribution (value added relative to policy benchmark) and are not necessarily additive to total Plan Excess Return over long periods of time.

Quarterly Attribution – Manager Selection

GTAA continues to reverse recent alpha trend

Consistent performance from Portable Alpha

Alpha challenges in Public Equity portfolio

Private Equity secondary sale

Quality of Manager Selection - Quarter	Asset Class Selection	Impact to Plan (BPS)
GTAA	248	18
PA Hedge Fund	20	2
Private Real Estate	20	2
Emerging Markets Debt	36	1
Cash and Short Duration (Net)	-1	0
TIPS	-5	0
Core Fixed Income	-11	-1
Public Real Estate	-77	-1
Equity Options	-6	-1
World Infrastructure	-46	-2
Mixed Credit	-95	-5
Other Opportunistic	-396	-7
Private Debt	-115	-8
Private Equity	-208	-15
Global Public Equity	-70	-25
Total Plan		-42

[1]Asset class contributions are displayed as snapshots of RSIC's quarterly attribution (value added relative to policy benchmark) and are not necessarily additive to total Plan Excess Return over long periods of time.

Quarterly Attribution*: Trailing Four Quarters

Portfolio Structure	Mar-19	Jun-19	Sep-19	Dec-19	FYTD	12 M
Public Equity	49	5	-7	27	20	73
Private Equity	97	-58	-4	-2	-6	33
Other Assets	2	-5	-6	-6	-11	-14
Real Assets	1	-1	-1	0	0	0
Private Credit	0	0	0	0	0	0
Bonds	1	-4	-13	6	-6	-9
PA HFs	19	2	-11	9	-2	19
Total	169	-60	-41	34	-7	102

Public Equity value from overweighting in Q1, Q2, Q4 2019

Private Equity value from variance between benchmarks

Portable Alpha structure beneficial

Underweight to Core Bonds hurt, particularly in Q3 2019

Selection	Mar-19	Jun-19	Sep-19	Dec-19	FYTD	12 M
Public Equity	-16	-9	6	-26	-20	-46
Private Equity	8	-15	-21	-15	-36	-43
Other Assets	8	-9	1	11	11	11
Real Assets	-3	0	6	-1	5	1
Private Credit	34	-20	-7	-8	-14	0
Bonds	-9	-4	-4	-5	-9	-22
PA HFs	-25	-7	11	2	13	-19
Total	-4	-64	-9	-42	-51	-119

Poor active returns in Public Equity and Credit in 2019

Hedge funds added value, but did not achieve alpha target in 2019 (due to poor first half performance)

GTAA strategies had very strong year

Value Added	Mar-19	Jun-19	Sep-19	Dec-19	FYTD	12 M
Public Equity	32	-4	-1	0	-1	27
Private Equity	105	-72	-25	-17	-43	-10
Other Assets	10	-13	-5	5	0	-3
Real Assets	-2	-1	5	-1	4	1
Private Credit	34	-20	-7	-8	-14	0
Bonds	-8	-8	-17	2	-15	-31
PA HFs	-6	-5	0	11	11	-1
Total Plan	165	-124	-50	-8	-58	-17

Benefit of additional Public Equity outweighed the impact of manager underperformance

Cash overweight vs. Core Fixed Income a drag on performance

Poor credit performance (Private and Public)

**Asset class contributions are displayed as snapshots of RSIC's quarterly attribution (value added relative to policy benchmark) and are not necessarily additive to total Plan Excess Return over long periods of time.*

3-Year Performance – Total Plan vs Policy

3-Year Performance	Asset Class Return	Policy Return	Excess Return (BPS)
Private Real Estate	8.7%	7.4%	130
Public Real Estate	9.3%	8.1%	113
PA Hedge Fund	2.3%	1.2%	106
Core Fixed Income	4.1%	4.0%	11
Equity Options	7.1%	7.1%	8
Cash and Short Duration (Net)	1.7%	1.7%	0
Global Public Equity	11.7%	12.0%	-28
Mixed Credit	5.0%	5.4%	-40
Emerging Markets Debt	6.3%	6.9%	-58
GTAA	7.2%	8.0%	-80
World Infrastructure	10.2%	11.1%	-98
Private Debt	4.2%	6.0%	-180
Private Equity	10.5%	14.6%	-411
Total Plan	8.7%	9.2%	-50

1/3 of the portfolio has outperformed…

…while 2/3 of the portfolio has underperformed during this time.

Plan Exposures (Including Change Since Fiscal Q1)

- Relatively modest deviations from targets
- Increase to public equity offsets decrease to private
- Remain underweight Core Bonds
- Portable alpha underweight temporary

Asset Class	Policy Target	Weight	Active Weight (BPS)	▲ Since Last Quarter
Bonds	22.4%	21.0%	-1.4%	0.1%
Public Equity	44.8%	45.1%	0.3%	1.2%
Private Credit	6.6%	6.6%	0.0%	-0.2%
Private Equity	6.2%	6.2%	0.0%	-1.2%
Real Assets	12.0%	11.8%	-0.2%	-0.4%
Portable Alpha	10.0%	8.6%	-1.4%	-0.9%
Other Assets	8.0%	9.3%	1.3%	0.4%
Total Plan	**110.0%**	**108.6%**	**-1.4%**	**-0.9%**

Plan Exposures – Bonds Look through

Asset Class	Policy Target	Weight	Active Weight (BPS)	▲ Since Last Quarter
Bonds	22.4%	21.0%	-1.4%	0.1%
Public Equity	44.8%	45.1%	0.3%	1.2%
Private Credit	6.6%	6.6%	0.0%	-0.2%
Private Equity	6.2%	6.2%	0.0%	-1.2%
Real Assets	12.0%	11.8%	-0.2%	-0.4%
Portable Alpha	10.0%	8.6%	-1.4%	-0.9%
Other Assets	8.0%	9.3%	1.3%	0.4%
Total Plan	**110.0%**	**108.6%**	**-1.4%**	**-0.9%**

Bonds Breakout	Policy Target	Avg Wt in Plan	Active Weight	▲ Since Last Quarter
Emerging Markets Debt	4.0%	3.9%	-0.1%	0.0%
Mixed Credit	4.4%	4.3%	-0.1%	0.1%
Core Fixed Income	11.0%	6.9%	-4.1%	0.7%
Cash and SD (Net)	1.0%	4.0%	3.0%	-0.5%
TIPS	2.0%	1.9%	-0.1%	-0.1%
Total	**22.4%**	**21.0%**	**-1.4%**	**0.1%**

Large underweight to duration (via Core)

Emphasis on liquidity and flexibility

Plan Exposures – Public Equity Look through

Asset Class	Policy Target	Weight	Active Weight (BPS)	▲ Since Last Quarter
Bonds	22.4%	21.0%	-1.4%	0.1%
Public Equity	44.8%	45.1%	0.3%	1.2%
Private Credit	6.6%	6.6%	0.0%	-0.2%
Private Equity	6.2%	6.2%	0.0%	-1.2%
Real Assets	12.0%	11.8%	-0.2%	-0.4%
Portable Alpha	10.0%	8.6%	-1.4%	-0.9%
Other Assets	8.0%	9.3%	1.3%	0.4%
Total Plan	**110.0%**	**108.6%**	**-1.4%**	**-0.9%**

Public Equity Breakout	Policy Target	Avg Wt in Plan	Active Weight	▲ Since Last Quarter
US Large Cap Equity	14.7%	14.6%	-0.1%	0.0%
US Small / Mid Cap Equity	4.7%	5.4%	0.7%	0.3%
EAFE + Canada	11.9%	12.4%	0.5%	1.8%
Emerging Market Equity	6.5%	6.9%	0.5%	0.2%
Equity Options	7.0%	5.8%	-1.2%	-1.1%
Total	**44.8%**	**45.1%**	**0.3%**	**1.2%**

Underweight Equity Options (poor premium levels)

Overweight traditional equity (neutral to US Large)

Value bias in US and Emerging Markets

Portfolio Risk Framework

Risk Estimates [1]

as of December 31, 2019

	Reference Portfolio	Policy [3]	Implementation [3]	Actual [4]
Expected Volatility [2]	***8.47%***	***8.14%***	***8.37%***	***8.90%***

	Asset Allocation	Portfolio Structure	Manager Selection
Tracking Error	***1.77%***	***0.38%***	***TBD***

1. Estimates based on equal weighting of previous 2 years of data
2. Risk figures provided are ex-ante, our best estimate of future risk based on current positioning
3. Private benchmarks proxied with daily public alternatives
4. Actual position level risk sourced from BNYM, and will be subject to a six to eight-week lag due to data requirements

Impact Of Actions Taken

- CY 2019 performance highlights impact of actions taken in recent years
  - Asset allocation
  - Portfolio efficiency
  - Improved system funding
- Results are not yet benefitting from the impact of several major initiatives

	FY 2014	CY 2019
RSIC Performance	15.3%	16.8%
Policy Benchmark	14.3%	17.1%
Median Public Fund	16.7%	16.9%

RSIC vs. Median	-1.4%	-0.1%
Policy vs. Median	-2.4%	0.2%

APPENDIX

Footnotes and Disclosures

- Quality of Portfolio Structure: The combination of the Allocation Effect and Implementation Style Bias.

- Allocation Effect: The decisions made to over or underweight an asset class relative to RSICs policy targets. Because Global Public Equity is Overweight its target, and the benchmark outperformed the Plan Policy benchmark, it is adding 5BPS to the Plan's excess return over the policy benchmark. Allocation effect is calculated as: [Asset Class Weight – Policy Weight] * [Asset Class Policy Benchmark – Total Plan Policy Benchmark]

- Implementation Style Bias**:** The performance coming from a manager (or collection of managers) that tracks a different benchmark(s) than that which is used to measure the asset class as a whole. For example, Private Equity is benchmarked to an 80/20 + 300 BPS public benchmark in the Policy BM, but RSIC tracks these assets versus a private markets benchmark. Implementation Style Bias is calculated as: [Asset Class Implementation Benchmark Return – Asset Class Policy Benchmark Return] * [Asset Class Weight in Plan]

- Manager Selection**:** The value added by manager's ability to outperform (or underperform) the benchmarks that we hired them to beat. This is a measure of manager "alpha". Manager Selection is calculated as: [Asset Class Return – Asset Class Implementation Benchmark Return] * [Asset Class Weight in Plan]

- Asset class exposures and returns include blended physical and synthetic returns and current notional values (EM Debt, GTAA, Global Public Equity, Real Estate, Core Fixed Income, Private Equity, TIPS, Equity Options, and Commodities). Synthetic returns are provided by Russell Investments gross of financing costs. To accommodate for financing costs, LIBOR is added to the synthetic returns and removed from the collateral return.

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Contribution to Plan Excess Return by Asset Class[1]

Value Added	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	FYTD	12 M	24 M	36M
Public Equity	-1	-4	18	-1	1	-49	-4	-18	32	-4	-1	0	-1	27	-22	-11
Private Equity	14	-41	-9	-10	-3	7	4	-48	105	-72	-25	-17	-43	-10	-25	-32
Other Assets	-20	-27	-1	-5	12	-12	0	-1	10	-13	-5	5	0	-3	-2	-19
Real Assets	-6	2	8	9	8	2	3	3	-2	-1	5	-1	4	1	8	10
Private Credit	-8	-11	4	6	-3	3	-4	-16	34	-20	-7	-8	-14	0	-10	-10
Bonds	11	-3	5	1	2	-12	-1	-13	-8	-8	-17	2	-15	-31	-27	-13
PA HFs	18	-5	27	27	13	11	-8	-13	-6	-5	0	11	11	-1	1	23
Total Plan	10	-89	53	27	30	-50	-11	-106	165	-124	-50	-8	-58	-17	-77	-51

[1]Asset class contributions are displayed as snapshots of RSIC's quarterly attribution (value added relative to policy benchmark) and are not necessarily additive to total Plan Excess Return over long periods of time.

Quarter Performance – Attribution Building Blocks as of 12/31/19

	A	B	B-A	C	B*C	D	E	C-D	C-E	E-D			
	Weights			Returns				Excess Returns			Attribution		
Attribution Building Blocks Quarter as of 12/31/2019	Policy Target	Avg Wt in Plan	Active Weight (BPS)	Asset Class Return	cR to Plan Return	Policy Return	Implementation BM Return	Excess Return - Policy (BPS)	Excess Return - Impl. (BPS)	Impl. - Policy (BPS)	Quality of Portfolio Structure (BPS)	Manager Selection (BPS)	Total Value Added (BPS)
Global Public Equity	**36.7%**	**38.0%**	136	9.0%	3.4%	9.2%	9.7%	-18	-70	52	24	-25	-1
Equity Options	**7.0%**	**4.7%**	-232	4.4%	0.2%	4.4%	4.4%	-1	-6	4	2	-1	1
Private Equity	**7.3%**	**7.3%**	0	-0.9%	-0.1%	1.5%	1.2%	-236	-208	-28	-2	-15	-17
GTAA	**7.0%**	**7.5%**	52	8.2%	0.6%	5.7%	5.7%	248	248	0	0	18	18
Other Opportunistic	**1.0%**	**1.8%**	77	-2.4%	0.0%	5.7%	1.5%	-815	-396	-419	-6	-7	-13
Private Real Estate	**7.7%**	**7.7%**	0	1.6%	0.1%	1.4%	1.4%	20	20	0	0	2	2
Public Real Estate	**1.3%**	**1.5%**	17	-1.5%	0.0%	-0.8%	-0.7%	-73	-77	4	0	-1	-2
World Infrastructure	**3.0%**	**2.8%**	-24	3.5%	0.1%	4.0%	4.0%	-46	-46	0	1	-2	-1
Emerging Markets Debt	**4.0%**	**3.9%**	-9	3.9%	0.2%	3.5%	3.5%	37	36	1	0	1	1
Mixed Credit	**4.3%**	**5.7%**	138	1.6%	0.1%	2.2%	2.6%	-55	-95	40	-2	-5	-7
Private Debt	**6.7%**	**6.7%**	0	0.2%	0.0%	1.3%	1.3%	-115	-115	0	0	-8	-8
Core Fixed Income	**11.0%**	**6.8%**	-416	0.1%	0.0%	0.2%	0.3%	-4	-11	7	20	-1	19
Cash and Short Duration (Net)	**1.0%**	**3.7%**	269	0.5%	0.0%	0.5%	0.5%	0	-1	1	-12	0	-12
TIPS	**2.0%**	**1.9%**	-8	0.7%	0.0%	0.8%	0.8%	-5	-5	0	0	0	0
PA Hedge Funds	**10.0%**	**9.1%**	-94	1.4%	0.1%	0.6%	1.2%	75	20	55	9	2	11
Total SC With Overlay	**110.0%**	**109.1%**	-94	4.8%	4.8%	4.9%	5.2%	-7	-36	28	34	-42	-8

Description: This report is used to explain RSIC's performance by asset class as well as attributing each asset classes' excess return to three different effects.
Allocation Effect: The decisions made to over or underweight an asset class relative to RSICs policy targets. Because Global Public Equity is Overweight its target, and the benchmark outperformed the Plan Policy benchmark, it is adding 5BPS to the Plan's excess return over the policy benchmark.
Implementation Style Bias: The performance coming from a manager (or collection of managers) that tracks a different benchmark(s) than that which is used to measure the asset class as a whole. For example, Private Equity is benchmarked to an 80/20 + 300 BPS public benchmark in the Policy BM, but RSIC tracks these assets versus a private markets benchmark.
Manager Selection: The value added by manager's ability to outperform (or underperform) the benchmarks that we hired them to beat. This is a measure of manager "alpha".

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South Carolina Retirement System Investment Commission

December 31, 2019

Performance Report

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South Carolina Retirement System Investment Commission

Total Retirement System | As of December 31, 2019

Allocation vs. Targets and Policy								
	MV at 12/31/2019	Overlay Exposures	Net Position	% of Total System	% of Total System (Net)	FY 20 Policy Targets	Allowable Ranges	SIOP Compliance?
Total System	**33,502,750,677**	**-**	**33,502,750,677**	**100%**	**100%**	**110%**	**-**	**-**
Equity	**14,365,343,684**	**2,831,042,912**	**17,196,386,597**	**43%**	**51%**	**51%**	**31-59%**	**Yes**
Global Public Equity	10,364,373,350	2,831,042,912	13,195,416,262	31%	39%	38%	22-50%	Yes
Private Equity	2,073,931,585	-	2,073,931,585	6%	6%	6%	5-13%	Yes
Equity Options	1,927,038,750	-	1,927,038,750	6%	6%	7%	5-9%	Yes
Conservative Fixed Income	**4,255,209,254**	**35,651,840**	**4,290,861,094**	**13%**	**13%**	**14%**	**4-24%**	**Yes**
Cash and Short Duration	3,472,850,439	(2,137,794,683)	1,335,055,756	10%	4%	1%	0-7%	Yes
Core Fixed Income	782,358,815	2,173,446,523	2,955,805,338	2%	9%	13%	6-20%	Yes
Diversified Credit	**4,961,101,908**	**-**	**4,961,101,908**	**15%**	**15%**	**15%**	**10-20%**	**Yes**
Mixed Credit	1,424,829,564	-	1,424,829,564	4%	4%	4%	0-8%	Yes
Private Debt	2,219,678,990	-	2,219,678,990	7%	7%	7%	3-11%	Yes
Emerging Market Debt	1,316,593,354	-	1,316,593,354	4%	4%	4%	2-6%	Yes
Opportunistic	**3,086,386,745**	**26,001,493**	**3,112,388,239**	**9%**	**9%**	**8%**		
GAA	2,591,938,350		2,591,938,350	8%	8%	7%	3-11%	Yes
Other Opportunistic	494,448,395	26,001,493	520,449,889	1%	2%	1%	0-3%	Yes
Real Assets	**3,942,012,840**	**-**	**3,942,012,840**	**12%**	**12%**	**12%**	**7-17%**	**Yes**
Public Real Estate	412,048,725	-	412,048,725	1%	1%	1%	0-13%	Yes
Private Real Estate	2,524,563,471	-	2,524,563,471	8%	8%	8%	0-13%	Yes
Public Infrastructure	721,603,082	-	721,603,082	2%	2%	2%	0-5%	Yes
Private Infrastructure	283,797,562	-	283,797,562	1%	1%	1%	0-5%	Yes
Hedge Funds PA	**2,892,696,246**	**(2,892,696,246)**	**-**	**9%**	**0%**	**10%**	**0-12%**	**Yes**

Includes cash in the Russell Overlay separate account.
Percentages may not sum to 100% due to rounding.

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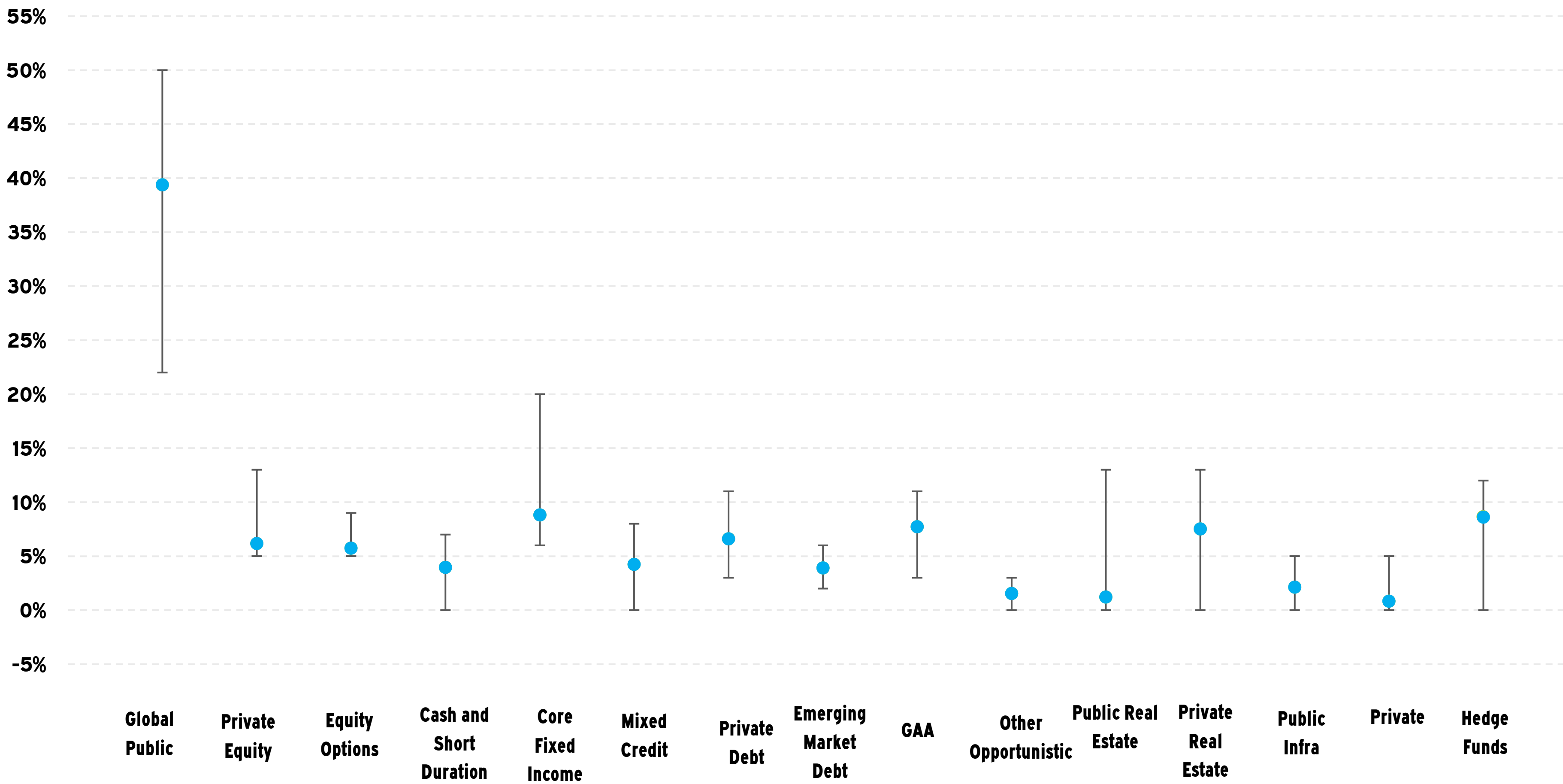
Actual vs. Policy Ranges:
(Including Overlay)



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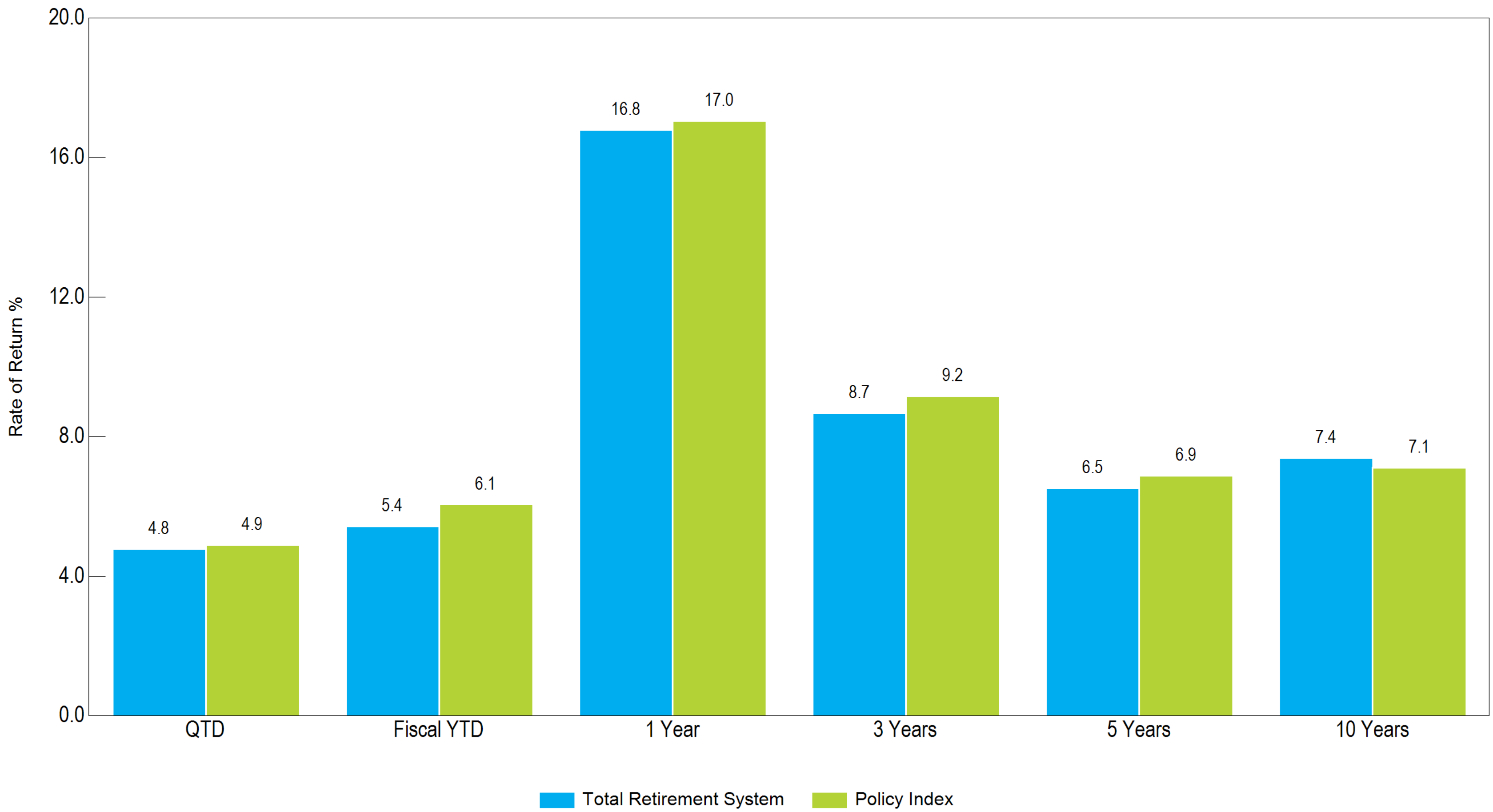
South Carolina Retirement System Investment Commission

Total Retirement System | As of December 31, 2019

Net Return Summary
Ending December 31, 2019



Returns for periods greater than one year are annualized.

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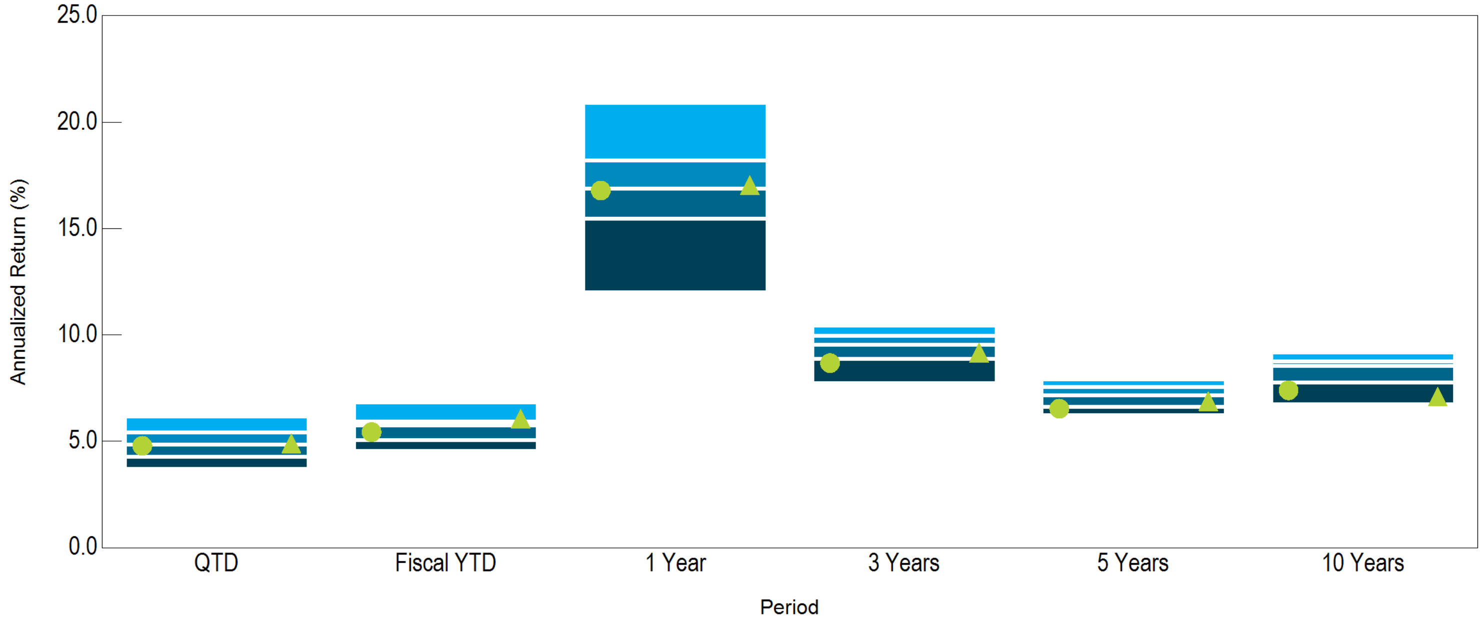
South Carolina Retirement System Investment Commission

Total Retirement System | As of December 31, 2019

InvMetrics Public DB > $5B Net Return Comparison
Ending December 31, 2019



	Return (Rank)											
5th Percentile	6.1		6.8		20.9		10.4		7.9		9.2	
25th Percentile	5.4		5.9		18.2		10.0		7.6		8.8	
Median	4.9		5.8		16.9		9.6		7.2		8.6	
75th Percentile	4.3		5.1		15.5		8.9		6.6		7.8	
95th Percentile	3.7		4.6		12.0		7.7		6.2		6.7	
# of Portfolios	24		24		24		24		22		20	
Total Retirement System	4.8	(58)	5.4	(67)	16.8	(54)	8.7	(80)	6.5	(79)	7.4	(91)
Policy Index	4.9	(44)	6.1	(18)	17.0	(46)	9.2	(66)	6.9	(62)	7.1	(95)

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South Carolina Retirement System Investment Commission

Total Retirement System | As of December 31, 2019

Quarterly Excess Performance vs. Policy Benchmark

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South Carolina Retirement System Investment Commission

Total Retirement System | As of December 31, 2019

Net Asset Class Performance Summary

	Market Value ($)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement System	**33,502,750,677**	**100.0**	**4.8**	**5.4**	**16.8**	**8.7**	**6.5**	**7.4**	**6.4**	**Jul-94**
Policy Index			*4.9*	*6.1*	*17.0*	*9.2*	*6.9*	*7.1*	*5.9*	*Jul-94*
Global Public Equity	**10,364,373,350**	**30.9**	**9.2**	**8.0**	**25.0**	**11.3**	**7.7**	**8.9**	**4.8**	**Jun-99**
FY '20 Global Public Equities Custom Benchmark			*9.2*	*8.7*	*25.8*	*12.0*	*8.2*	*8.7*	*5.3*	*Jun-99*
Private Equity	**2,073,931,585**	**6.2**	**-0.9**	**0.9**	**5.1**	**10.4**	**9.3**	**12.1**	**7.6**	**Apr-07**
80% Russell 3000/20% MSCI EAFE + 300 bps on a 3-month lag			*1.5*	*6.5*	*5.1*	*14.6*	*12.0*	*14.5*	*14.3*	*Apr-07*
Equity Options	**1,927,038,750**	**5.8**	**4.3**	**5.7**	**15.0**	**7.4**	**--**	**--**	**7.7**	**Jul-16**
FY '20 CBOE 50/50 Put/Buy			*4.4*	*5.0*	*14.6*	*7.1*	*6.7*	*6.9*	*7.4*	*Jul-16*
Short Duration	**1,040,073,912**	**3.1**	**0.7**	**1.5**	**4.1**	**2.4**	**2.1**	**--**	**2.0**	**Mar-10**
BBgBarc US Govt/Credit 1-3 Yr. TR			*0.6*	*1.3*	*4.0*	*2.1*	*1.7*	*1.5*	*1.5*	*Mar-10*
Cash and Overlay	**2,432,776,527**	**7.3**	**0.6**	**1.1**	**2.1**	**1.2**	**0.5**	**0.3**	**1.1**	**Oct-05**
ICE BofAML 91 Days T-Bills TR			*0.5*	*1.0*	*2.3*	*1.7*	*1.1*	*0.6*	*1.3*	*Oct-05*
Core Fixed Income	**782,358,815**	**2.3**	**-0.1**	**2.4**	**8.6**	**4.3**	**3.5**	**4.1**	**6.0**	**Jul-94**
BBgBarc US Aggregate TR			*0.2*	*2.5*	*8.7*	*4.0*	*3.0*	*3.7*	*5.5*	*Jul-94*
Mixed Credit	**1,424,829,564**	**4.3**	**1.6**	**2.3**	**7.7**	**5.0**	**4.1**	**5.7**	**6.0**	**May-08**
50% S&P LSTA Leveraged Loan Index/50% Barclays High Yield Index			*2.2*	*3.4*	*11.5*	*5.4*	*5.4*	*5.7*	*6.0*	*May-08*
Private Debt	**2,219,678,990**	**6.6**	**0.2**	**1.2**	**4.6**	**4.2**	**4.6**	**7.4**	**6.7**	**Jun-08**
S&P LSTA Leveraged Loan Index + 150 bps on a 3-month lag			*1.3*	*3.5*	*4.6*	*6.0*	*5.5*	*6.7*	*5.2*	*Jun-08*
Emerging Market Debt	**1,316,593,354**	**3.9**	**3.9**	**3.1**	**13.4**	**6.3**	**4.9**	**4.5**	**5.5**	**Jul-09**
50% JP Morgan EMBI Global Diversified (USD)/50% JP Morgan EMBI Global Diversified			*3.5*	*3.9*	*14.3*	*6.9*	*4.6*	*4.9*	*5.8*	*Jul-09*
GAA	**2,591,938,350**	**7.7**	**8.2**	**7.8**	**22.1**	**6.9**	**4.7**	**6.7**	**5.3**	**Aug-07**
Total System Policy Benchmark ex-Private Markets			*5.7*	*6.3*	*19.6*	*8.0*	*5.9*	*6.0*	*4.8*	*Aug-07*

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South Carolina Retirement System Investment Commission

Total Retirement System | As of December 31, 2019

	Market Value ($)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Other Opportunistic	**494,448,395**	**1.5**	**-2.5**	**-0.6**	**4.8**	**--**	**--**	**--**	**6.2**	**Jul-17**
Total System Policy Benchmark ex-Private Markets			*5.7*	*6.3*	*19.6*	*8.0*	*5.9*	*6.0*	*7.0*	*Jul-17*
Hedge Funds Portable Alpha	**2,892,696,246**	**8.6**	**1.9**	**3.0**	**4.3**	**4.3**	**4.6**	**7.7**	**7.9**	**Jul-07**
ICE BAML 3 Month T-Bill + 250 BPS SC Custom			*1.1*	*2.3*	*4.8*	*3.2*	*2.1*	*1.2*	*1.5*	*Jul-07*
Public Real Estate	**412,048,725**	**1.2**	**-1.5**	**6.9**	**27.5**	**9.3**	**--**	**--**	**6.5**	**Jul-16**
FTSE NAREIT Equity REIT			*-0.8*	*7.0*	*26.0*	*8.1*	*7.2*	*11.9*	*5.6*	*Jul-16*
Private Real Estate	**2,524,563,471**	**7.5**	**1.6**	**3.7**	**6.1**	**8.7**	**10.5**	**10.6**	**7.2**	**Jul-08**
NCREIF ODCE Net + 100 BPS SC Custom			*1.4*	*2.8*	*5.4*	*7.4*	*9.7*	*11.4*	*5.9*	*Jul-08*
Public Infrastructure	**721,603,082**	**2.2**	**4.4**	**7.1**	**29.5**	**11.1**	**--**	**--**	**8.0**	**Jun-16**
DJ Brookfield Global Infrastructure			*4.0*	*6.6*	*28.7*	*11.1*	*5.7*	*10.2*	*9.8*	*Jun-16*
Private Infrastructure	**283,797,562**	**0.8**	**2.1**	**-1.7**	**1.2**	**--**	**--**	**--**	**6.4**	**Jul-18**
DJ Brookfield Global Infrastructure			*4.0*	*6.6*	*28.7*	*11.1*	*5.7*	*10.2*	*13.0*	*Jul-18*

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South Carolina Retirement System Investment Commission

Total Retirement System | As of December 31, 2019

Statistics Summary
5 Years Ending December 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Retirement System	6.5%	5.9%	-0.3	1.0	0.9	1.1%
Policy Index	6.9%	5.7%	--	1.0	1.0	0.0%
Global Public Equity	7.7%	11.7%	-0.5	1.0	0.6	1.1%
FY '20 Global Public Equities Custom Benchmark	8.2%	11.8%	--	1.0	0.6	0.0%
Private Equity	9.3%	3.8%	-0.2	0.1	2.1	11.6%
80% Russell 3000/20% MSCI EAFE + 300 bps on a 3-month lag	12.0%	11.5%	--	1.0	1.0	0.0%
Short Duration	2.1%	0.6%	0.8	0.6	1.7	0.5%
BBgBarc US Govt/Credit 1-3 Yr. TR	1.7%	0.9%	--	1.0	0.7	0.0%
Cash and Overlay	0.5%	0.3%	-3.1	1.1	-1.6	0.2%
ICE BofAML 91 Days T-Bills TR	1.1%	0.3%	--	1.0	0.1	0.0%
Core Fixed Income	3.5%	3.0%	0.6	1.0	0.8	0.7%
BBgBarc US Aggregate TR	3.0%	3.1%	--	1.0	0.7	0.0%
Mixed Credit	4.1%	3.1%	-0.8	0.8	1.0	1.6%
50% S&P LSTA Leveraged Loan Index/50% Barclays High Yield Index	5.4%	3.3%	--	1.0	1.3	0.0%
Private Debt	4.6%	2.8%	-0.2	0.3	1.3	3.5%
S&P LSTA Leveraged Loan Index + 150 bps on a 3-month lag	5.5%	3.0%	--	1.0	1.5	0.0%
Emerging Market Debt	4.9%	8.3%	0.2	1.1	0.5	1.5%
50% JP Morgan EMBI Global Diversified (USD)/50% JP Morgan EMBI Global Diversified	4.6%	7.6%	--	1.0	0.5	0.0%
GAA	4.7%	8.3%	-0.4	1.1	0.4	3.1%
Total System Policy Benchmark ex-Private Markets	5.9%	6.9%	--	1.0	0.7	0.0%
Hedge Funds Portable Alpha	4.6%	4.1%	0.6	-0.6	0.9	4.2%
ICE BAML 3 Month T-Bill + 250 BPS SC Custom	2.1%	0.5%	--	1.0	2.0	0.0%
Private Real Estate	10.5%	2.3%	0.2	0.1	4.1	4.3%
NCREIF ODCE Net + 100 BPS SC Custom	9.7%	3.9%	--	1.0	2.2	0.0%

Return calculations are rounded to the nearest tenth of percent and may differ slightly from BNYM reported returns.

Disclaimer

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INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE “FORWARD - LOOKING STATEMENTS,” WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS “MAY,” “WILL,” “SHOULD,” “EXPECT,” “AIM”, “ANTICIPATE,” “TARGET,” “PROJECT,” “ESTIMATE,” “INTEND,” “CONTINUE” OR “BELIEVE,” OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

RETIREMENT SYSTEM
INVESTMENT COMMISSION

Annual Investment Plan Progress Report

Geoff Berg, CIO
Robert Feinstein, Managing Director
Steve Marino, Managing Director
Bryan Moore, Managing Director

Summary Update

- New RSIC priorities

NEW RSIC PRIORITIES	STATUS
Implement portfolio reporting framework	NEARING COMPLETION
Continue to drive improvements to Private Markets returns:	
• Co-investment Platform	COMPLETED
• Plan for ongoing utilization of secondaries	ONGOING
• Improve sourcing	ONGOING
• Adapt process to leverage specialty consultant	EARLY STAGES
Risk reporting	ONGOING

- Current AIP initiatives
  - Update attached

APPENDIX
Current AIP Progress Report
(As of 12/31/19)

Summary Update

- AIP included 34 different goals/initiatives
  - 28 from the investment team
    - 16 of these are “single-year” initiatives
    - 12 are multi-year, or “ongoing” initiatives
  - Non-investment team initiatives relate to Reporting, IT, and Legal initiatives

- Progress from prior meeting noted in yellow

Current-Year Initiatives - Investments

- Over 90% of current-year initiatives completed

INITIATIVE	Single or Multi-Yr	STATUS
A. INVESTMENT TEAM - CURRENT YEAR INITIATIVES		
Implement Policy Asset Allocation	Single	COMPLETED
TIPS: create implementation plan for exposure	Single	COMPLETED
EM small cap manager search	Single	COMPLETED
Passive Index Menu	Single	COMPLETED
Evaluate insurance-linked strategies	Single	COMPLETED
Evaluate impact of rising rates on Securities Lending	Single	COMPLETED
Work with Securities Lending agent to improve reporting	Single	COMPLETED
Co-investment platform - design & implementation	Single	COMPLETED
Develop strategy to exploit credit market turbulence	Single	COMPLETED
Active/Enhanced/Passive Framework	Single	COMPLETED
Evaluate additional alt beta strategies	Single	COMPLETED
Use of Equity Options in international markets	Single	COMPLETED
Currency hedging - evaluate options (w/Meketa)	Single	COMPLETED
PD and Credit: Develop way to track key differentials	Single	COMPLETED
Re-underwrite existing active equity strategies	Single	COMPLETED
Rebalancing options (cost/benefit analysis)	Single	VERY EARLY

Multi-Year and Ongoing Initiatives - Investments

- We completed three ongoing initiatives and have made progress on the remaining nine

INITIATIVE	Single or Multi-Yr	STATUS
B. INVESTMENT TEAM - MULTI-YEAR INITIATIVES		
Challenging beliefs (continue)	Multi	ONGOING
Mixed Credit: monitor secured vs. unsecured mix	Multi	COMPLETED
Build-out of Investment Risk function	Multi	ONGOING
Fee and expense review - structural vs. variable	Multi	ONGOING
Manager debates (GAA)	Multi	COMPLETED
Enhance Private Markets quantitative underwriting	Multi	ONGOING
Infrastructure: build out private portfolio	Multi	ONGOING
Personnel - Opportunities for cross-asset class work	Multi	ONGOING
Non-PA HFs: complete wind-down	Multi	COMPLETED
Asset consolidation w/high conviction mgrs; improve cost	Multi	ONGOING
TAA and Rebalancing - strengthen capabilities	Multi	ONGOING
Review of investment process	Multi	NEARING COMPLETION

Non-Investment Initiatives

- Progress has been made on non-investment initiatives, most of which are multi-year

INITIATIVE	Single or Multi-Yr	STATUS
C. NON-INVESTMENT TEAM AIP INITIATIVES		
Ops - Explore improvements to FI portfolio accounting	Single	COMPLETED
Ops - Assess performance reporting ecosystem needs	Multi	NEARING COMPLETION
Ops - Enhance IT infrastructure to support RSIC business needs	Multi	ONGOING
Ops - Research, implement CMS solution	Multi	ONGOING
Legal - Evaluate contracting/closing process	Multi	ONGOING
Legal - Assess different ownership structures	Multi	ONGOING

Delegated Investments (December 12, 2019 to March 4, 2020)

Asset Class	Investment	Investment Amount	Closing Date
Private Equity	Aberdeen U.S. Private Equity Fund VIII	$50 M	December 23, 2019
Infrastructure	Brookfield Infrastructure Partners IV	$100 M	January 31, 2020
Private Equity	Valor Equity V	$75 M	February 6, 2020