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Oregon Investment Council

January 30 2020

Rukaiyah Adams
Chair

John Skjervem
Chief Investment Officer

Tobias Read
State Treasurer

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OREGON INVESTMENT COUNCIL

OIC

Agenda

January 30, 2020
9:00 AM

Oregon State Treasury
Investment Division
16290 SW Upper Boones Ferry Road
Tigard, OR 97224

Time	A. Action Items	Presenter	Tab
9:00-9:05	**1. Review & Approval of Minutes** December 11, 2019	**Rukaiyah Adams** *OIC Chair*	**1**
9:05-9:10	**2. Proposed 2021 OIC Meeting Dates**	**John Skjervem** *Chief Investment Officer*	**2**
9:10-9:15	**3. Committee Reports and CIO Remarks**	**John Skjervem**	**3**
9:15-10:00	**4. Risk Parity Manager Recommendation** *OPERF Risk Parity Portfolio*	**Karl Cheng** *Senior Investment Officer, Portfolio Risk & Research* **Janet Becker-Wold** *Senior Vice President, Callan LLC* **Kevin Machiz** *Vice President, Capital Markets Research Group, Callan LLC* **James L. Haskel** *Senior Portfolio Strategist, Bridgewater Associates, LP* **Joel Whidden** *Global Head of Sales, Bridgewater Associates, LP*	**4**
10:00-10:10	**5. Opportunity Portfolio Policy Update** *OPERF*	**Michael Mueller** *Investment Officer, Alternatives*	**5**
10:10-10:25	**6. Policy Updates** *OIC and OPERF*	**Jennifer J. Peet** *Corporate Governance Director*	**6**
10:25-10:30	**7. Special Officer Election**	**Council Members**	**7**

10:30-10:45 -------------------- BREAK --------------------

B. Information Items

10:45-10:50	**8. Annual Placement Agent Report**	**John Hershey** *Director of Alternative Investments*	**8**
10:50-11:50	**9. Private Equity Annual Review and 2020 Plan** *OPERF Private Equity Portfolio*	**Michael Langdon** *Senior Investment Officer, Private Equity* **Ahman Dirks** *Investment Officer, Private Equity* **Tiffany ZhuGe** *Investment Officer, Private Equity* **Eric Messer** *Investment Officer, Private Equity* **Tom Martin** *Managing Director, TorreyCove Capital Partners*	**9**
11:50-12:00	**10. Annual PUF Update** *Public Universities Fund*	**Geoff Nolan** *Senior Investment Officer, Fixed Income*	**10**
12:00-12:30	**11. IAP Update** *OPERF*	**Jennifer J. Peet** **Christopher Nikolich** *Head of Glide Path Strategies (U.S.), AllianceBernstein*	**11**
12:30-12:35	**12. Asset Allocation & NAV Updates** a. Oregon Public Employees Retirement Fund b. SAIF Corporation c. Common School Fund d. Southern Oregon University Endowment Fund	**John Skjervem**	**12**
	13. Calendar — Future Agenda Items	**John Skjervem**	**13**
12:35	**14. Open Discussion**	**OIC Members** **Staff** **Consultants**	

C. Public Comment

TAB 1 – REVIEW & APPROVAL OF MINUTES

December 11, 2019 Regular Meeting

State of Oregon

Office of the State Treasurer

16290 SW Upper Boones Ferry Road

Tigard, Oregon 97224

OREGON INVESTMENT COUNCIL

December 11, 2019

Meeting Minutes

Members Present:	Rukaiyah Adams, John Russell, Tobias Read, Rex Kim, Patricia Moss (via phone) and Kevin Olineck
Staff Present:	John Skjervem, David Randall, John Hershey, Perrin Lim, Deena Bothello, Karl Cheng, May Fanning, Debra Day, Steve Kruth, Jen Peet, Roy Jackson, Andy Coutu, Tyler Bernstein, Wil Hiles, Geoff Nolan, Jen Plett, Ben Mahon, Jo Recht, Faith Sedberry, Sam Spencer, Paul Koch, Kristi Jenkins, Michael Langdon, Ahman Dirks, Tom Lofton, Lisa Pettinati, Mark Selfridge, Austin Carmichael, Joe Hutchinson, Garrett Cudahey, Amanda Kingsbury, Michael Mueller, Aliese Jacobsen, Angela Schaffers, Ian Huculak, Dana Millican, Eric Messer, Kristel Flores, Michael Viteri, Mohammed Quraishi, Anna Totdahl, Jeremy Knowles, Will Hampson, Tiffany ZhuGe, Dmitri Palmateer, Amy Wojcicki, Rachel Wray, Meredith Coba, Ryan Auclair, Sommer May, Andrey Voloshinov, and Scott Robertson
Consultants Present:	Tom Martin, David Fann and Kyson Hawkins (TorreyCove); Allan Emkin, Christie Fields, and David Glickman (Meketa Investment Group, Inc.); Janet Becker-Wold and Jim Callahan (Callan LLC)
Legal Counsel Present:	Steven Marlowe, Department of Justice

The December 11th, 2019 OIC meeting was called to order at 8:59 am by Rukaiyah Adams, OIC Chair.

I. 8:59 am Review and Approval of Minutes

MOTION: Chair Adams asked for approval of the October 30, 2019 OIC regular meeting minutes. Mr. Russell moved approval at 9:00 am, and Mr. Kim seconded the motion which then passed by a 5/0 vote.

II. 9:00 am Committee Reports and CIO Remarks

Committee Reports: John Skjervem, Chief Investment Officer, gave an update on the following committee actions taken since the October 30th, 2019 OIC meeting:

Private Equity Committee

October 31, 2019	Odyssey Investment Partners VI, L.P.	$150M

Real Estate Committee

October 30, 2019	Harrison Street Co-Investment Sidecar to the Harrison Street Core Property Fund, L.P.	$150M
December 9, 2019	DivcoWest Fund VI	$200M

Alternatives Portfolio Committee

None

Opportunity Portfolio Committee

None

Mr. Skjervem then provided opening remarks which included context for the Private Equity Monitoring and Liquidity Solutions proposal, staff's Risk Parity Manager Recommendations, and the Annual Fixed Income Review. Mr. Skjervem then introduced new OST staff member, Will Hampson, Investment Officer, Fixed Income.

III. 9:05 am Private Equity Monitoring & Liquidity Solutions – *OPERF Private Equity Portfolio*

Michael Langdon, Senior Investment Officer, Private Equity, and Tom Martin, Managing Director, TorreyCove Capital Partners recommended, subject to the satisfactory negotiation of all terms and conditions, establishing a new monitoring and liquidity management program with Pathway Capital Management for the OPERF private equity portfolio. The Program will consist of an initial portfolio of existing OPERF private equity investments with a value of up to $2 billion selected by Staff in close collaboration with Pathway and TorreyCove. Staff further recommended approval to recycle half of any accelerated liquidity proceeds generated by the Program for an initial period of five years and up to a maximum of $1 billion into new commitments to OPERF's co-investment program (Pathway Private Equity Fund C-III, L.P., the "Co-Invest Vehicle"). Approval of this proposal would represent the continuation and extension of the OIC's existing relationship with Pathway dating back to 2001 and spanning $1.15 billion of total commitments across two investment mandates.

Mr. Langdon introduced Ms. Karen J. Jakobi, Senior Managing Director & CIO, Pathway Capital Management, Mr. Derrek I. Ransford, Managing Director, Pathway Capital Management, and Mr. Pete Veravanich, Managing Director, Pathway Capital Management who provided a presentation that included an overview of Pathway in general and a description of the Customized Monitoring and Liquidity Solutions proposal in particular.

MOTION: Mr. Russell moved approval at 10:05 am to establish both the Program and recycle half of any accelerated liquidity proceeds generated by it for an initial five-year period and up to a $1 billion new Co-Invest Vehicle commitment maximum. Mr. Kim seconded the motion which then passed by a 5/0 vote.

IV. 10:05 am Private Equity Consulting Contract Extension – *OPERF Private Equity Portfolio*

Michael Langdon reviewed the extensive due diligence process undertaken by staff in connection with the 2016 Private Equity consultant search which resulted in a renewed engagement with TorreyCove Capital Partners. The contract supporting that engagement included two, 2-year extension periods, the first of which becomes effective January 1, 2020. Mr. Langdon then asked the Council for approval to activate the first extension period in the OIC's current TorreyCove contract.

MOTION: Mr. Russell moved approval at 10:08 am. Ms. Adams seconded the motion which then passed by a 5/0 vote.

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V. 10:20 am Risk Parity Manager Recommendations – *OPERF Risk Parity Portfolio*

Karl Cheng, Senior Investment Officer, Portfolio Risk & Research, along with staff and consultants Callan LLC recommended approval of an up to $900 million investment commitment to both the PanAgora Risk Parity Multi Asset and AHL Multi-Asset TargetRisk strategies. Approval of these recommended investments would initiate the formation of the OPERF Risk Parity Portfolio, a new strategic asset allocation approved by the Council at its April 24, 2019 meeting.

Mr. Cheng introduced Dr. Eric Sorensen, President & CEO, PanAgora Asset Management, Inc. (a last-minute addition not listed in the agenda), Dr. Edward Qian, CIO & Head of Research, Multi Asset, PanAgora Asset Management, Inc., and Mr. Bryan Belton, Director, Multi Asset, PanAgora Asset Management, Inc. who provided the Council with a brief overview of their firm and its risk parity strategy. Mr. Cheng then introduced Mr. Russell Korgaonkar, Director of Investment Strategies for AHL Partners LLP, who provided the Council with a similar overview and description of AHL and its Multi-Asset TargetRisk strategy, respectively.

MOTION: Mr. Kim moved approval at 11:20 am for a $650 million allocation to both the PanAgora Risk Parity Multi Asset and AHL Multi-Asset TargetRisk strategies. Treasurer Read seconded the motion which then passed by a 5/0 vote.

11:21 am Fixed Income Review – *OPERF and other OST-managed funds*

Geoff Nolan, Senior Investment Officer, Fixed Income, Tom Lofton, Investment Officer, Fixed Income, Garrett Cudahey, Investment Officer, Fixed Income and Janet Becker-Wold, Senior Vice President, Callan LLC, presented the Fixed Income Strategic Review and 2020 Plan.

MOTION 1: Treasurer Read moved approval at 12:05 pm of staff's recommendation to make the following changes to OIC Policy INV 401:

- Lower the OPERF fixed income portfolio's expected return target from 25 to 15 basis points;
- Stipulate the Bloomberg Barclays U.S. Aggregate Bond Index as the portfolio's new fixed income policy benchmark; and
- Revise the policy description of the portfolio's annualized tracking error target from "0.5 to 1.0 percent" to "up to 1.0 percent".

Mr. Kim seconded the motion which then passed by a 5/0 vote.

MOTION 2: At 12:15 pm, Mr. Russell moved approval of staff's recommendation for a minor set of clarifying revisions to policies INV 404: Intermediate Term Pool Investments and INV 407: Public Universities Common Policy. Treasurer Read seconded the motion which then passed by a 5/0 vote.

VI. 12:15 pm Q3 2019 Performance & Risk Report – *OPERF*

Karl Cheng and Janet Becker-Wold presented the quarterly OPERF investment performance and risk report for the calendar quarter and cumulative period ended September 30, 2019.

VII. 12:33 pm Asset Allocation & NAV Updates

Mr. Skjervem reviewed asset allocations and NAVs across OST-managed accounts for periods ended October 31, 2019.

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VIII. 12:33 pm Calendar – Future Agenda Items

A calendar listing of future OIC meetings and scheduled agenda topics was included in the Council's meeting material.

IX. 12:34 pm Open Discussion

Member Olineck shared updates pertaining to the Individual Account Program's Retirement Allocation Fund. Specifically, Mr. Olineck reported that at the end of 2019, the Retirement Allocation Fund (RAF) within the Individual Account Program (IAP) will be split between accumulation phase beneficiaries who will remain invested in the RAF and drawdown/disbursement phase beneficiaries whose balances will be transferred into the new Retirement Income Fund. Mr. Olineck also announced that PERS will be collapsing the IAP's 2020 Fund into the RAF while simultaneously introducing a 2065 Fund.

Mr. Olineck also described the passage of Senate Bill 1049 and its significant impacts on PERS including the $100 million Employer Incentive Fund which provides a 25% match for every $1 deposited to an employer's new side account. Mr. Olineck then reported that new side account subscriptions were so brisk that the Employer Incentive Fund's entire $100 million had already been allocated.

Ms. Adams then acknowledged and thanked her Council peers for the important progress made during today's meeting. She stated that despite an unusually large and complex volume of supporting materials, the Council's votes reflected high confidence and trust in staff's expertise and represented another significant milestone in the Council's continued commitment to investment and fiduciary excellence.

12:37 pm Public Comments

None

Ms. Adams adjourned the meeting at 12:37 pm.

Respectfully submitted,
May Fanning
May Fanning
Executive Support Specialist

TAB 2 – Proposed 2021 OIC Meeting Dates

OREGON INVESTMENT COUNCIL

Proposed 2021 Meeting Schedule

Meetings Begin at 9:00 am

Oregon State Treasury
Investment Division
16290 SW Upper Boones Ferry Road
Tigard, OR 97224

Thursday, January 28

Wednesday, March 10

Wednesday, April 21

Wednesday, June 2

Wednesday, July 21

Wednesday, September 8

Wednesday, October 27

Wednesday, December 8

TAB 3 – Committee Reports and CIO Remarks

January 30, 2020 **Oregon Investment Council**

Opening Remarks

John D. Skjervem, Chief Investment Officer

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Private Equity: Annual Plan and Portfolio Update

- 2020 Pacing
- Performance Update
- Execution Time

Risk Parity Manager Recommendation

- Another manager in the mix
- Allocation complete

Policy Updates

- Housekeeping and modernization

New Hires

- Claire Illo, Investment Analyst 2, Public Equity
- Monique Sadegh, Investment Analyst 2, Operations

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Promotions

- Aliese Jacobsen, Investment Analyst 1, Operations to Investment Analyst 2, Operations

Departures

- Garrett Cudahey, Investment Officer 3, Fixed Income
- Ricardo Lopez, Investment Analyst 2, Real Estate
- Tom Lofton, Investment Officer 3, Fixed Income
- Kristel Flores, Executive Support Specialist 2, Operations

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TAB 4 – Risk Parity Manager Recommendation

OPERF Risk Parity Portfolio

OPERF Risk Parity Manager Recommendation
Bridgewater Associates, LP All Weather Portfolio

Purpose

Subject to the satisfactory negotiation of all terms and conditions, staff recommends approval of a $650 million investment to Bridgewater Associates, LP All Weather Portfolio ("Bridgewater All Weather" or the "Fund"). Approval of this recommended investment would complete the buildout of the OPERF Risk Parity Portfolio.

Background

At its April 2019 meeting, the Oregon Investment Council approved a staff recommendation for a 2.5% allocation to Risk Parity during the Strategic Asset Allocation & Capital Markets Assumptions Update. Although Public and Private Equity make up 55% of OPERF by net asset value as of September 30, 2019, these allocations together contribute 90% of OPERF's risk per Aladdin. OPERF's 20% allocation to Fixed Income provides some diversification, but overall OPERF risk (as measured by the standard deviation of expected returns) is almost entirely driven by the combined equity allocations.

The traditional "60/40" portfolio provides some intuition for why OPERF's risk stems almost exclusively from its equity allocations. Comprised of 60% public equity and 40% fixed income, the traditional 60/40 allocation is a widely-used reference or benchmark for a "balanced" portfolio. Although the nominal allocation in this 60/40 portfolio is 3:2 public equity to fixed income, the Expected Volatility of public equity is a multiple of fixed income. Callan's Capital Market Assumptions, reviewed at the same April 2019 meeting, included expected volatilities of approximately 18.8%[1] and 3.8%, respectively for public equity and fixed income. In other words, the risk of stocks to bonds is roughly 5:1. Thus, while the traditional 60/40 has an *asset weighting* of stocks to bonds of 3:2, given stocks' much higher volatility, the *risk weighting* is closer to 15:2.

As inferred from its name, "Risk Parity" balances the risk contributions in a portfolio equally among the portfolio's component asset classes, which typically includes public equity, fixed income and commodities. Moreover, in order to provide a level of return commensurate with that of the 60/40 portfolio, risk parity strategies are levered using exchange-traded futures contracts. Comprising a collection of long-only beta exposures, Risk Parity is positively correlated to public equity and fixed income. Nevertheless, and due primarily to its levered fixed income exposures (as expressed through U.S. Treasury and other sovereign bond futures), Risk Parity can still serve as an effective diversifier within an otherwise broad asset allocation strategy.

At current OPERF NAV, the target allocation to the Risk Parity Portfolio translates to $2.0 billion. The OIC approved at its December 2019 meeting investments in two risk parity strategies. If Bridgewater All Weather is approved, $650 million would be invested in each of the three risk parity strategies, collectively bringing the Risk Parity Portfolio's assets up to target allocation.

Discussion/Investment Considerations

Bridgewater Associates, LP ("Bridgewater" or the "Firm") was established by Ray Dalio in 1975 and has grown to become the largest hedge fund manager in the world, with approximately $168 billion in assets under management (AUM) as of December 31, 2019. Three co-CIOs (Mr. Dalio, alongside Bob Prince and Greg Jensen) oversee the Firm's investment management process and monitor the performance of all portfolios and investment systems. Bridgewater functions under a one-team approach, with all products designed and managed by the same investment group. The Firm's "Investment Engine," consisting of research, account

[1] Calculated based on a 50/50 construct of Callan's U.S. Equity and Global Non-U.S. Equity estimates.

management, and trading functions, marshals the investment process from generating views to constructing portfolios to executing trades. A key aspect of the process is systemization, with all elements explicitly codified in order to preserve and compound insights and learnings.

Bridgewater's investment philosophy is characterized by three tenets: 1) a fundamental approach, focused on understanding the cause/effect relationships across economies and markets; 2) a systematic decision-making process, creating explicit rules to react to a given set of conditions; and, 3) broad diversification, investing across a variety of markets such that no one position dominates. Built around the principle of separating passive strategic asset allocation (beta) from active management (alpha), the Firm only offers three primary strategies: Pure Alpha; All Weather; and Optimal Portfolio, which is a blend of Pure Alpha and All Weather. The Alternatives Committee recently approved investing up to $500 million in the Optimal Portfolio for the Diversifying Strategies sleeve of OPERF's Alternatives Portfolio.

Although Bridgewater All Weather was not originally designed as a "risk parity" strategy when it launched in 1996, it shares many traits and is therefore recognized by many investors to be the first risk parity strategy. The Firm's investment philosophy is that growth and inflation are the two most important drivers of asset class returns because the cash flows of an asset class are determined largely by the volume of economic activity (growth) and the pricing of that activity (inflation). Bridgewater All Weather is constructed so that it has equal risk exposure to four market environments where a specific fundamental driver dominates: above market expectations ("Rising") Growth; below market expectations ("Falling") Growth; Rising Inflation; and Falling Inflation. The four component portfolios have long-only allocations to public equities, fixed income, and commodities. Ultimately, Bridgewater All Weather shares the same objective as a conventional risk parity strategy (namely, delivering a more consistent return pattern), but seeks to achieve that objective by balancing risks associated with anticipated shifts in the economic environment.

Attributes:

- *Deep and experienced team*. Bridgewater is a seasoned but entrepreneurial investment firm with substantial resources committed to research, portfolio construction, and risk management. In total, Bridgewater has 1,675 employees, of which 675 are in research, account management, and trading.
- *Strategic client relationships*. Bridgewater views each client as a strategic relationship, providing access to a variety of tools as well as other customized research. These research projects often extend beyond topics related to a client's Bridgewater investment. Bridgewater's intentionality regarding its client base is unique and is reflected in its client statistics: the Firm has about 330 client relationships, with an average client account of over $500 million and an average duration of 11 years.
- *Delivery of desired beta exposures*. Using the 5-year monthly performance through June 2019, staff estimates a beta of +0.5 to MSCI World Index (developed market public equity) and a beta of +0.9 to Bloomberg Barclays Global Aggregate (fixed income) for Bridgewater All Weather.

Concerns:

- *Significant assets under management.* Bridgewater All Weather has $55 billion AUM, making it the largest risk parity strategy by assets. [Mitigant: Given the Firm's focus on liquid markets and securities, capacity is very scalable. To wit, despite its size, Bridgewater represents a fraction of average daily volume in markets in which it trades.]
- *Leverage.* By design, Bridgewater uses leverage in the Fund to deliver equal risk contribution from the four component portfolios. [Mitigant: Bridgewater has extensive capabilities and experience in managing complex portfolios and operating risks. Although Bridgewater All Weather's leverage can exceed two times its net asset value, the Fund has a lower exposure to public equities than to either nominal or to inflation-linked bonds.]

Conclusion

Although the Fund balances risk by component portfolios instead of asset classes, it shares many attributes with other risk parity strategies. Furthermore, with its long track record and the deep resources the Firm brings to bear, staff believes Bridgewater All Weather is an attractive addition to the Risk Parity Portfolio.

Callan

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www.callan.com

Memorandum

To: Oregon Investment Council
From: Callan LLC ("Callan")
Date: January 16, 2020
Subject: Bridgewater Associates L.P. All Weather (Risk Parity) Portfolio Evaluation

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Callan conducted an evaluation of Bridgewater Associates L.P. ("the Firm") All Weather Portfolio strategy, which is being considered for an investment by the Oregon State Treasury ("OST") as part of OPERF's Risk Parity portfolio. OST is considering an allocation with a volatility target of 12%. To evaluate the Strategy, we considered track records targeting 10% and 12% volatility. The 12% volatility version is expected to use proportionally higher leverage in order to pursue proportionally higher return and risk with other aspects of the Strategy materially similar.

All Weather represents $53.7 billion of Bridgewater's total assets under management of $162 billion as of September 2019. Representing the rest of Bridgewater's discretionary assets, Bridgewater's Optimal Portfolio strategy has $21.0 billion and its Pure Alpha strategy has $87.6 billion.

The Strategy invests in equity index, fixed-income and commodity-linked instruments with a long-only approach. The portfolio is constructed in a manner that is intended to collect the potential risk premiums of these asset classes as consistently as possible. Bridgewater seeks to achieve consistency of returns by balancing the portfolio's sensitivity to surprises in economic growth and inflation.

Callan believes that Bridgewater's All Weather strategy is an attractive investment option to capture a balanced risk allocation to traditional asset classes designed to produce a well-diversified return stream over full market cycles in various economic environments. Based upon our evaluation of Bridgewater, its team, investment philosophy, this proposed strategy, along with how Bridgewater's All Weather fits into OPERF's overall portfolio, Callan believes that:

- Bridgewater is a seasoned but driven investment firm with substantial resources committed to research, portfolio construction, and trading.
- Under the stable leadership of the Firm's key professionals (including 3 Co-CIOs and 7 other key senior professionals), the organization is well-positioned to deliver liquid, transparent investment solutions that are competitive with those of its peers.
- The Team follows a relatively transparent and thoughtful investment process in managing risk parity portfolios.

Callan

- Bridgewater's All Weather is an attractive fit for OPERF's Risk Parity mandate as it pursues a diversified portfolio across the broad capital markets focused exclusively on capturing the risk premia associated with traditional asset classes.
- While the investment philosophy underpinning Bridgewater All Weather differs from other risk parity strategies, such as the PanAgora Risk Parity Multi-Asset and Man AHL TargetRisk portfolios, there is significant overlap in the types of asset class risks used. All of these strategies seek exposure to equities, sovereign bonds, corporate credit, inflation linked bonds, and commodities. As OPERF pursues a multi-manager structure of risk parity strategies, this potential overlap should be considered.
- The Bridgewater Optimal Portfolio strategy allocates half of its risk to the Bridgewater All Weather strategy. As OPERF is invested in the Bridgewater Optimal Portfolio, this overlap should be considered.
- Given all of the Firm's resources that support these strategies, the proposed flat fee is competitive for OPERF's targeted $650 million investment in the All Weather Portfolio targeting 12% volatility.
- Based upon our evaluation of Bridgewater and the All Weather strategy, Callan recommends that OST consider an investment as part of OPERF's Risk Parity portfolio. Callan's recommendation is subject to review and approval of the All Weather's offering materials by OST's legal counsel.

Please refer to the full report for further information.

BRIDGEWATER

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Bridgewater's All Weather Strategy

January 2020

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Westport, CT 06880
(203) 226-3030
www.bridgewater.com

BRIDGEWATER OVERVIEW

- Institutional investment manager with over 40 years of experience
- Consistency of people and process
  - Co-CIOs have worked together for over two decades
- Deep fundamental understanding of economies and markets
  - Over 600 people on the investment team
- Manage $168bln in total firm assets with $55bln in All Weather
  - Meaningful partnerships with our clients
  - Average client relationship is 12 years and over $500mln in AUM
  - Public funds represent $50bln of AUM (~30% of our business)
- Culture of continuous improvement
- Employee controlled

Figures estimated as of December 2019. Figures as of the date shown are inclusive of additions and/or withdrawals made as of the first business day of the following month.
Please review the "Important Disclosures and Other Information" located at the end of this presentation.

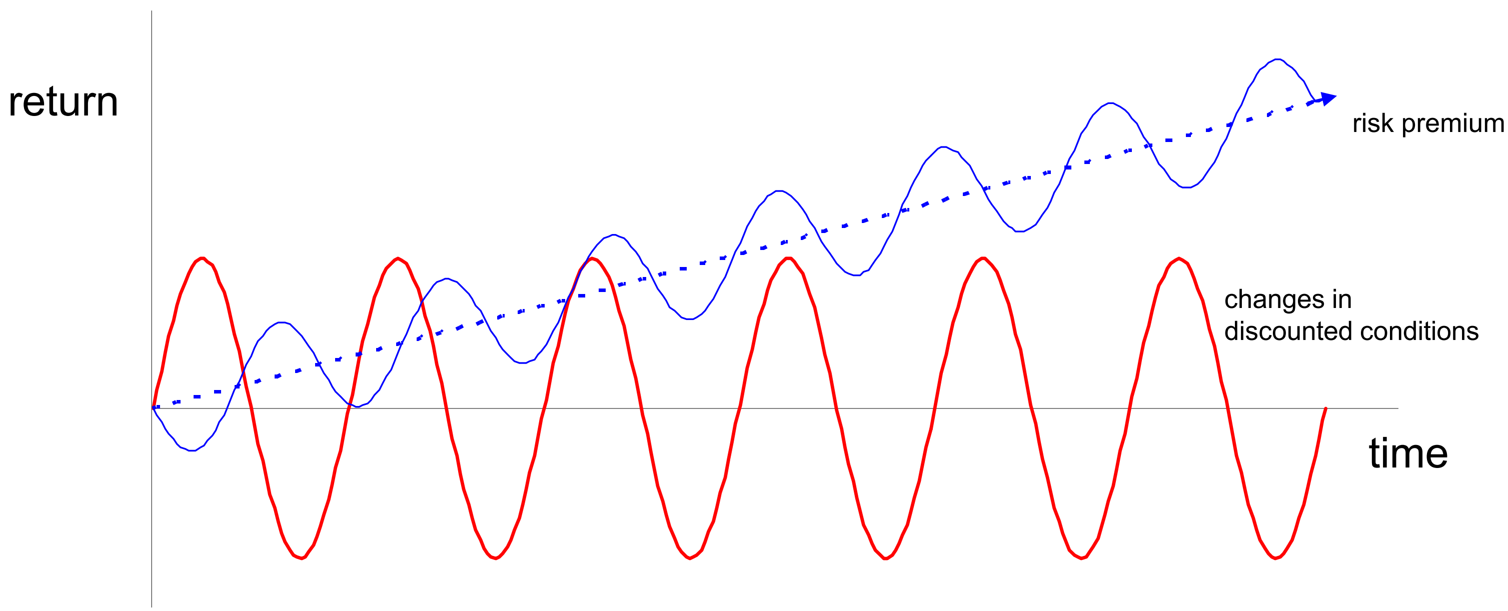
WHAT MAKES BRIDGEWATER'S RISK PARITY UNIQUE?

- **Originators:** Bridgewater invented All Weather in 1996 as the most reliable and consistent strategic asset mix. This pioneered the Risk Parity movement.
- **Fundamental diversification:** Instead of making assumptions about unstable correlations, All Weather utilizes the highly reliable environmental biases embedded in all financial assets to generate consistent diversification.
- **Track record:** Over its more than 23 year history, All Weather has delivered on its expectations, translating into a gross annualized total return of 9.4% since 1996.
- **Continual evolution:** We are constantly researching ways to improve our implementation of environmental balance and evolving the strategy as the environment and paradigms shift.
- **Partnership:** Meaningful partnerships are part of our "DNA" and have been for 40 years. As thought partners, we put ourselves in your shoes. This is often more impactful to our clients than their investments in our strategies.

"All Weather" is All Weather at 12% Volatility. Data through December 2019. Related fund performance is based on the returns of the All Weather Strategy, scaled by a factor of 1.2. 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.

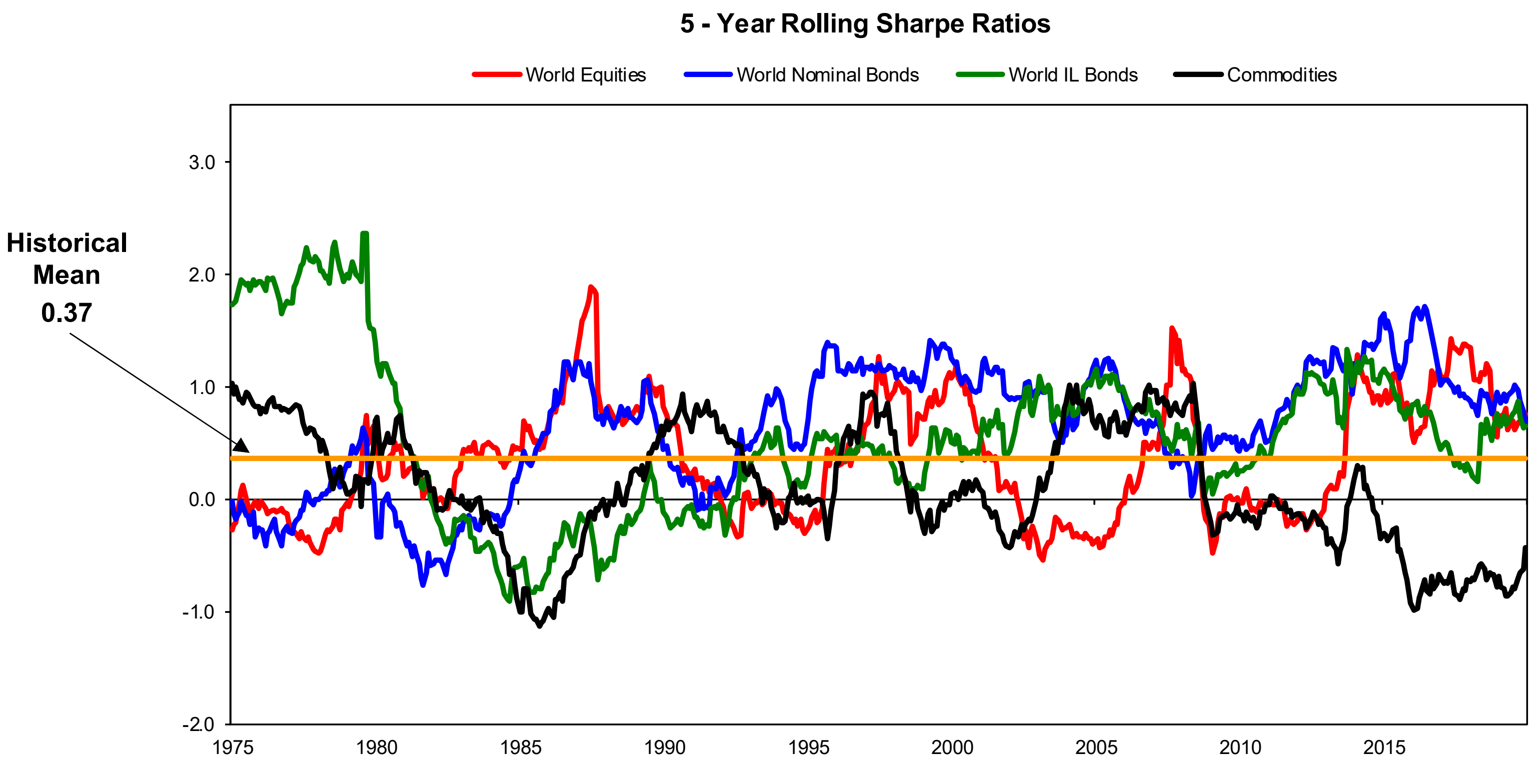
TWO TIMELESS DRIVERS OF ANY BETA INVESTMENT

- An exchange of money today for money tomorrow.
- Terms of the deal:
  - Discounted future conditions.
  - Required compensation.



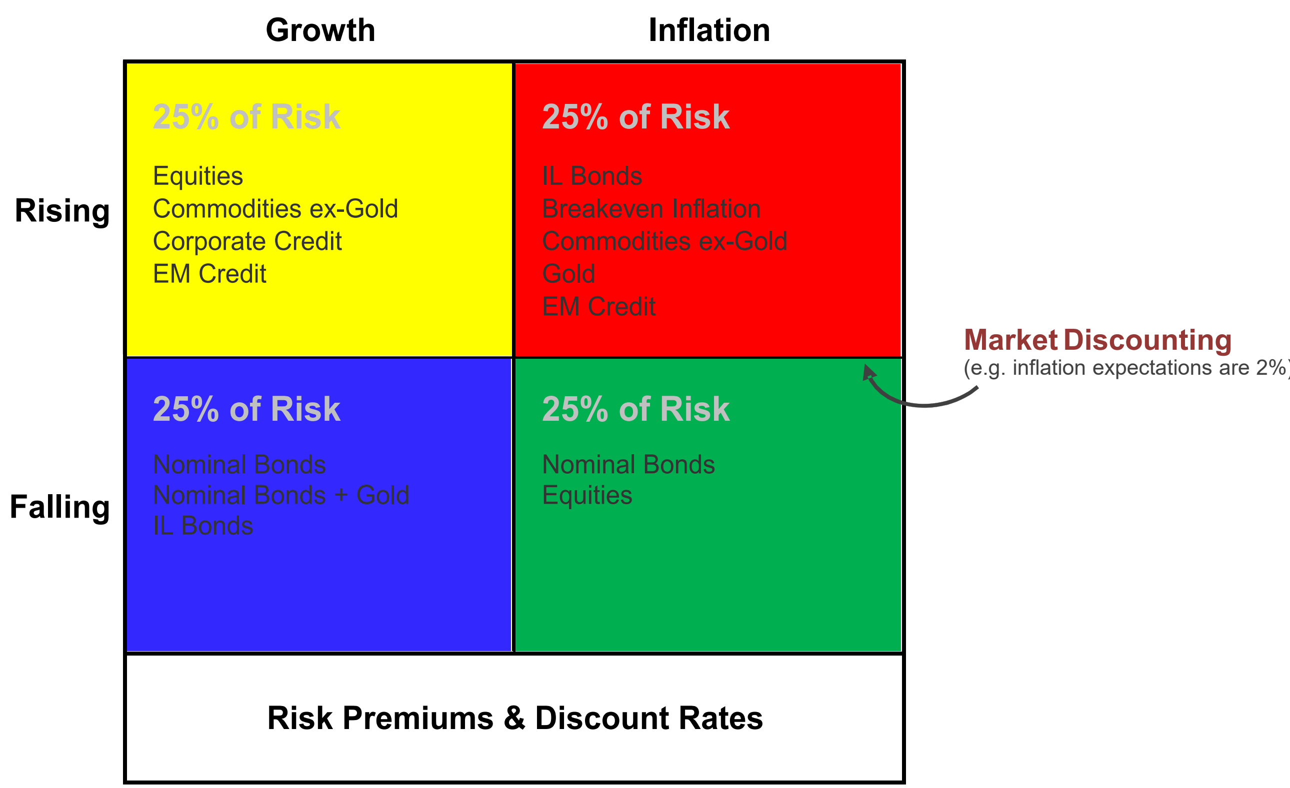
ASSETS OUTPERFORM CASH, BUT ANY ONE ASSET IS INCONSISTENT

1970 to Present	World Equities	World Nominal Bonds	World IL Bonds	Commodities
Annualized Excess Return	**3.9%**	**2.1%**	**2.8%**	**2.0%**
Annual Volatility	13.7%	4.3%	4.9%	15.7%



Data through December 2019. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

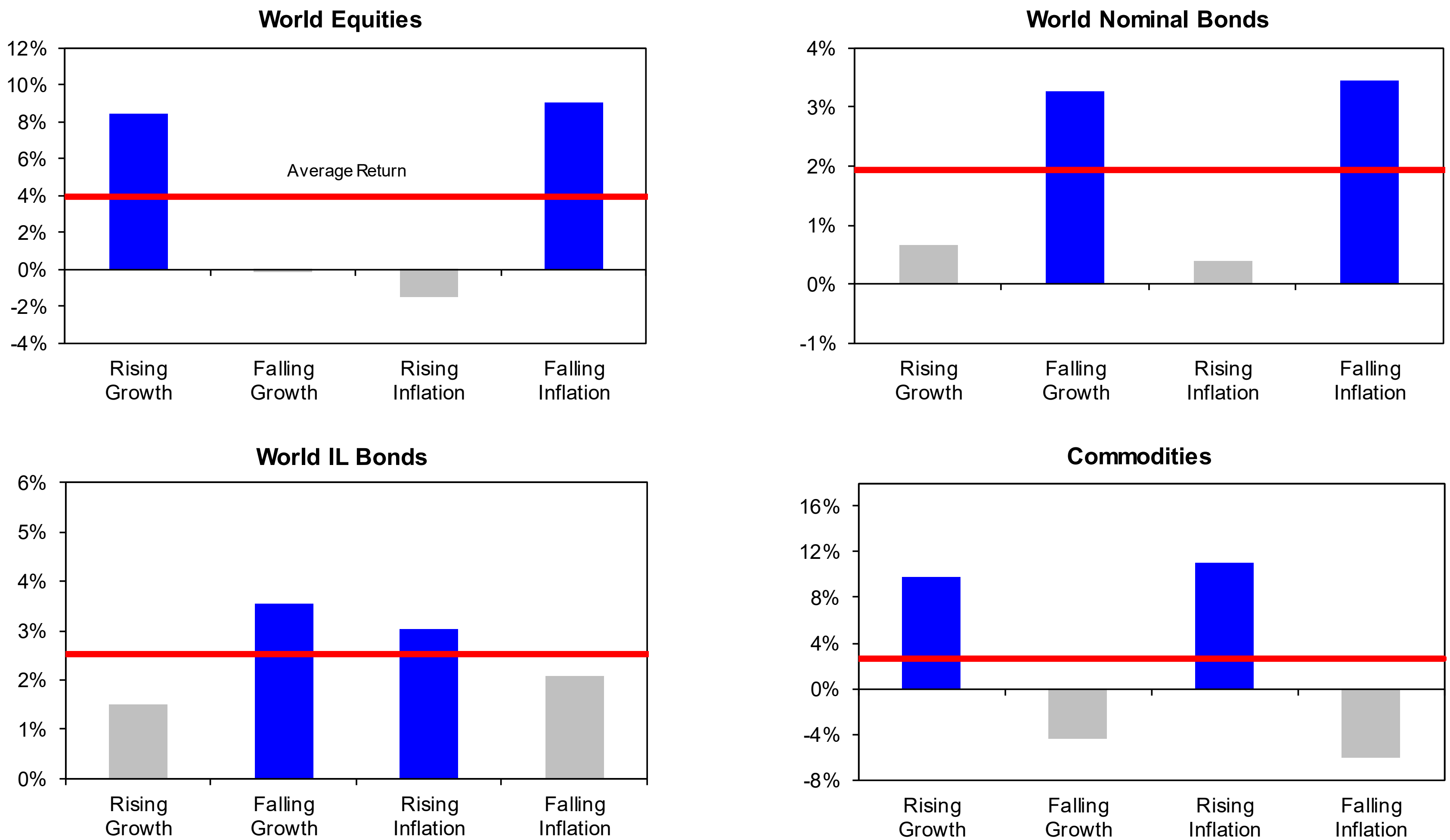
ENVIRONMENTAL FRAMEWORK:
BALANCE RISK TO GROWTH AND INFLATION SURPRISES



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

HISTORICAL EVIDENCE: ASSET CLASSES ARE DRIVEN BY ECONOMIC ENVIRONMENTS

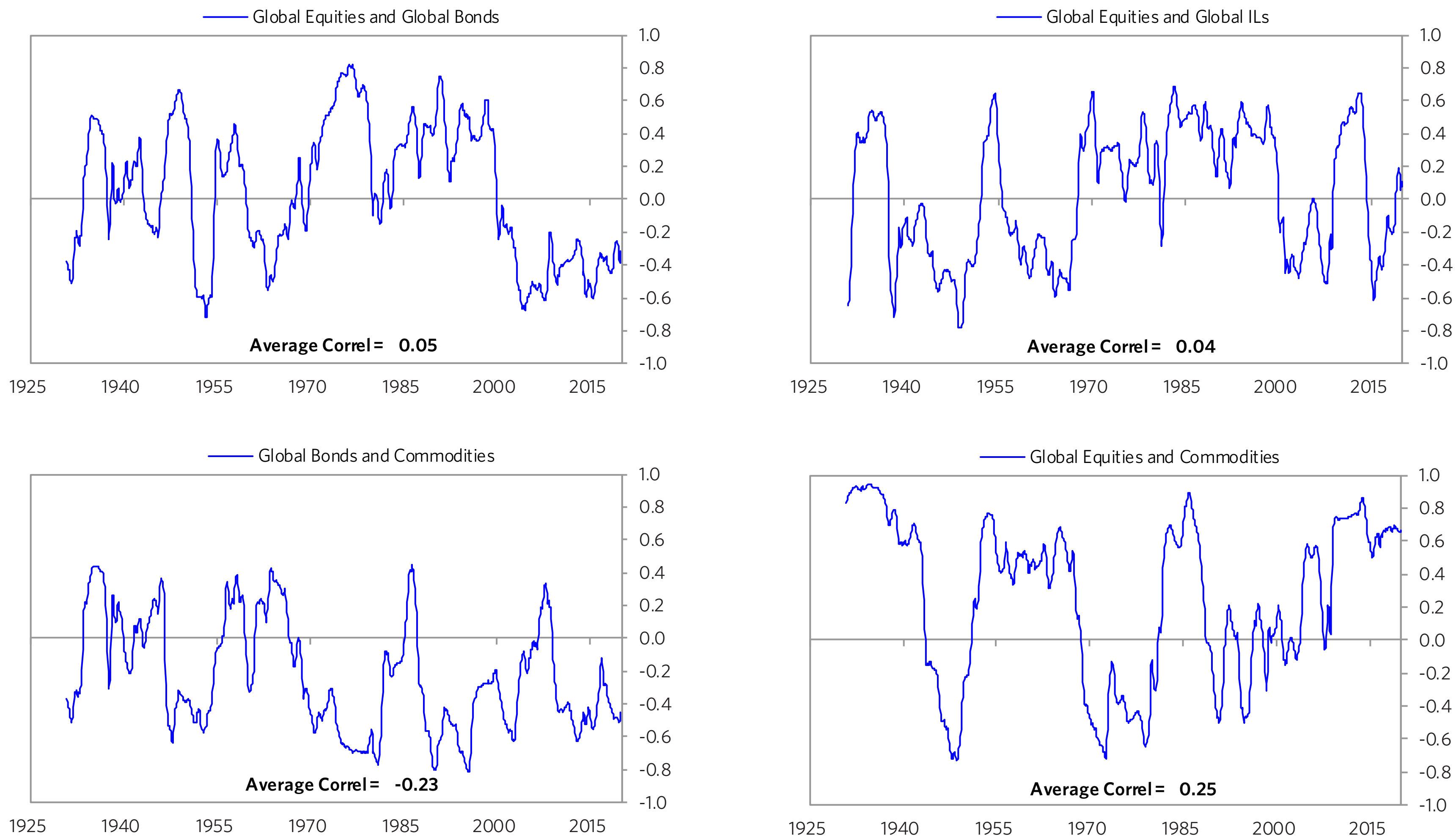
Annual Asset Class Excess Returns in Economic Environments (1970 – Present)



A rising (falling) inflation month is defined as a month in which the current rate of inflation is greater (lower) than the 12-month moving average rate of inflation. A rising (falling) growth month is defined as a month in which the current rate of real GDP growth is greater (lower) than the 12-month moving average rate of real GDP growth. Data through Sep 2019. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

CORRELATION IS UNRELIABLE

Rolling 5-yr Correlation of Annual Excess Returns



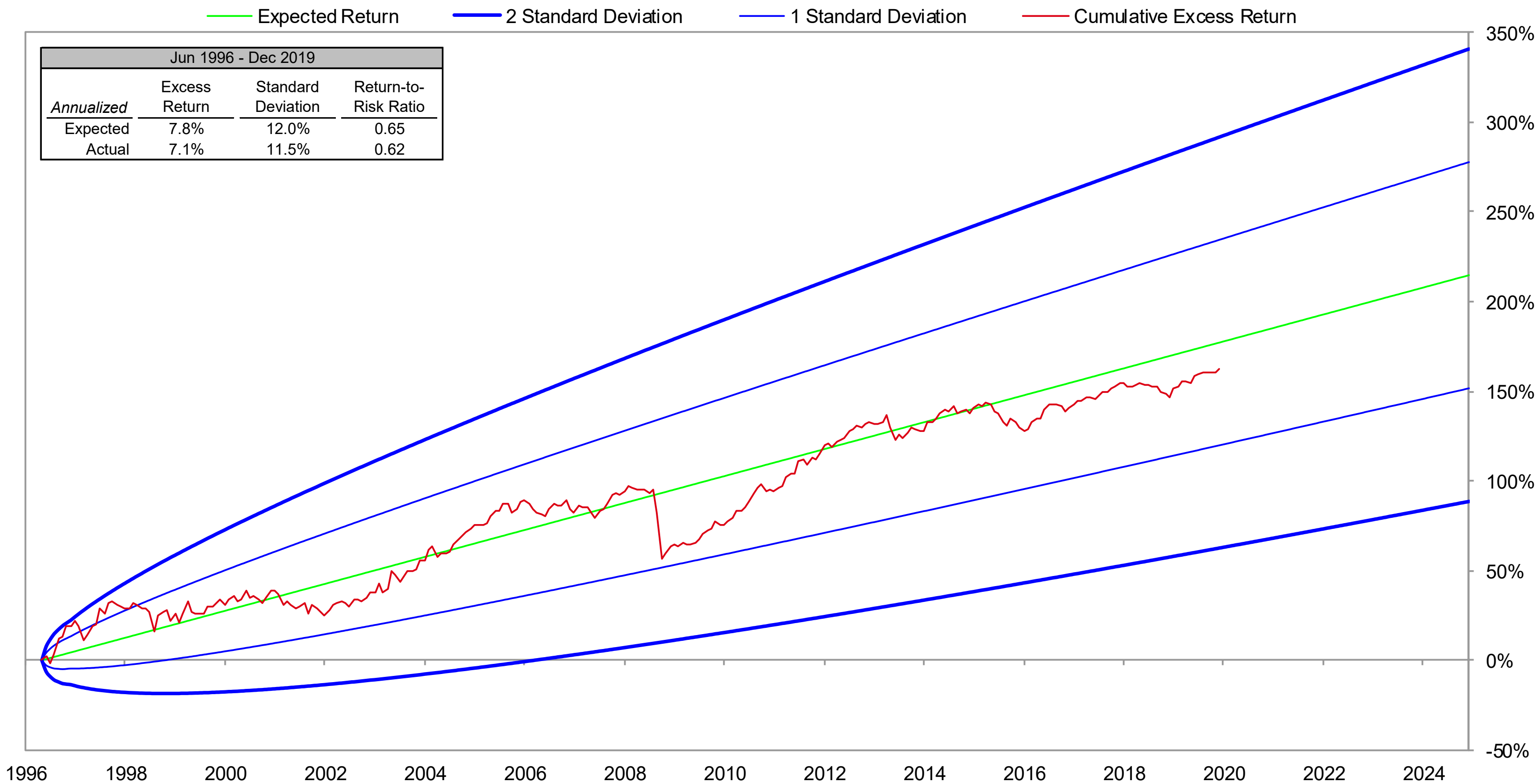
Data from 1925 through December 2019. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

ALL WEATHER HAS DELIVERED ON CLEARLY DEFINED EXPECTATIONS FOR HIGH RISK-ADJUSTED RETURNS

Bridgewater All Weather Strategy 12% Volatility

Gross Cumulative Excess Return vs. Expectations (ln)

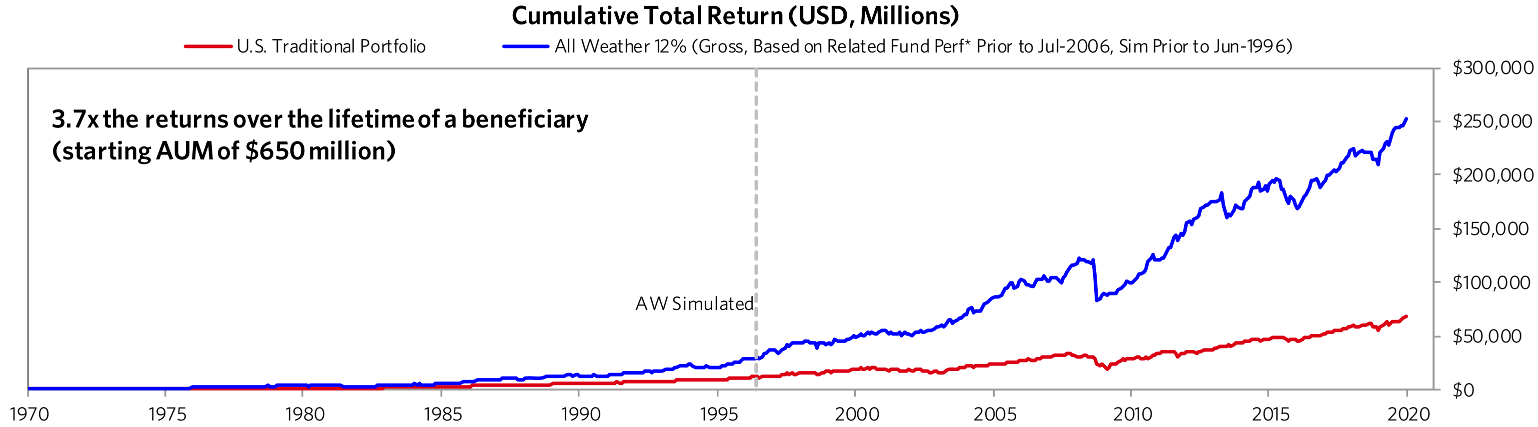
(Returns Based on Related Fund Performance Prior to July 2006)

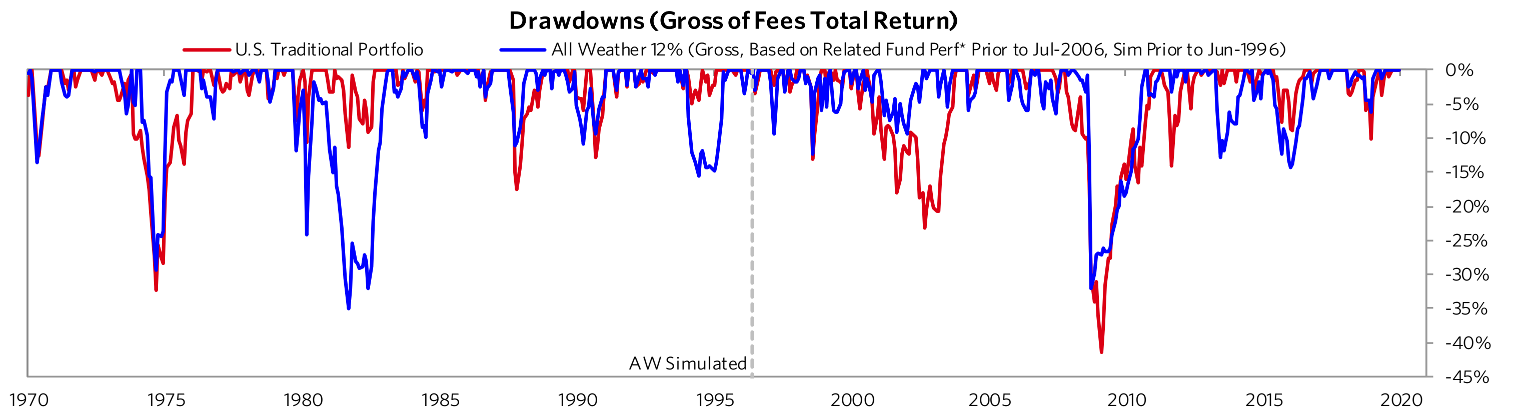


Jun 1996 - Dec 2019			
Annualized	Excess Return	Standard Deviation	Return-to-Risk Ratio
Expected	7.8%	12.0%	0.65
Actual	7.1%	11.5%	0.62

"Related fund performance" is based on the returns of the All Weather Strategy, scaled by a factor of 1.2. 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 RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

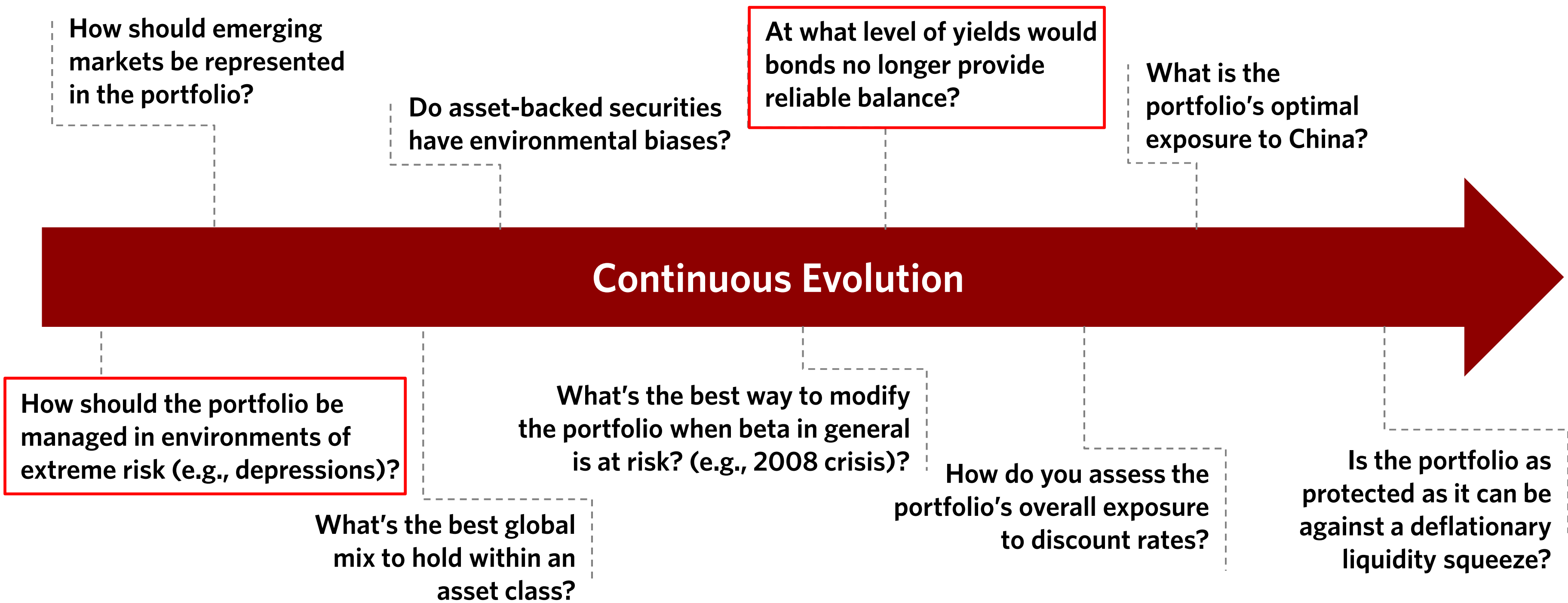
CONSISTENCY DELIVERS MORE WEALTH TO PAY BENEFITS





Data through December 2019. *Related fund performance is based on the returns of the All Weather Strategy, scaled by a factor of 1.2. Before June 1996, returns are simulated using the All Weather Strategy Simulation, as described in the "All Weather Strategy Simulation Disclosure." "U.S. Traditional Portfolio" refers to the traditional allocation described in the "U.S. Traditional Portfolio 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.

THE ALL WEATHER IMPLEMENTATION APPROACH IS CONTINUOUSLY EVOLVING



Appendix

BALANCE IS BETTER, BUT NO BETA PORTFOLIO WILL RELIABLY OUTPERFORM OVER SHORTER PERIODS

All Weather Expected Sharpe Ratio	Global 60/40 Expected Sharpe Ratio
0.6	0.4

Frequency of Outperformance

All Weather Strategy (Gross of Fees; Simulated Prior to June 1996) vs. Global 60/40

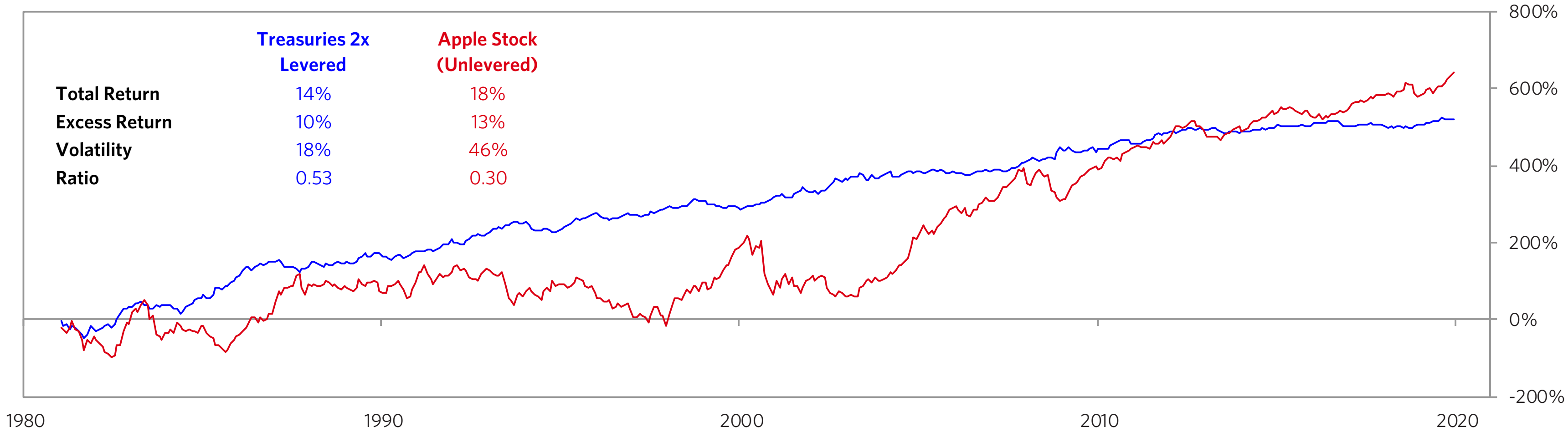
Time Frame	Expected	Historical (1925-Present)
1-Year	61%	57%
3-Year	69%	66%
5-Year	74%	71%
10-Year	82%	79%
20-Year	90%	95%
30-Year	94%	100%

"All Weather" is All Weather at 10% Volatility. Data through December 2019. The global 60/40 is 60% world equities and 40% world bonds. All return series are hedged to USD. For the purposes of this analysis, the expected monthly correlation between the 60/40 Portfolio and All Weather is assumed to be 0.60. Before June 1996, returns are simulated using the All Weather Strategy Simulation, as described in the "All Weather Strategy Simulation 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.

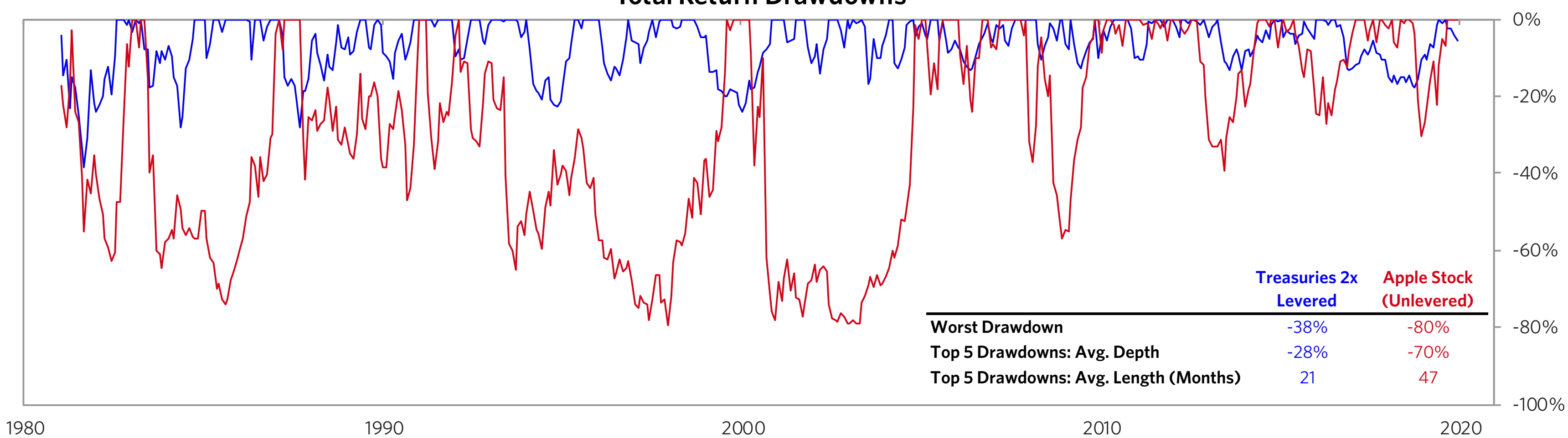
LEVERAGE IS NOT RISK; IT IS A TOOL

- Leverage is a tool that raises the expected return and risk of an asset.
- Leverage can be used to either increase or decrease the risk of a portfolio.
- The impact on portfolio risk depends on how and where leverage is applied.
- There are two types of leverage:
  - Economic leverage, which is embedded leverage that all investors have.
  - Accounting leverage, which is feared because of the prospect of losing more money than is invested.

LEVERAGE DOES NOT MEAN HIGHER RISK



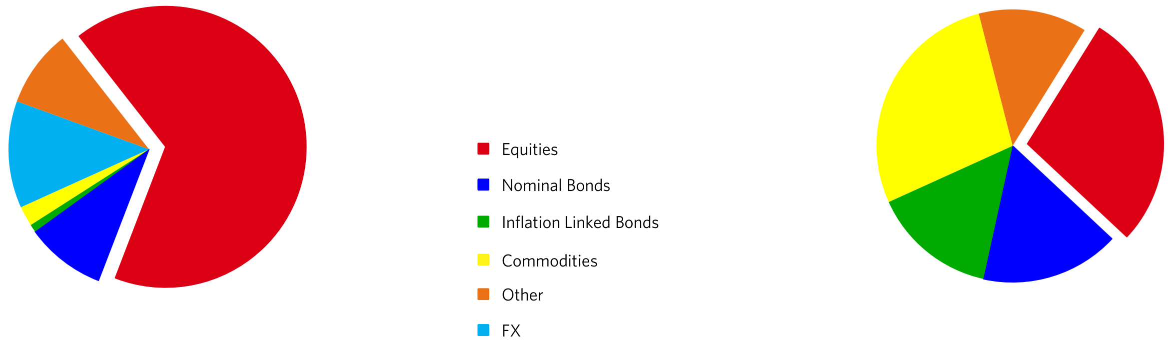
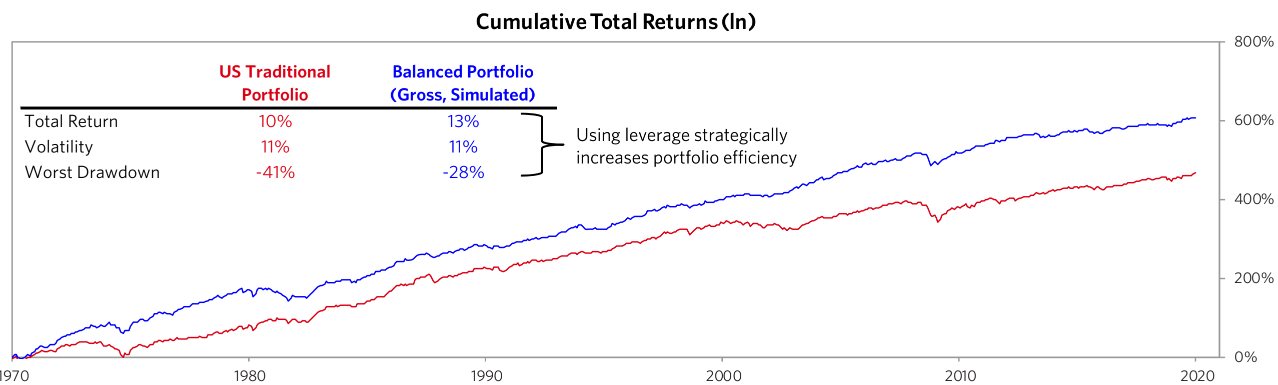
	Treasuries 2x Levered	Apple Stock (Unlevered)
Total Return	14%	18%
Excess Return	10%	13%
Volatility	18%	46%
Ratio	0.53	0.30



	Treasuries 2x Levered	Apple Stock (Unlevered)
Worst Drawdown	-38%	-80%
Top 5 Drawdowns: Avg. Depth	-28%	-70%
Top 5 Drawdowns: Avg. Length (Months)	21	47

Data through December 2019. "Treasuries 2x Levered" are 10 year constant duration US Treasuries scaled by a factor of 2. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

LEVERAGE IN A BALANCED PORTFOLIO

	US Traditional Portfolio	Balanced Portfolio
Risk Allocation (Beta only, Var)		
Leverage	• **Explicit**: None. • **Implicit**: High (Real Estate, Equities, PE)	• **Explicit**: 1.5-2x, though none on balance sheet if implemented by external manager. • **Implicit**: Some (Equities).
Performance		

Data through December 2019. "U.S. Traditional Portfolio" refers to the traditional allocation described in the "U.S. Traditional Portfolio Disclosure". "Balanced Portfolio" is simulated using the All Weather Asset Mix as described in the "All Weather Asset Mix Disclosure." "Risk" refers to standard deviation of excess returns. 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.

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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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ALL WEATHER STRATEGY DISCLOSURE

All Weather Strategy Performance (Net of Fees)

	Total Return in USD
Last 1 Year	16.6%
Last 3 Years	7.3%
Last 5 Years	4.8%
Last 7 Years	3.9%
Last 10 Years	7.6%

Annualized Returns (Jun-96 through Dec-19)

Net Since Inception Jun-96 through Dec-19

	Total Return in USD
Annualized Return	7.8%
Standard Deviation	9.7%
Sharpe Ratio	0.56

Past results are not necessarily indicative of future results.

Standard deviation is calculated using gross of fees performance.

Bridgewater All Weather Strategy Performance Disclosure:

For the period June 1996 (the inception of the strategy) through August 2001 the performance is based on the total return of the Bridgewater All Weather strategy as implemented for Bridgewater's principals and their affiliates and was not fully hedged to the US Dollar. The All Weather strategy is structured to be fully hedged, and the performance reflected after August 2001 includes these hedging transactions. For the period of August 2001 through present the performance shown is the actual total returns of the longest running fully funded All Weather account. For the entire history excess returns are calculated by subtracting an approximation of a U.S. cash rate from the total returns described above. Of note, the All Weather strategy’s target leverage, volatility and return, as well as the asset mix varied from June 1996 to July 2005. From August 2005 through the present the strategy has targeted 10% volatility. Bridgewater manages additional All Weather portfolios not included in this performance history.

Gross of fees performance is gross of management fees and includes the reinvestment of interest, gains, and losses. Returns will be reduced by the investment advisory fees and any other expenses that may be incurred in the management of the account.

Net of fees performance has 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.

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ALL WEATHER 12% STRATEGY DISCLOSURE

All Weather 12% Strategy Performance (Net of Fees)

	Total Return in USD
Last 1 Year	17.8%
Last 3 Years	7.8%
Last 5 Years	5.1%
Last 7 Years	4.1%
Last 10 Years	8.4%

Annualized Returns (Jun-96 through Dec-19)

Net Since Inception Jun-96 through Dec-19

	Total Return in USD
Annualized Return	8.0%
Standard Deviation	11.5%
Sharpe Ratio	0.49

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Standard deviation is calculated using gross of fees performance.

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.

Bridgewater All Weather Strategy 12% Volatility Performance Disclosure:
Returns from June 1996 (All Weather's inception) through June 2006 are based on the gross returns of the Bridgewater All Weather strategy, scaled by a factor of 1.2. Monthly excess returns of the Bridgewater All Weather strategy are scaled linearly by a factor of 1.2. The scaling results in the 12% strategy being 20% more aggressive than the All Weather Strategy. Due to the effects of compounding, annualized historical returns, volatilities, and Sharpe ratios will not scale linearly. Because the returns are scaled, they are simulated or hypothetical. For the period from July 2006 through the present, the performance shown is the actual returns of the longest running fully funded All Weather account run at 12% volatility, albeit adjusting target leverage, volatility, return and the asset mix during extreme recessionary or depressionary economic environments.

Bridgewater All Weather Strategy Gross Performance Disclosure:
For the period June 1996 (the inception of the strategy) through August 2001 the performance is based on the total return of the Bridgewater All Weather strategy as implemented for Bridgewater's principals and their affiliates and was not fully hedged to the US Dollar. The All Weather strategy is structured to be fully hedged, and the performance reflected after August 2001 includes these hedging transactions. For the period of August 2001 through present the performance shown is the actual total returns of the longest running fully funded All Weather account. For the entire history excess returns are calculated by subtracting an approximation of a U.S. cash rate from the total returns described above. Of note, the All Weather strategy's target leverage, volatility and return, as well as the asset mix varied from June 1996 to July 2005. From August 2005 through the present the strategy has targeted 10% volatility. Bridgewater manages additional All Weather portfolios not included in this performance history.

Gross of fees performance is gross of management and performance fees and includes the reinvestment of interest, gains, and losses. Returns will be reduced by the investment advisory fees and any other expenses that may be incurred in the management of the account.

Net of fees performance has 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.

No representation is being made that any account will or is likely to achieve returns similar to those shown. Trading in futures is risky and can result in losses as well as profits. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE PERFORMANCE. Performance as of the current month is estimated and subject to change.

US TRADITIONAL PORTFOLIO

This page contains the allocation information for the historical simulation of the US Traditional portfolio, from 1970 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	Benchmark	Nominal Exposure	Fx Exposure	Beta Volatility	Beta Ratio	Alpha Volatility	Alpha Ratio
Equities	U.S. Equities	15.0%	---	14.5%	0.25	---	---
Equities	U.S. Equities	15.0%	---	14.5%	0.25	5.0%	0.25
Equities	Dev. World Equities Ex-US	18.0%	Unhedged	14.1%	0.30	5.0%	0.30
Equities	Emerging Market Equities	3.0%	Unhedged	17.0%	0.25	5.0%	0.30
Nominal Bonds	U.S. Gov't Bonds	4.5%	---	3.8%	0.25	---	---
Nominal Bonds	U.S. Gov't Bonds	4.5%	---	3.8%	0.25	2.0%	0.25
Corporate Bonds	U.S. Corporate Bonds	5.0%	---	6.4%	0.30	3.0%	0.25
MBS	U.S. MBS	6.0%	---	4.1%	0.25	2.0%	0.25
IL Bonds	U.S. IL Bonds	1.0%	---	6.0%	0.25	---	---
IL Bonds	U.S. IL Bonds	1.0%	---	6.0%	0.25	1.0%	0.25
High Yield Bonds	U.S. High Yield	2.0%	---	10.3%	0.30	4.0%	0.25
Nominal Bonds	World Gov't Bonds Ex-US	2.0%	Hedged	3.7%	0.30	2.0%	0.30
Equities	U.S. PE / VC	9.0%	---	24.0%	0.25	10.0%	0.25
Real Estate	U.S. Real Estate	5.0%	---	18.3%	0.25	6.0%	0.25
Real Estate	World Real Estate	2.0%	Unhedged	16.8%	0.30	6.0%	0.30
Commodities	Bloomberg Commodity Index	2.0%	---	16.7%	0.20	---	---
Hedge Fund	Cash	5.0%	---	---	---	7.0%	0.70

ALL WEATHER STRATEGY SIMULATION DISCLOSURE

All Weather Simulation Performance (Net of Fees)

	Total Return in USD
Last 1 Year	20.3%
Last 3 Years	8.5%
Last 5 Years	5.7%
Last 7 Years	4.7%
Last 10 Years	8.1%

Annualized Returns (Jan-70 through Dec-19)

Net Since Inception Jan-70 through Dec-19

	Total Return in USD
Annualized Return	12.2%
Standard Deviation	10.2%
Sharpe Ratio	0.71

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.

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.

All Weather Strategy Simulation Performance Disclosure

From June 1996 to present, any performance shown will be based on the performance of the All Weather Strategy or a variation of the All Weather Strategy expressed in a different currency or volatility. For additional information about the characteristics of such returns, please refer to the relevant disclosure page provided at the end of the materials. Prior to June 1996, performance of the Bridgewater All Weather Strategy Simulation is based on simulated, hypothetical performance and not the actual 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 Strategy, prior to its existence. These assumptions are intended to approximate such implementation, but are inherently speculative.

The simulated performance for the All Weather Strategy Simulation 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 Strategy Simulation. A list 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 Strategy Simulation are subject to change in the future.

The All Weather Strategy Simulation includes periodic adjustments that are made to the All Weather Strategy Simulation's desired strategic asset allocation and level of risk pursuant to Bridgewater's systematic strategic management process. Such strategic management is based on a systematic process that assesses whether the assumptions underlying the All Weather Strategy (that assets will outperform cash, and that assets can be reasonably balanced against each other) are under threat, and systematically adjusts or reduces exposures accordingly. When applicable, the returns of the All Weather Strategy Simulation reflect adjustments based on this systematic strategic management process.

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 Strategy Simulation 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 Strategy Simulation 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 Strategy Simulation'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 Strategy Simulation

The All Weather Strategy 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.

ALL WEATHER ASSET MIX DISCLOSURE

All Weather Asset Mix Performance (Net of Fees)

	Total Return in USD
Last 1 Year	22.6%
Last 3 Years	9.0%
Last 5 Years	6.9%
Last 7 Years	5.6%
Last 10 Years	8.8%

Annualized Returns (Jan-70 through Dec-19)

Net Since Inception Jan-70 through Dec-19

	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.

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.

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.

TAB 5 – Opportunity Portfolio Policy Update

OPERF

OPERF Opportunity Portfolio
Policy Revisions and Updates

Purpose
To seek Oregon Investment Council ("OIC") approval for revisions and updates to Policy INV 703: OPERF Opportunity Portfolio Standards and Procedures.

Background
During the annual review of the OPERF Opportunity Portfolio on October 31, 2019, Staff suggested, and the OIC requested, a proposed policy change that would allow for an increase in OPERF's total exposure to the Opportunity Portfolio during a market dislocation.

As a reminder, the Opportunity Portfolio was established nearly 15 years ago, in 2005, as a home for investments that did not fit within the strategic confines of the traditional asset class structure of the pension fund by using up to three percent of the total OPERF value at any point in time. The strategy embraced the notion that these investments should provide an absolute rate of return with a volatility less than that of public equity (i.e., seek solid risk-adjusted returns), while providing additional diversification. Additionally, the Opportunity Portfolio was the natural place to pursue shorter-term market dislocations such as the bank/leveraged loan opportunity which arose during the Global Financial Crisis ("GFC") in 2008.

Discussion
Since the GFC, there have been few, if any, investable market dislocations with the U.S. economy enjoying its longest expansion in the post-war era. However, the Opportunity Portfolio represents approximately 2.3% of OPERF's value today, leaving little capacity for more tactical investment opportunities that may arise. While it is difficult to determine how much OPERF will be impacted by the next market correction, by definition, we would expect so see a decline of some significance (e.g., 10%). Such a decline would limit Staff's ability to explore resulting investment opportunities that may result, as the current three percent Opportunity Portfolio limit would come under pressure at the same time. For example, ceteris paribus, a 10% decline in OPERF would leave approximately $300 million of capacity before the current three percent cap would be breached.

The proposed policy change would allow Staff to flex the capacity of the Opportunity Portfolio to five percent, once a market dislocation (as defined) is triggered. Using the same example of a 10% decline in OPERF, ceteris paribus, up to $1.7 billion could be invested before the Opportunity Portfolio would breach a five percent total fund value.

In conversations with market participants, it was evident that the leading indicators used to flag market dislocations are in the debt markets, with a notable focus on high yield bonds and leveraged loans. The leveraged loan market has continued to grow since 2011 and is roughly on par with the high yield bond market, at approximately $1.4 trillion. The policy recommendation focuses on two common measures of distress: credit spreads and prices.

In addition to the technical market triggers suggested, the policy change requires a market assessment by the Chief Investment Officer before the Opportunity Portfolio threshold would be expanded to a maximum of five percent. Finally, every proposed investment would be subject to the same due diligence and investment processes in place today.

Staff Recommendation
Approve Staff proposed revisions and updates to Policy INV 703, as detailed in the following documents. Proposed policy revisions and updates have been reviewed by counsel and the OIC's advisors.

INV 703-OPERF Opportunity Portfolio Standards and Procedures

INTRODUCTION & OVERVIEW

Summary Policy Statement

~~The Oregon State Treasury ("OST"), to~~To accomplish the prudent and efficient implementation of investment policies established by the Oregon Investment Council ("OIC" or "Council"), ~~has~~ Oregon State Treasury ("OST") created the Opportunity Portfolio (the "Portfolio") as an investment strategy within the Oregon Public Employees Retirement Fund ("OPERF" or the "Fund"). The Portfolio may be populated with investment approaches across a wide range of investment opportunities with no limitation on asset classes or strategies employed, subject to a total current fair market value that is no more than three percent of the Fund's total value. However, in the event of a "Market Dislocation" (as defined below), the three percent limitation may be increased to no more than five percent of the Fund's total value. The Opportunity Portfolio ~~investment Portfolio~~ seeks to achieve its investment objective by making investments and partnership commitments that, for any one or more ~~various~~ reasons, do not conform to the guidelines and objectives of the OIC's previously identified asset classes (i.e., public equities, fixed income, real estate, private equity, alternative investments and cash) or which seek to benefit from a Market Dislocation. A Market Dislocation is defined as:

- High yield spreads reach a level of 900 bps or more, based on the ICE Bank of America Merrill Lynch (BofAML) High Yield Index[1], or an index price of ≤ 90; or
- Leveraged loan spreads reach a level of 750 bps or more, based on the S&P/LSTA Leveraged Loan Index[2], or an index price of ≤ 90%.

Notwithstanding the technical trigger of a Market Dislocation, the Chief Investment Officer ("CIO") shall assess overall market conditions and report to the OIC the activation of the Portfolio limit increase to no more than five percent of the Fund's total value at the next, most feasible OIC meeting.

Purpose and Goals

~~The purpose of this policy is to define the strategic role of the Portfolio within the OIC's general investment policies for OPERF, to set forth specific policy objectives, and to outline strategies and guidelines for Portfolio implementation.~~

The goal of this policy is to provide guidance to OST staff ("Staff") and advisors regarding the Portfolio and its investment objectives.

Applicability

Classified represented, management service, unclassified executive service

Authority

ORS 293.726
ORS 293.731
ORS 293.736
~~Standard of judgment and care in investments; investment in corporate stock.~~

1. ~~The investment funds shall be invested and the investments of those funds managed as a prudent investor would do, under the circumstances then prevailing and in light of the purposes, terms,~~

[1] The ICE BofAML High Yield Loan Index tracks the market weighted performance of the U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market.
[2] The S&P/LSTA ("Loan Syndication and Trading Association") Leveraged Loan Index is designed to measure the performance of U.S. institutional leveraged loans based on market weightings, spreads and interest payments.

~~distribution requirements and laws governing each investment fund.~~

2. ~~The standard stated in subsection (1) of this section requires the exercise of reasonable care, skill and caution, and is to be applied to investments not in isolation but in the context of each investment fund's investment portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the particular investment fund.~~
3. ~~In making and implementing investment decisions, the Oregon Investment Council and the investment officer have a duty to diversify the investments of the investment funds unless, under the circumstances, it is not prudent to do so.~~
4. ~~In addition to the duties stated in subsection (3) of this section, the council and the investment officer must:~~
    a. ~~Conform to the fundamental fiduciary duties of loyalty and impartiality;~~
    b. ~~Act with prudence in deciding whether and how to delegate authority and in the selection and supervision of agents; and~~
    c. ~~Incur only costs that are reasonable in amount and appropriate to the investment responsibilities imposed by law.~~
5. ~~The duties of the council and the investment officer under this section are subject to contrary provisions of privately created public trusts the assets of which by law are made investment funds. Within the limitations of the standard stated in subsection (1) of this section and subject to subsection (6) of this section, there may be acquired, retained, managed and disposed of as investments of the investment funds every kind of investment which persons of prudence, discretion and intelligence acquire, retain, manage and dispose of for their own account.~~
6. ~~Notwithstanding subsection (1) of this section, not more than 50 percent of the moneys contributed to the Public Employees Retirement Fund or the Industrial Accident Fund may be invested in common stock, and not more than 65 percent of the moneys contributed to the other trust and endowment funds managed by the Oregon Investment Council or the State Treasurer may be invested in common stock.~~
7. ~~Subject to the standards set forth in this section, moneys held in the Deferred Compensation Fund may be invested in the stock of any company, association or corporation, including but not limited to shares of a mutual fund. Investment of moneys in the Deferred Compensation Fund is not subject to the limitation imposed by subsection (6) of this section. [1967 c.335 §7; 1971 c.53 §1; 1973 c.385 §1; 1981 c.880 §12; 1983 c.456 §1; 1983 c.466 §1; 1987 c.759 §1; 1993 c.18 §59; 1993 c.75 §1; 1997 c.129 §2; 1997 c.179 §22; 1997 c.804 §5; 2005 c.294 §1]~~

~~**293.731 Council to formulate and review investment policies; exception.** Subject to the objective set forth in ORS 293.721 and the standards set forth in ORS 293.726, the Oregon Investment Council shall formulate policies for the investment and reinvestment of moneys in the investment funds and the acquisition, retention, management and disposition of investments of the investment funds. The council, from time to time, shall review those policies and make changes therein as it considers necessary or desirable. The council may formulate separate policies for any fund included in the investment funds. This section does not apply to the Oregon Growth Account, the Oregon Growth Fund, the Oregon Growth Board, the Oregon Commercialized Research Fund, the Oregon Innovation Fund or the Oregon Innovation Council. [1967 c.335 §8; 1993 c.210 §20; 1999 c.42 §1; 1999 c.274 §18; 2001 c.835 §9; 2001 c.922 §§15a,15b; 2005 c.748 §§15,16; 2012 c.90 §§22,32; 2013 c.732 §8]~~

~~**293.736 Duties of investment officer.**~~

1. ~~Except as provided in ORS 293.741, in amounts available for investment purposes and subject to the policies formulated by the Oregon Investment Council, the investment officer shall invest and reinvest moneys in the investment funds and acquire, retain, manage, including exercise of any voting rights, and dispose of investments of the investment funds.~~
2. ~~Subject to the direction of the council, the investment officer shall perform the functions described in subsection (1) of this section with respect to the investment in mutual funds of moneys in the Deferred Compensation Fund. The council must approve all mutual funds in which Deferred Compensation Fund moneys are invested. [1967 c.335 §9; 1997 c.179 §23; 2005 c.295 §1]~~

POLICY PROVISIONS

Definitions

Advisor: One or more independent third party (consultant) firms retained by the OIC and working in concert with Staff to provide expert investment counsel, due diligence, and ongoing portfolio monitoring.

Benchmark: -The Consumer Price Index plus a premium defined as 500 basis points.

Policy Statements

I. GENERAL POLICY

Portfolio investments provide an appropriate complement to OPERF's other investments, and are consistent with OPERF's general objectives, including:

A. Providing a means to pay benefits to OPERF participants and their beneficiaries;

B. Investing to produce a return based on prudent and reasonable levels of liquidity and investment risk;

C. Attaining an adequate real return over the expected rate of inflation; and

D. Complying with all applicable laws and regulations concerning the investment of pension assets.

Portfolio investments should exhibit differentiated (i.e., less correlated) returns relative to other Fund assets and therefore the Portfolio is expected to provide diversification benefits to the Fund.

Staff and the Advisor will provide the OST and OIC with an annual Portfolio investment review~~ and strategy plan~~.

II. OBJECTIVES

~~A. **Strategic Role**~~

~~The Portfolio should provide enhanced, risk-adjusted returns and diversification to OPERF, and Portfolio investments are expected to comprise both shorter-term (1-3 years) and longer-term holdings, which may include inflation-oriented and real return-oriented strategies.~~

~~The Portfolio has no strategic target, and it may comprise no more than 3.0% of total Fund assets; moreover, any allocation to the Portfolio will not result in a range violation for or among the Fund's other, previously established strategic asset allocations.~~

~~B~~A. **Portfolio Investment Performance Objective**

The Portfolio's investment performance objective is to generate long-term net returns to OPERF (i.e., after management fees and general partners' carried interest) above ~~a~~ the ~~b~~Benchmark. The premium portion of the Benchmark ~~comprised of the Consumer Price Index ("CPI") plus an appropriate premium to~~ compensates for illiquidity, principal risk and related investment costs and expenses. ~~Specifically, the Portfolio's performance objective is a return equivalent to CPI plus 500 basis points.~~ OST Staff will periodically evaluate the Portfolio's performance objective and ~~assigned~~ the B~~b~~enchmark.

~~C~~B. **Diversification**

1. The Portfolio may be non-diversified, meaning that Staff may concentrate its investments. However, with the exception of cash, the Portfolio's allocation to a particular investment or partnership commitment cannot exceed~~,~~ 25% at the time of investment~~, 25% of the~~

~~Portfolio's maximum allowable 3% total Fund allocation ceiling (i.e., 0.75% of OPERF)~~.

2. Certain investments may be allocated to the Portfolio for incubation purposes and, if successful, may be recommended for transfer into one of the other, primary OPERF asset classes.

3. Investments will be diversified among a range of commitment sizes, generally with a minimum commitment of $~~75~~ 50 million and a maximum commitment equal to 25% of any particular co-mingled partnership. Staff will document and report to the OIC any deviations from these guidelines.

4. Given the truly opportunistic nature and objective of the Portfolio, Staff expects its investments and partnership commitments ~~will~~ may be highly episodic and inconsistent over time.

5. A low correlation between OPERF and Portfolio returns is expected over time.

III. OPPORTUNITY PORTFOLIO COMMITTEE

A. The ~~Opportunity~~ Portfolio c~~C~~ommittee ~~or~~ ("Committee") acts on behalf of, and subject to the review of, OST. The Committee is comprised of the following individuals: the Deputy State Treasurer; the ~~Chief Investment Officer (~~CIO~~)~~; and an OIC member invited by the OST to participate as a voting member on the Committee. OST will consider input from the OIC in extending such invitations.

B. OST, through the Committee, may invest OPERF amounts up to and including $250 million per investment for new general partner, fund sponsor or manager relationships, and an amount up to and including $350 million for existing relationships, consistent with OIC policies (see Appendix ~~B~~A). If consideration of a particular investment opportunity is deemed urgent or otherwise less suited for presentation to the OIC, the CIO may seek OIC approval for Committee consideration of that particular investment opportunity.

C. The Committee will only exercise its investment authority by unanimous vote and acting upon a favorable due diligence determination by the Advisor. The Committee may only consider proposed investments if agreement exists between the Advisor and Staff that the proposed investment is consistent with Portfolio standards. Proposed investments or partnership commitments presented to the Committee are subject to review by OST, which may choose to cancel or refer such proposed investments or partnership commitments to the OIC for broader review and consideration.

D. In connection with a proposed investment or partnership commitment, Staff shall furnish any favorable due diligence determination, including the underlying rationale, market conditions and portfolio impact, to the OIC as soon as practical and at least two weeks prior to a Committee meeting called for purposes of considering the proposed investment or partnership commitment. If OST objects to the proposed investment or partnership commitment or is advised by any OIC member that he or she objects to the proposed investment or partnership commitment, OST will cancel the proposed investment or partnership commitment and determine whether or not Staff will bring same as a separate agenda item at a subsequent OIC meeting.

E. Staff shall report any investment or partnership commitment made by the Committee at the next, most feasible OIC meeting.

IV. OST STAFF AUTHORITY

The CIO, upon a favorable recommendation from both the Director of Alternative Investments and the Advisor, has authority to accomplish the following:

A. Approve OST administrative activities and guideline exceptions if a plan is established to conform the ~~[project/~~investment~~/partnership]~~ exception(s) to applicable guidelines within a reasonable period of time;

B. Acquire, retain, manage and dispose of investment or partnership interests consistent with the authority granted to the Office of the State Treasurer pursuant to ORS 293.736. Review and approve other activities as necessary to further the interests of the Portfolio consistent with its standards; and

C. Approve up to an additional $50 million, per action, to an existing investment or partnership commitment for the following purposes: (1) recapitalize the investment or partnership with additional equity; (2) acquire all or part of another manager's or limited partner's interest in an investment or partnership; (3) re-balance between or among investments or partnership commitments; or (4) co-invest alongside a partnership in an individual investment.

~~D.~~ Any such additional investments or partnership commitments shall be on terms equal to or better than the existing terms.

D. Staff shall report any of the foregoing activities at the next, most feasible OIC meeting.

V. ADVISOR AND OST REQUIREMENTS

~~OST~~ Staff manages the Portfolio ~~using a hybrid Staff/~~in collaboration with the Advisor~~ model~~. ~~Specifically, and~~ S~~s~~ubject to budget limitations, OST will assign an appropriate number of Staff to manage Portfolio design and construction, the Portfolio's investment decision-making schedule and process, and the Advisor's contract. The OIC will retain a qualified, independent Advisor and will delegate to that Advisor substantial duties such as performing due diligence on investment opportunities, monitoring Portfolio investments, performing Portfolio analytics and valuation analyses and preparing ~~current historical~~ performance reports.

Staff retains the primary responsibility to ensure that Portfolio investments and prospective investments receive appropriate due diligence, monitoring, and valuation analyses. ~~While some of these duties may be delegated to the Advisor, Staff will conduct and document sufficient reviews and tests of the Advisor's work as necessary to conclude that such delegated duties are performed consistently and appropriately by the Advisor.~~

~~VI. LEGAL COUNSEL~~

~~Staff will obtain relevant legal services from internal legal staff and/or Oregon Department of Justice (DOJ) personnel. However, due to the complex nature of Portfolio investments, OIC, OST and/or Staff will recommend internal legal or DOJ collaboration with expert, external legal counsel when deemed necessary or appropriate.~~

VI~~I~~. MONITORING

A. **Reports**. The Advisor will furnish Portfolio activity and performance reports to Staff on both a quarterly and annual basis.

B. **Adherence to Strategy**. Staff and the Advisor will evaluate the actual strategy employed by investment managers or general partners relative to stated Portfolio objectives, strategies or other industry standards. The Advisor will interact with investment managers and general partners periodically and as necessary to verify adherence to such objectives, strategies and standards.

Exceptions

None

Failure to Comply

Failure to comply with this policy may be cause for disciplinary action up to and including dismissal.

PROCEDURES and FORMS

~~Appendix A: Alternative Investments Valuation Policy~~

Appendix ~~B~~A: OIC/OST Alternative Investments Authority

Appendix ~~C~~B: OST Procedures for INV 703

~~Appendix D: OST Procedures: Contract Execution and Partnership Funding~~

ADMINISTRATION

Feedback

Your comments are extremely important to improving the effectiveness of this policy. If you would like to comment on the provisions of this policy, you may do so by e-mailing the Policy Analyst. To ensure your comments are received without delay, *please list the policy number and name in your e-mail's subject*. Your comments will be reviewed during the policy revisions process and may result in changes to the policy.

INV 703-OPERF Opportunity Portfolio Standards and Procedures

INTRODUCTION & OVERVIEW

Summary Policy Statement

To accomplish the prudent and efficient implementation of investment policies established by the Oregon Investment Council ("OIC" or "Council"), Oregon State Treasury ("OST") created the Opportunity Portfolio (the "Portfolio") as an investment strategy within the Oregon Public Employees Retirement Fund ("OPERF" or the "Fund"). The Portfolio may be populated with investment approaches across a wide range of investment opportunities with no limitation on asset classes or strategies employed, subject to a total current fair market value that is no more than three percent of the Fund's total value. However, in the event of a "Market Dislocation" (as defined below), the three percent limitation may be increased to no more than five percent of the Fund's total value. The Opportunity Portfolio seeks to achieve its investment objective by making investments and partnership commitments that, for any one or more reasons, do not conform to the guidelines and objectives of the OIC's previously identified asset classes (i.e., public equities, fixed income, real estate, private equity, alternative investments and cash) or which seek to benefit from a Market Dislocation. A Market Dislocation is defined as:

- High yield spreads reach a level of 900 bps or more, based on the ICE Bank of America Merrill Lynch (BofAML) High Yield Index[1], or an index price of ≤ 90; or
- Leveraged loan spreads reach a level of 750 bps or more, based on the S&P/LSTA Leveraged Loan Index[2], or an index price of ≤ 90%.

Notwithstanding the technical trigger of a Market Dislocation, the Chief Investment Officer ("CIO") shall assess overall market conditions and report to the OIC the activation of the Portfolio limit increase to no more than five percent of the Fund's total value at the next, most feasible OIC meeting.

Purpose and Goals

The goal of this policy is to provide guidance to OST staff ("Staff") and advisors regarding the Portfolio and its investment objectives.

Applicability

Classified represented, management service, unclassified executive service

Authority

ORS 293.726
ORS 293.731
ORS 293.736

POLICY PROVISIONS

Definitions

Advisor: One or more independent third party (consultant) firms retained by the OIC and working in concert with Staff to provide expert investment counsel, due diligence, and ongoing portfolio monitoring.

[1] The ICE BofAML High Yield Loan Index tracks the market weighted performance of the U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market.
[2] The S&P/LSTA ("Loan Syndication and Trading Association") Leveraged Loan Index is designed to measure the performance of U.S. institutional leveraged loans based on market weightings, spreads and interest payments.

Benchmark: The Consumer Price Index plus a premium defined as 500 basis points.

Policy Statements

I. GENERAL POLICY

Portfolio investments provide an appropriate complement to OPERF's other investments, and are consistent with OPERF's general objectives, including:

A. Providing a means to pay benefits to OPERF participants and their beneficiaries;

B. Investing to produce a return based on prudent and reasonable levels of liquidity and investment risk;

C. Attaining an adequate real return over the expected rate of inflation; and

D. Complying with all applicable laws and regulations concerning the investment of pension assets.

Portfolio investments should exhibit differentiated (i.e., less correlated) returns relative to other Fund assets and therefore the Portfolio is expected to provide diversification benefits to the Fund.

Staff and the Advisor will provide the OST and OIC with an annual Portfolio investment review.

II. OBJECTIVES

A. **Portfolio Investment Performance Objective**

The Portfolio's investment performance objective is to generate long-term net returns to OPERF (i.e., after management fees and general partners' carried interest) above the Benchmark. The premium portion of the Benchmark compensates for illiquidity, principal risk and related investment costs and expenses. OST Staff will periodically evaluate the Portfolio's performance objective and the Benchmark.

B. **Diversification**

1. The Portfolio may be non-diversified, meaning that Staff may concentrate its investments. However, with the exception of cash, the Portfolio's allocation to a particular investment or partnership commitment cannot exceed 25% at the time of investment.

2. Certain investments may be allocated to the Portfolio for incubation purposes and, if successful, may be recommended for transfer into one of the other, primary OPERF asset classes.

3. Investments will be diversified among a range of commitment sizes, generally with a minimum commitment of $50 million and a maximum commitment equal to 25% of any particular co-mingled partnership. Staff will document and report to the OIC any deviations from these guidelines.

4. Given the truly opportunistic nature and objective of the Portfolio, Staff expects its investments and partnership commitments may be highly episodic and inconsistent over time.

5. A low correlation between OPERF and Portfolio returns is expected over time.

III. OPPORTUNITY PORTFOLIO COMMITTEE

A. The Portfolio committee ("Committee") acts on behalf of, and subject to the review of, OST. The Committee is comprised of the following individuals: the Deputy State Treasurer; the CIO; and an OIC member invited by the OST to participate as a voting member on the Committee. OST will consider input from the OIC in extending such invitations.

B. OST, through the Committee, may invest OPERF amounts up to and including $250 million per investment for new general partner, fund sponsor or manager relationships, and an amount up to and including $350 million for existing relationships, consistent with OIC policies (see Appendix A). If consideration of a particular investment opportunity is deemed urgent or otherwise less suited for presentation to the OIC, the CIO may seek OIC approval for Committee consideration of that particular investment opportunity.

C. The Committee will only exercise its investment authority by unanimous vote and acting upon a favorable due diligence determination by the Advisor. The Committee may only consider proposed investments if agreement exists between the Advisor and Staff that the proposed investment is consistent with Portfolio standards. Proposed investments or partnership commitments presented to the Committee are subject to review by OST, which may choose to cancel or refer such proposed investments or partnership commitments to the OIC for broader review and consideration.

D. In connection with a proposed investment or partnership commitment, Staff shall furnish any favorable due diligence determination, including the underlying rationale, market conditions and portfolio impact, to the OIC as soon as practical and at least two weeks prior to a Committee meeting called for purposes of considering the proposed investment or partnership commitment. If OST objects to the proposed investment or partnership commitment or is advised by any OIC member that he or she objects to the proposed investment or partnership commitment, OST will cancel the proposed investment or partnership commitment and determine whether or not Staff will bring same as a separate agenda item at a subsequent OIC meeting.

E. Staff shall report any investment or partnership commitment made by the Committee at the next, most feasible OIC meeting.

IV. OST STAFF AUTHORITY

The CIO, upon a favorable recommendation from both the Director of Alternative Investments and the Advisor, has authority to accomplish the following:

A. Approve OST administrative activities and guideline exceptions if a plan is established to conform the investment exception(s) to applicable guidelines within a reasonable period of time;

B. Acquire, retain, manage and dispose of investment or partnership interests consistent with the authority granted to the Office of the State Treasurer pursuant to ORS 293.736. Review and approve other activities as necessary to further the interests of the Portfolio consistent with its standards; and

C. Approve up to an additional $50 million, per action, to an existing investment or partnership commitment for the following purposes: (1) recapitalize the investment or partnership with additional equity; (2) acquire all or part of another manager's or limited partner's interest in an investment or partnership; (3) re-balance between or among investments or partnership commitments; or (4) co-invest alongside a partnership in an individual investment. Any such additional investments or partnership commitments shall be on terms equal to or better than the existing terms.

D. Staff shall report any of the foregoing activities at the next, most feasible OIC meeting.

V. ADVISOR AND OST REQUIREMENTS

Staff manages the Portfolio in collaboration with the Advisor. Subject to budget limitations, OST will assign an appropriate number of Staff to manage Portfolio design and construction, the Portfolio's investment decision-making schedule and process, and the Advisor's contract. The OIC will retain a qualified, independent Advisor and will delegate to that Advisor substantial duties such as performing due diligence on investment opportunities, monitoring Portfolio investments, performing Portfolio analytics and valuation analyses and preparing performance reports.

Staff retains the primary responsibility to ensure that Portfolio investments and prospective investments receive appropriate due diligence, monitoring, and valuation analyses.

VI. MONITORING

A. **Reports**. The Advisor will furnish Portfolio activity and performance reports to Staff on both a quarterly and annual basis.

B. **Adherence to Strategy**. Staff and the Advisor will evaluate the actual strategy employed by investment managers or general partners relative to stated Portfolio objectives, strategies or other industry standards. The Advisor will interact with investment managers and general partners periodically and as necessary to verify adherence to such objectives, strategies and standards.

Exceptions

None

Failure to Comply

Failure to comply with this policy may be cause for disciplinary action up to and including dismissal.

PROCEDURES and FORMS

Appendix A: OIC/OST Alternative Investments Authority

Appendix B: OST Procedures for INV 703

ADMINISTRATION

Feedback

Your comments are extremely important to improving the effectiveness of this policy. If you would like to comment on the provisions of this policy, you may do so by e-mailing the Policy Analyst. To ensure your comments are received without delay, *please list the policy number and name in your e-mail's subject*. Your comments will be reviewed during the policy revisions process and may result in changes to the policy.

TAB 6 – Policy Updates

OIC OPERF

Oregon Investment Council
Policy Updates
January 30, 2020

Purpose
Update the Responsible Contractor Policy, and the policies governing divestment.

Discussion

Staff recommends the following two changes:

A. Update the Responsible Contractor Policy, as noted in the attached documents.
B. Consolidate two divestment policies into one. Currently there are two divestment policies in force: 1) an overarching OIC document; and 2) a second policy outlining steps for staff to follow in implementing divestment programs. Staff recommends converting the second policy into a procedure document, and attaching it to the first policy. This approach is consistent with staff's broader and on-going policy rationalization initiative, and results in a single policy document regarding Oregon's divestment program.

Recommendation
Approve policy language as presented in the attached documents.

~~OREGON INVESTMENT COUNCIL POLICY~~INV 504 – FOR OIC REVIEW & APPROVAL

INTRODUCTION & OVERVIEW

Summary Policy Statement

This ~~Responsible Contractor Policy~~responsible contractor policy (the "Policy") for the Oregon Public Employees Retirement Fund ("OPERF" or "the Fund") is designed to guide, to the extent possible, the selection of ~~appropriate contractors and subcontractors ("~~Responsible Contractors~~"~~ (defined below) who provide building operations and construction services (collectively, "Services") to real estate properties ~~wholly owned by the Fund~~and infrastructure assets held by OPERF. Selection of Responsible Contractors should ~~**be consistent with**~~meet fiduciary responsibilities to Fund beneficiaries, ~~**particularly the obligations of maximizing**~~specifically, the obligation to maximize investment returns ~~**while exercising**~~and exercise appropriate prudence.

This Policy seeks to ensure that Responsible Contractors will be selected based upon their ability to provide Services of appropriate quality at ~~reasonable expense~~a fair price with minimal operational risk, thereby prudently maximizing the value of OPERF real estate properties and infrastructure assets.

~~Purpose and Goals~~Purpose and Goals

~~To guide the selection of contractors and subcontractors providing building operations and construction services to real estate properties wholly owned by OPERF.~~

The Oregon Investment Council ("OIC") is keenly interested in the quality and performance of its real estate and infrastructure investment managers ("Advisors"), their contractors, and subcontractors, including the quality and performance of Responsible Contractors in carrying out the Services. The OIC expects such Advisors, contractors, and subcontractors to utilize Responsible Contractors whenever possible, because it believes that a local, diverse, adequately compensated, and well-trained workforce safely delivers high quality products and services. This, in turn, improves the long term growth of the real estate and infrastructure investments in the OPERF portfolio, and supports the fiduciary responsibility to deliver sustainable returns for Fund beneficiaries. Within the context of this fiduciary duty to plan participants, this Policy is intended to guide Advisors, contractors and subcontractors in the selection of Responsible Contractors who may provide Services to Applicable Investments (as defined herein).

Applicability

Classified represented, management service, unclassified executive service.

Authority

ORS Chapter 293.

POLICY PROVISIONS

~~Definitions~~

Policy Statements

I. DEFINITIONS

Applicable Investments: Applicable Investments are defined as real estate and infrastructure investments where OPERF holds at least a 51% ownership interest, and is able to exercise complete control of the investment asset through the investment vehicle. For real estate and infrastructure investments in which the aggregate holdings of OPERF are less than a 51% ownership interest, only Articles I through IV shall apply, although the OIC strongly encourages all managers to comply with the entire Policy.

This policy specifically excludes all other types of investments, including mezzanine debt, hybrid debt, international investments, secondary funds, and indirect, specialty and mortgage investments lacking equity features, and their respective advisors.

Responsible Contractor: A contractor or subcontractor that provides goods or services to ~~the Oregon Investment Council (OIC) in a manner that is consistent with the fiduciary duties owed by the OIC to the Fund~~real estate and infrastructure Advisors, in compliance with applicable law. ~~A Responsible Contractor~~The term "Responsible Contractor" does not include a contractor debarred by, or whose principal officer is debarred by, a municipal, state, or federal government. A Responsible Contractor is licensed in good standing to do business in the state in which it operates, and is distinguished by qualities such as capacity, experience, industry reputation, honesty, integrity, responsiveness, dependability, ~~and its~~respect for labor laws and regulations, and appropriate treatment of and relations with its employees, including ~~payment of fair wages and benefits. What constitutes "fair wages" and "fair benefits" depends~~providing a workplace free of harassment, and payment of adequate compensation. "Adequate compensation" includes area standard, or "fair," wages and benefits, including, but not limited to, employer-paid family health care coverage, retirement benefits, and state registered apprenticeship programs. "Fair wages" and "fair benefits" depend upon the circumstances in each ~~case, and may include a consideration of wages and benefits paid on comparable real estate projects, local market factors, the nature of the project (e.g., residential or commercial, public or private), comparable job or trade classifications, and the scope and complexity of services provided. This Policy does not require that "prevailing wages" be paid in order to satisfy the requirement that a Responsible Contractor treat its employees fairly~~market. In markets where a majority of the market in the construction trade or building service sector is subject to a collective bargaining agreement with a labor organization, "fair wages" and "fair benefits" will be measured by the applicable master collective bargaining agreement.

~~Policy Statements~~

~~I. GENERAL STATEMENTS~~

~~This Policy recognizes the statutory right of employees to representation and expects its managers, and contractors and subcontractors retained by its managers, to comply with federal and state laws that protect those rights in the event of a legitimate attempt by a labor organization to organize workers~~

~~employed by contractors or subcontractors retained by the manager.~~

~~This Policy encourages a broad outreach and, where appropriate, competitive bidding in the selection of Responsible Contractors. OPERF advisors, managers and their agents should contact local trades as well as others to suggest contractors, which in their view qualify as Responsible Contractors. The advisors, managers and their agents are responsible for gathering and analyzing information relevant to identifying and hiring Responsible Contractors.~~

The OIC supports and encourages adequate compensation and state-registered apprenticeship training for workers employed by its managers, subject to the strict fiduciary principles applicable to a public pension fund.

~~II.~~ II. REQUIREMENTS OF THE RESPONSIBLE ~~CONTRACTING~~CONTRACTOR POLICY

A. ~~A.~~ **Duty of Loyalty**~~:~~**.** Notwithstanding any other considerations, assets of the Fund shall be managed for the sole and exclusive benefit of ~~**the**~~Fund beneficiaries~~**of the Fund**~~. Fiduciary duties owed to Fund beneficiaries shall take precedence over any other responsibility under this Policy.

B. ~~B.~~ ~~**Prudence**: The OIC, staff, advisors, managers, and their agents are charged with the fiduciary duty of exercising the care, skill, prudence, and diligence appropriate to the task~~**Prudence.** Investment funds shall be invested and the investments of those funds managed as a prudent investor would do, under the circumstances then prevailing and in light of the purposes, terms, distribution requirements and laws governing each investment fund. This standard requires the exercise of reasonable care, skill and caution, and is to be applied to investments not in isolation but in the context of each investment fund's investment portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the particular investment fund.

C. ~~C.~~ **Competitive Return**~~:~~**.** To comply with fiduciary duties~~of~~, including loyalty and prudence, all investments and services must be made and managed in a manner that maximizes a ~~prudently~~competitive, risk-adjusted return.

~~D. **Competitive Bidding**: Responsible Contractors should be selected through a competitive bidding and selection process in order to encourage competition and to actively seek bids from best-qualified providers. This bid invitation process should include reasonable notification and be distributed to a broad spectrum of potential bidders. In reviewing submitted bids, advisors, managers, and their agents, as applicable, should consider appropriate factors consistent with this Policy. Competitive bidding is not required if advisors, managers, or their agents reasonably determine that a competitive bidding process would be infeasible or otherwise inconsistent with their fiduciary obligations.~~

~~E.~~ **D. Compliance with Laws**~~:~~**.** Each ~~advisor~~Advisor, property manager, contractor, and subcontractor shall observe all local, state and national laws (including, for example, those pertaining to labor contractors, insurance, withholding taxes, minimum wage, labor relations, health and occupational safety). The practices of wage theft and the use of debarred contractors do not comply with the law.

III. RECOMMENDED PRACTICES OF RESPONSIBLE CONTRACTORS

This Policy supports and strongly encourages:

A. Representation. Compliance with federal and state laws applicable to representation.

B. Competitive Bidding. A competitive bidding and selection process when retaining contractors and subcontractors unaffiliated with a building manager to provide construction, maintenance and services. The purpose of this provision is to encourage fair competition and to actively seek bids from all qualified sources within an area, including those identified as Responsible Contractors.

C. Neutrality. A position of neutrality in the event there is a legitimate attempt by a labor organization to organize workers employed in the construction, maintenance, or operations at a OPERF-owned property or asset in an Applicable Investment. Neutrality, in the context of this Policy, specifically means refraining from taking any action or making any statement that will directly or indirectly state or imply any support for or opposition to the selection by employees of a collective bargaining agent, or preference or opposition to any particular union as a bargaining agent. Nothing in this Policy obligates or prohibits any Advisor, property or asset manager or contractor from entering into private neutrality, labor peace or other lawful agreements with a labor organization seeking to represent, or who currently represents, workers at an Applicable Investment. This Policy does not call for any involvement by any Advisor, property or asset manager or contractor in inter-jurisdictional trade disputes.

D. Training. The provision of employer-paid safety training and state-registered apprenticeship programs by contractors to ensure that all employees have the skills and legal certifications necessary to safely perform assigned work, and to understand best practices in the workplace. This Policy strongly encourages every contractor to draft and adhere to a plan to recruit and employ women, minorities and veterans pursuant to Oregon law.

~~III.~~ IV. MINIMUM CONTRACT SIZE

The Policy shall apply to all ~~operating service~~Applicable Investment-related contracts ~~with~~of a minimum size of $~~25,000 (individually or annually, as applicable) and all construction contracts in excess of $250,000.~~ $100,000. Minimum contract size refers to the total project value of the work being contracted for and not to any disaggregation by trade or task. For example, a $~~25,000~~100,000 contract to paint two buildings in a single office complex would not be treated as two $~~12,500~~50,00 contracts, ~~both~~each below the minimum contract size. Disaggregation designed to evade the requirements of the Policy is not permitted.

V. ~~IV.~~ MONITORING AND ADMINISTRATION .

~~A. **Applicable Investments**: This Policy shall apply to real estate advisors managing real estate investments **solely** for the benefit of the Fund. The Policy **shall not apply** to investments such as hybrid debt, joint ventures, opportunity funds, and other real estate investments where OPERF does not have 100% ownership and/or full control of the investment.~~

~~B. **Responsibilities**:~~ Persons and entities ~~subject to~~in receipt of this Policy shall act in accordance with its terms, including the following:

A. **Staff** will:
~~i. The Investment Division of the Oregon State Treasury will communicate~~ 1. Provide a copy of this Policy to all ~~relevant advisors and exercise~~Advisors of Applicable Investments;
2. Exercise appropriate due diligence as to its implementation by such ~~advisors~~Advisors; and
3. Report on this Policy at a regular meeting of the OIC on an annual basis.

~~ii.~~ B. **Advisors** ~~subject to~~in receipt of this Policy will:
1. ~~1.~~ Communicate this Policy to all property managers~~;~~ providing Services to Applicable Investments; and
2. ~~2.~~ Exercise appropriate due diligence as to its implementation by such property managers~~;~~.

C. ~~iii.~~ **Property managers** ~~subject to~~in receipt of this Policy will:
1. ~~1.~~ Communicate this Policy in bid documents to contractors seeking to secure construction or building service contracts;

2. ~~2.~~ Maintain a list, which should include names, addresses, and telephone numbers of potential Responsible Contractors;

3. ~~3.~~ When ~~appropriate~~possible, use a broadly publicized, competitive bidding process consistent with this Policy in the selection of Responsible Contractors;

4. ~~4.~~ Maintain documentation of successful bidders;~~ and~~

~~5.~~ 5. Provide annual property-level summary reports~~.~~ to Staff;

~~iv.~~

6. Provide a listing for applicable service and construction contracts available for bid for each property or asset under management to all interested parties via prompt electronic notification (a website, email distribution, or other suitable technology, including to the Real Estate Management Tracking System (REMATS) maintained by participating national trades unions). All potential bidders, building and service trade unions and councils, will have access to such electronic notification. Such notice shall be sent as soon as practical prior to the bid due date; and

7. Annually invite input from trade unions/service unions in the development of Responsible Contractor lists.

D. **Contractors** ~~subject to~~in receipt of this Policy will communicate this Policy to subcontractors.

VI. Enforcement.

A. If Staff receives complaints alleging a violation of this Policy, it shall gather information relating to the complaint and forward such information to the Chief Investment Officer and the Director of Compliance. Complaints will be taken seriously. Staff will expect Advisors to provide prompt communication and full information.

B. If Staff becomes aware of a formal determination by a law enforcement or regulatory agency or a court that an Advisor, property or asset manager, or contractor of an Applicable Investment has violated applicable labor laws, regulations, or standards, either directly or by failing to take appropriate steps to prevent or remedy violations and that constitute a violation of this Policy, then Staff will consider all reasonably available remedies and recommend to the Chief Investment Officer and the Director of Compliance any appropriate remedies that they believe will address the violation in a manner consistent with the form of the investment, and that satisfy the fiduciary duties described above.

C. Incidents of non-compliance will be reported to the Chief Investment Officer and the Director of Compliance on a timely basis, and no less than quarterly.

Exceptions

None.

Failure to Comply

Failure to comply with this policy may be cause for disciplinary action up to and including dismissal.

PROCEDURES and FORMS

None.

ADMINISTRATION

Review

Annually.

Feedback

Your comments are extremely important to improving the effectiveness of this policy. If you would like to comment on the provisions of this policy, you may do so by e-mailing the OST Policy Analyst. To ensure your comments are received without delay, *please list the policy number and name in your e-mail's subject*. Your comments will be reviewed during the policy revisions process and may result in changes to the policy.

Document comparison by Workshare 9.5 on Tuesday, January 14, 2020 1:49:25 PM

Input:	
Document 1 ID	file://U:\INV 504_ Real Estate Investments_ Responsible Contractor Policy.docx
Description	INV 504_ Real Estate Investments_ Responsible Contractor Policy
Document 2 ID	file://U:\INV 504 - FOR OIC REVIEW APPROVAL.docx
Description	INV 504 - FOR OIC REVIEW APPROVAL
Rendering set	Standard

Legend:	
Insertion	
~~Deletion~~	
~~Moved from~~	
Moved to	
Style change	
Format change	
~~Moved deletion~~	
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics:	
	Count
Insertions	105
Deletions	72
Moved from	5
Moved to	5
Style change	0
Format changed	0
Total changes	187

INTRODUCTION & OVERVIEW

Summary Policy Statement

This responsible contractor policy (the "Policy") for the Oregon Public Employees Retirement Fund ("OPERF" or "the Fund") is designed to guide, to the extent possible, the selection of Responsible Contractors (defined below) who provide building operations and construction services (collectively, "Services") to real estate properties and infrastructure assets held by OPERF. Selection of Responsible Contractors should meet fiduciary responsibilities to Fund beneficiaries, specifically, the obligation to maximize investment returns and exercise appropriate prudence.

This Policy seeks to ensure that Responsible Contractors will be selected based upon their ability to provide Services of appropriate quality at a fair price with minimal operational risk, thereby prudently maximizing the value of OPERF real estate properties and infrastructure assets.

Purpose and Goals

The Oregon Investment Council ("OIC") is keenly interested in the quality and performance of its real estate and infrastructure investment managers ("Advisors"), their contractors, and subcontractors, including the quality and performance of Responsible Contractors in carrying out the Services. The OIC expects such Advisors, contractors, and subcontractors to utilize Responsible Contractors whenever possible, because it believes that a local, diverse, adequately compensated, and well-trained workforce safely delivers high quality products and services. This, in turn, improves the long term performance of OPERF's real estate and infrastructure investments, and supports the OIC's fiduciary responsibility to deliver sustainable returns for Fund beneficiaries. Within the context of this fiduciary duty to plan participants, this Policy is intended to guide Advisors, contractors and subcontractors in the selection of Responsible Contractors who may provide Services to Applicable Investments (as defined herein).

Applicability

Classified represented, management service, unclassified executive service.

Authority

ORS Chapter 293.

POLICY PROVISIONS

Policy Statements

I. DEFINITIONS

Applicable Investments: Applicable Investments are defined as real estate and infrastructure investments where OPERF holds at least a 51% ownership interest, and is able to exercise complete control of the investment asset through the investment vehicle. For real estate and infrastructure investments in which the aggregate holdings of OPERF are less than a 51% ownership interest, only Articles I through IV shall apply, although the OIC strongly encourages all managers to comply with the entire Policy.

This policy specifically excludes all other types of investments, including mezzanine debt, hybrid debt, international investments, secondary funds, and indirect, specialty and mortgage investments lacking equity features, and their respective advisors.

Responsible Contractor: A contractor or subcontractor that provides goods or services to real estate and infrastructure Advisors, in compliance with applicable law. The term "Responsible Contractor" does not include a contractor debarred by, or whose principal officer is debarred by, a municipal, state, or federal government. A Responsible Contractor is licensed in good standing to do business in the state in which it operates, and is distinguished by qualities such as capacity, experience, industry reputation, honesty, integrity, responsiveness, dependability, respect for labor laws and regulations, and appropriate treatment of and relations with its employees, including providing a workplace free of harassment, and payment of adequate compensation. "Adequate compensation" includes area standard, or "fair," wages and benefits, including, but not limited to, employer-paid family health care coverage, retirement benefits, and state registered apprenticeship programs. "Fair wages" and "fair benefits" depend upon circumstances in each market. In markets where a majority of the market in the construction trade or building service sector is subject to a collective bargaining agreement with a labor organization, "fair wages" and "fair benefits" will be measured by the applicable master collective bargaining agreement.

The OIC supports and encourages adequate compensation and state-registered apprenticeship training for workers employed by its managers, subject to the strict fiduciary principles applicable to a public pension fund.

II. REQUIREMENTS OF THE RESPONSIBLE CONTRACTOR POLICY

A. Duty of Loyalty. Notwithstanding any other considerations, assets of the Fund shall be managed for the sole and exclusive benefit of Fund beneficiaries. Fiduciary duties owed to Fund beneficiaries shall take precedence over any other responsibility under this Policy.

B. Prudence. Investment funds shall be invested and the investments of those funds managed as a prudent investor would do, under the circumstances then prevailing and in light of the purposes, terms, distribution requirements and laws governing each investment fund. This standard requires the exercise of reasonable care, skill and caution, and is to be applied to investments not in isolation but in the context of each investment fund's investment portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the particular investment fund.

C. Competitive Return. To comply with fiduciary duties, including loyalty and prudence, all investments and services must be made and managed in a manner that maximizes a competitive, risk-adjusted return.

D. Compliance with Laws. Each Advisor, property manager, contractor, and subcontractor shall observe all local, state and national laws (including, for example, those pertaining to labor contractors, insurance, withholding taxes, minimum wage, labor relations, health and occupational safety). The practices of wage theft and the use of debarred contractors do not comply with the law.

III. RECOMMENDED PRACTICES OF RESPONSIBLE CONTRACTORS

This Policy supports and strongly encourages the following:

A. Representation. Compliance with federal and state laws applicable to representation.

B. Competitive Bidding. A competitive bidding and selection process when retaining contractors and subcontractors unaffiliated with a building manager to provide construction, maintenance and services. The purpose of this provision is to encourage fair competition and to actively seek bids from all qualified sources within an area, including those identified as Responsible Contractors.

C. Neutrality. A position of neutrality in the event there is a legitimate attempt by a labor organization to organize workers employed in the construction, maintenance, or operations at a OPERF-owned property or asset in an Applicable Investment. Neutrality, in the context of this Policy, specifically means refraining from taking any action or making any statement that will directly or indirectly state or imply any support for or opposition to the selection by employees of a collective bargaining agent, or preference or opposition to any particular union as a bargaining agent. Nothing in this Policy obligates or prohibits any Advisor, property or asset manager or contractor from entering into private neutrality, labor peace or other lawful agreements with a labor organization seeking to represent, or who currently represents, workers at an Applicable Investment. This Policy does not call for any involvement by any Advisor, property or asset manager or contractor in inter-jurisdictional trade disputes.

D. Training. The provision of employer-paid safety training and state-registered apprenticeship programs by contractors to ensure that all employees have the skills and legal certifications necessary to safely perform assigned work, and to understand best practices in the workplace. This Policy strongly encourages every contractor to draft and adhere to a plan to recruit and employ women, minorities and veterans pursuant to Oregon law.

IV. MINIMUM CONTRACT SIZE

The Policy shall apply to all Applicable Investment-related contracts with a minimum size of $ $100,000. Minimum contract size refers to the total project value of the work being contracted for and not to any disaggregation by trade or task. For example, a $100,000 contract to paint two buildings in a single office complex would not be treated as two $50,000 contracts, each below the minimum contract size. Disaggregation designed to evade the requirements of the Policy is not permitted.

V. MONITORING AND ADMINISTRATION

Persons and entities in receipt of this Policy shall act in accordance with its terms, including the following:

A. **Staff** will:

1. Provide a copy of this Policy to all Advisors of Applicable Investments;
2. Exercise appropriate due diligence as to its implementation by such Advisors; and
3. Report on this Policy at a regular meeting of the OIC on an annual basis.

B. **Advisors** in receipt of this Policy will:

1. Communicate this Policy to all property managers providing Services to Applicable Investments; and
2. Exercise appropriate due diligence as to its implementation by such property managers.

C. **Property managers** in receipt of this Policy will:
1. Communicate this Policy in bid documents to contractors seeking to secure construction or building service contracts;
2. Maintain a list, which should include names, addresses, and telephone numbers of potential Responsible Contractors;
3. When possible, use a broadly publicized, competitive bidding process consistent with this Policy in the selection of Responsible Contractors;
4. Maintain documentation of successful bidders;
5. Provide annual property-level summary reports to Staff;
6. Provide a listing for applicable service and construction contracts available for bid for each property or asset under management to all interested parties via prompt electronic notification (a website, email distribution, or other suitable technology, including to the Real Estate Management Tracking System (REMATS) maintained by participating national trades unions). All potential bidders, building and service trade unions and councils, will have access to such electronic notification. Such notice shall be sent as soon as practical prior to the bid due date; and
7. Annually invite input from trade unions/service unions in the development of Responsible Contractor lists.

D. **Contractors** in receipt of this Policy will communicate this Policy to subcontractors.

VI. Enforcement

A. If Staff receives complaints alleging a violation of this Policy, it shall gather information relating to the complaint and forward such information to the Chief Investment Officer and the Director of Compliance. Complaints will be taken seriously. Staff will expect Advisors to provide prompt communication and full information.

B. If Staff becomes aware of a formal determination by a law enforcement or regulatory agency or a court that an Advisor, property or asset manager, or contractor of an Applicable Investment has violated applicable labor laws, regulations, or standards, either directly or by failing to take appropriate steps to prevent or remedy violations and that constitute a violation of this Policy, then Staff will consider all reasonably available remedies and recommend to the Chief Investment Officer and the Director of Compliance any appropriate remedies that they believe will address the violation in a manner consistent with the form of the investment, and that satisfy the fiduciary duties described above.

C. Incidents of non-compliance will be reported to the Chief Investment Officer and the Director of Compliance on a timely basis, and no less than quarterly.

Exceptions

None.

Failure to Comply

Failure to comply with this policy may be cause for disciplinary action up to and including dismissal.

PROCEDURES and FORMS

None.

ADMINISTRATION

Review

Annually.

Feedback

Your comments are extremely important to improving the effectiveness of this policy. If you would like to comment on the provisions of this policy, you may do so by e-mailing the OST Policy Analyst. To ensure your comments are received without delay, *please list the policy number and name in your e-mail's subject*. Your comments will be reviewed during the policy revisions process and may result in changes to the policy.

INV 205-

INTRODUCTION & OVERVIEW

Summary Policy Statement

This policy articulates the guidelines within which the Oregon Investment Council ("OIC" or "Council") considers existing and potential investments. The statutory standards of prudence and productivity are the *only* standards that apply to the investment of the Oregon Public Employees Retirement Fund ("OPERF") and all other Oregon public trust funds. ~~The OIC recognizes its obligation to adhere to applicable law and that political, social and legal circumstances in various nations and regions of the world may impact the productivity and prudence of investments made in or connected with those nations and regions.~~

Purpose and Goals

The OIC ~~can~~may only consider investments that meet the productivity objectives of Oregon Revised Statutes (ORS) 293.721 and the prudence standards of ORS 293.726. Each proposed investment is separately evaluated based on its unique structure and potential in accordance with standard OIC and Oregon State Treasury ("OST") investment criteria. The standard stated in 293.721(1) "requires the exercise of reasonable care, skill and caution, and is to be applied to investments not in isolation but in the context of each investment fund's investment portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the particular investment fund." However, the OIC must adhere to applicable law, and recognizes that political, social and legal circumstances in various nations and regions of the world may impact the productivity and prudence of investments made in or connected with those nations and regions. This policy provides guidance for the OIC and OST staff in reconciling these considerations.

Applicability

Classified represented, management service, unclassified executive service.

Authority

ORS 293.721, 292.726

~~The OIC can only consider investments that meet the productivity objectives of Oregon Revised Statutes (ORS) 293.721 and the prudence standards of ORS 293.726. Each proposed investment is separately evaluated based on its unique structure and potential in accordance with standard OIC and Oregon State Treasury ("OST") investment criteria. The standard stated in 293.721(1) "requires the exercise of reasonable care, skill and caution, and is to be applied to investments not in isolation but in the context of each investment fund's investment portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the particular investment fund."~~

~~ORS 293.721 states, in part: "Moneys in the investment funds shall be invested and reinvested to achieve the investment objective of the investment funds, which is to make the moneys as productive as possible." Under ORS 293.726 (1) and (2), the OIC and its investment officer (the "Treasurer" or OST) are also required to invest with prudence, reasonable care, skill and caution. Under subsection (4), the OIC and OST must adhere to the fundamental fiduciary duties of loyalty and impartiality.~~

POLICY PROVISIONS

Definitions

Company means any sole proprietorship, organization, firm, association, corporation, utility, partnership, venture, public franchise, franchisor, franchisee or its wholly-~~-~~owned subsidiary that exists for profit-making purposes or otherwise to secure economic advantage.

Invest means to commit funds or other assets to a company. **Invest** includes making a loan or other extension of credit to a company, or owning or controlling a share or interest in a company or a bond or other debt instrument issued by a company.

Investment means the commitment of funds or other assets to a company for an interest in the company. **Investment** includes the ownership or control of a share or interest in a company or of a bond or other debt instrument issued by a company.

~~**Iran** means the Islamic Republic of Iran.~~

Scrutinized company means any company that currently has an investment: 1) in the Republic of Sudan and any territory under the administration, legal or illegal, of Sudan, including but not limited to the Darfur region, from which federal law specifically allows public pension plans to divest; or 2) in the energy sector of the Islamic Republic of Iran as described in section 202(c)(1) of the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (P.L. 111-195), as further determined by the United States Department of State.

~~**Sudan** means the Republic of the Sudan and any territory under the administration, legal or illegal, of Sudan, including but not limited to the Darfur region.~~

Policy Statements

I. **Consideration of Investments**

The ~~Council~~OIC's statutory duties, as defined in ORS 293.721, to formulate and review investment policies consistent with the productivity objectives set forth in ORS 293.721 and the prudence standards set forth in ORS 293.726, shall take precedence over any other consideration. The ~~Council~~OIC's implementation of these objectives and standards can be stated as follows:

A. Consideration of investments is limited to those which, when judged solely on the basis of economic value, enhance portfolio returns on a risk-adjusted basis;

B. Any benefit an investment may confer, other than meeting the statutory standards of prudence and productivity, is not and shall not be considered the responsibility or within the control of OST, the ~~Council~~OIC, or its agents;

C. For allocation purposes, proposed investments are categorized by asset class and subject to the ~~Council~~OIC's asset allocation guidelines, ranges, and targets;

D. Proposed investments shall be consistent with the ~~Council~~OIC's desired level of portfolio diversification as defined by the OIC's approved mix of asset types and allocations to different economic, industry, and geographic exposures;

E. Investments shall at all times conform to the laws, requirements, policies, and procedures governing the ~~Council~~OIC, OST, and OPERF;

F. Because investments are part of an ~~actively~~ actively-managed portfolio, full due diligence is exercised. This due diligence, conducted by OST staff, designated private managers, consultants, and/or advisors, addresses, at a minimum, (1) legal sufficiency, (2) investment sufficiency, and (3) the identification of any potential conflicts of interest. Only those investment proposals that comply with the ~~Council~~OIC's prescribed proposal format shall be considered. The costs associated with all legal and financial review for each investment proposal shall be addressed pursuant to policy consistent with similar investment types. Where no such policies exist, these costs shall be borne entirely by the proposer. Furthermore, the proposer shall provide all information that the ~~Council~~OIC, OST staff and designated private managers, consultants and/or advisors deem necessary to perform appropriate levels of due diligence and evaluation. If the information is not provided within a specified, reasonable time frame, the ~~Council~~OIC, OST staff, or designated private managers, consultants, and/or advisors may discontinue their individual and collective due diligence and evaluation considerations. All investments that are approved by the ~~Council~~OIC shall be subject to a continuing obligation to disclose certain requested information;

G. Investments shall be valued at current market prices and will be subject to performance measurement at least annually;

H. The ~~Council~~OIC carefully considers investment structures such as partnerships and joint ventures when evaluating an initial investment and ongoing participation with a sponsoring entity. The ~~Council~~OIC will only consider those structures that appropriately align financial rewards and risk among all other partners/participants. OST staff or designated private managers, consultants and/or advisors shall consider and recommend to the ~~Council~~OIC structural features to mitigate investment risks, losses, and liabilities such as federal government credit insurance, personal guarantees, corporate guarantees, cross-corporate collateralization, and other such mechanisms. Furthermore, only those investment proposals that stipulate explicit exit strategies and define the means by which investment returns may be realized shall be considered;

I. Due to resource constraints, investment proposals that may impose unreasonable administrative burdens directly upon the ~~Council~~OIC, OST investment staff, or the State Treasurer shall not be considered;

J. All persons or firms managing, evaluating, or monitoring investments on behalf of the ~~Council~~OIC shall act in a fiduciary capacity when giving advice or information to the ~~Council~~OIC and OST staff;

K. The OIC recognizes that excellent investment opportunities may exist within Oregon.~~,~~ Prudent, local investments may satisfy the exclusive benefit rule for pension plan participants, as well as provide the collateral benefit of encouraging economic development within the state. Accordingly, whenever diversification and quality standards permit, the OIC will endeavor to hire local partners. The risk, return, and liquidity characteristics of investments in Oregon must be consistent with (i.e., meet or exceed) the evaluation criteria, legal standards, and investment policies that govern all OIC investment activity. ~~but specific decisions regarding whether or not investments are made in Oregon-based companies or real property are delegated to third-party managers selected by the OIC;~~

~~L. The Council recognizes that prudent, local investments may satisfy the exclusive benefit rule for pension plan participants, as well as provide the collateral benefit of encouraging economic development within the state. Accordingly, whenever diversification and quality standards permit, the Council will endeavor to hire local partners; and~~

~~The methodology that the Council applies to all its investments also applies and will be applied to investment opportunities within Oregon. Consequently, the risk, return, and liquidity characteristics of investments in Oregon must be consistent with (i.e., meet or exceed) the evaluation criteria, legal standards, and investment policies that govern all Council investment activity.~~

II. **Divestiture Initiatives**

While social, political and legal circumstances material to prudent and productive investment activities should receive appropriate consideration in making and maintaining investments, such factors may not be given undue weight (i.e., weight disproportionate to their impact upon economic prudence and productivity) when implementing the OIC's and OST's investment responsibility to a) act with prudence to make the moneys under their care as productive as possible and b) adhere to their fundamental fiduciary duties of loyalty and impartiality.

The OIC and OST are subject to, and will comply with, applicable federal and state law.

A. The federal government of the United States of America (the "United States") has preeminent governmental power for those subject to its jurisdiction with respect to the conduct of foreign policy and interstate commerce. When the United States sanctions or restricts investment by subject entities in other nations, as when it regulates interstate commerce, the OIC requires all of its business partners, including investment managers, to comply with those regulations, as applicable. The OIC also expects companies in which it invests, that are subject to such regulations, to comply with those regulations.

B. The OIC requires its investment managers to consider all material risks and benefits when making an investment. Material risks or benefits may include those factors that arise from the social, political or legal circumstances affecting regions or governments with or within which companies considered for investment conduct business.

~~C. OST will maintain a dialogue with the OIC's proxy voting agent(s) and investment managers to ascertain how ballot issues and investment decisions related to international investments and compliance with government regulations are addressed.~~

~~D.~~C. When not inconsistent with the policies described above, the OIC prefers that its managers avoid holdings in companies doing business with or in countries where such conduct is prohibited if performed by companies subject to the jurisdiction of the United States.

Exceptions

None.

Failure to Comply

Failure to comply with this policy may be cause for disciplinary action up to and including dismissal.

PROCEDURES and FORMS

None.

ADMINISTRATION

Review

Annually.

Feedback

Your comments are extremely important to improving the effectiveness of this policy. If you would like to comment on the provisions of this policy, you may do so by e-mailing the OST Policy Analyst. To ensure your comments are received without delay, *please list the policy number and name in your e-mail's subject*. Your comments will be reviewed during the policy revisions process and may result in changes to the policy.

INV 205

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Scrutinized company means any company that currently has an investment: 1) in the Republic of Sudan and any territory under the administration, legal or illegal, of Sudan, including but not limited to the Darfur region, from which federal law specifically allows public pension plans to divest; or 2) in the energy sector of the Islamic Republic of Iran as described in section 202(c)(1) of the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (P.L. 111-195), as further determined by the United States Department of State.

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B. Any benefit an investment may confer, other than meeting the statutory standards of prudence and productivity, is not and shall not be considered the responsibility or within the control of OST, the OIC, or its agents;
C. For allocation purposes, proposed investments are categorized by asset class and subject to the OIC's asset allocation guidelines, ranges, and targets;
D. Proposed investments shall be consistent with the OIC's desired level of portfolio diversification as defined by the OIC's approved mix of asset types and allocations to different economic, industry, and geographic exposures;
E. Investments shall at all times conform to the laws, requirements, policies, and procedures governing the OIC, OST, and OPERF;
F. Because investments are part of an actively-managed portfolio, full due diligence is exercised. This due diligence, conducted by OST staff, designated private managers, consultants, and/or advisors, addresses, at a minimum, (1) legal sufficiency, (2) investment sufficiency, and (3) the identification of any potential conflicts of interest. Only those investment proposals that comply with the OIC's prescribed proposal format shall be considered. The costs associated with all legal and financial review for each investment proposal shall be addressed pursuant to policy consistent with similar investment types. Where no such policies exist, these costs shall be borne entirely by the proposer. Furthermore, the proposer shall provide all information that the OIC, OST staff and designated private managers, consultants and/or advisors deem necessary to perform appropriate levels of due diligence and evaluation. If the information is not provided within a specified, reasonable time frame, the OIC, OST staff, or designated private managers, consultants, and/or advisors may discontinue their individual and collective due diligence and evaluation considerations. All investments that are approved by the OIC shall be subject to a continuing obligation to disclose certain requested information;
G. Investments shall be valued at current market prices and will be subject to performance measurement at least annually;
H. The OIC carefully considers investment structures such as partnerships and joint ventures when evaluating an initial investment and ongoing participation with a sponsoring entity. The OIC will only consider those structures that appropriately align financial rewards and risk among all other partners/participants. OST staff or designated private managers, consultants and/or advisors shall consider and recommend to the OIC structural features to mitigate investment risks, losses, and liabilities such as federal government credit insurance, personal guarantees, corporate guarantees, cross-corporate collateralization, and other such mechanisms. Furthermore, only those investment proposals that stipulate explicit exit strategies and define the means by which investment returns may be realized shall be considered;
I. Due to resource constraints, investment proposals that may impose unreasonable administrative burdens directly upon the OIC, OST investment staff, or the State Treasurer shall not be considered;
J. All persons or firms managing, evaluating, or monitoring investments on behalf of the OIC shall act in a fiduciary capacity when giving advice or information to the OIC and OST staff;
K. The OIC recognizes that excellent investment opportunities may exist within Oregon. Prudent, local investments may satisfy the exclusive benefit rule for pension plan participants, as well as provide the collateral benefit of encouraging economic development within the state. Accordingly,

whenever diversification and quality standards permit, the OIC will endeavor to hire local partners. The risk, return, and liquidity characteristics of investments in Oregon must be consistent with (i.e., meet or exceed) the evaluation criteria, legal standards, and investment policies that govern all OIC investment activity.

II. **Divestiture Initiatives**

While social, political and legal circumstances material to prudent and productive investment activities should receive appropriate consideration in making and maintaining investments, such factors may not be given undue weight (i.e., weight disproportionate to their impact upon economic prudence and productivity) when implementing the OIC's and OST's investment responsibility to a) act with prudence to make the moneys under their care as productive as possible and b) adhere to their fundamental fiduciary duties of loyalty and impartiality.

The OIC and OST are subject to, and will comply with, applicable federal and state law.

A. The federal government of the United States of America (the "United States") has preeminent governmental power for those subject to its jurisdiction with respect to the conduct of foreign policy and interstate commerce. When the United States sanctions or restricts investment by subject entities in other nations, as when it regulates interstate commerce, the OIC requires all of its business partners, including investment managers, to comply with those regulations, as applicable. The OIC also expects companies in which it invests, that are subject to such regulations, to comply with those regulations.
B. The OIC requires its investment managers to consider all material risks and benefits when making an investment. Material risks or benefits may include those factors that arise from the social, political or legal circumstances affecting regions or governments with or within which companies considered for investment conduct business.
C. When not inconsistent with the policies described above, the OIC prefers that its managers avoid holdings in companies doing business with or in countries where such conduct is prohibited if performed by companies subject to the jurisdiction of the United States.

Exceptions

None.

Failure to Comply

Failure to comply with this policy may be cause for disciplinary action up to and including dismissal.

PROCEDURES and FORMS

None.

ADMINISTRATION

Review

Annually.

Feedback

Your comments are extremely important to improving the effectiveness of this policy. If you would like to comment on the provisions of this policy, you may do so by e-mailing the OST Policy Analyst. To ensure your comments are received without delay, *please list the policy number and name in your e-mail's subject*. Your comments will be reviewed during the policy revisions process and may result in changes to the policy.

Appendix A

Sudan and Iran Divestiture Procedures

January, 2020

This ~~policy~~ procedure document establishes the State Treasurer's role in identifying and divesting from scrutinized companies ~~in Sudan and Iran,~~ and for meeting ~~parameters for annual~~ reporting requirements in Oregon law~~to the State Legislature~~. ~~This policy, including the reporting requirement,~~

Procedures

These procedures will be implemented when, and if, the Legislature appropriates to the State Treasurer sufficient moneys to execute the divestment programs codified in Oregon law~~the State Treasurer available for implementation of this policy~~, not including OPERF assets or moneys described by ORS 293.718.

1. **Identification of Scrutinized Companies.**
   The State Treasurer's staff may engage the services of a specialized research firm to identify scrutinized companies, in accordance with Oregon law, based on its professional judgment.

2. **If a research firm is retained:**
   A. The State Treasurer's staff will work with the retained research firm to review and verify a list of scrutinized companies;

   B. The State Treasurer's staff will provide external managers with the list of scrutinized companies and any updates to the list, as they are identified and verified by the research firm working with the State Treasurer's staff and remind them of the fiduciary parameters within which they may take divestment action in accordance with such notice;

   C. External managers shall advise scrutinized companies that they may comment in writing to the State Treasurer to dispute the identification of the company as a scrutinized company; and

   D. If the State Treasurer determines that a company is not a scrutinized company, the State Treasurer shall notify the relevant manager of the State Treasurer's determination.

3. **Proxy Voting**. OST staff will ~~continue a dialogue with~~monitor its proxy voting agent to ensure that ballot issues related to the disclosure of Sudan investments are properly addressed.

4. **Reporting.** On or before March 15 of each year, the State Treasurer shall make available on the State Treasurer's website a summary of actions taken during the previous year in accordance with ORS 293.811 to 293.817. The summary shall include a list of identified scrutinized companies.

Appendix A

Sudan and Iran Divestiture Procedures

January, 2020

This procedure document establishes the State Treasurer's role in identifying and divesting from scrutinized companies and for meeting reporting requirements in Oregon law.

Procedures

These procedures will be implemented when, and if, the Legislature appropriates to the State Treasurer sufficient moneys to execute the divestment programs codified in Oregon law, not including OPERF assets or moneys described by ORS 293.718.

1. **Identification of Scrutinized Companies.**
   The State Treasurer's staff may engage the services of a specialized research firm to identify scrutinized companies, in accordance with Oregon law, based on its professional judgment.

2. **If a research firm is retained:**
   A. The State Treasurer's staff will work with the retained research firm to review and verify a list of scrutinized companies;

   B. The State Treasurer's staff will provide external managers with the list of scrutinized companies and any updates to the list, as they are identified and verified by the research firm working with the State Treasurer's staff and remind them of the fiduciary parameters within which they may take divestment action in accordance with such notice;

   C. External managers shall advise scrutinized companies that they may comment in writing to the State Treasurer to dispute the identification of the company as a scrutinized company; and

   D. If the State Treasurer determines that a company is not a scrutinized company, the State Treasurer shall notify the relevant manager of the State Treasurer's determination.

3. **Proxy Voting**. OST staff will monitor its proxy voting agent to ensure that ballot issues related to the disclosure of Sudan investments are properly addressed.

4. **Reporting**. On or before March 15 of each year, the State Treasurer shall make available on the State Treasurer's website a summary of actions taken during the previous year in accordance with ORS 293.811 to 293.817. The summary shall include a list of identified scrutinized companies.

TAB 7 – Special Officer Election

(no documents for this agenda item)

TAB 8 – Annual Placement Agent Report

Annual Placement Agent Disclosure

January 30, 2020

Purpose

In accordance with its Policy COM 201: Conflict of Interest and Code of Conduct, OST shall disclose, in all investment recommendations to the Oregon Investment Council, any Placement Agent used by the investment firm *that has had any contact with Treasury investment staff*. Staff shall present to the OIC an annual summary of the foregoing, which will also be made available to the public on the Treasury website.

Placement Agent Contact Summary for Calendar Year 2019

Partnership	**OPERF Commitment**	**Placement Agent**
Aquiline Financial Services IV LP and Sidecar	$250 million	First Avenue Partners
Veritas Capital Partners VII	$250 million	UBS
Northern Shipping Fund IV	$150 million	Eaton Partners
QL Capital Partners LP	$200 million	Park Hill Group
Appian Natural Resources Fund II	$100 million	Mercury Capital Advisors

Note that Placement Agents are retained by investment funds' General Partner, and OST investment staff does not rely on such placement agent firms for access or analysis.

TAB 9 – Private Equity Annual Review and 2020 Plan

OPERF Private Equity Portfolio

January 30, 2020

OPERF Private Equity Annual Review & 2020 Plan

OREGON STATE TREASURY

Agenda

- **Executive Summary**
- **Investment Environment**
- **OPERF 2019 Private Equity Year In Review**
- **OPERF Private Equity Performance Review**
- **OPERF Private Equity Portfolio Update**
- **OPERF Private Equity Implementation Plan**
- **2020 Private Equity Plan**
- **Closing**

Executive Summary

Key Takeaways…

1. With a 13% IRR for the year ending 6/30/19, the private equity ("PE") portfolio's performance exceeded both the primary and secondary benchmarks by roughly 1%

2. Long-term relative returns remain challenging due to uneven pacing going into and coming out of the global financial crisis ("GFC")

3. Transaction activity moderated slightly in 2019, and OPERF continues to be modestly overweight PE

4. The portfolio is currently well positioned, and all of the elements of OPERF's revised implementation plan in the PE asset class are now in place

5. The focus for 2020 and beyond is execution and discipline…

Investment Environment – Appendix A

- **M&A Activity**
  - At more than $2.4 trillion, global M&A volumes through the first three quarters of 2019 were broadly in line with 2018
  - M&A volumes in North America were slightly ahead of the 2018 pace while volumes in Europe were modestly behind. Transaction pricing remains full across both markets
  - Private equity ("PE") sponsor backed transactions accounted for 34% of overall M&A volumes through the first three quarters of 2019, on pace for a modest increase over recent years
- **Corporate Leveraged Finance**
  - At roughly $650 billion, corporate leveraged finance new issue volumes in 2019 are 25% behind the 2018 pace and half of the 2017 pace
  - There is material divergence in new issue activity across asset classes with loan volumes 50% behind the 2018 pace and HY volumes 50% ahead of the 2018 pace
- **Private Equity Returns**
  - On an absolute basis, private equity returns were solid for the year ending 9/30/19. The composite one year IRRs for global buyout and global venture capital were 9% and 15%, respectively
  - On a relative basis, the PE asset class produced solid results posting 200-500 basis points of excess return relative to public equities across all timeframes. The only exception is the 10 year comparison to large publicly traded companies in the U.S. where the "FAANG" stocks have had an outsized impact
- **Private Equity Activity**
  - At nearly $200 billion, fundraising in the U.S. through the first nine months of 2019 was well ahead of 2018 and on pace for a record vintage. In Europe, fundraising activity was broadly in line with the 2018 pace though 9/30/19
  - At roughly $500 billion, new deal volumes in the U.S. were modestly behind the pace set in 2018. Moreover, at more that $200 billion, exit volumes are down nearly 30% on a year-over-year basis for U.S. private equity
  - Median transaction pricing in the U.S. hit all time highs in 2019 at nearly 13 times enterprise value/EBITDA. However, PE transactions are not commensurately being financed with significantly more debt as compared to prior years
  - In Europe, both new deal and exit volumes through the first nine months of the year are ~33% behind the strong pace set in 2018 at ~€300 billion and ~€125 billion, respectively
  - At roughly 9 times enterprise value/EBITDA, median PE transaction pricing in Europe is off the record levels seen in the past two years

Fundraising & pricing remain strong, but transaction volumes moderated in 2019

PE 2019 Year In Review – Priorities

- <u>**OST Staff achieved solid progress on all five initiatives set out in the 2019 PE Annual Review & Plan**</u>**:**

1. **$2.5-3.5 billion of new commitments**
    - 10-15 commitments of $100-500 million
2. **Expand on existing gross-to-net mitigation capabilities**
    - Continue to exploit negotiated/structured discount opportunities
    - Re-launch revised co-investment program
3. **Explore additional portfolio management capabilities**
    - Continue to explore solutions to enhance monitoring and pacing management
4. **Private equity team capacity**
    - Recruit a third Investment Officer and further leverage the Alternative Program's analyst resources
5. **Continue enhancements to due diligence and monitoring capabilities**
    - Enhanced data capture and monitoring output remain focus areas for 2019

PE 2019 Year In Review – Approvals

- **Over the course of 2019, the OIC approved 14 new private equity commitments totaling $2.7 billion**

  - **Pacing** – the $2.7 billion committed in 2019 is on target relative to plan ($2.5-3.5 billion per annum) and compares to $3.0 billion, $3.3 billion and $3.0 billion for the 2016, 2017, and 2018 commitment approvals, respectively
  - **Strategy** – the 2019 vintage skews strongly to buyout strategies, and more than half of all committed capital targets middle and upper middle market opportunities
  - **Geography** – 62% North America, 21% Europe, 11% Asia, and 6% rest-of-world

	FUND NAME	STRATEGY	SEGMENT	GEOGRAPHY	COMMIT (MM)		
1	Advent Global Technology	Buyout	Technology	Global	$	50	
2	Advent GPE IX	Buyout	Large	Global	$	100	
3	Advent LAPEF VII	Buyout	Middle Market	Latin America	$	150	
4	Aquiline Financial Services IV & Sidecar	Buyout	Middle Market - Financials	NA & Europe	$	250	
5	Blackstone Capital Partner VIII	Buyout	Large	Global	$	500	
6	Cinven Seventh Fund	Buyout	Large	Europe	€	200	*
7	ClearLake Capital Partners VI	Buyout/SS	Middle Market	North America	$	150	
8	CVC Asia V	Buyout	Middle Market	Asia	$	150	
9	Genstar Capital Partner IX & Opps II	Buyout	Upper Middle Market	North America	$	200	
10	KPS Special Sits V	Special Situations	Turnaround	NA & Europe	$	50	
11	Odyssey Investment Partners Fund VI	Buyout	Middle Market	North America	$	150	
12	Pathway Private Equity C-III	Co-Invest	Diversified	Global	$	250	
13	Permira VII	Buyout	Large	Global	€	225	*
14	Veritas Capital Partners VII	Buyout	Upper Middle Market	North America	$	250	
	TOTAL				**$**	**2,717**	

* - Euro/USD - 0.91

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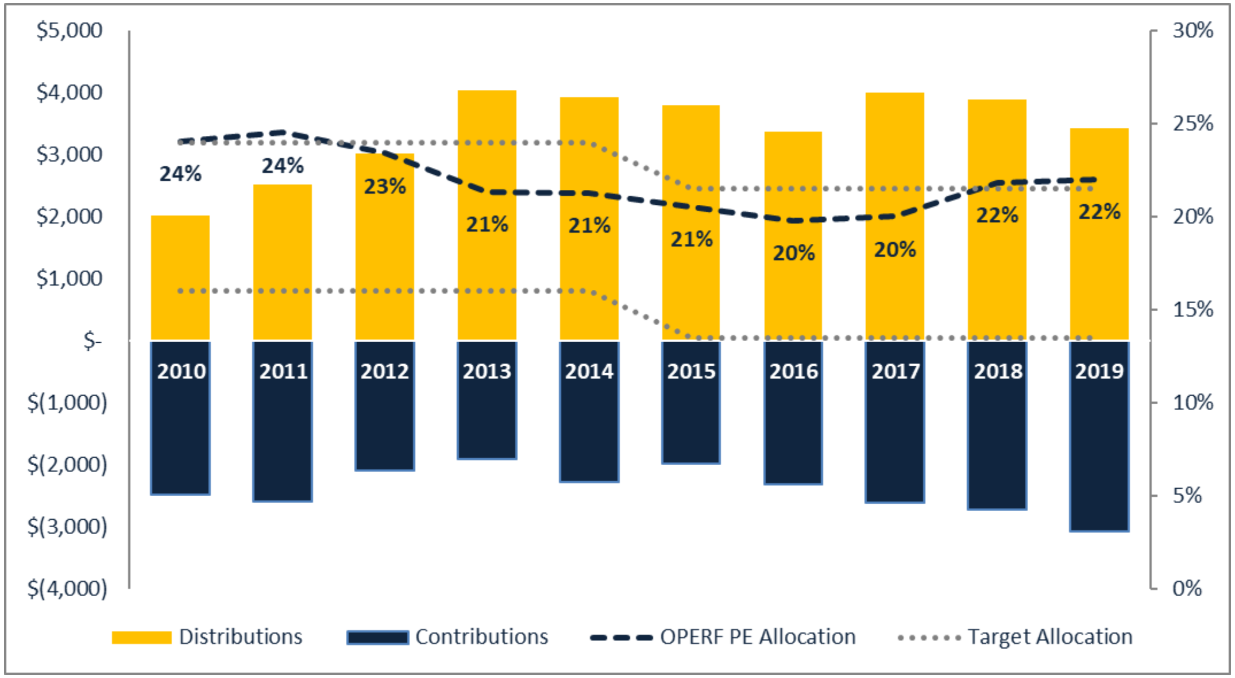
PE 2019 Year In Review – Cash Flows

- **<u>In 2019, the private equity portfolio processed capital calls totaling $3.1 billion and distributions totaling $3.4 billion for net distributions of $348 million</u>**
  - Since 2015, the private equity portfolio has processed $12.7 billion of contributions and $18.5 billion of distributions – **roughly $6 billion of net distributions over the past five years**
  - While transaction activity for both new deals and exits was slower in 2019, the commensurate slowdown in capital calls was delayed 6-12 months due to the use of capital call subscription lines
  - At June 30, 2019, the private equity portfolio's net asset value of $17 billion represented roughly 22% of the full OPERF portfolio. This is slightly above the top end of the OPERF's target allocation range (17.5% +/- 4%)



Source: OST, TorreyCove

Performance Review – Relative Performance

- **For the year ending 6/30/19, the portfolio outperformed the policy benchmark (Russell 3000+3%) by 1%**
  - Performance relative to public equities remains challenging over the 3, 5 , and 10 year periods, but OPERF's results look better when compared to global public equity indices (MSCI ACWI+3%)
  - For the year ending 6/30/19, the OPERF PE portfolio also outperformed the program's secondary benchmark (Burgiss All Funds Ex. Real Assets) by 1%

06/30/2019	IRR 1 year	IRR 3 year	IRR 5 year	IRR 10 year	IRR 20 year
OPERF Private Equity Portfolio	**12.9%**	**15.3%**	**10.6%**	**14.4%**	**11.1%**
Primary Benchmark					
Russell 3000 + 300bps	11.9%	17.6%	13.0%	18.8%	9.5%
OPERF Value-Add	*1.0%*	*(2.3%)*	*(2.4%)*	*(4.5%)*	*1.6%*
MSCI ACWI + 300bps	7.4%	16.2%	8.5%	15.2%	8.5%
OPERF Value-Add	*5.5%*	*(0.9%)*	*2.1%*	*(0.9%)*	*2.6%*
Secondary Benchmark					
Burgiss All Funds Ex. Real Assets	12.0%	14.9%	11.6%	14.0%	11.5%
OPERF Value-Add	*1.0%*	*0.4%*	*(0.9%)*	*0.4%*	*(0.4%)*
ILPA All Funds Index	10.1%	14.2%	10.4%	13.9%	11.7%
OPERF Value-Add	*2.9%*	*1.1%*	*0.3%*	*0.5%*	*(0.6%)*

Source: OST, Burgiss, ILPA, TorreyCove, MSCI, Russell

Performance Review – Vintage Performance

- **As of 6/30/2019, the program generated a net IRR and multiple of total value to paid-in capital since inception of 15% and 1.7x, respectively**
  - The chart below compares OPERF's vintage level performance to both the private equity asset class (Quartile Rankings) and public equities (Approximate Value-Add)
  - As the chart reflects, OPERF's results relative to the private equity asset class have been mostly solid
  - With the exception of the pre- and post-GFC vintages, OPERF's results have also been positive as compared to public equities

Vintage Year	Commitment (mm)	Contributions (mm)	Unfunded Commitment (mm)	Distributions (mm)	Fair Market Value (mm)	Net IRR	Net TVPI	IRR Quartile Rank*	TVPI Quartile Rank*	Approximate Value-Add vs. Russell 3000*	Approximate Value-Add vs. MSCI ACWI*
1981- 2004	$ 11,303	$ 13,523	$ 122	$ 24,203	$ 164	17.1%	1.97x	N/A	N/A	N/A	N/A
2005	2,371	2,671	60	3,655	457	7.7%	1.62x	2nd	2nd	3.4%	8.0%
2006	4,733	5,200	188	6,560	841	6.7%	1.48x	2nd	2nd	-1.3%	1.7%
2007	2,914	3,084	116	4,104	678	9.7%	1.61x	2nd	2nd	-0.4%	2.7%
2008	4,344	4,593	330	5,703	1,540	11.9%	1.66x	2nd	2nd	-1.0%	2.0%
2009	387	365	27	384	81	6.3%	1.30x	4th	4th	-8.1%	-5.1%
2010	1,020	1,116	89	1,226	637	12.8%	1.80x	2nd	2nd	-0.9%	1.8%
2011	2,429	2,506	322	2,173	1,728	12.6%	1.65x	3rd	3rd	-0.9%	1.2%
2012	2,001	2,100	221	1,888	1,814	19.9%	1.89x	1st	2nd	7.4%	9.4%
2013	1,515	1,510	238	756	1,533	15.3%	1.61x	2nd	2nd	3.8%	5.7%
2014	984	801	314	387	887	20.1%	1.73x	2nd	1st	8.5%	10.5%
2015	2,893	2,453	745	680	2,704	18.5%	1.43x	2nd	2nd	6.1%	8.3%
2016	2,854	2,037	1,036	225	2,289	15.4%	1.26x	2nd	2nd	3.0%	5.2%
2017	3,393	1,245	2,195	51	1,445	23.2%	1.21x	1st	1st	12.0%	14.4%
2018	3,362	348	3,008	-	330	N/A	0.95x	N/A	N/A	N/A	N/A
2019	2,710	114	2,596	-	111	N/A	0.97x	N/A	N/A	N/A	N/A
Total	**$ 49,211**	**$ 43,666**	**$ 11,609**	**$ 51,994**	**$ 17,240**	**15.4%**	**1.68x**				

* Using Burgiss All Funds Ex. Real Assets as of 6/30/19

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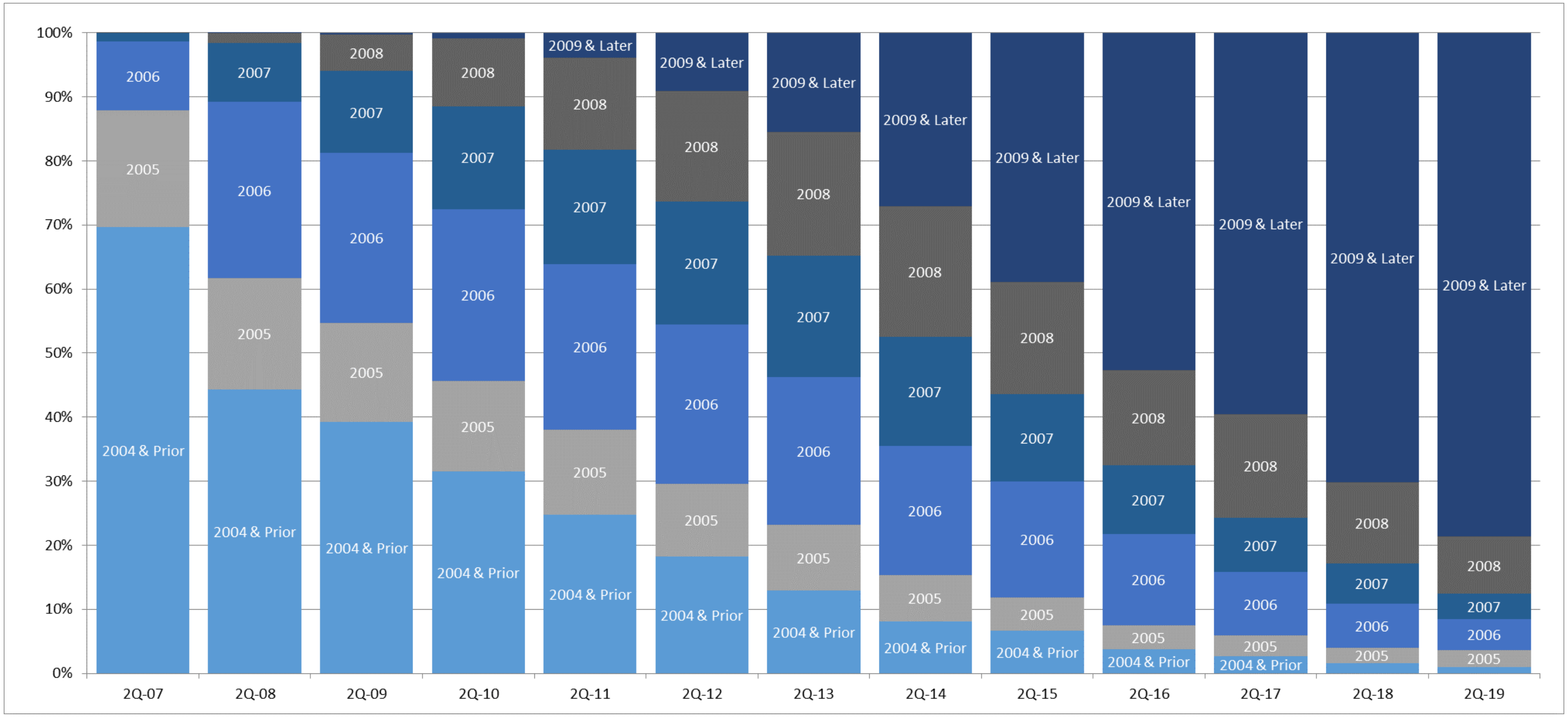
Source: OST, TorreyCove, Burgiss

Performance Review – Vintage Exposure

- **As of 6/30/19, the 2005-2008 vintages represented 20% of the portfolio's current net asset value. This is down from 28% a year earlier**
  - The chart below presents the development of the portfolio's vintage year exposures going back to June 30, 2007
  - As noted in previous presentations, the weak performing pre-GFC vintages dominate the portfolio exposure over the three, five, and ten year periods



Performance Review – Vintage Cohorts

- **As noted in previous presentations, OPERF's relative performance issues over the past decade are largely a function of uneven pacing**
  - **2005-2008 Vintages** – on the back of a strategic decision to increase OPERF's target allocation to 20% +/- 4%, pacing scaled aggressively in this timeframe. This cohort has had a dominant impact on the portfolio's 3, 5, and 10 year returns
  - **2009-2014 Vintages** – coming out of the GFC, pacing scaled back aggressively in this timeframe as the total portfolio was over-allocated to the PE asset class. This meant that the PE portfolio was underexposed to these strong performing vintage years
  - **2015-2019 Vintages** – despite a reduction in OPERF's target allocation to PE from 20% +/- 4% to 17.5% +/- 4%, the OIC committed to normalized and patient pacing of $2.5-3.5 billion per annum in this timeframe. Early results for this cohort are encouraging

Vintage	Total Commit. (bn)	Avg. Annual Commit. (bn)	Current FMV %	IRR 1 year	IRR 3 year	IRR 5 year	IRR 10 year
1981-2004	$ 11.3	NM	1%	NM	NM	NM	15.9%
2005-2008	$ 14.4	$ 3.6	20%	6.1%	11.2%	6.6%	13.6%
2009-2014	$ 8.3	$ 1.4	39%	12.4%	17.7%	14.4%	14.6%
2015-2019	$ 15.2	$ 3.0	40%	19.6%	18.7%	17.5%	N/A
All Vintages	**$ 49.2**	**NM**	**100%**	**12.9%**	**15.3%**	**10.6%**	**14.4%**

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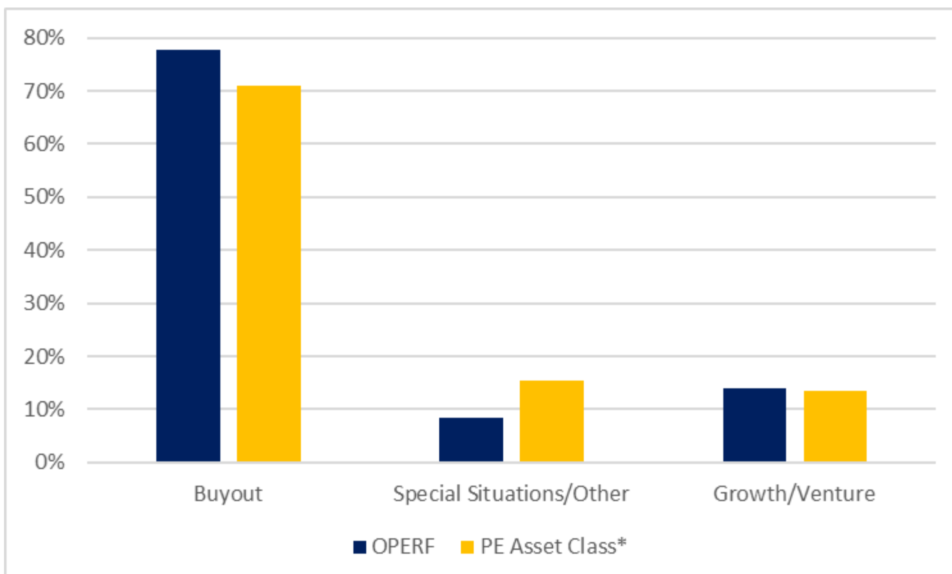
Source: OST, TorreyCove

Portfolio Update – Strategy

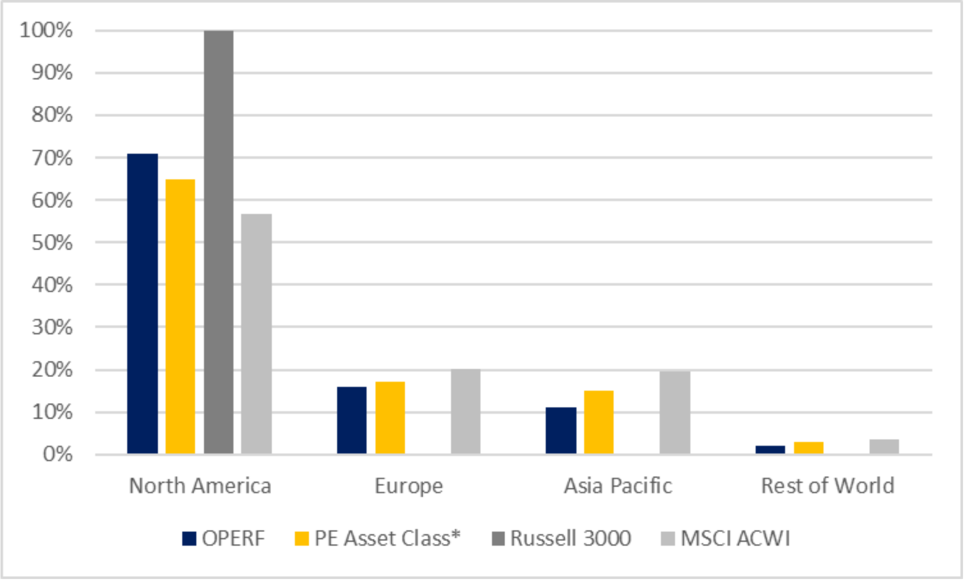
- **The OPERF PE portfolio's total exposure ("current value plus uncalled commitments") is currently 78% buyout, 8% special situations & other, and 14% growth equity & venture capital**
  - Current strategy exposure is broadly in line with the portfolio's targets – 60-85% buyout, 5-15% special situations & other, and 5-15% growth & venture
  - OPERF's strategy exposure is broadly in line with the asset class with a slight overweight to buyout at the expense of special situations & other
  - For OPERF, special situations & other is effectively an allocation to corporate distressed debt. Further, growth & venture capital is increasingly weighted to growth equity at the expense of venture capital



** As measured by "capitalization" using Burgiss All Funds Ex. Real Assets*

Portfolio Update – Geography

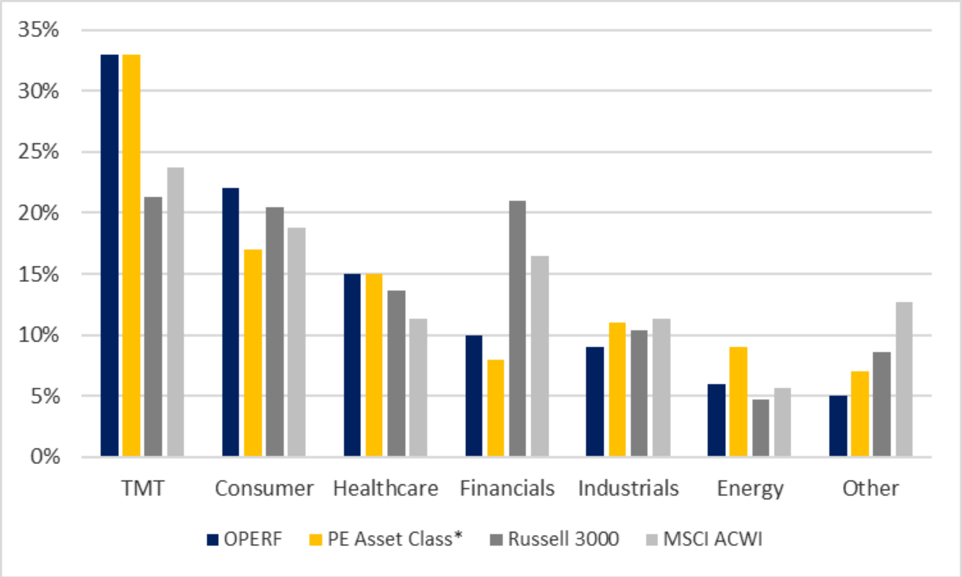
- **Based on current net asset value, the OPERF portfolio is 71% North America, 16% Europe, 11% Asia Pacific, and 2% Rest of World**
  - As compared to the PE asset class, OPERF is overweight North America at the expense of Asia Pacific and Rest of World
  - As compared to MSCI ACWI, OPERF is materially overweight North America and underweight all other regions
  - As expected, the OPERF portfolio is meaningfully more global than the domestically focused Russell 3000
  - Based on commitments made in recent vintages, OPERF's anticipated future regional exposure is ~60-65% North America, 20-25% Europe, 12-16% Asia Pacific, and 1-3% Rest of World



** Cambridge Associates*

Portfolio Update – Sector

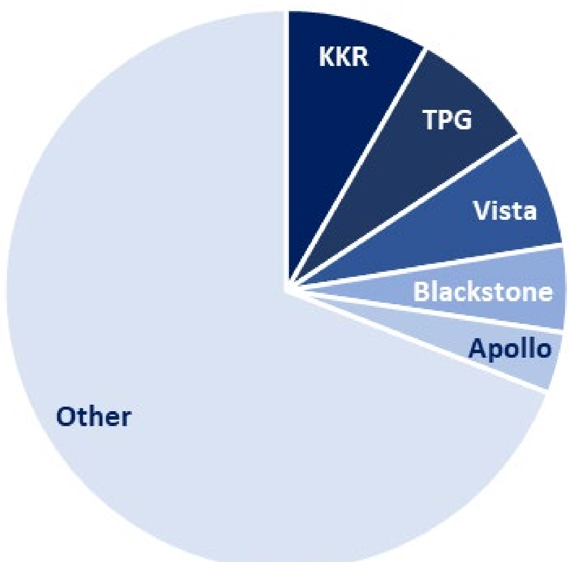
- **By current exposure, both the OPERF PE portfolio and the broader PE asset class are overweight technology/media/telecom (“TMT”) at the expense of financial services**
  - As compared to the PE asset class, OPERF is currently overweight consumer and financial services at the expense of industrials and energy
  - At 22%, OPERF is currently carrying more consumer exposure than the PE asset class or the public markets
  - Within the sectors outlined below, both OPERF PE and the broader PE asset class have increasingly pivoted to businesses pursuing resilient business models (e.g. asset lite, recurring revenue, tech-enabled, etc.)
  - In the chart below, “Other” captures real estate, materials, utilities, etc.



** Cambridge Associates*

Portfolio Update – Manager

- **As measured by total exposure, OPERF's top five manager relationships currently represent ~30% of the portfolio**
  - As outlined later in this presentation, the focus in recent years has been reducing the manager roster to 40-45 long-term relationships and flattening the manager roster around an average commitment of $250 million per partnership
  - From a size perspective, the manager roster is currently modestly biased to upper middle market opportunities
  - From a style perspective, the portfolio has a slight bias toward "growth" oriented managers/strategies
  - In recent years, additional exposure to Europe and to "value" has been added to better balance the portfolio



Source: OST, TorreyCove

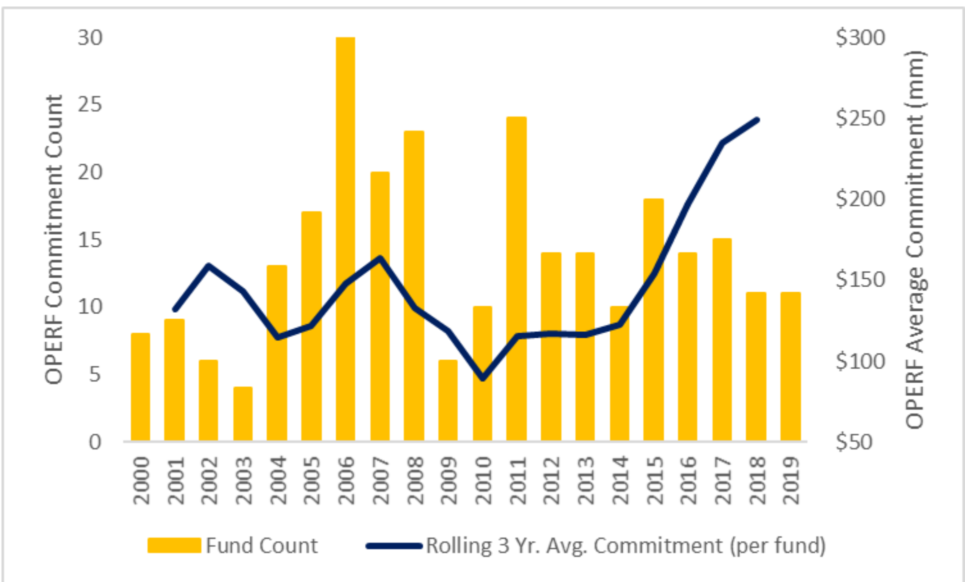
Implementation – Overview

- **In 2015, the OIC directed OST Staff and TorreyCove to create a revised implementation plan for OPERF's PE portfolio**
  - This request was made in connection with the 2015 strategic asset allocation study where the objectives of the private equity allocation were re-affirmed – target returns at or above diversified public equities plus 3% per annum in a risk aware manner
  - The OIC's directive was informed by the realization that OPERF's legacy private equity implementation was increasingly challenged in the PE asset class that is becoming exponentially more complex and competitive
  - Over the past five years, OPERF's PE implementation approach has been overhauled with a focus on three foundational pillars:

1. Refocused Primary Program
2. Fee Mitigation
3. Smooth Pacing

Implementation 1) Refocused Primary Program

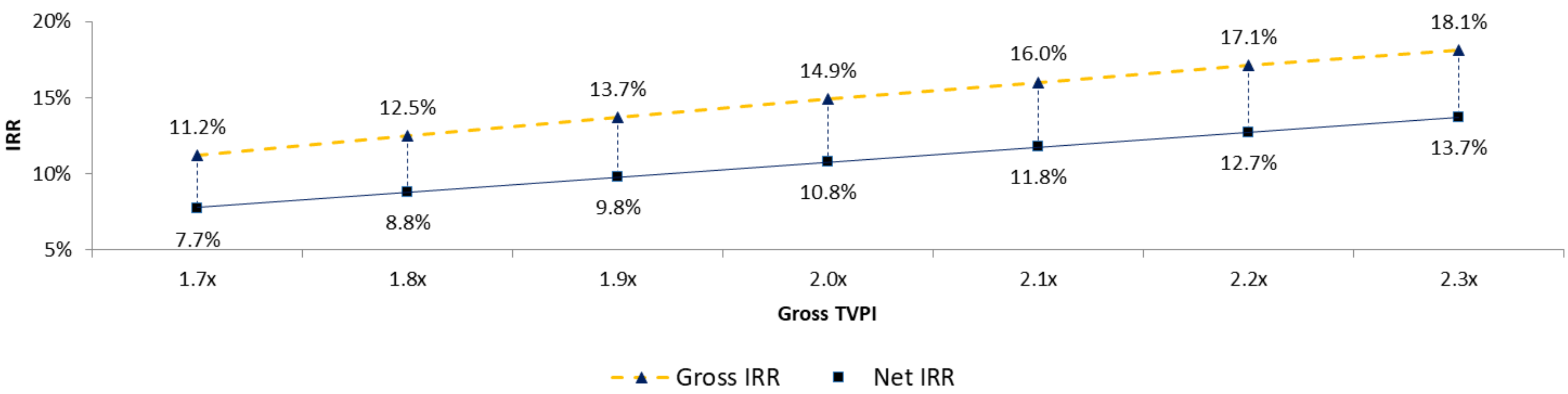
- **OPERF's revised plan calls for a more focused and flat manager roster**
  - With increasing competition and complexity, the challenge of effectively sourcing allocations, performing due diligence, and monitoring GP relationships has increased materially over the past decade. In the past five years, all of Staff's prospecting, due diligence, monitoring, and internal approval procedures have been updated
  - Given OST's modest Staff resources and increasing diligence and monitoring demands, a more focused GP roster is required. Since 2015, OPERF's roster of current GP relationships has been cut from more than 80 to a steady state target level of 40-45
  - OPERF's historical manager roster included a couple of very large relationships and a large universe of subscale relationships. In recent years, the average commitment per partnership has increased from ~$100 million to ~$250 million, and there have been no commitments larger than $500 million
  - The chart below presents the number of commitments made and the rolling three year average commitment per fund by vintage year for the past 20 years. Note that in recent vintages OPERF has consistently been making 10-15 commitments of ~$250 million on average



Source: OST, TorreyCove, Burgiss

Implementation 2) Fee Mitigation

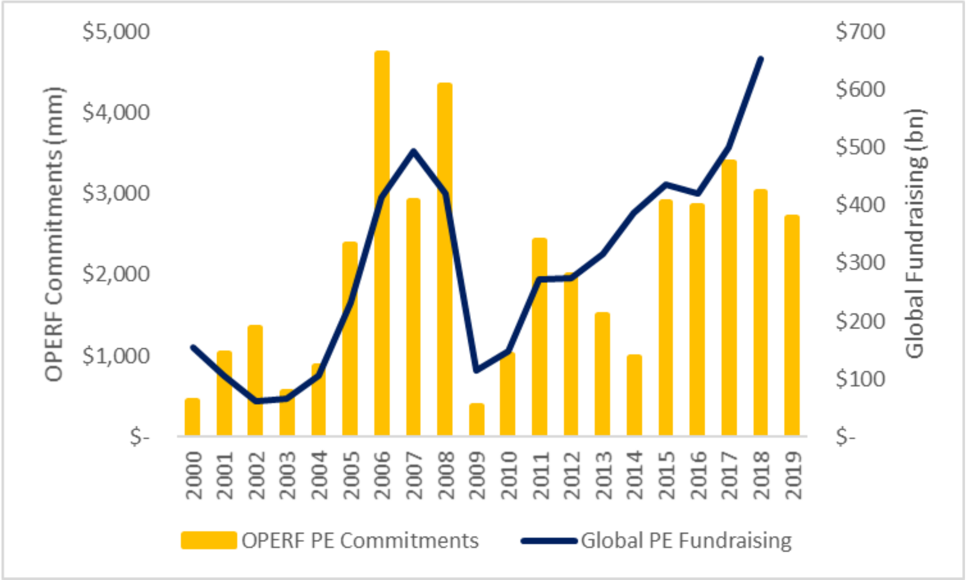
- **OPERF's revised plan focuses on fee mitigation strategies to narrow gross-to-net return spread**
  - As the private equity asset class grows more competitive, high levels of gross returns will be increasingly challenging to generate. With that as a backdrop, OPERF needs to exploit the portfolio's scale to pursue fee mitigation strategies to reduce the gross-to-net spread
  - The chart below approximates PE's fee drag across various gross return scenarios. In the range of gross return scenarios outlined below, the gross-to-net spread is ~350-450bps per annum
  - In the revised plan, OPERF's fee mitigation strategies include a combination of negotiated discounts, structured sidecar vehicles, and the portfolio's new, systematic co-investment program
  - In recent years, those fee mitigation strategies have reduced the portfolio's carried interest exposure by ~ $250 million. With the tools now in place, Staff hopes to be in a position to reduce carried interest exposure by at least $100 million per annum in the coming decade which could reduce fee drag by 15-25%



Source: OST

Implementation 3) Smooth Pacing

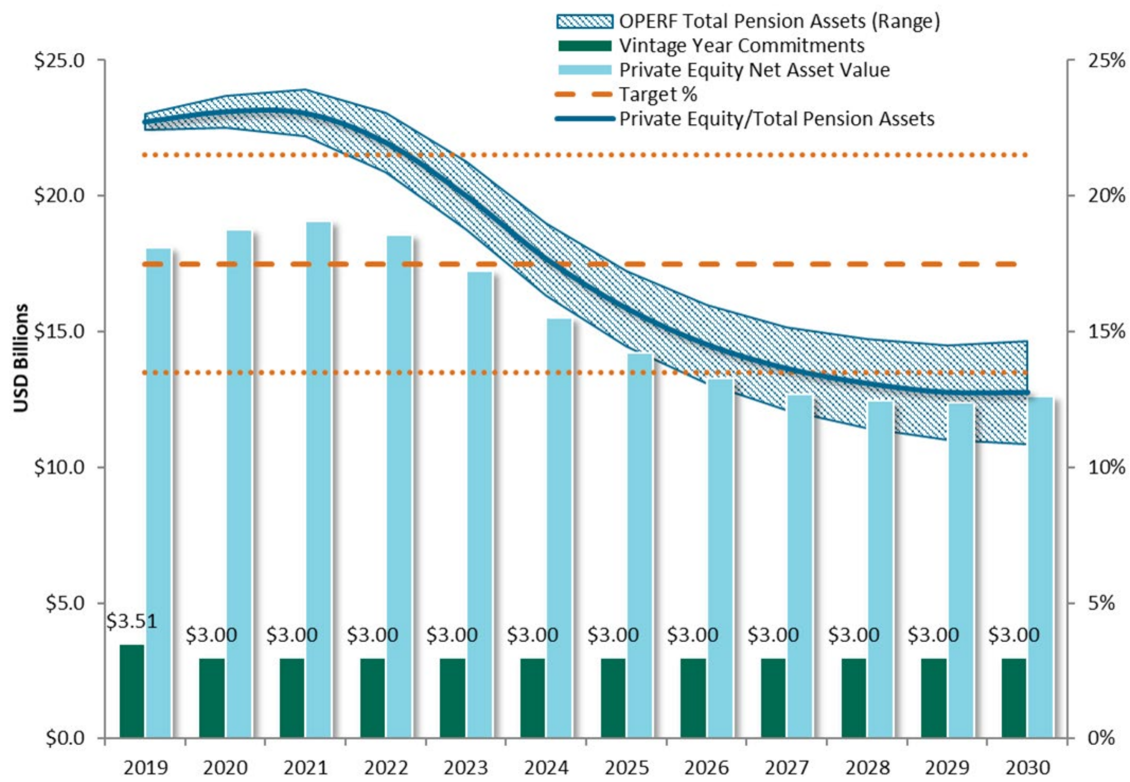
- **OPERF's revised plan includes a commitment to smoothed pacing to avoid unintentional market timing**
  - As previously discussed, the dominant factor in the PE portfolio's returns over the past decade has been uneven pacing both before and after the GFC
  - Most importantly, OST Staff, TorreyCove, and the OIC must remain committed to maintaining discipline and a long-term view on pacing across cycles. The chart below presents OPERF's commitment pacing and global PE fundraising over the past 20 vintage years. Note that commitments have remained in the target $2.5-3.5 billion range since 2015 despite an accelerating fundraising environment
  - Secondly, OPERF's new co-investment program was designed to allow for vintage level allocation decisions providing an important governor on pacing
  - Lastly, the new monitoring & liquidity management program provides an essential portfolio and pacing management tool



Source: OST, TorreyCove, Burgiss

2020 Plan – Pacing

- **In keeping with the principal of maintaining flat pacing, Staff is recommending $2.5-3.5 billion of new commitments again in 2020**
  - Consistent with prior years, Staff anticipates recommending 10-15 commitments of $100-500 million over the course of the year. It is anticipated that this will be the recommendation for the next several vintages years as the program remains above the target allocation range
  - The output of the horizon model used to create this forward pacing recommendation is presented in the chart below. Further detail on this exercise is available in TorreyCove's review of the program (Appendix B)



2020 Plan – Initiatives

2020 OST Private Equity Staff Priorities

1. **$2.5-3.5 billion of new commitments**
   - 10-15 commitments of $100-500 million
2. **Drive savings via existing fee mitigation strategies**
   - Focus on sourcing and relationship management for the co-investment program
3. **Introduce additional portfolio & pacing management tools**
   - Implement the recently approved enhanced monitoring & liquidity management program
4. **Private equity team capacity**
   - Recruit to fill open Investment Analyst position
5. **Continue enhancements to due diligence and monitoring capabilities**
   - Introduce new structure to Staff's existing market mapping and prospecting program

Closing

Key Takeaways…

1. With a 13% IRR for the year ending 6/30/19, the private equity ("PE") portfolio's performance exceeded both the primary and secondary benchmarks by roughly 1%

2. Long-term relative returns remain challenging due to uneven pacing going into and coming out of the global financial crisis ("GFC")

3. Transaction activity moderated slightly in 2019, and OPERF continues to be modestly overweight PE

4. The portfolio is currently well positioned, and all of the elements of OPERF's revised implementation plan in the PE asset class are now in place

5. The focus for 2020 and beyond is execution and discipline…

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January 30, 2020

OPERF Private Equity Annual Review & 2020 Plan

Appendix A – 2019 Private Equity Market Review

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2019 Private Equity Market Review – Agenda

- **Executive Summary**

- **Investment Environment**
  - M&A Activity
  - Corporate Leveraged Finance
  - Private Equity Returns
  - U.S. Private Equity Update
  - Europe Private Equity Update

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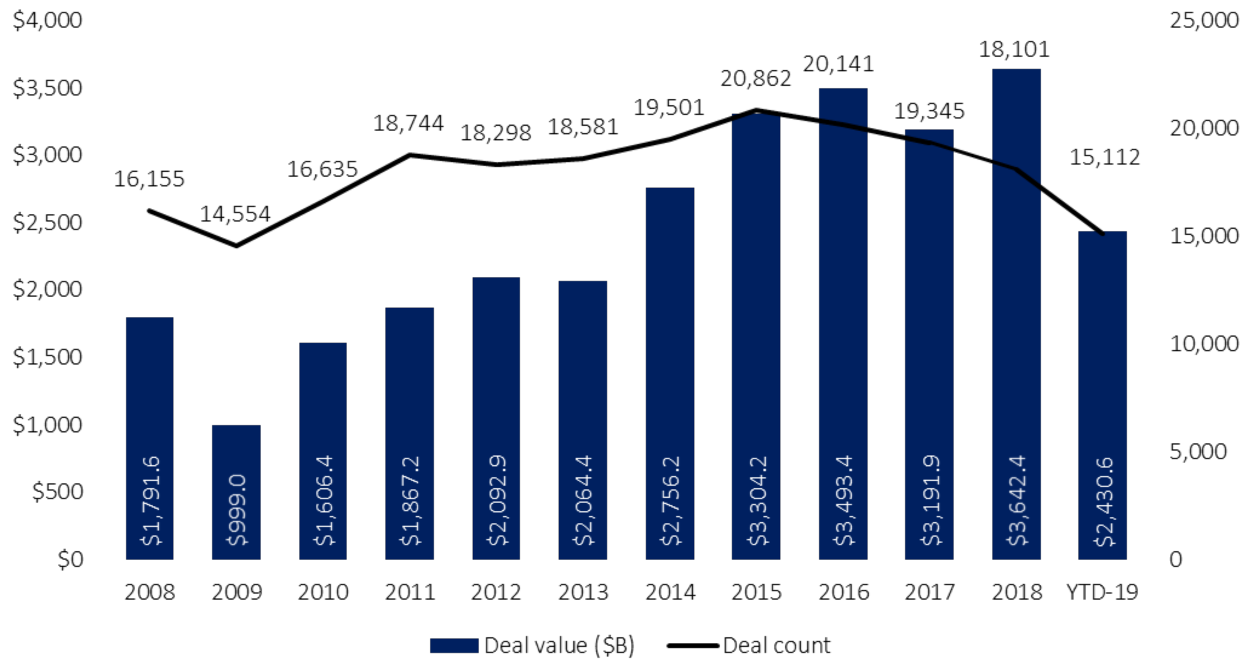
Executive Summary

- **M&A Activity**
  - At more than $2.4 trillion, global M&A volumes through the first three quarters of 2019 were broadly in line with 2018
  - M&A volumes in North America were slightly ahead of the 2018 pace while volumes in Europe were modestly behind. Transaction pricing remains full across both markets
  - Private equity ("PE") sponsor backed transactions accounted for 34% of overall M&A volumes through the first three quarters of 2019, on pace for a modest increase over recent years
- **Corporate Leveraged Finance**
  - At roughly $650 billion, corporate leveraged finance new issue volumes in 2019 are 25% behind the 2018 pace and half of the 2017 pace
  - There is material divergence in new issue activity across asset classes with loan volumes 50% behind the 2018 pace and HY volumes 50% ahead of the 2018 pace
- **Private Equity Returns**
  - On an absolute basis, private equity returns were solid for the year ending 9/30/19. The composite one year IRRs for global buyout and global venture capital were 9% and 15%, respectively
  - On a relative basis, the PE asset class produced solid results posting 200-500 basis points of excess return relative to public equities across all timeframes. The only exception is the 10 year comparison to large publicly traded companies in the U.S. where the "FAANG" stocks have had an outsized impact
- **Private Equity Activity**
  - At nearly $200 billion, fundraising in the U.S. through the first nine months of 2019 was well ahead of 2018 and on pace for a record vintage. In Europe, fundraising activity was broadly in line with the 2018 pace though 9/30/19
  - At roughly $500 billion, new deal volumes in the U.S. were modestly behind the pace set in 2018. Moreover, at more that $200 billion, exit volumes are down nearly 30% on a year-over-year basis for U.S. private equity
  - Median transaction pricing in the U.S. hit all time highs in 2019 at nearly 13 times enterprise value/EBITDA. However, PE transactions are not commensurately being financed with significantly more debt as compared to prior years
  - In Europe, both new deal and exit volumes through the first nine months of the year are ~33% behind the strong pace set in 2018 at ~€300 billion and ~€125 billion, respectively
  - At roughly 9 times enterprise value/EBITDA, median PE transaction pricing in Europe is off the record levels seen in the past two years

Fundraising & pricing remain strong, but transaction volumes moderated in 2019

M&A Activity – Developed Market Volumes

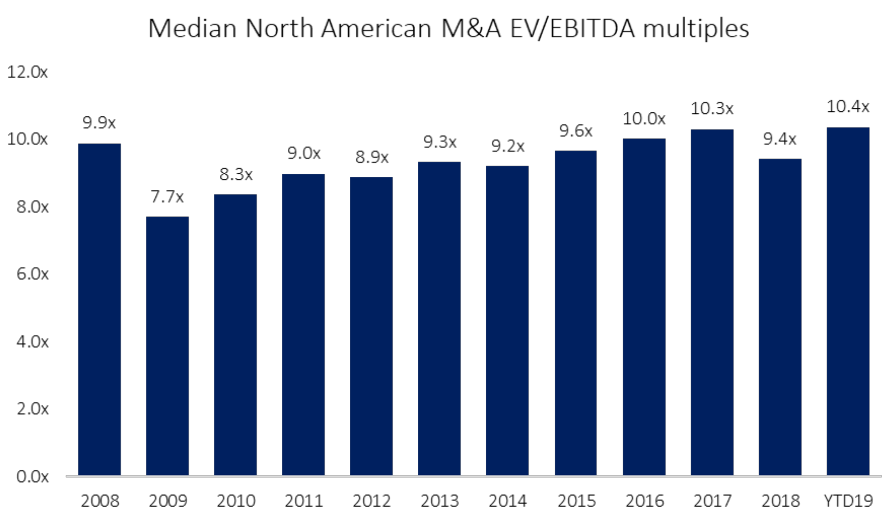
- **Through 3Q 2019, Pitchbook recorded over 15k M&A transactions in North America & Europe with an aggregate value of $2.4 trillion**
    - In total, volumes through the 3Q 2019 were broadly in line with where they stood at this time in 2018. However, Q4-18 volumes were strong, putting 2019 11% behind the full year pace
    - On a regional basis, volumes through three quarters of the year are up 3% in North America and down 6% in Europe
    - Deal volume to date in 2019 is roughly 75% weighted to North America. In recent years, Europe volume represented roughly a third of the activity
    - The chart below presents the annual developed market M&A volumes since 2008

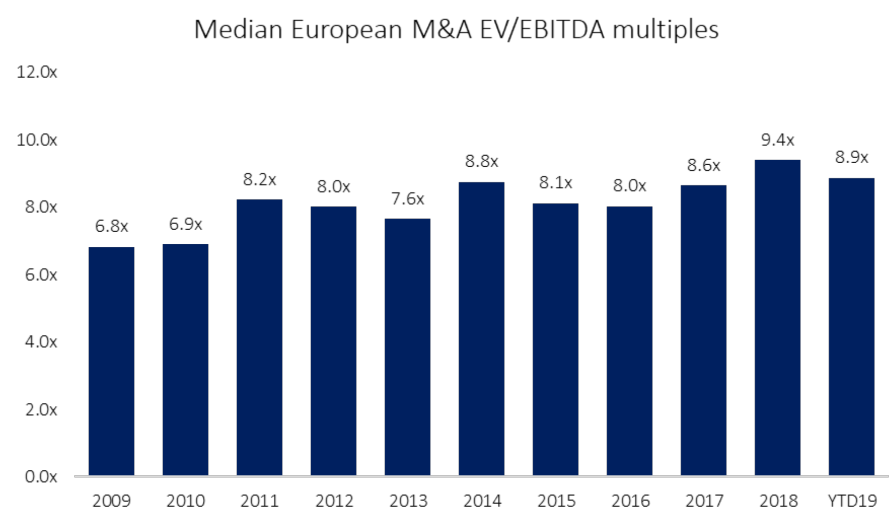


Source: Pitchbook
** As of 9/30/19 – USD/Euro = 1.11*

M&A Activity – Transaction Multiples

- **Through 3Q 2019, median transaction multiples remained high at 10.4x and 8.9x in North America and Europe, respectively**
    - Transaction multiples in North America remain at peak levels, but 2019 pricing does not appear to have moved up from where it stood in recent years
    - The data in Europe suggests a modest step back from the record pricing environment in 2018
    - However, the numbers listed below for both markets likely remain somewhat understated due to aggressive EBITDA adjustments
    - The chart below presents median transaction multiples since 2008 in North America and since 2009 in Europe

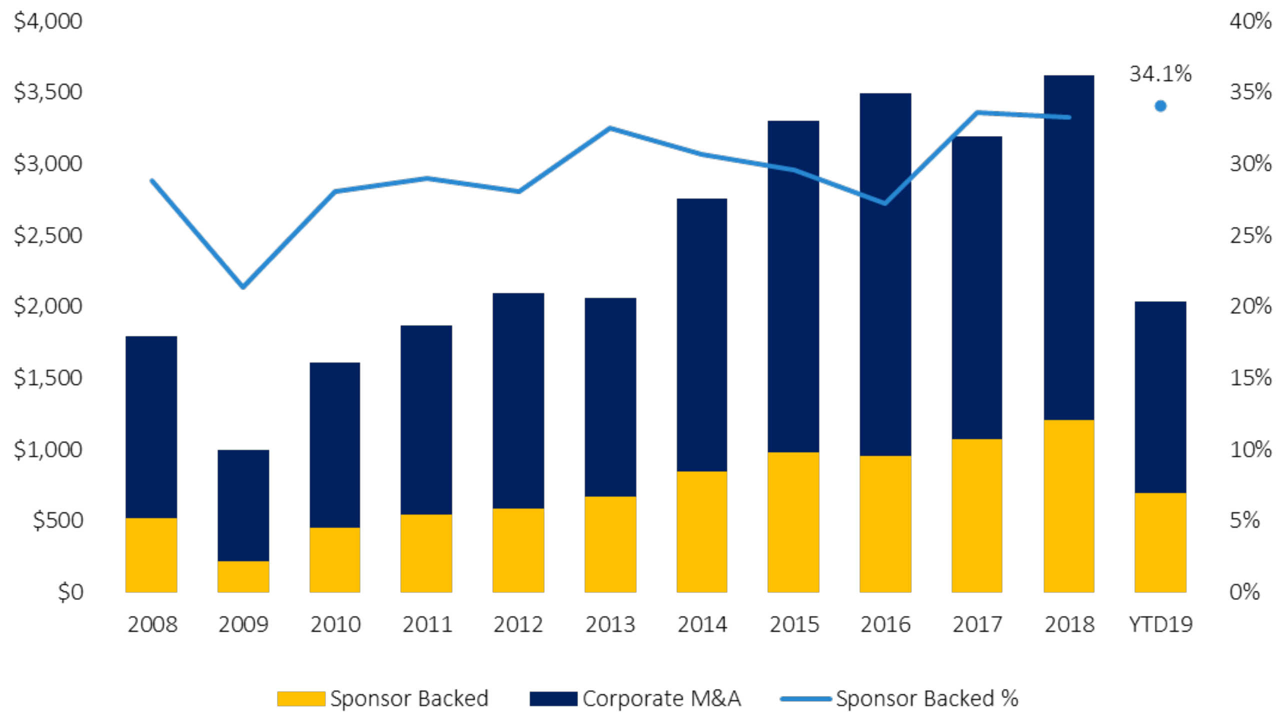




Source: Pitchbook
** As of 09/30/19*

M&A Activity – Private Equity Market Share

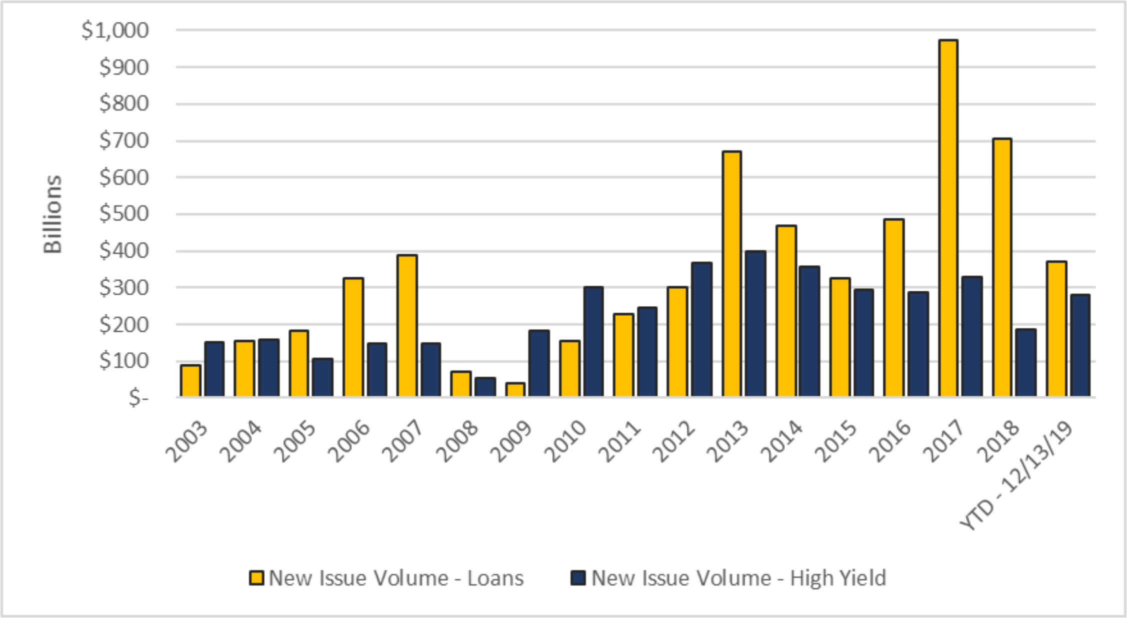
- **The share of developed market M&A activity driven by private equity sponsors remained flat through Q3-2019**
  - Through 3Q 2019, PE sponsors led 34% of deal activity (as measured by value) which is broadly in line with where PE's share has stood since 2013
  - PE sponsors' share of M&A remains below the peak of 40% set in 2007
  - The chart below presents PE sponsors' share of developed market M&A activity per year since 2008



Source: Pitchbook
** As of 9/30/19 – USD/Euro = 1.11*

Corporate Leveraged Finance

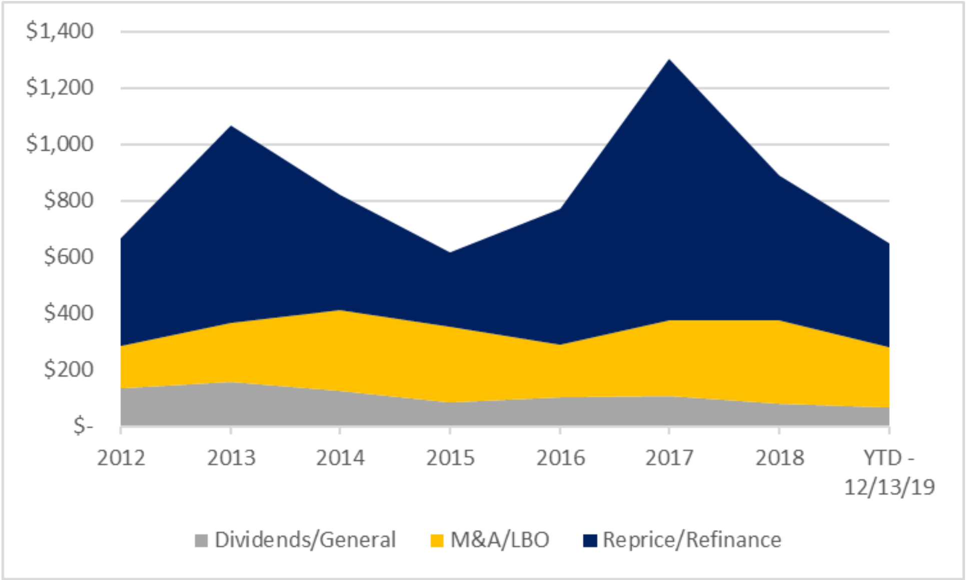
- **<u>Through 12/13/19, gross new issue volumes for U.S. corporate loans and high yield totaled roughly $650 billion</u>**
  - 2019 total new issue volumes compare to $900 billion and $1.3 trillion in 2018 and 2017, respectively
  - While the new issue market is off by roughly 25% versus 2018 in total, the two key asset classes present divergent trends with loan volume roughly half what it was last year and HY new issue volume roughly 50% ahead of the 2018 pace
  - The chart below presents new issue volumes for loans and HY since 2003



Source: JPM

Corporate Leveraged Finance

- **The volatility in new issue volumes in recent years is largely attributable to repricing and refinancing activity**
  - The chart below presents aggregate loan and HY new issue volumes by "use" since 2012
  - As the chart reflects, large year-over-year movements (e.g. 2013 & 2017) are driven by aggressive repricing and refinancing activity
  - Acquisition financing flows ("M&A/LBO") have been more stable over time. However, volumes in this category are off ~28% in 2019 as compared to 2018



Source: JPM

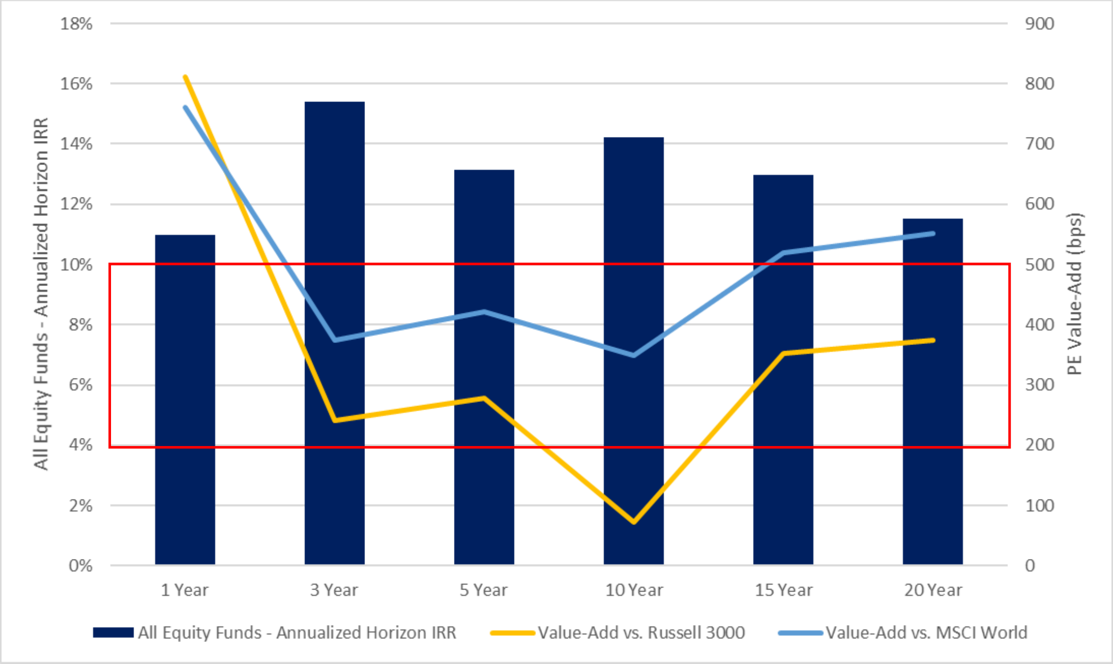
Private Equity Returns – Absolute

- **The chart below presents trailing horizon net IRRs for the Private Equity industry as of September 30, 2019**
  - Returns for the asset class were reasonable over the past year at 7.6% for All Funds. Equity-focused funds performed better generating 9.2% and 15.0% for global buyout and global VC, respectively
  - VC is the strongest performing asset class for the 1 and 5 year periods
  - As expected, real asset and private credit strategies have underperformed equity oriented strategies across all horizons

	1 Quarter	1 Year	3 Year	5 Year	10 Year	20 Year
All Funds	0.7%	7.6%	12.5%	10.7%	12.2%	10.3%
Global Buyout	1.3%	9.2%	15.2%	12.7%	14.1%	11.6%
North America Buyout	2.5%	10.7%	16.0%	13.8%	15.6%	11.3%
Europe Buyout (USD)	-1.5%	5.7%	16.1%	12.5%	12.4%	14.3%
Global Venture Capital	1.1%	15.0%	16.0%	14.9%	15.2%	11.1%
Asia/Pacific PE & VC (USD)	1.8%	9.2%	13.5%	13.3%	14.0%	12.3%
Real Assets	-0.6%	1.1%	7.7%	6.6%	8.2%	6.5%
Private Credit	0.2%	3.7%	7.7%	6.5%	10.0%	9.1%

Private Equity Returns – Relative

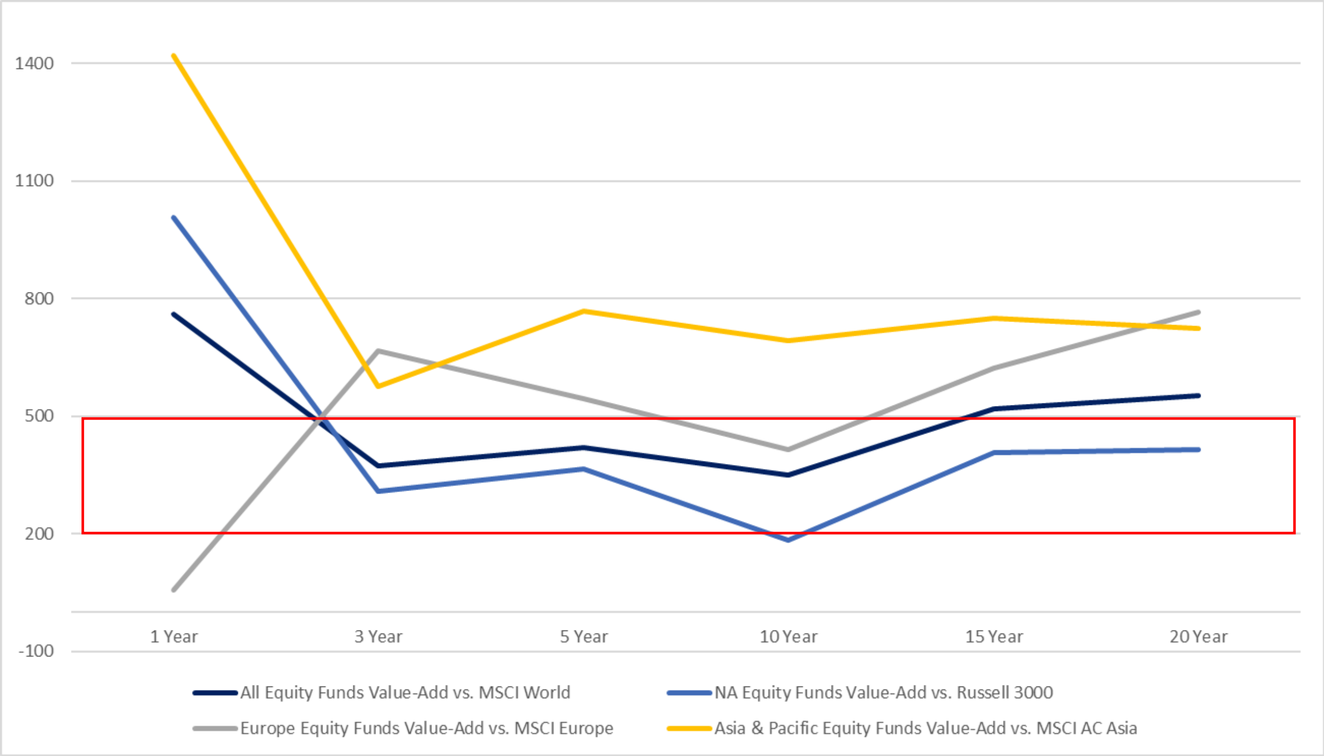
- **Trailing relative performance remains strong, but the 10 year public market comparison is somewhat challenging**
  - The chart below compares trailing horizon IRRs for the all equity oriented private funds to public equities using both the Russell 3000 and MSCI World (as of 9/30/19)
  - The left axis reflects the annualized horizon net IRR for private equity and the right axis shows PE's estimated value-add versus public market indices over the various time periods. The red box highlights the zone where PE is adding 200-500bps of outperformance versus public equities
  - It is important to note that this data includes a very strong Q4-18 for PE on a relative basis



Source: Burgiss 9/30/19

Private Equity Returns – Relative

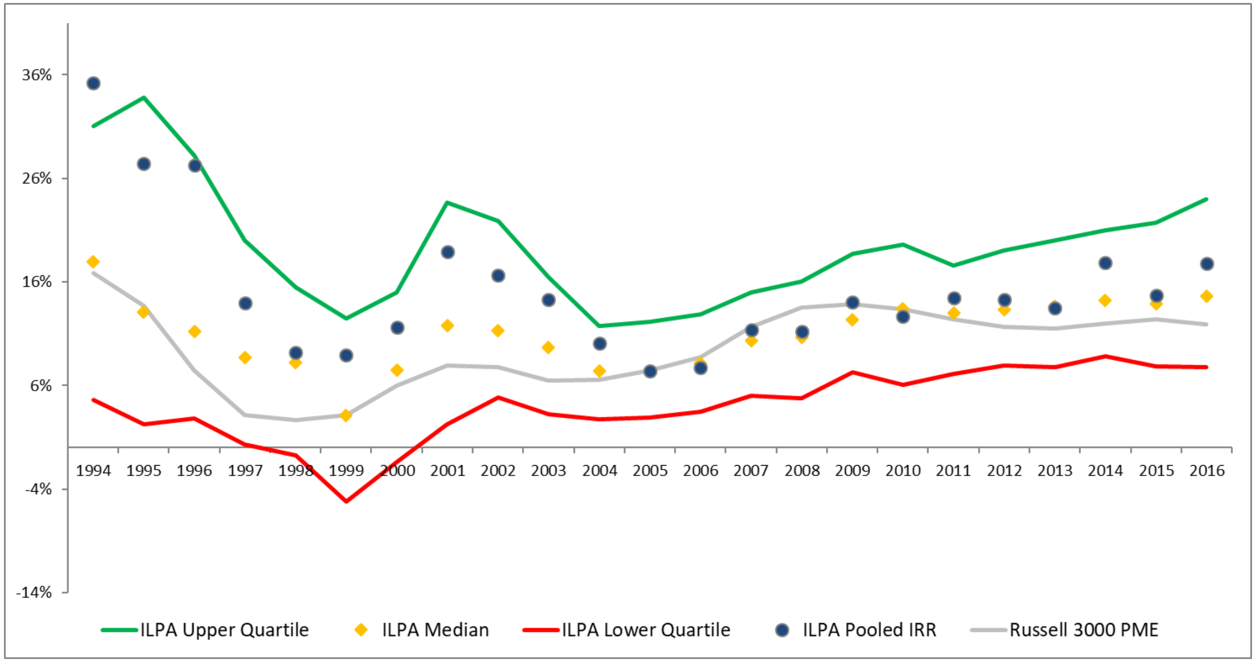
- **On a regional basis, trailing performance reflects fairly broad and consistent value-add on the part of the PE asset class**
  - The chart below compares trailing horizon value-add as measured in basis points per annum for all equity-oriented private funds by region as compared to public equities (as of 9/30/19)
  - As on the prior slide, the red box highlights the zone where PE is adding 200-500bps of outperformance versus public equities



Source: Burgiss 9/30/19 as calculated by OST Staff

Private Equity Returns – Relative

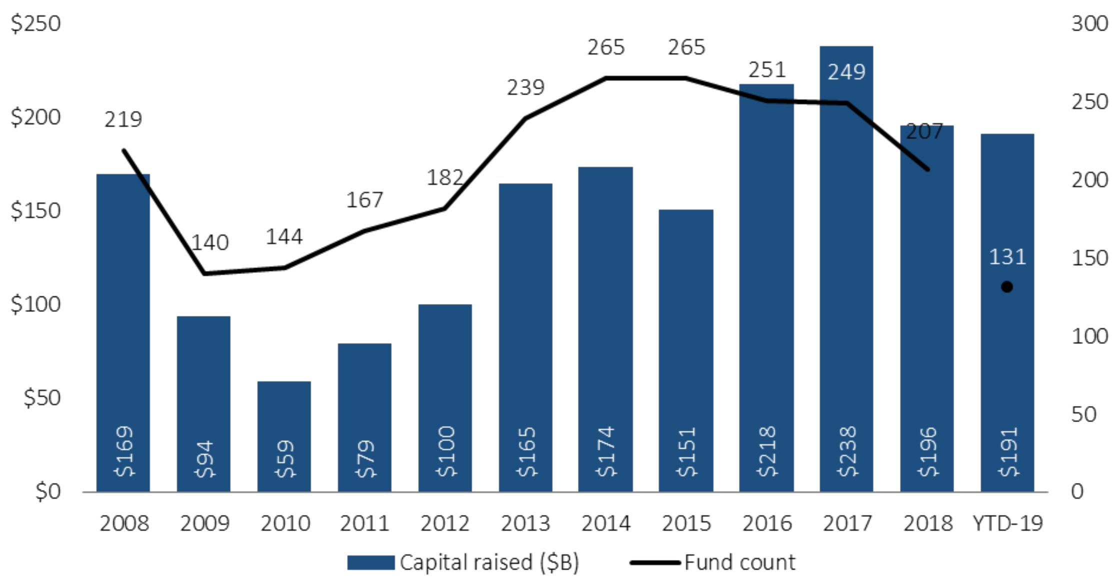
- **<u>With the exception of the GFC timeframe, investments in the PE asset class have been additive relative to public equities</u>**
  - The chart below presents the quartile IRR marks, pooled average IRR, and Russell 3000 modified public market equivalent using the ILPA All Funds index for each vintage year since 1994
  - As the chart reflects, investing in private equity in an index-like manner (pooled average IRR) would have produced alpha relative to the Russell 3000 in each vintage year outside of the 2005-2010 period. Further, while median or pooled average returns at the vintage year level are generally additive as compared to public equities, top quartile results have always produced meaningful value-add and bottom quartile results have always lagged materially



Source: ILPA – 6/30/19

U.S. Private Equity Update – Fundraising

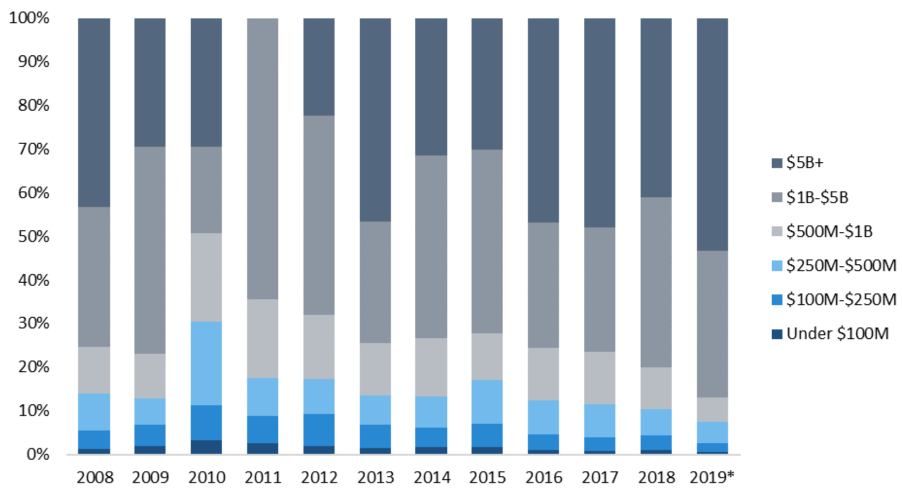
- **Through 3Q 2019, $191 billion had been raised across 131 U.S. private equity funds**
  - Fundraising through 3Q 2019 was 30% ahead of where it stood at that time in 2018 with respect to the quantum of capital raised. Conversely, the number of new private equity funds formed was ~15% behind where it stood at that time in 2018
  - For buyout funds raised in 2019, GPs came back to market only 3.6 years after raising predecessor funds on average. This compares to 4.9 years between funds for buyout fundraising in 2018
  - On average it took only 9.9 months to raise a buyout fund in 2019 which compares to 17 months in 2018
  - The chart below presents annual U.S. private equity fundraising activity since 2008

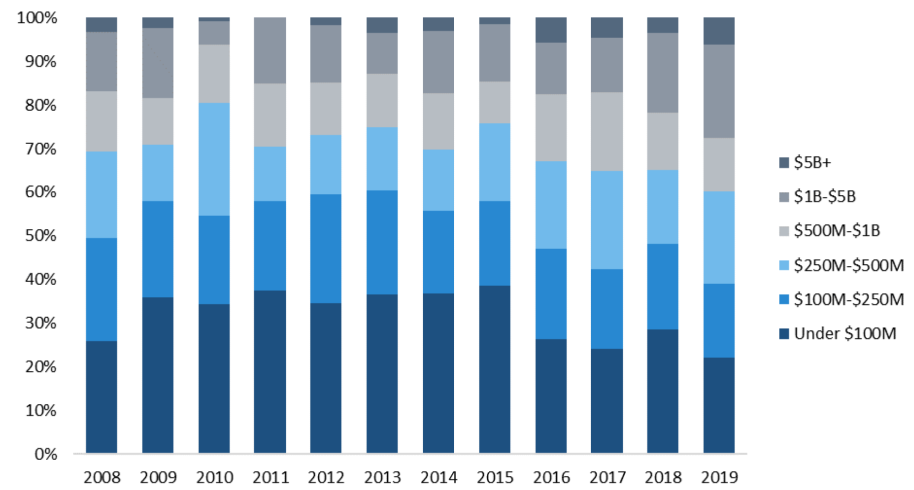


Source: Pitchbook
** As of 9/30/19*

U.S. Private Equity Update – Fundraising

- **The acceleration in fundraising through 3Q 2019 is mostly attributable to the large end of the market.**
  - As the chart on the left reflects, roughly 53% of capital raised in 2018 went to funds targeting $5 billion or more of capital commitments. 2007 is the only year where the large end of the market was more dominant (57%), and, at this time in 2018, only ~25% was attributable to this cohort
  - At $1.6 billion, the average size of a buyout fund raised in 2019 is 59% larger than it was in 2018
  - As always, smaller funds dominate by count with 73% of funds formed receiving less than $1 billion of commitments. However, at ~$350 million, the median size for funds raised in 2019 is larger than ever
  - The charts below show the fund size mix for annual U.S. private equity fundraising activity since 2008

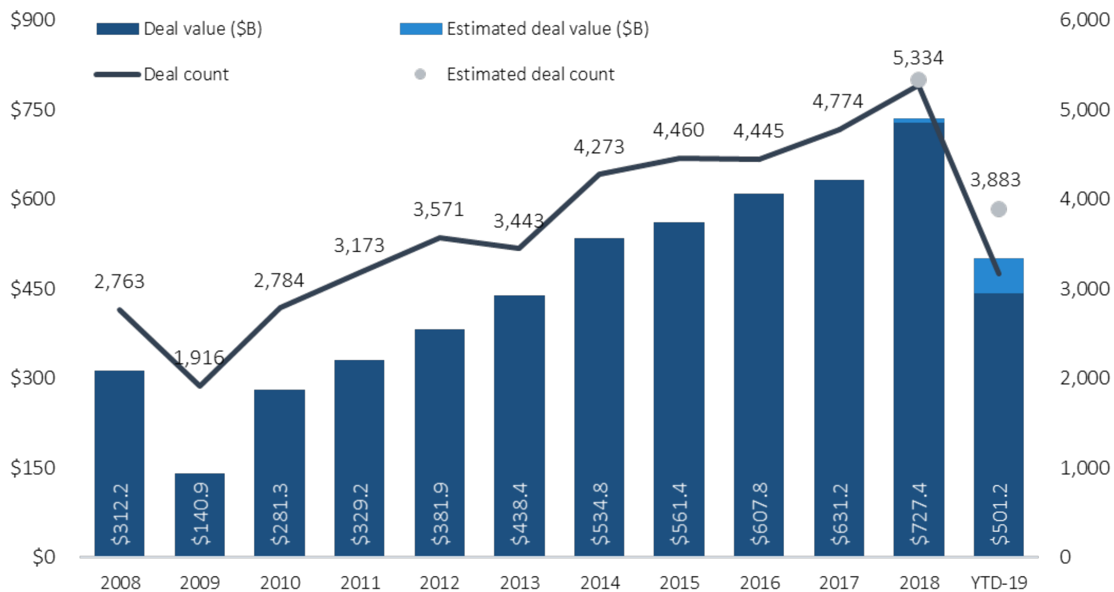




Source: Pitchbook
** As of 9/30/19*

U.S. Private Equity Update – Deployment

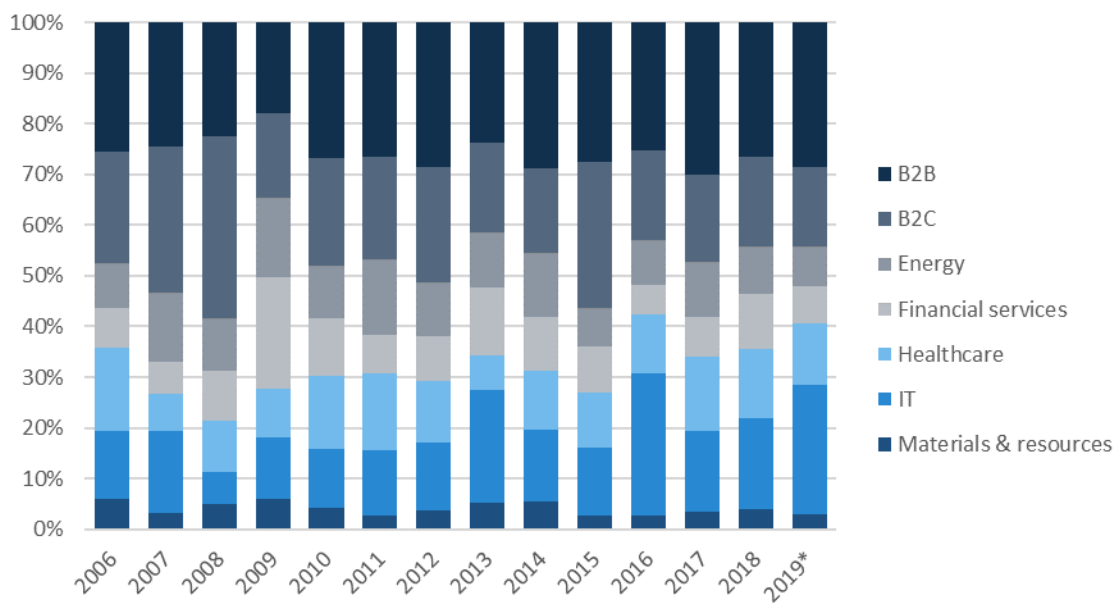
- **<u>Through 3Q 2019, roughly 3,900 private equity deals have been announced with a total value of $501 billion</u>**
  - While the pace set through 3Q 2019 was broadly in line with the first three quarters of 2018 as measured by both deal count and deal value, 2019's annualized pace is ~10% behind 2018
  - Add-on acquisitions represented ~68% of all deals done in the first nine months of the year. Add-ons represented two-thirds of all deals in 2018 and over 60% of all deals done since 2009
  - Secondary buyout activity continues to represent about 25% of all transaction volume, as was the case in 2018
  - The chart below presents annual U.S. investment activity since 2008



Source: Pitchbook
** As of 9/30/19*

U.S. Private Equity Update – Deployment

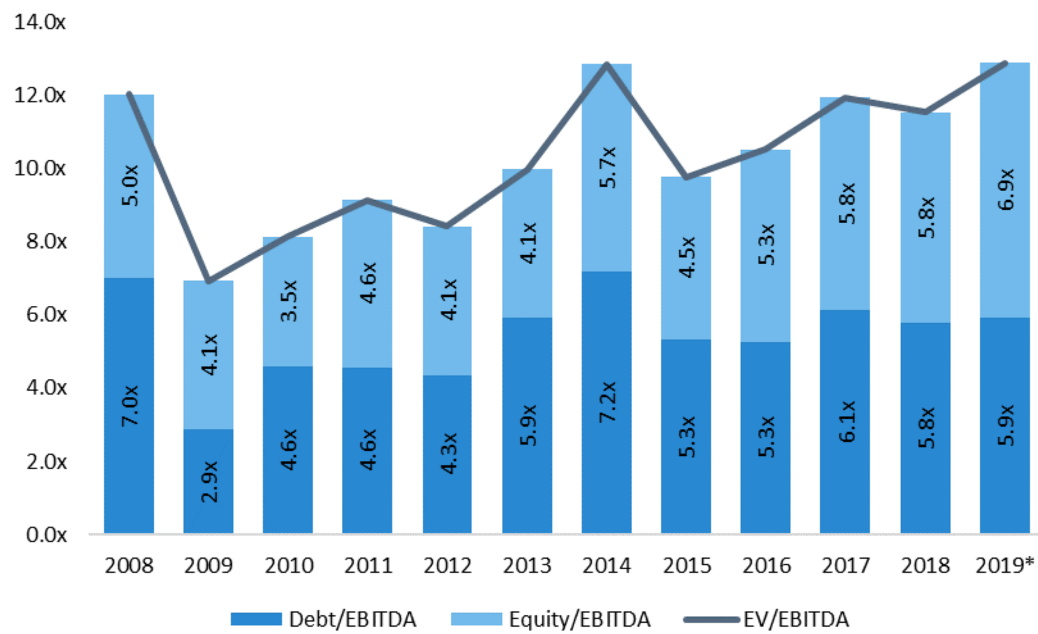
- **In 2019, GPs continued an aggressive pivot to information technology ("IT") and business services ("B2B") in the hopes of backing more resilient companies**
  - The allocations to IT and B2B represented 54% of overall volume through 3Q 2019. In total, those two sectors have represented 47% of all deals since 2014
  - Deals in the more cyclical consumer, energy, and materials verticals represented only 27% of all deals announced through the first three quarters of 2019. Before 2016, those sectors commonly represented at least a third of all deal volume, and they represented more than half of deal volume in 2008
  - The chart below presents the sector mix (by $) for annual U.S. investment activity since 2006



Source: Pitchbook
** As of 9/30/19*

U.S. Private Equity Update – Deployment

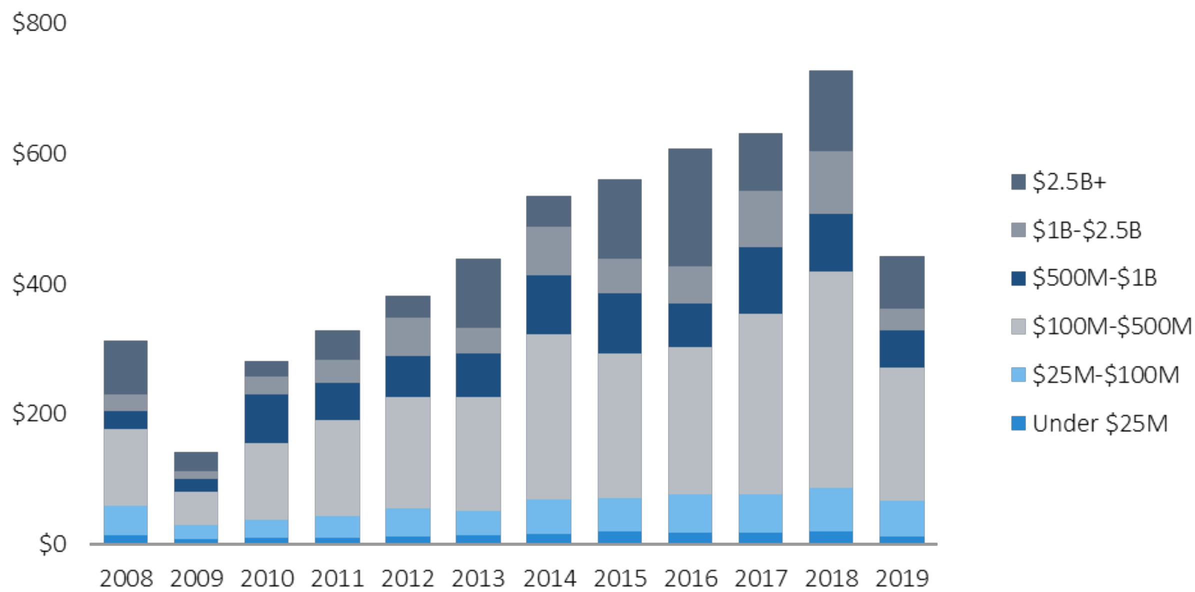
- **At a median entry multiple of 12.9x enterprise value/EBITDA, transaction pricing reached peak levels through Q3-2019**
  - While entry prices are at an all time high, median debt multiples did not move materially through the first three quarters of 2019
  - As a consequence, equity contribution as a percentage of the going-in capital structure stands at an all time high through the first three quarters of 2019
  - The chart below presents median transaction multiples for U.S. investment activity since 2008



Source: Pitchbook
** As of 9/30/19*

U.S. Private Equity Update – Deployment

- **<u>Deals with enterprise values ≥$500 million represent less than 40% of announced deal volume (by $)</u>**
  - Deals with EVs ≥$500 million represented 39% of deal volume through the 3Q 2019. This is modestly behind 2017 and 2018 and the lowest allocation to deals above the $500m threshold since before the global financial crisis
  - The largest declines come in the $1-2.5 billion cohort where deal volume through the first three quarters of 2019 is tracking to less than half of the volume realized in 2018
  - The chart below presents annual U.S. investment activity (by $) across various enterprise value cohorts since 2008

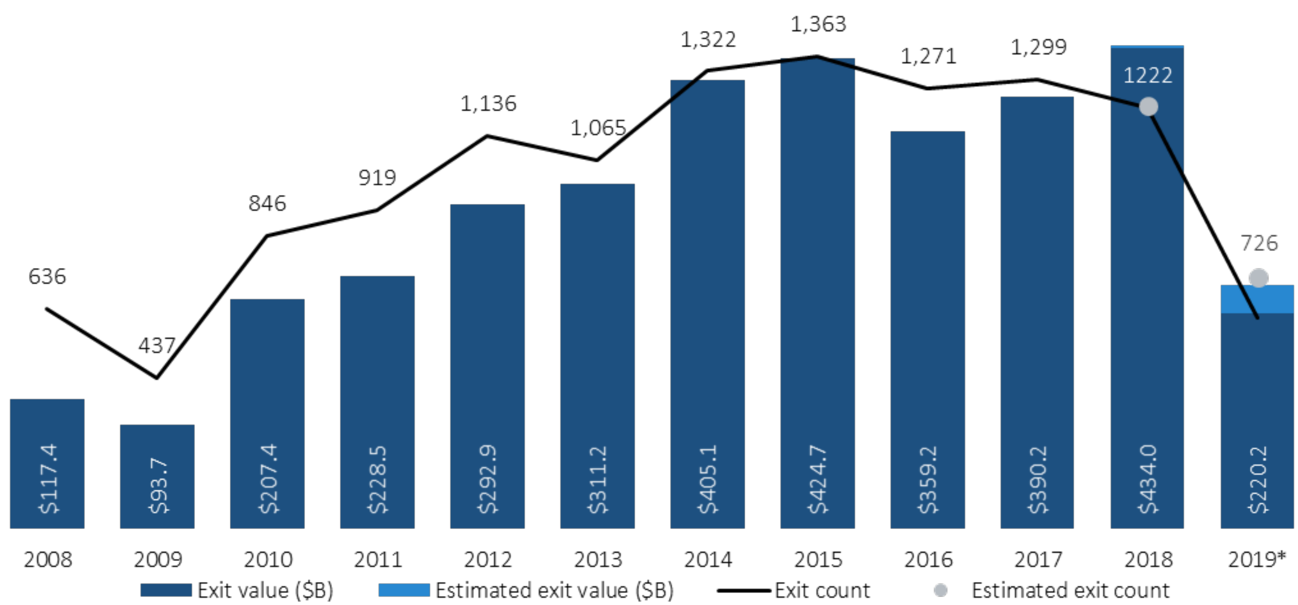


OREGON STATE TREASURY

Source: Pitchbook
** As of 9/30/19*

U.S. Private Equity Update – Exits

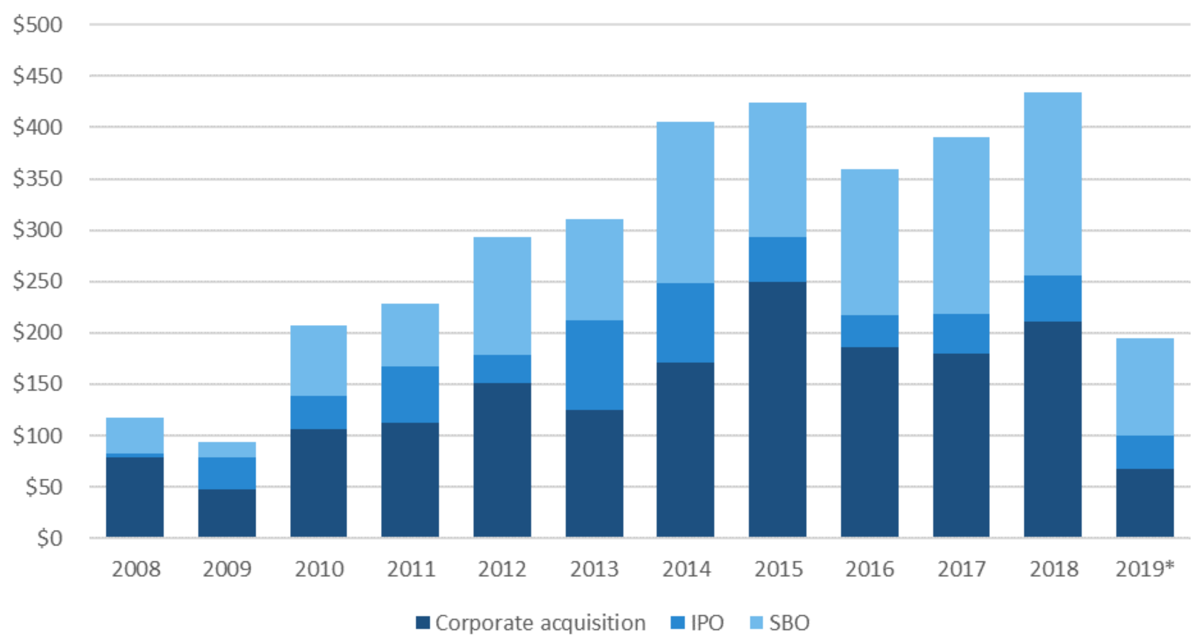
- **Through 3Q 2019, over 700 exits of U.S. private equity backed companies have been consummated for a total value of $220 billion**
  - Exit pace through 3Q 2019 was the slowest since 2013 and roughly 32% behind the record pace set in 2018
  - As a result of market volatility in Q4 2018, Q1 2019 was slowest quarter for exits since Q4 2012
  - The chart below presents the annual U.S. exit activity since 2008



Source: Pitchbook
** As of 9/30/19*

U.S. Private Equity Update – Exits

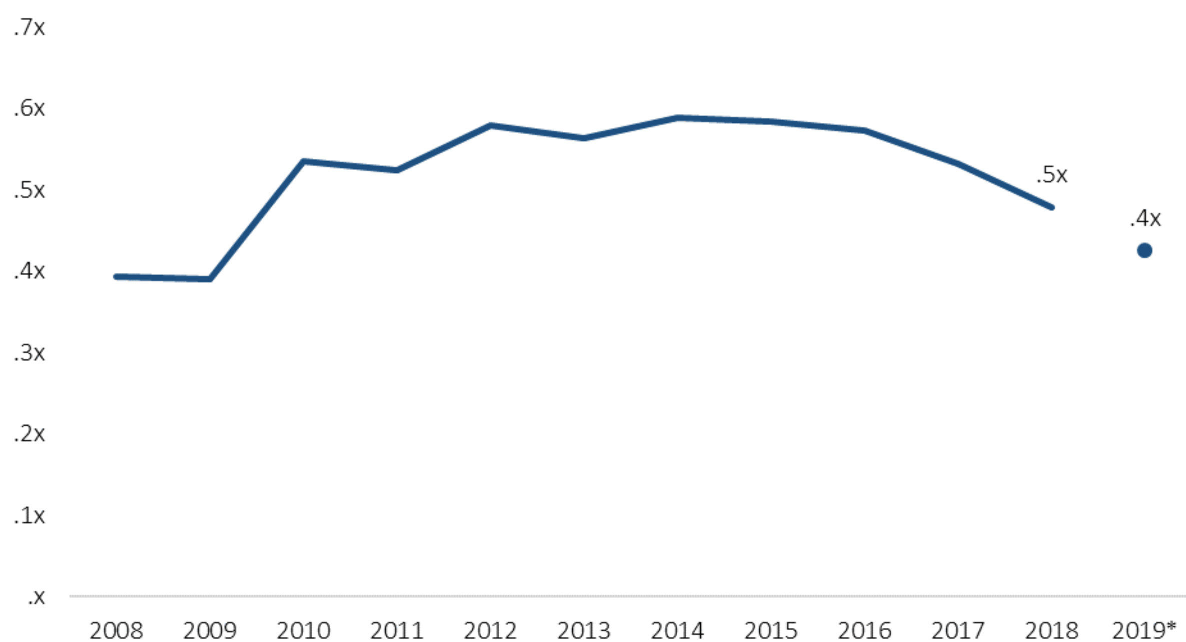
- **Through 3Q 2019, secondary buyouts represented almost half of deal volume (by $)**
  - On the back of market volatility in late 2018, PE exits to corporate acquirers represented only 35% of volume through the first three quarters of 2019. This represents the lowest level of strategic acquisition activity since 2009
  - While secondary buyouts represent nearly half of all exit volume in a depressed 2019, secondary exit activity through the first three quarters of the year was nearly 30% below the pace set in 2017 and 2018
  - The chart below presents annual U.S. exit activity by type since 2009



Source: Pitchbook
* As of 9/30/19

U.S. Private Equity Update – Exits

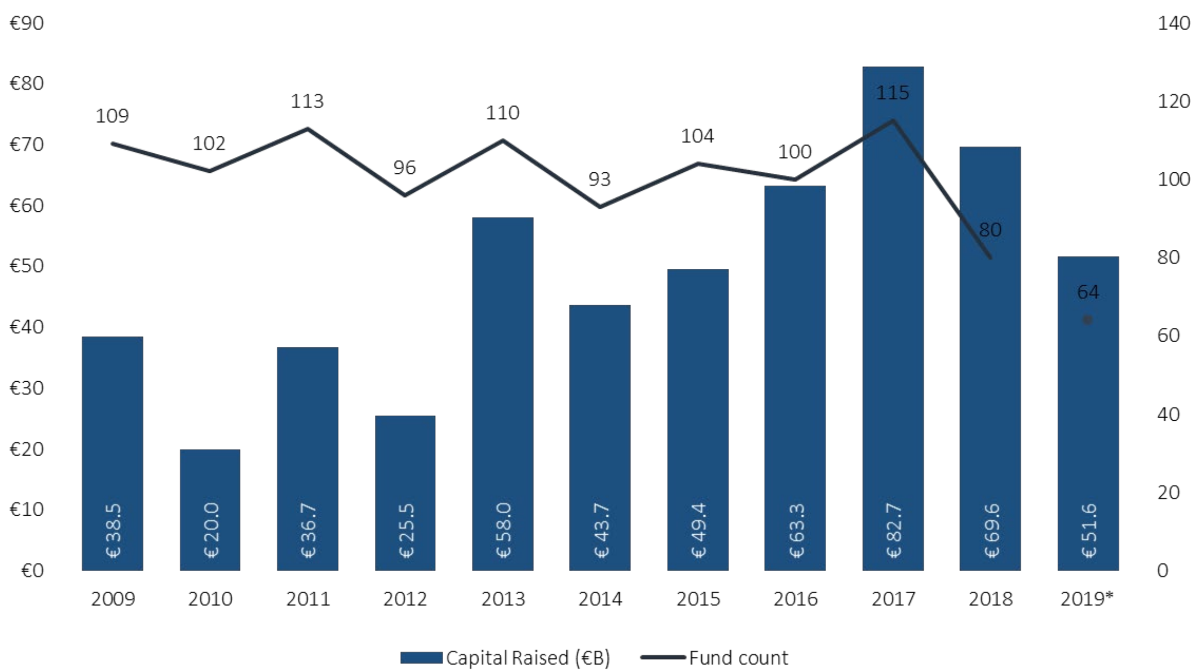
- **<u>On the back of slower exits through the first three quarters of 2019, the inventory of companies owned by PE is increasing</u>**
  - U.S. private equity backed company inventory increased at a slightly accelerated pace through the first three quarters of 2019. The count of companies owned by U.S. PE sponsors stood at more than 8,000 a year ago
  - The chart below presents the ratio of exits to new platform investments for U.S. private equity since 2008. A ratio below 1.0x means that inventory is building, and a declining ratio corresponds to accelerated inventory growth



Source: Pitchbook
** As of 9/30/19*

Europe Private Equity Update – Fundraising

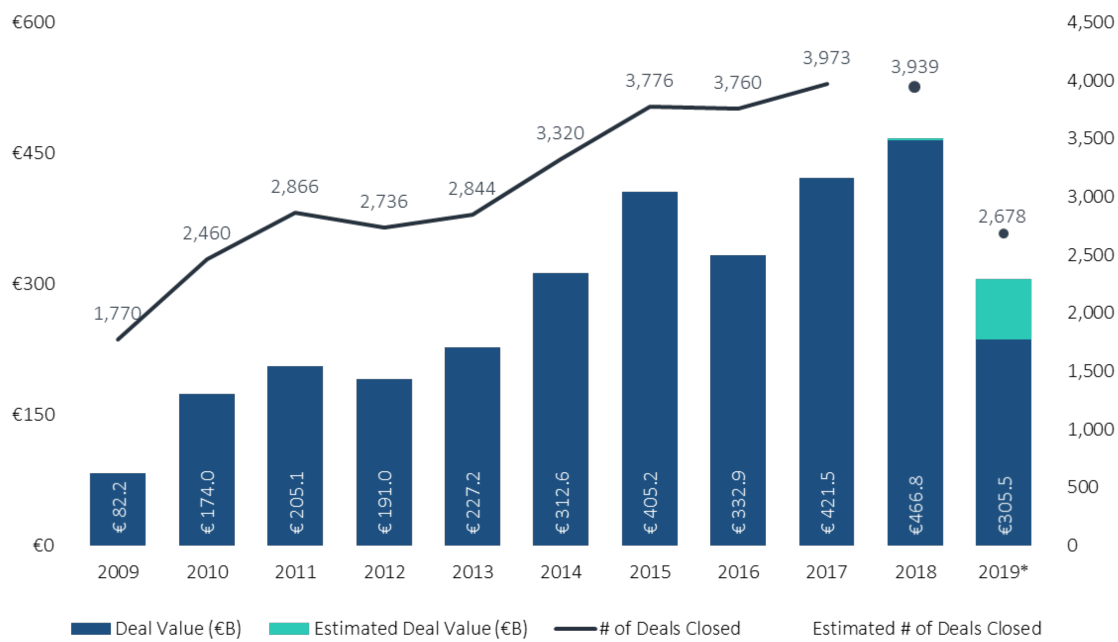
- **Through 3Q 2019, €52 billion had been raised across 64 funds**
  - Fundraising for the first three quarters of the year was broadly in line with the pace set in 2018 and 17% behind the record pace set in 2017
  - As in the U.S., the average time required to raise a buyout fund declined from 13.5 months in 2018 to 8.6 months in 2019
  - The chart below presents annual European private equity fundraising activity since 2009



Source: Pitchbook
** As of 9/30/19*

Europe Private Equity Update – Deployment

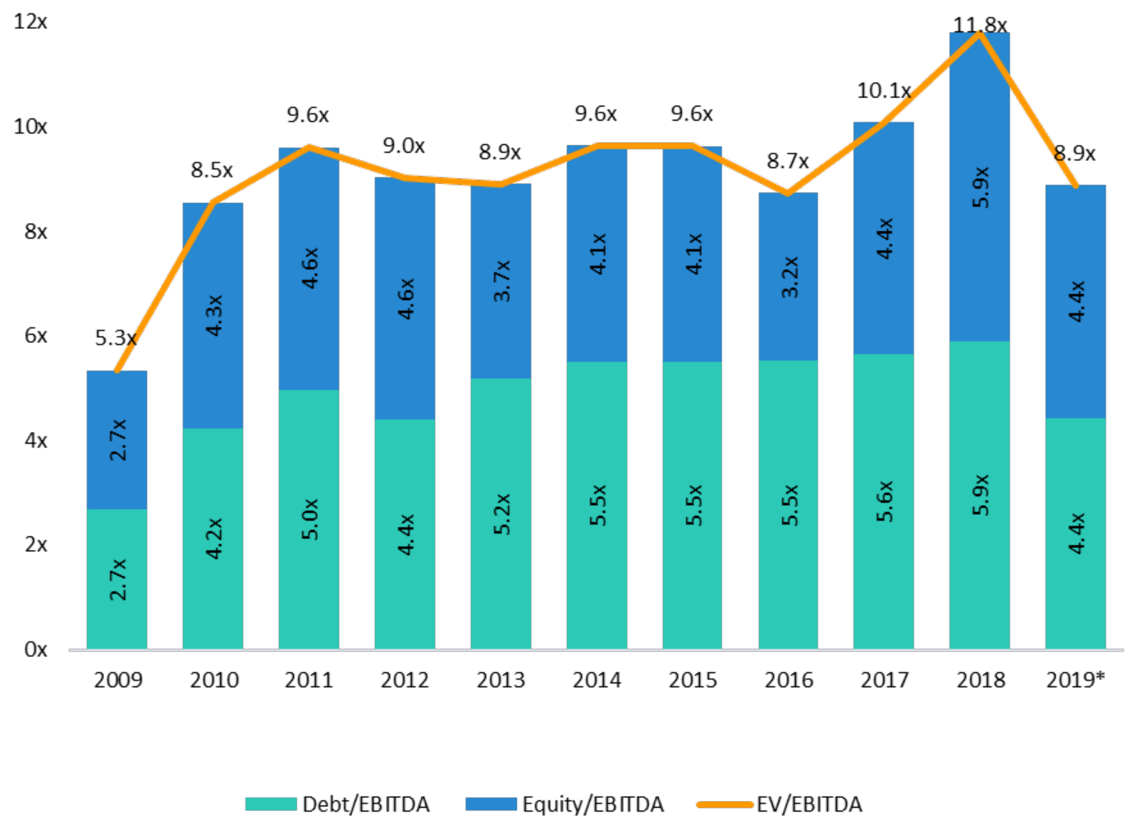
- **Through 3Q 2019, roughly 2,700 private equity deals have been announced with a total value of €305 billion**
  - Deployment through 3Q 2019 was the slowest it had been since 2016 and roughly 33% behind the strong pace set in 2018
  - As in the U.S., deals in the IT and B2B sectors accounted for more than half of all European deal volume in the first three quarters of 2019
  - The average deal size of ~€195m for the first three quarters of the year remains high by historical standards, but it is nearly 25% below the peak level set in 2018
  - The chart below presents the annual private equity investment activity in Europe since 2009



Source: Pitchbook
** As of 9/30/19*

Europe Private Equity Update – Deployment

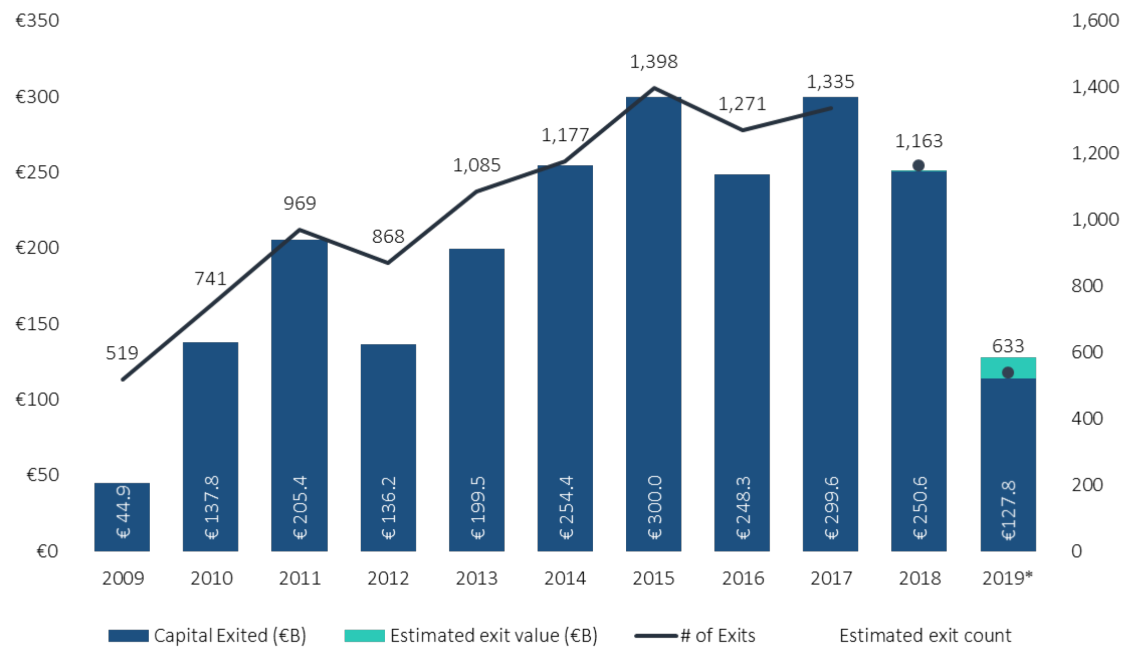
- **Unlike the U.S., median transaction multiple through 3Q 2019 are down meaningfully in Europe**
    - For the first three quarters of 2019, median purchase price multiples for European private equity transactions stood at 8.9x enterprise value/EBITDA with roughly half funded with debt
    - The chart below presents median transaction multiples for European investment activity since 2009



Source: Pitchbook
** As of 9/30/19*

Europe Private Equity Update – Exits

- **Through 3Q 2019, more than 600 exits of private equity backed companies have been announced with a total value of €128 billion**
  - The pace of exit activity (as measured by €) through the first three quarters of the year is slower than in any year since 2012
  - The pace of exit volume (as measured by €) through the first three quarters of the year is ~32% behind the strong pace set in 2018 and ~43% behind the record pace set in 2017
  - The chart below presents the annual private equity exit activity in Europe since 2009



Source: Pitchbook
** As of 9/30/19*

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Tobias Read
Oregon State Treasurer

350 Winter St NE, Suite 100
Salem, OR 97301-3896

oregon.gov/treasury

TAB 10 – Annual PUF Update

Public Universities Fund

Public University Common Policy

Purpose

Chair Adams had previously requested an update on the Public University investment program. This presentation provides a brief update on the background of the Oregon State Treasury Public University Common Policy and the related investment program.

Background

The Oregon University System was dissolved in 2015 after which all seven system members adopted separate independent boards.

(a) Statutory Authority:

ORS Chapter 352 provided the authority for Oregon public universities to (1) invest moneys, and (2) allow public universities to enter into agreements with the Oregon State Treasury (OST) to establish a separately managed account or commingled fund in order for OST to invest Public University funds. An agreement with OST is required for OST to engage with any Public University.

(b) Public University Common Policy:

To accommodate the changes, OST created an investment policy framework for Oregon public universities named the Public University Common Policy (Common Policy). The Common Policy is designed to provide guidance to OST investment staff regarding the investment, exchange, liquidation and reinvestment of invested moneys upon direction of any university. Guidelines for current university funds, whether managed internally by OST or externally by a third-party investment manager, are governed by the Common Policy.

(c) Investment Options:

The Common Policy offers both internal OST-managed and external third-party investment management services for Public Universities.

(d) Public University Core Bond Fund:

The Oregon Investment Council approved the establishment of the Public University Core Bond Fund (PUF) and related guidelines in 2014. PUF is offered by OST as an internally-managed fixed income fund option through the Common Policy. PUF is structured as an intermediate-term total return mandate.

(e) Externally Managed Funds:

Public Universities invest in externally managed accounts through BlackRock (ACWI Ex-U.S. equity fund) and Legg Mason (core + fixed income, sub-advised by Western Asset Management).

Public University Participation

PUF: Six universities currently invest in PUF.

Externally Managed Mandates: Two (2) public universities have elected for OST to oversee investment of moneys through external managed mandates.

2019 Update: (1) Western Oregon University was added to the investment program during 2019, choosing to allocate funds to externally managed equities and fixed income mandates; and (2) at the December 2019 OIC meeting, INV404 and INV407 policy updates were approved.

Recommendation

None.

TAB 11 – IAP Update

OPERF

Oregon Investment Council
Individual Account Program
Annual Review and Policy Updates
January 30, 2020

Background and Purpose

The Individual Account Program ("IAP" or the "Program") is a member-funded Defined Contribution Retirement Plan created by the Oregon Legislature in 2003. Since inception, IAP assets have been invested alongside of defined benefit pension assets and represent a growing fraction of the Oregon Public Employees Retirement Fund (OPERF). As of December 2019, IAP comprised $10.3 billion.

The Council approved at the August 2017 OIC meeting a policy directing staff to establish a set of Target-Date Funds (TDFs) available for PERS to assign to each Program participant. The transition to TDFs was complete on January 1, 2018. Staff will provide an update on the Individual Account Program after two years of history in the TDF structure. This is an information item only, with no recommendations.

January 2020

Individual Account Program

Annual Review

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Agenda

- Status update
    - Changes to the TDF series
    - Retirement Installments Fund
- Performance
- 2019 SB 1049
- Glide Path Review
- Total Retirement Package
- Questions

Agenda

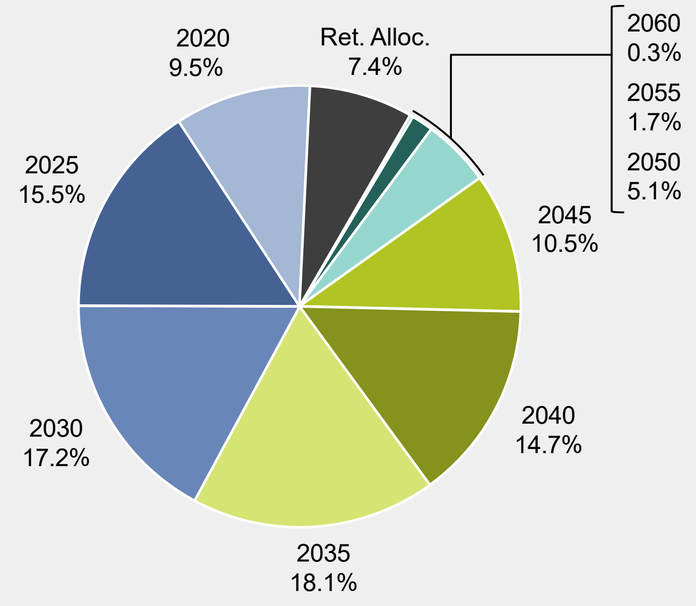
- Status update
    - Changes to the TDF series
    - Retirement Installments Fund
- Performance
- 2019 SB 1049
- Glide Path Review
- Total Retirement Package
- Questions

Plan Status

12/31/2019

+ Beginning Assets: $ 8.9 billion
+ Net Flows: $ 123.6 million
+ Investment Gain (Loss): $ 1.25 billion
+ Ending Assets: $ 10.3 billion

Distribution by Vintage



Source: State Street Bank

Custom Target-Date Fund list

Date of Birth	Vintage	Expected Retirement Date Range
In 1998 or later	2065	2063 or later
Between 1993 and 1997	2060	2058 – 2062
Between 1988 and 1992	2055	2053 – 2057
Between 1983 and 1987	2050	2048 – 2052
Between 1978 and 1982	2045	2043 – 2047
Between 1973 and 1977	2040	2038 – 2042
Between 1968 and 1972	2035	2033 – 2037
Between 1963 and 1967	2030	2028 – 2032
Between 1958 and 1962	2025	2023 – 2027
~~Between 1953 and 1957~~	~~2020~~ (Consolidate into the Retirement Allocation Fund)	~~2018 – 2022~~
In ~~1952~~ 1957 or earlier	Retirement Allocation Fund	~~2017~~ 2022 or earlier
In ~~1952~~ 1957 or earlier	Retirement Installments Fund	~~2017~~ 2022 or earlier

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Retirement Installments Fund

- New fund, created for retired employees receiving installment payments.
- Retirement Installments Fund is invested in the Oregon Short Term Fund, consistent with OIC policy approved in January of 2018.
- Retirement Allocation Fund remains in place for employees born in 1957 and before, but not drawing installment payments.

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Agenda

- Status update
  - Changes to the TDF series
  - Retirement Installments Fund
- Performance
- 2019 SB 1049
- Glide Path Review
- Total Retirement Package
- Questions

Performance as of December 31, 2019

	Market Value ($M)	Weight (%)	3 Mth Returns	YTD Returns	1 Year Returns	Since Incept
IAP Total	**10,301**	**100.0**	**3.56**	**13.87**	**13.87**	**6.36**
IAP Retirement	764	7.4	1.97	9.84	9.84	**5.00**
Retirement Custom Benchmark			2.25	10.19	10.19	5.44
IAP 2020	979	9.5	2.03	10.49	10.49	**5.21**
2020 Custom Benchmark			2.32	10.64	10.64	5.57
IAP 2025	1,599	15.5	3.32	13.58	13.58	**6.20**
2025 Custom Benchmark			3.58	13.84	13.84	6.64
IAP 2030	1,776	17.2	3.91	14.74	14.74	**6.68**
2030 Custom Benchmark			4.38	15.32	15.32	7.30
IAP 2035	1,859	18.1	3.77	14.19	14.19	**6.74**
2035 Custom Benchmark			4.30	14.78	14.78	7.44
IAP 2040	1,516	14.7	3.47	14.01	14.01	**6.56**
2040 Custom Benchmark			4.05	14.47	14.47	7.26
IAP 2045	1,080	10.5	4.84	16.75	16.75	**6.95**
2045 Custom Benchmark			5.26	17.24	17.24	7.51
IAP 2050	527	5.1	4.84	16.78	16.78	**6.96**
2050 Custom Benchmark			5.26	17.24	17.24	7.51
IAP 2055	170	1.7	4.83	16.90	16.90	**7.03**
2055 Custom Benchmark			5.26	17.24	17.24	7.51
IAP 2060	26	0.3	4.83	16.93	16.93	**7.07**
2060 Custom Benchmark			5.26	17.24	17.24	7.51

Each Fund has a custom benchmark with the same asset allocation as the Fund's target asset allocation and uses index returns to represent performance of the underlying asset classes/components.

The current OPERF Policy Benchmark is comprised of 20% of the Russell 3000 Index + 3%, one quarter lagged, 22.5% of the Oregon Custom Fixed Income Benchmark, 12.5% of the Oregon Custom Real Estate Benchmark, 40% of the MSCI ACWI IMI Net Index and 5% of the CPI + 4%.

Source: State Street Bank

Agenda

- Status update
    - Changes to the TDF series
    - Retirement Installments Fund
- Performance
- 2019 SB 1049 (PERS reform, 2 concepts for discussion)
    - Member choice
    - Redirect
- Glide Path Review
- Total Retirement Package
- Questions

IAP Member Choice

Effective January 1, 2021

- By fall 2020, PERS will inform members of an “optional investment choice window” for their IAP investments.
- Members will be able to choose a different Target-Date Fund for their IAP investments, rather than the default fund based on birth year.
- Members may choose to invest their IAP balance in a fund that is more reflective of risk tolerance than the default based on age.
- Impact on the glide path likely to be minimal, but will be determined over the course of 2021.

IAP "Redirect"

Effective July 1, 2020

- Establishes Employee Pension Stability Account ("EPSA") for each active member. EPSA will be used at retirement to pay a portion of the member's pension benefit.

- Redirects a portion of IAP contributions to the EPSA, as follows:

  When salary is above $2,500/month (indexed yearly):

  - Tier One/Tier Two: 2.50% of salary to EPSA/3.50% of salary to IAP
  - OPSRP: 0.75% of salary to EPSA/5.25% of salary to IAP

- When salary is under $2,500/month, "redirect" does not apply and the entire 6.0% goes to IAP.

OREGON STATE TREASURY

Agenda

- Status update
  - Changes to the TDF series
  - Retirement Installments Fund
- Performance
- 2019 SB 1049
- Glide Path Review
  - Changes to asset allocation in April 2019
  - IAP “Redirect”
- Total Retirement Package
- Questions

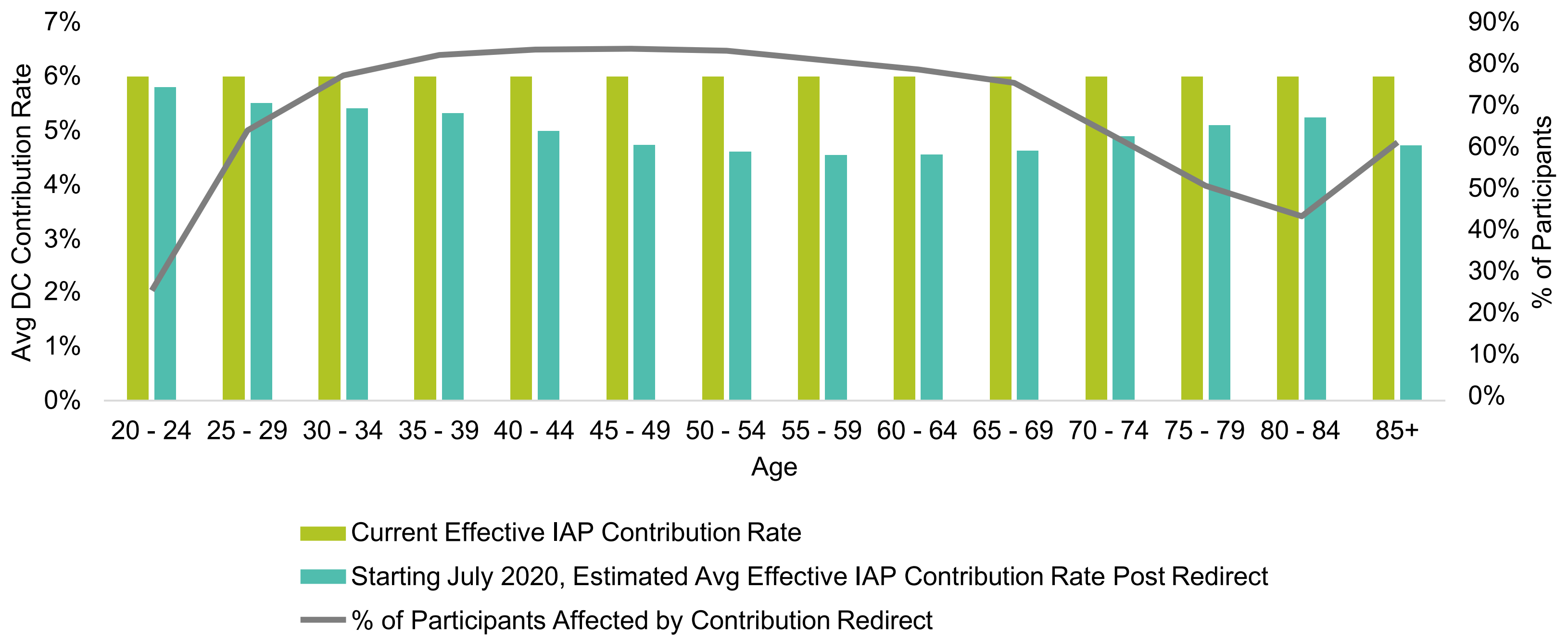
IAP “Redirect”

- Redirect will reduce participants’ future contributions to IAP, requiring additional focus on risk control in the event of a downturn.
- Greatest impact on participants nearing retirement (specifically between the ages of 51 and 64) for three reasons: 1) higher salary levels in that age group; 2) higher percentage of Tier One/Tier Two members in that age group; and 3) ability to recover from market losses is limited due to short time horizon to retirement.
- Updated glide path proposes a modest reduction in growth allocation at age 55 and 60.
- Redirect allows participants to voluntarily contribute the equivalent of the “redirected” sums to their IAP accounts. For this analysis, AB made a conservative assumption that participants will not make additional contributions.
- AB will continuously monitor whether participants are taking advantage of this option, and may recommend further adjustments to the glide path.

Redirect Impact on Average IAP Contribution Rate

- On average, the redirect has the most impact for participants within age bucket 50-69 (average contribution reduction of 1.4%).
- Young participants will be affected the least due to lower salary level.

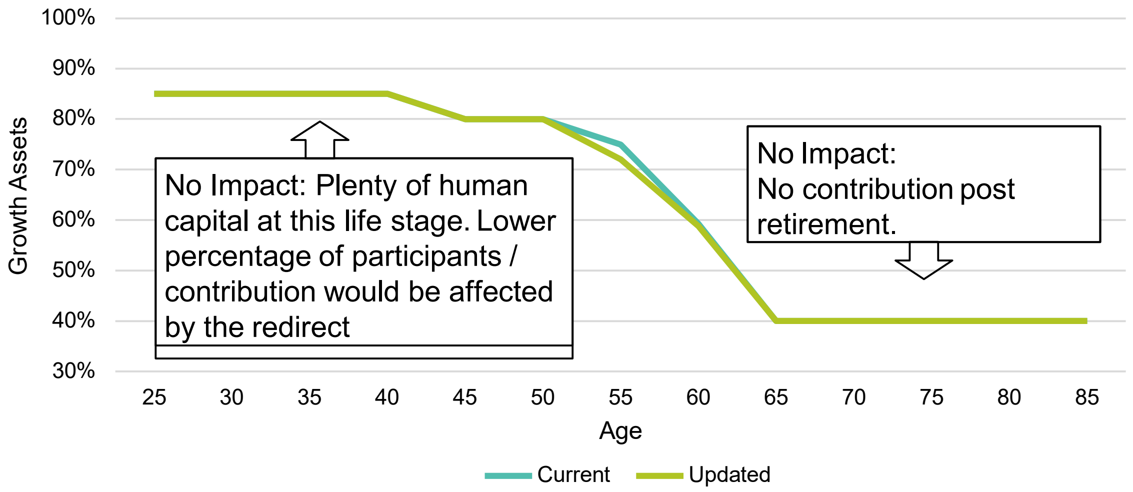
Contribution Redirection Impact



Impact estimation is based on plan's 2018 demographic profile.
Source: Oregon State Treasury and AB

Redirect Impact on Glide Path Design

- Participants' total assets are comprised of low-risk human capital and high-risk financial capital.
- To keep overall risk budget the same, lower future contribution, i.e. human capital, reduces participants' risk capacity in their financial capital at age 55 & 60, leads to lower growth exposure.
- Growth allocation at age 50 would have been reduced modestly, however, downside risk is already muted due to the existing OPERF allocation.

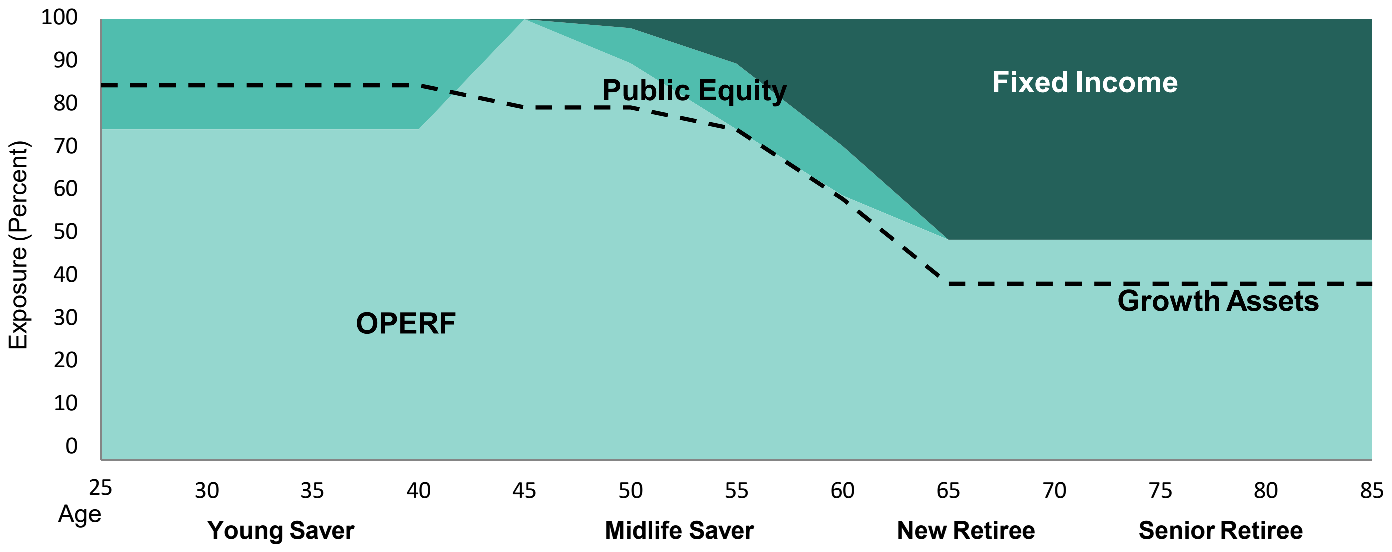


Total Growth Assets*													
	25	30	35	40	45	50	55	60	65	70	75	80	85
Current	85.0%	85.0%	85.0%	85.0%	80.0%	80.0%	75.0%	59.3%	40.0%	40.0%	40.0%	40.0%	40.0%
Updated	85.0%	85.0%	85.0%	85.0%	80.0%	80.0%	72.0%	58.8%	40.0%	40.0%	40.0%	40.0%	40.0%
Change	-	-	-	-	-	-	-3.0%	-0.5%	-	-	-	-	-

* 80% of OPERF allocation is counted as growth assets
Source: Oregon State Treasury and AB

Glide Path Construction

Current



	25	30	35	40	45	50	55	60	65	70	75	80	85
US All Market Equity	15.00	15.00	15.00	15.00	-	5.10	9.85	7.65	-	-	-	-	-
ACWI ex US Equity	10.00	10.00	10.00	10.00	-	2.90	5.10	3.60	-	-	-	-	-
Core Bond	-	-	-	-	-	2.00	7.70	16.30	18.65	18.65	18.65	18.65	18.65
TIPS	-	-	-	-	-	-	2.35	8.15	12.05	12.05	12.05	12.05	12.05
Short Duration Bond	-	-	-	-	-	-	-	4.30	19.30	19.30	19.30	19.30	19.30
OPERF*	75.00	75.00	75.00	75.00	100.00	90.00	75.00	60.00	50.00	50.00	50.00	50.00	50.00
Public Equity	25.00	25.00	25.00	25.00	-	8.00	14.95	11.25	-	-	-	-	-
Fixed Income	-	-	-	-	-	2.00	10.05	28.75	50.00	50.00	50.00	50.00	50.00
OPERF	75.00	75.00	75.00	75.00	100.00	90.00	75.00	60.00	50.00	50.00	50.00	50.00	50.00
Total Growth Assets**	85.00	85.00	85.00	85.00	80.00	80.00	74.95	59.25	40.00	40.00	40.00	40.00	40.00

*OPERF is managed by the OST under the direction of the OIC and contains a mix of the following asset classes: public and private equity, fixed income, alternatives, and real estate

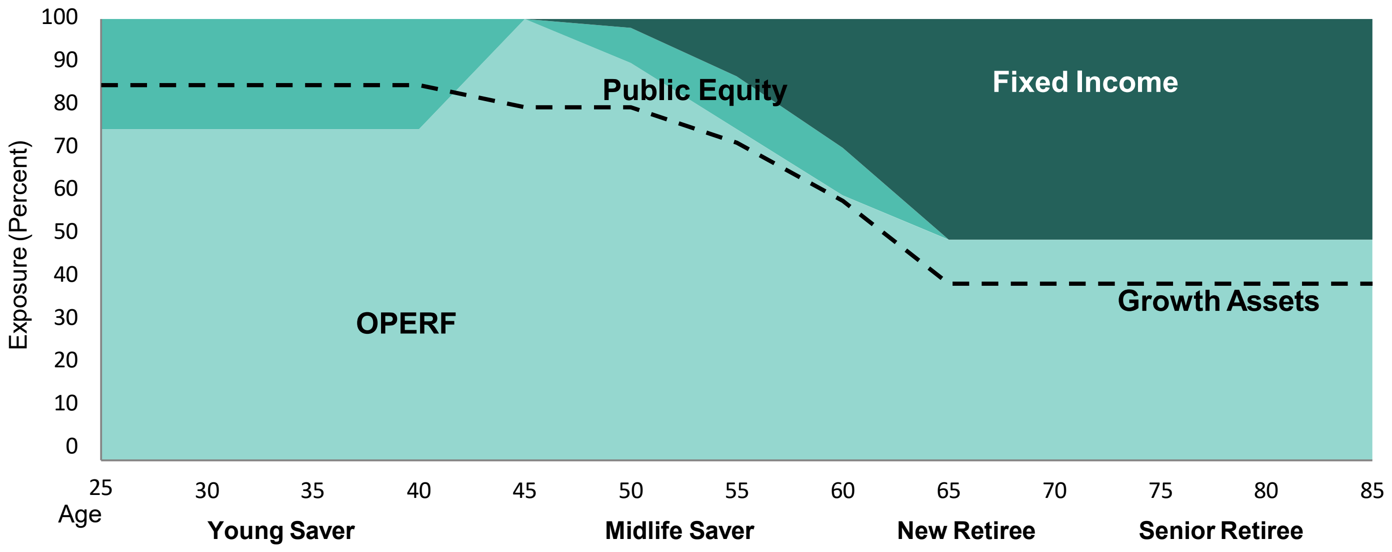
**80% of OPERF allocation is counted as growth assets

This chart does not represent any particular target-date fund. It is meant to show how the investment mix of any target-date portfolio changes over a lifetime. Numbers may not sum due to rounding.

Source: Oregon State Treasury and AB

Glide Path Construction

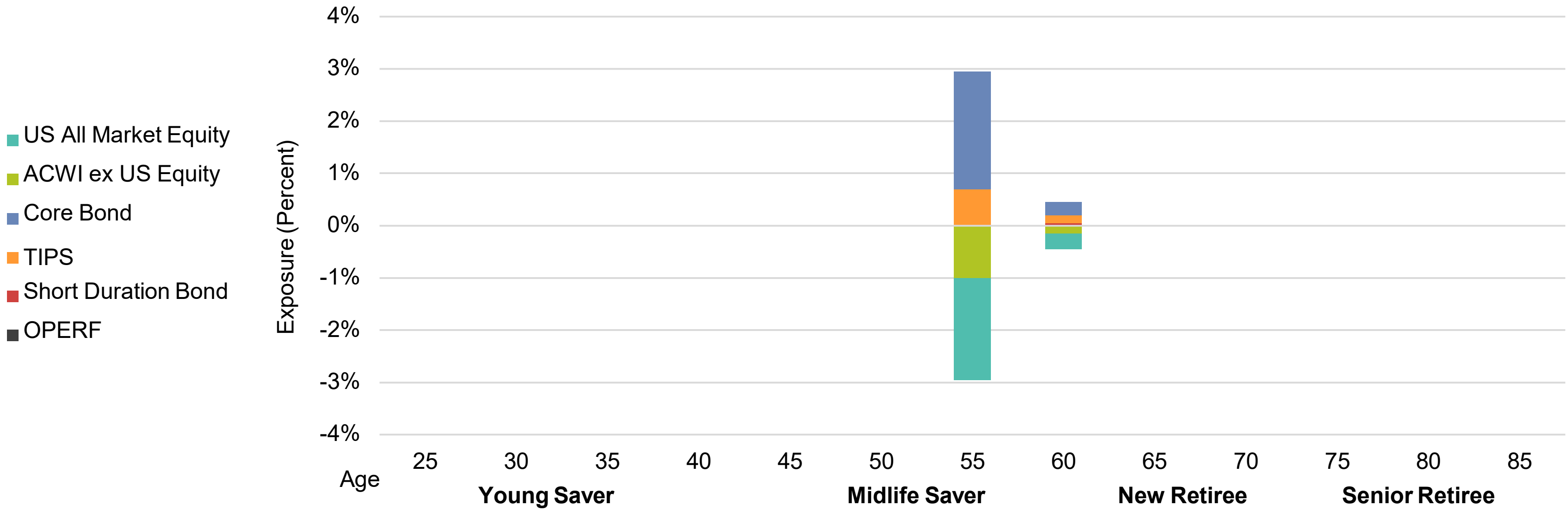
Updated to incorporate legislative changes effective July 1, 2020



	25	30	35	40	45	50	55	60	65	70	75	80	85
US All Market Equity	15.00	15.00	15.00	15.00	-	5.10	7.90	7.35	-	-	-	-	-
ACWI ex US Equity	10.00	10.00	10.00	10.00	-	2.90	4.10	3.45	-	-	-	-	-
Core Bond	-	-	-	-	-	2.00	9.95	16.55	18.65	18.65	18.65	18.65	18.65
TIPS	-	-	-	-	-	-	3.05	8.30	12.05	12.05	12.05	12.05	12.05
Short Duration Bond	-	-	-	-	-	-	-	4.35	19.30	19.30	19.30	19.30	19.30
OPERF*	75.00	75.00	75.00	75.00	100.00	90.00	75.00	60.00	50.00	50.00	50.00	50.00	50.00
Public Equity	25.00	25.00	25.00	25.00	-	8.00	12.00	10.80	-	-	-	-	-
Fixed Income	-	-	-	-	-	2.00	13.00	29.20	50.00	50.00	50.00	50.00	50.00
OPERF	75.00	75.00	75.00	75.00	100.00	90.00	75.00	60.00	50.00	50.00	50.00	50.00	50.00
Total Growth Assets**	85.00	85.00	85.00	85.00	80.00	80.00	72.00	58.80	40.00	40.00	40.00	40.00	40.00

*OPERF is managed by the OST under the direction of the OIC and contains a mix of the following asset classes: public and private equity, fixed income, alternatives, and real estate
**80% of OPERF allocation is counted as growth assets
This chart does not represent any particular target-date fund. It is meant to show how the investment mix of any target-date portfolio changes over a lifetime. Numbers may not sum due to rounding.
Source: Oregon State Treasury and AB

Updated Minus Current Glide Path



	25	30	35	40	45	50	55	60	65	70	75	80	85
US All Market Equity	-	-	-	-	-	-	-1.95	-0.30	-	-	-	-	-
ACWI ex US Equity	-	-	-	-	-	-	-1.00	-0.15	-	-	-	-	-
Core Bond	-	-	-	-	-	-	2.25	0.25	-	-	-	-	-
TIPS	-	-	-	-	-	-	0.70	0.15	-	-	-	-	-
Short Duration Bond	-	-	-	-	-	-	-	0.05	-	-	-	-	-
OPERF*	-	-	-	-	-	-	-	-	-	-	-	-	-
Public Equity	-	-	-	-	-	-	-3.0	-0.5	-	-	-	-	-
Fixed Income	-	-	-	-	-	-	3.0	0.5	-	-	-	-	-
OPERF	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Growth Assets**	-	-	-	-	-	-	-3.0	-0.5	-	-	-	-	-

*OPERF is managed by the OST under the direction of the OIC and contains a mix of the following asset classes: public and private equity, fixed income, alternatives, and real estate
**80% of OPERF allocation is counted as growth assets
Source: Oregon State Treasury and AB

Agenda

- Status update
  - Changes to the TDF series
  - Retirement Installments Fund
- Performance
- 2019 SB 1049
- Glide Path Review
- Total Retirement Package
- Questions

Total Retirement Package
(attributable to public service in Oregon)

- Public Employee Retirement System
  - Tier 1 (Start date on or before 12/31/95).
  - Tier 2 (Start date on or after 1/1/96 and before 8/29/03).
  - Oregon Public Service Retirement Plan “OPSRP” (start date after 8/29/03).
- Individual Account Program “IAP”
- Social Security
- Oregon Savings Growth Plan “OSGP”

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Employee groups within the PERS system

Tier 1: 33,805 employees or 15.2% of the employee population. Hired before 1/1/96. Guaranteed rate of return.

Tier 2: 50,397 employees or 22.7%. Hired between 1/1/96 and 8/28/2003. Market returns.

OPSRP: 137,788 employees or 62.1%. Hired after 8/28/03. Employer-funded, and designed to provide a life time pension of approximately 45 percent of final average salary, with 30 years of service.

IAP: The IAP is an account-based benefit under IRS 414(k) for all PERS employees (Tier 1/Tier 2/OPSRP). Six percent of subject salary is deposited in the individual’s IAP account, and the account is credited with investment returns on an annual basis.

Estimated Replacement Ratios

Program	Estimated Replacement Ratios
PERS	45%[1]
IAP	10-20%[2]
Social Security	18%[3]-35%[4]
Total	**73-100%**
OSGP	48% on average[5]

1. Replacement ratio for 2017 was 44% across 5,300 Tier 1/Tier 2 retirees (53% after 30 years).

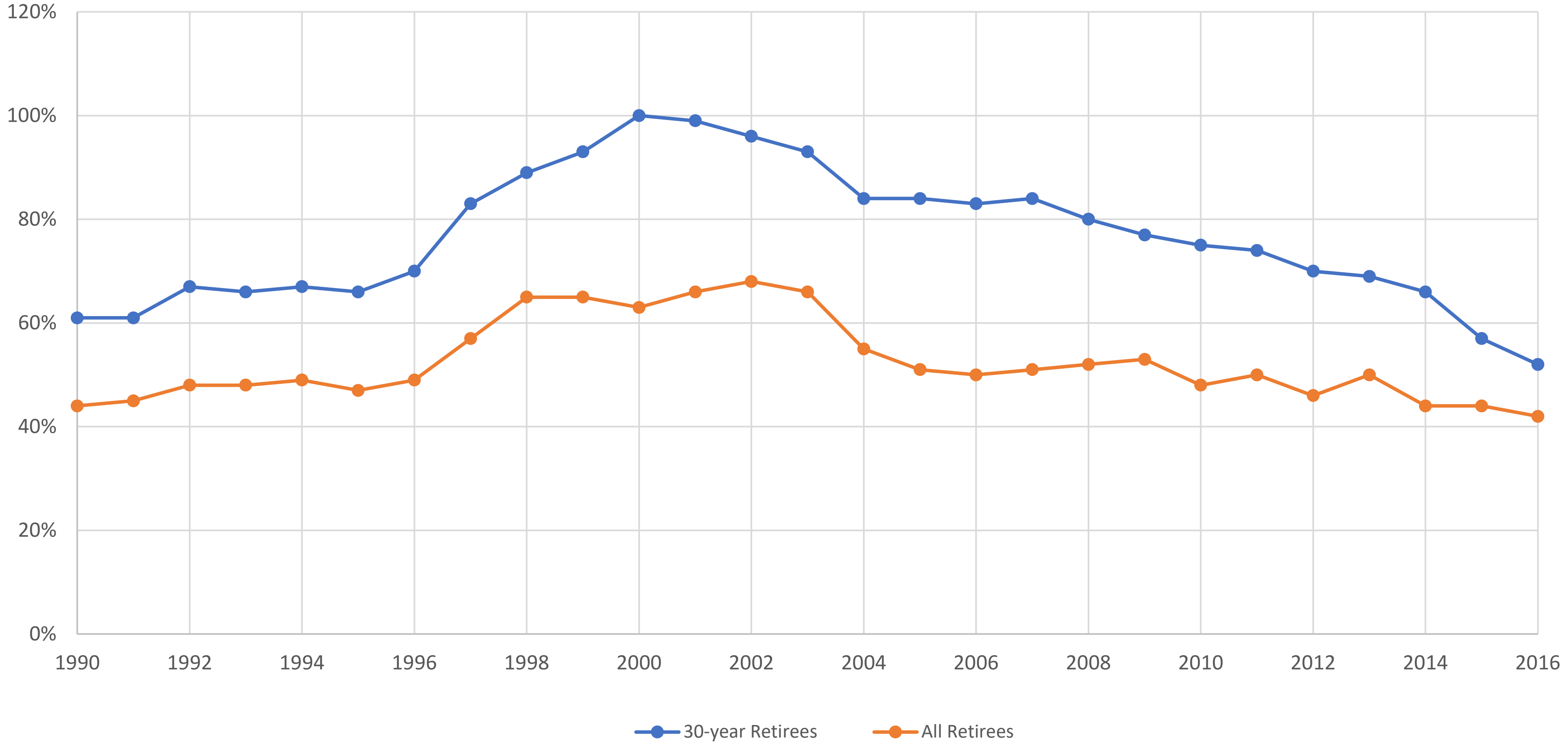
2. PERS does not provide an estimated replacement ratio for IAP, but the glide path was designed to target a total replacement ratio of 90% from all sources assuming 45% from PERS and 35% from Social Security.

3. Source: Callan, LLC.

4. Source: AllianceBernstein, LP.

5. Source: Voya as of 9/30/2019.

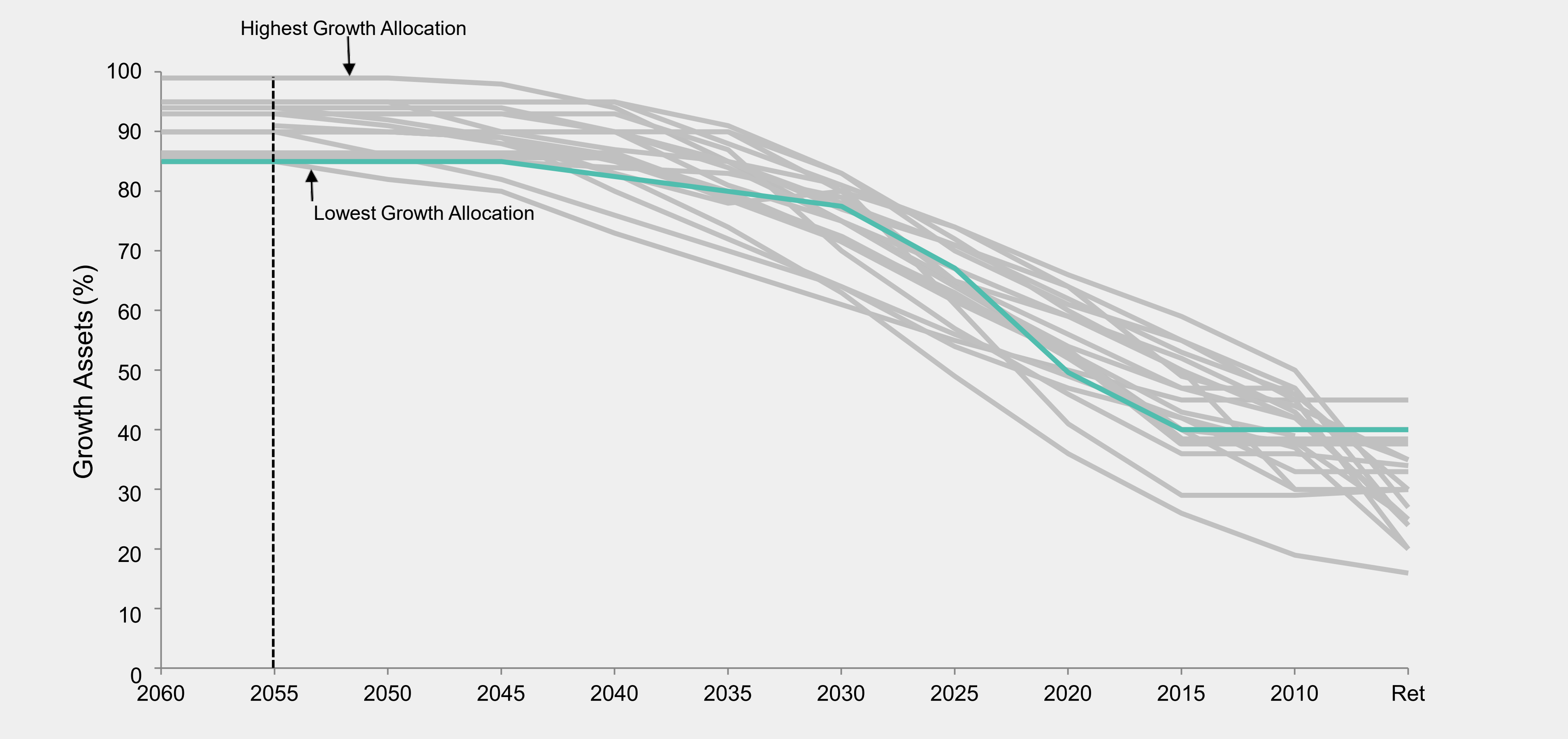
PERS Tier 1/Tier 2 replacement ratios for retirees



OREGON STATE TREASURY

Proposed State of Oregon Glide Path vs. Off-the-Shelf TDF Products

Glide Path Growth Asset Allocation Comparison



Source: Morningstar, Morningstar TDF Reports and Prospectus. Data as of December 31, 2016. Equity Allocation (%) includes real assets such as commodities, real estate, natural resources and other equity-like alternatives.

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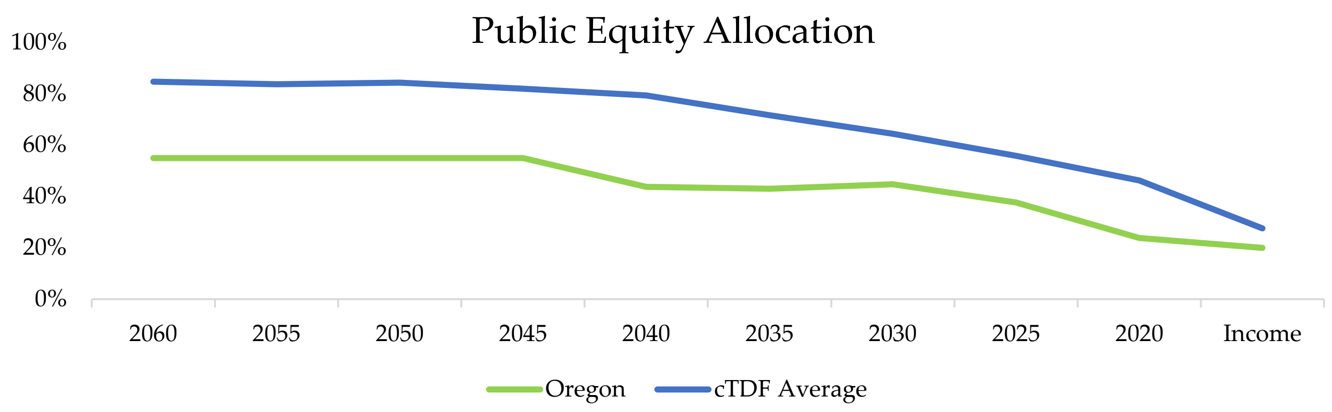
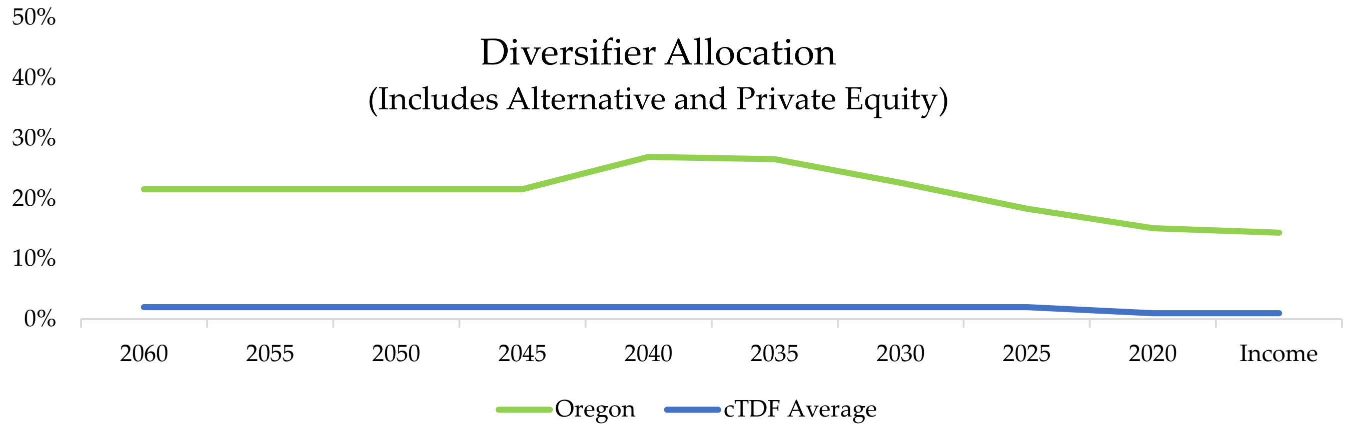
Lower Allocation in Public Equity and Higher Allocation in Diversifiers than Custom TDF Average

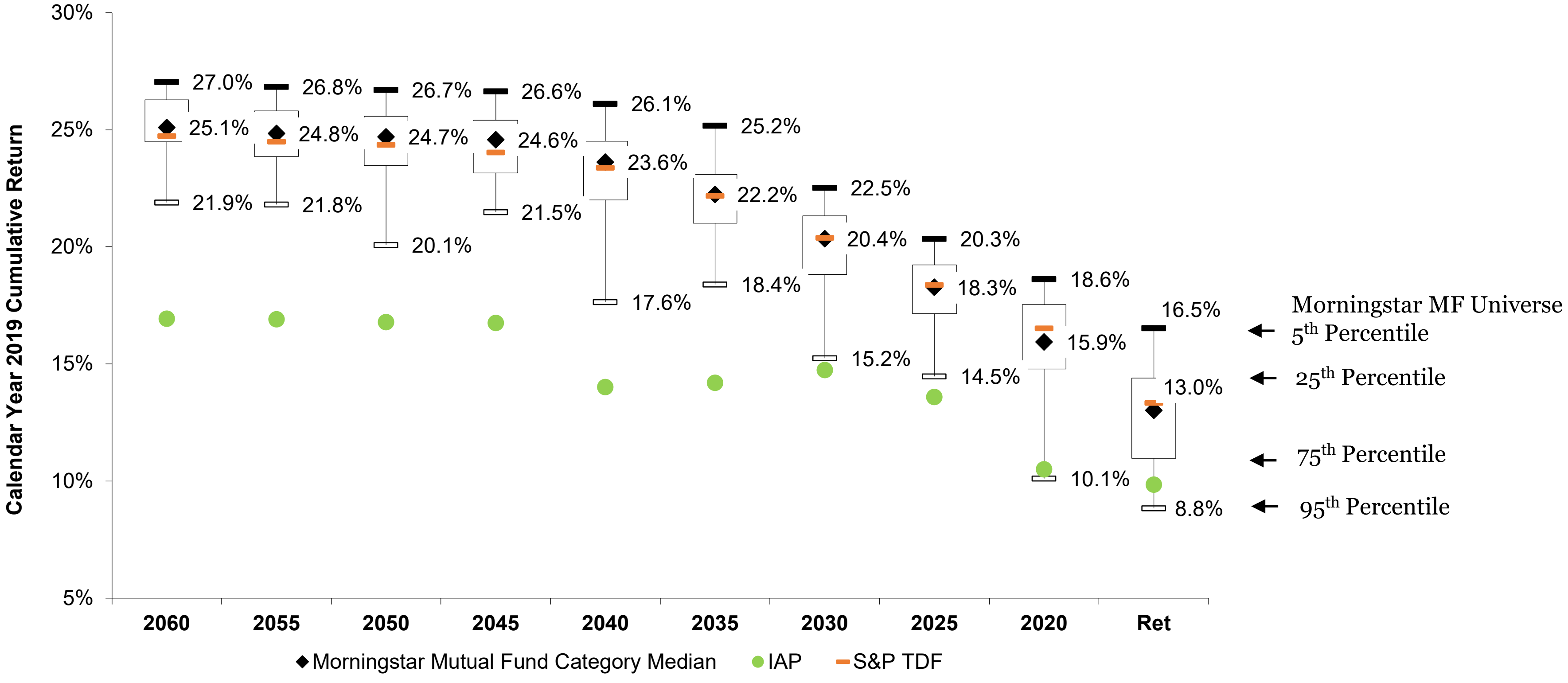




Source: AB, DCIIA

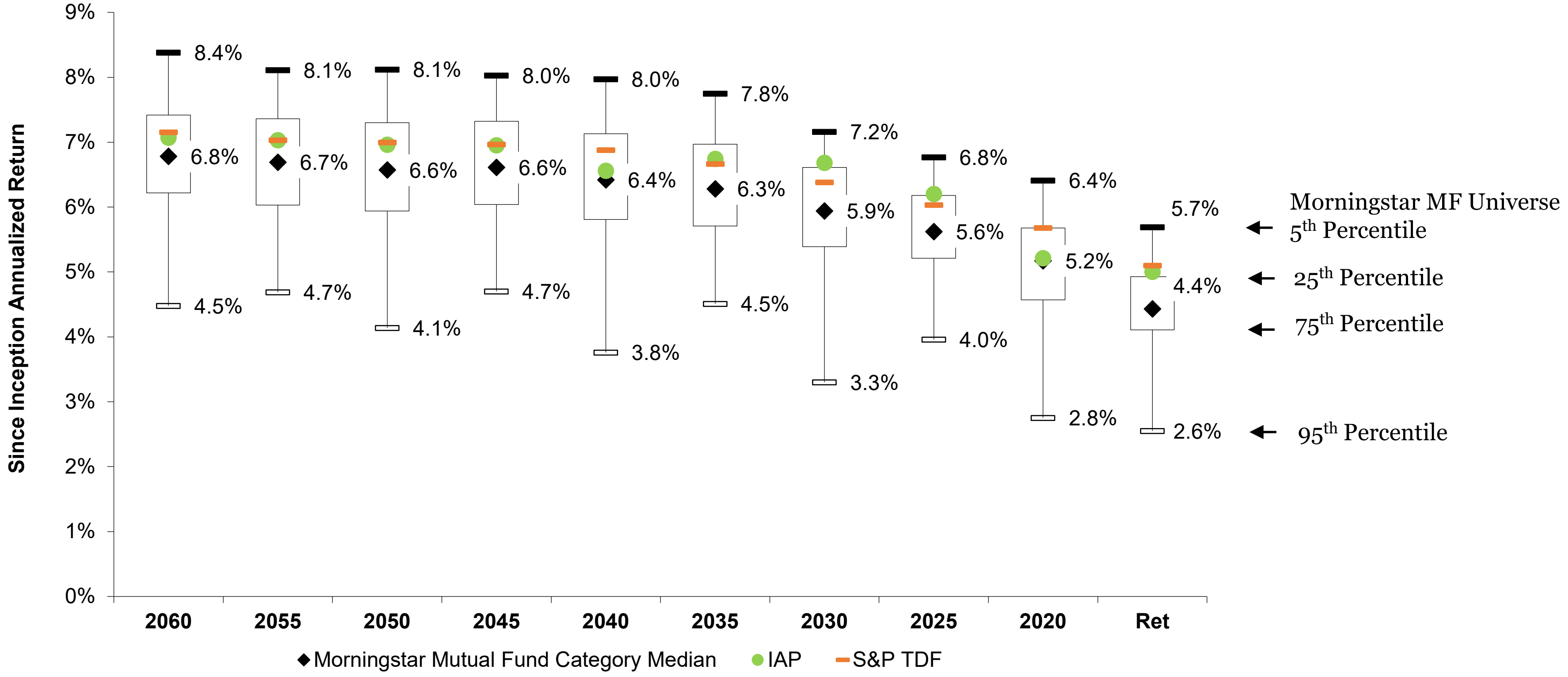
OREGON STATE TREASURY

IAP Underperformed Peer Mutual Fund TDF Universe During Calendar Year 2019



As of December 31, 2019
Source: State Street, Morningstar, S&P

IAP Outperformed Peer Median Within Mutual Fund TDF Universe Since Inception



As of December 31, 2019
Source: State Street, Morningstar, S&P

OREGON STATE TREASURY

2020 next steps:

Monitor progress on the changes to the target date fund series.

Review the glide path for potential changes due to:

- Member choice and the number of participants who utilize it.
- Number of participants who choose to recoup “redirected funds.”
- OPERF’s asset allocation.

Agenda

- Status update
  - Changes to the TDF series
  - Retirement Installments Fund
- Performance
- 2019 SB 1049
- Glide Path Review
- Total Retirement Package
- Questions

OREGON
STATE
TREASURY

Tobias Read
Oregon State Treasurer

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Tigard, OR 97224

oregon.gov/treasury

TAB 12 – Asset Allocation & NAV Updates

Asset Allocations at December 31, 2019

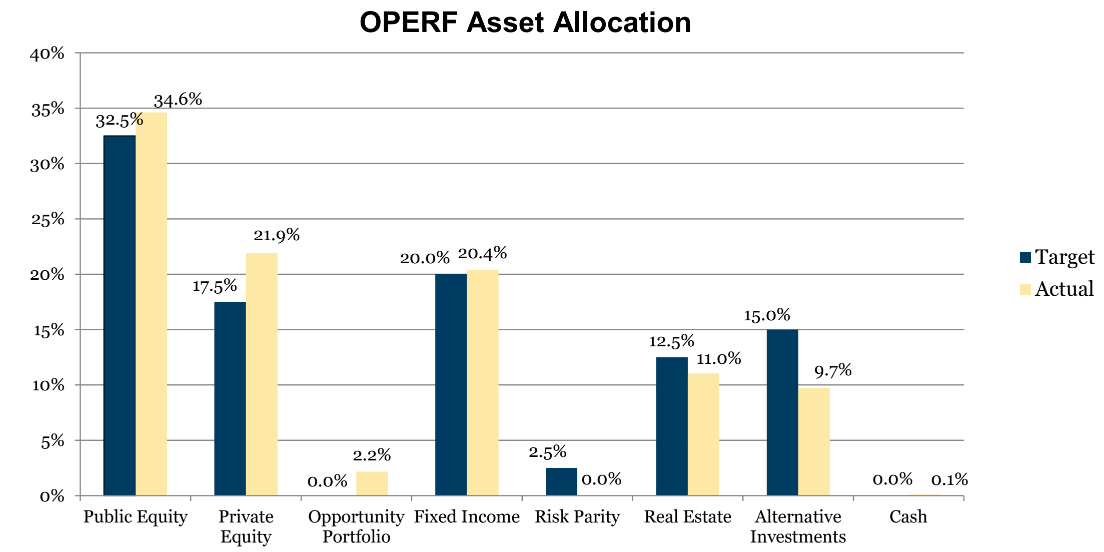
OPERF	Policy	Target[1]	Regular Account: $ Thousands	Regular Account: Pre-Overlay	Regular Account: Overlay	Regular Account: Net Position	Regular Account: Actual	Target Date Funds: $ Thousands	Variable Fund: $ Thousands	Total Fund: $ Thousands
Public Equity	27.5-37.5%	32.5%	26,779,400	33.9%	589,751	27,369,151	34.6%	1,088,455	483,219	28,940,825
Private Equity	13.5-21.5%	17.5%	17,322,313	21.9%		17,322,313	21.9%			17,322,313
Total Equity	**45.0-55.0%**	**50.0%**	**44,101,713**	**55.8%**	**589,751**	**44,691,464**	**56.5%**			**46,263,138**
Opportunity Portfolio	**0-3%**	**0.0%**	**1,715,831**	**2.2%**		**1,715,831**	2.2%			**1,715,831**
Fixed Income	**15-25%**	**20.0%**	**15,485,617**	**19.6%**	**663,850**	**16,149,467**	20.4%	1,428,342		**17,577,809**
Risk Parity	**0.0-2.5%**	**2.5%**	**-**	**0.0%**		**-**	0.0%			**-**
Real Estate	**9.5-15.5%**	**12.5%**	**8,730,546**	**11.0%**	**(1,900)**	**8,728,646**	11.0%			**8,728,646**
Alternative Investments	**7.5-17.5%**	**15.0%**	**7,688,993**	**9.7%**		**7,688,993**	9.7%			**7,688,993**
Cash[2]	**0-3%**	**0.0%**	**1,343,001**	**1.7%**	**(1,251,701)**	**91,300**	0.1%		8,532	**99,831**
TOTAL OPERF		**100%**	**$ 79,065,699**	**100.0%**	**$ -**	**$ 79,065,699**	**100.0%**	**$ 2,516,797**	**$ 491,751**	**$ 82,074,247**

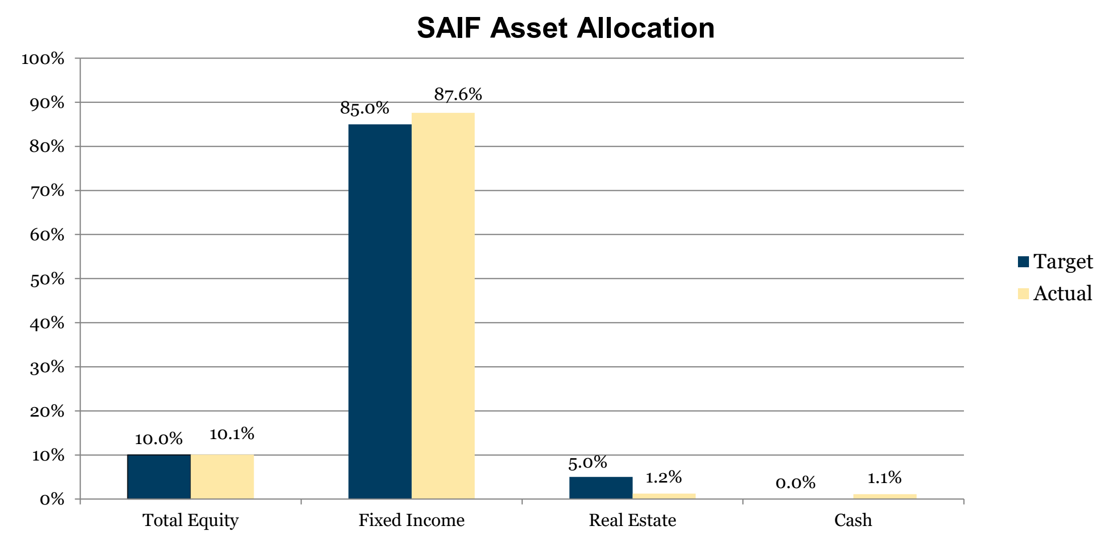
[1] Targets established in April 2019. Interim policy benchmark effective January 1, 2019, consists of: 37.5% MSCI ACWI IMI Net, 21% Custom FI Benchmark, 19% Russell 3000+300bps (1 quarter lagged), 12.5% NCREIF ODCE net (1 quarter lagged), & 10% CPI+400bps.

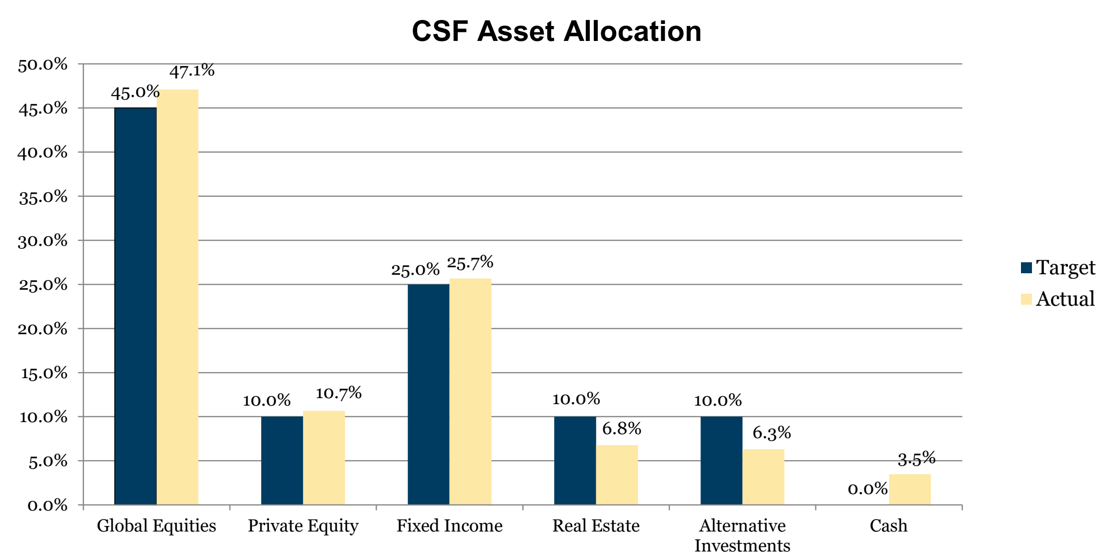
[2] Includes cash held in the policy implementation overlay program.

SAIF	Policy	Target	$ Thousands	Actual
Total Equity	**7-13%**	**10.0%**	**492,695**	**10.1%**
Fixed Income	**80-90%**	**85.0%**	**4,285,419**	**87.6%**
Real Estate	**0-7%**	**5.0%**	**60,000**	**1.2%**
Cash	**0-3%**	**0.0%**	**53,554**	**1.1%**
TOTAL SAIF			**$ 4,891,668**	**100.0%**

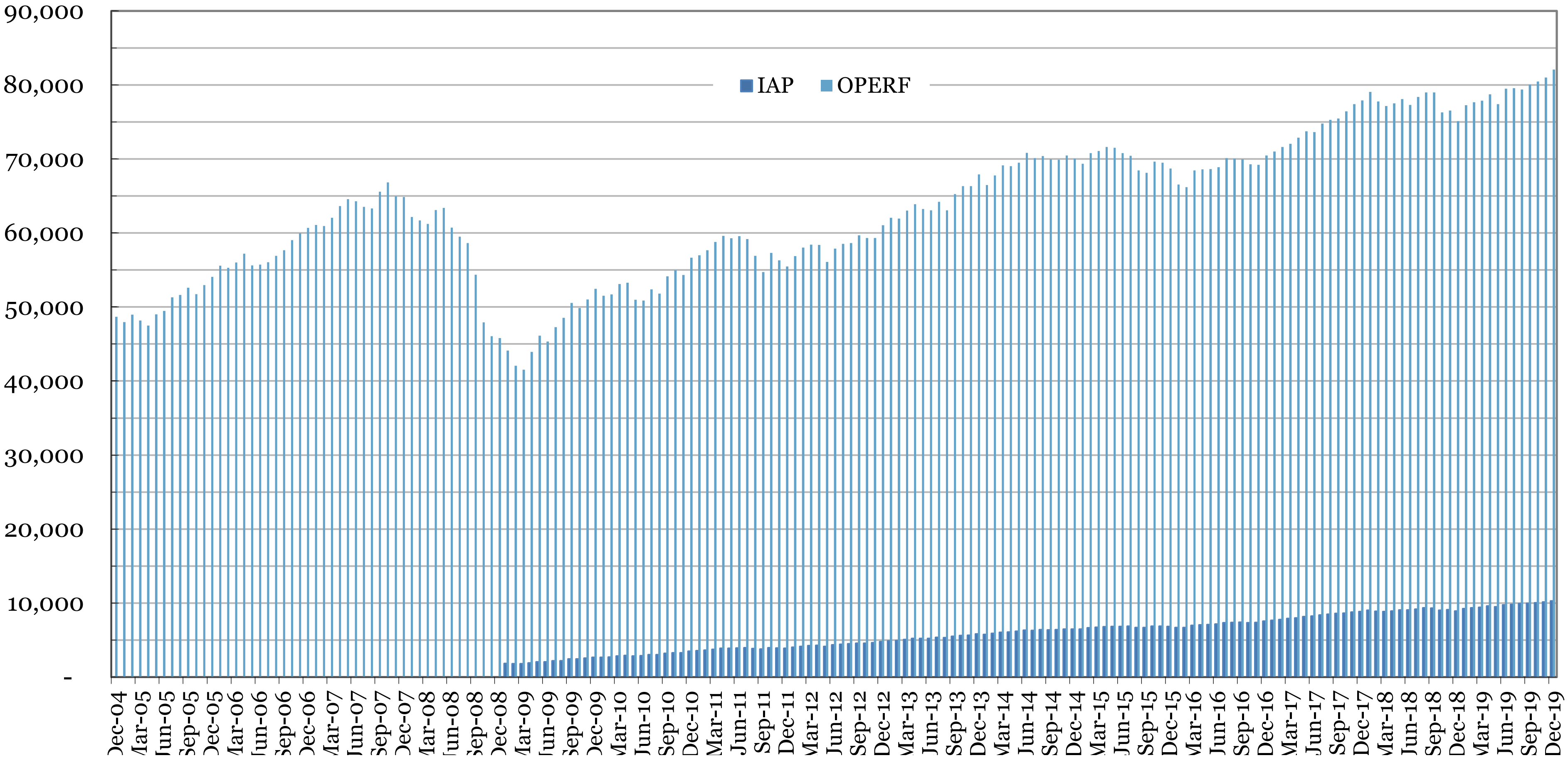
CSF	Policy	Target	$ Thousands	Actual
Global Equities	40-50%	45.0%	895,191	47.1%
Private Equity	8-12%	10.0%	202,602	10.7%
Total Equity	**58-62%**	**55.0%**	**1,097,793**	**57.8%**
Fixed Income	**25-35%**	**25.0%**	**487,915**	**25.7%**
Real Estate	**8-12%**	**10.0%**	**128,802**	**6.8%**
Alternative Investments	**8-12%**	**10.0%**	**119,813**	**6.3%**
Cash	**0-3%**	**0.0%**	**66,249**	**3.5%**
TOTAL CSF			**$ 1,900,572**	**100.0%**


OPERF Asset Allocation
40%
35%
30%
25%
20%
15%
10%
5%
0%
32.5%
34.6%
17.5%
21.9%
0.0%
2.2%
20.0%
20.4%
2.5%
0.0%
12.5%
11.0%
15.0%
9.7%
0.0%
0.1%
Public Equity
Private Equity
Opportunity Portfolio
Fixed Income
Risk Parity
Real Estate
Alternative Investments
Cash
Target
Actual

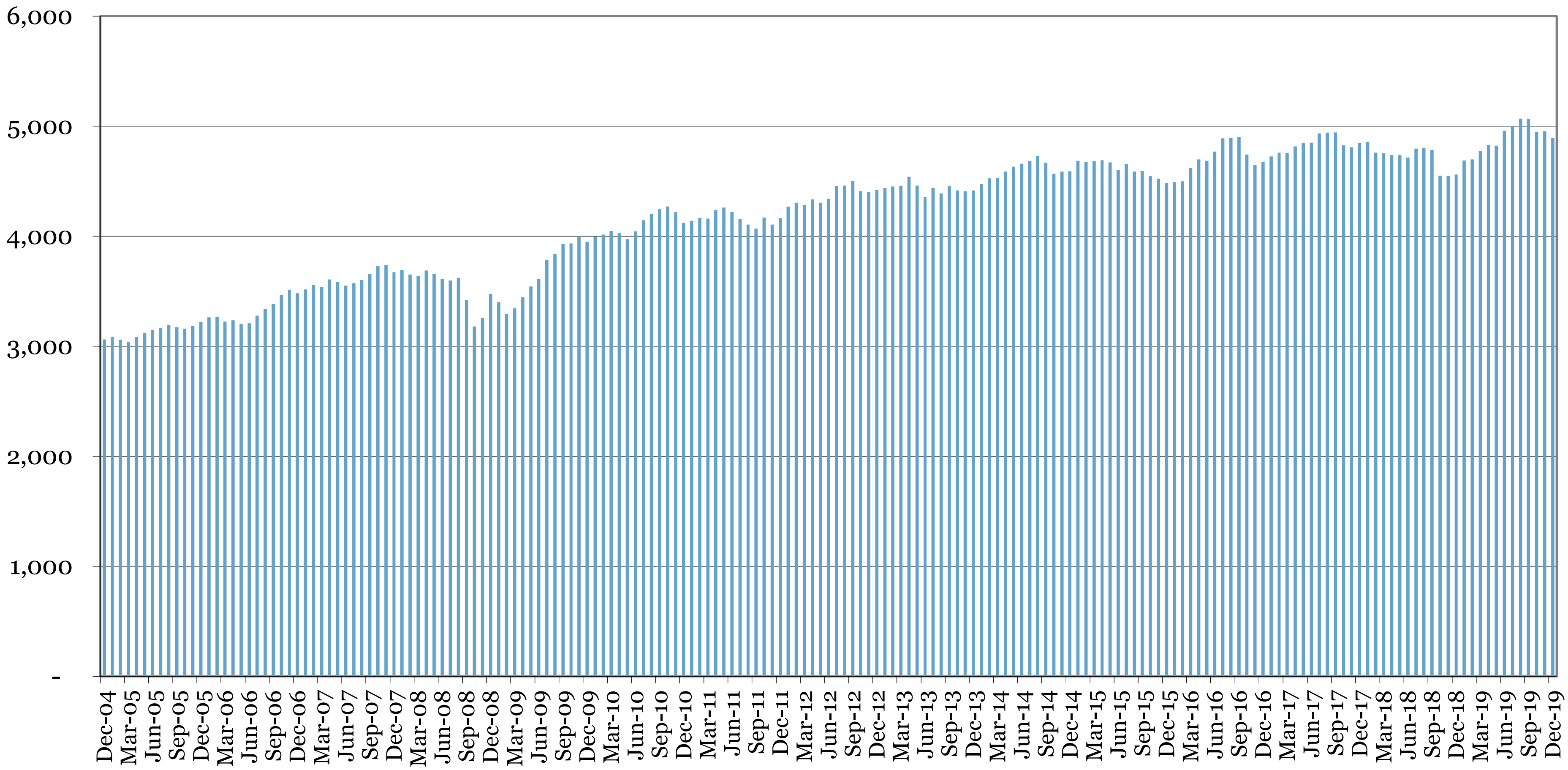

SAIF Asset Allocation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
10.0%
10.1%
85.0%
87.6%
5.0%
1.2%
0.0%
1.1%
Total Equity
Fixed Income
Real Estate
Cash
Target
Actual

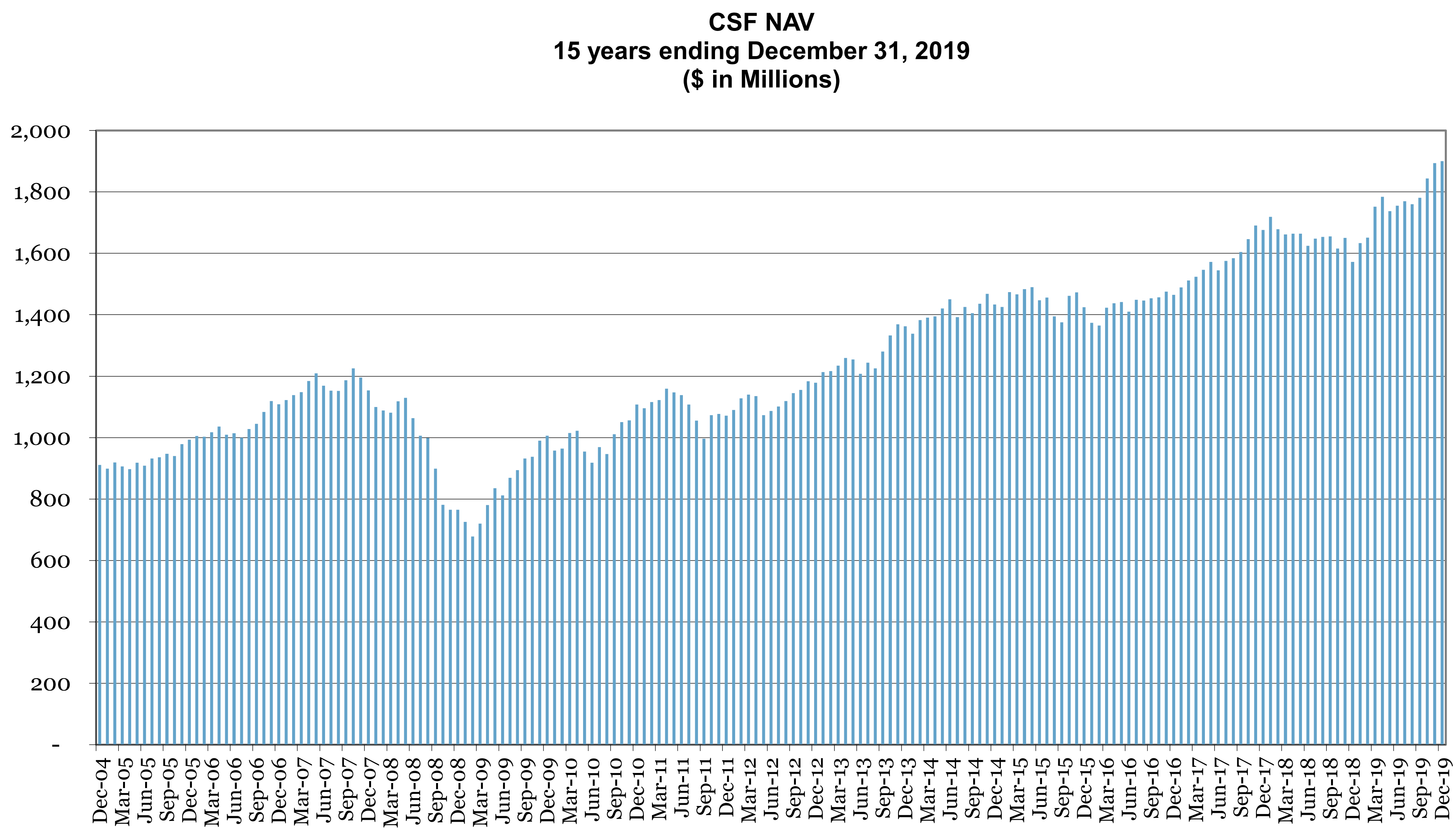

CSF Asset Allocation
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
45.0%
47.1%
10.0%
10.7%
25.0%
25.7%
10.0%
6.8%
10.0%
6.3%
0.0%
3.5%
Global Equities
Private Equity
Fixed Income
Real Estate
Alternative Investments
Cash
Target
Actual

OPERF NAV
15 years ending December 31, 2019
($ in Millions)



SAIF NAV
15 years ending December 31, 2019
($ in Millions)




CSF NAV
15 years ending December 31, 2019
($ in Millions)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
-
Dec-04
Mar-05
Jun-05
Sep-05
Dec-05
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
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Jun-19
Sep-19
Dec-19

TAB 13 – Calendar — Future Agenda Items

2020/21 OIC Forward Calendar and Planned Agenda Topics

March 11, 2020	Alternatives Manager Recommendation CSF Annual Review Real Estate Portfolio Review Q4 2019 Performance & Risk Report
April 22, 2020	Asset Allocation & Capital Market Assumptions Update SAIF Annual Review Real Estate Consultant Recommendation Overlay Review
June 3, 2020	Alternatives Portfolio Review Securities Lending Update Q1 Performance & Risk Report Operations Update
September 9, 2020	Opportunity Portfolio Review OSGP Annual Review Corporate Governance Update Q2 Performance & Risk Report
October 28, 2020	Currency Overlay Review ESG Update Public Equity Program Review
December 9, 2020	Fixed Income Program Review Q3 Performance & Risk Report Policy Updates
January, 2021	2022 OIC Calendar Approval Private Equity Program Review Placement Agent Report IAP Update