



Alameda County Employees' Retirement Association
BOARD OF RETIREMENT

INVESTMENT COMMITTEE/BOARD MEETING

ACERA MISSION:

To provide ACERA members and employers with flexible, cost-effective, participant-oriented benefits through prudent investment management and superior member services.

Wednesday, January 8, 2020
 9:30 a.m.

LOCATION	COMMITTEE MEMBERS	
ACERA C.G. "BUD" QUIST BOARD ROOM 475 14 TH STREET, 10 TH FLOOR OAKLAND, CALIFORNIA 94612-1900 MAIN LINE: 510.628.3000 FAX: 510.268.9574	ELIZABETH ROGERS, CHAIR	ELECTED GENERAL
	TARRELL GAMBLE, VICE CHAIR	APPOINTED
	DALE AMARAL	ELECTED SAFETY
	OPHELIA BASGAL	APPOINTED
	KEITH CARSON	APPOINTED
	JAIME GODFREY	APPOINTED
	LIZ KOPPENHAVER	ELECTED RETIRED
	HENRY LEVY	TREASURER
	GEORGE WOOD	ELECTED GENERAL
	NANCY REILLY	ALTERNATE RETIRED ¹
	DARRYL L. WALKER	ALTERNATE SAFETY ²

Should a quorum of the Board attend this meeting, this meeting shall be deemed a joint meeting of the Board and Committee. The order of agenda items is subject to change without notice. Board and Committee agendas and minutes are available online at www.acera.org.

Note regarding public comments: Public comments are limited to four (4) minutes per person in total.

Note regarding accommodations: The Board of Retirement will provide reasonable accommodations for persons with special needs of accessibility who plan to attend Board meetings. Please contact ACERA at (510) 628-3000 to arrange for accommodation.

¹ Alternate Retired Member (Votes in the absence of the Elected Retired Member, or, if the Elected Retired Member is present, then votes if both Elected General Members, or the Elected Safety Member and an Elected General Member, are absent.

² Alternate Safety Member (Votes in the absence of (1) the Elected Safety, (2) either of the two Elected General Members, or (3) both the Retired and Alternate Retired Members).

INVESTMENT COMMITTEE/BOARD MEETING

NOTICE and AGENDA, Page 2 of 2 – Wednesday, January 8, 2020

Call to Order: 9:30 a.m.

Public Input (Time Limit: 4 minutes per speaker)

Action Items: Matters for discussion and possible motion by the Committee

1. Discussion of and Possible Motion to Recommend that the Board Authorize Staff to Negotiate an Extension of the Custody Contract with State Street Bank and Trust Company

9:30 – 10:15 Thomas Taylor, ACERA
Betty Tse, ACERA

2. Discussion of and Possible Motion to Recommend to the Board to approve the Short List of candidates for ACERA's Large Cap Value Manager Search

10:15 – 11:00 Margaret Jadallah, Verus Advisory Inc.
Thomas Taylor, ACERA
Betty Tse, ACERA

Information Items: These items are not presented for Committee action but consist of status updates and cyclical reports

1. Education Session: Cash Overlay

Margaret Jadallah, Verus Advisory Inc.
Thomas Taylor, ACERA
Betty Tse, ACERA

2. Proposed Investment Committee Workplan 2020

Agnes Ducanes, ACERA
Betty Tse, ACERA

Trustee Remarks

Future Discussion Items

Establishment of Next Meeting Date

February 19, 2020 at 9:30 a.m.



ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14th Street, Suite 1000, Oakland, CA 94612 800/838-1932 510/628-3000 fax: 510/268-9574 www.acera.org

TO: Members of the Investment Committee

FROM: Betty Tse, Chief Investment Officer *B.Tse*
 Margo Allen, Fiscal Services Officer *MA*

DATE: January 8, 2020

SUBJECT: Discussion of and Possible Motion to Recommend that the Board Authorize Staff to Negotiate an Extension of the Custody Contract with State Street Bank and Trust Company

Recommendation:

Staff recommends that the Board authorize it to negotiate an extension of the Amended and Restated Custody Contract between ACERA and State Street Bank and Trust Company (“SSB”) dated August 8, 2012, as amended.

Background:

In April 1999, the ACERA Board of Trustees (“Board”) retained SSB as its custodian bank. Since then, ACERA has amended and extended the Custody Contract on a regular basis, each time after a thorough review of its relationship with SSB to ensure that its custodial services continue to meet or exceed expectations (see below).

Discussion:

At the December 11, 2019 ICM, the Committee and Staff reviewed SSB’s service improvements and discussed the recently implemented Service Level Document (SLD). Staff discussed the various options available with the Committee, but in the end recommended that ACERA extend its custody contract with SSB, given the improved level of service demonstrated in the last year.

In summary, Staff believes that a contract extension would be beneficial to ACERA for the following reasons:

- A. Staff is satisfied with the improved level of SSB’s over-all custodian services after its recent review presented at the December 11, 2019 ICM. The SLD now sets clear expectations regarding the scope of ongoing services.
- B. SSB continues to be in good standing with ACERA, its consultants and investment managers for the services it furnishes and for its compliance reporting.


- C. The current contract is satisfactory to ACERA and contains some favorable terms including a fee schedule dated back in 2012, and is the product of extensive negotiations previously undertaken by both in-house and external counsels.
- D. The contract currently contains a flat annual fee¹. By extending the contract, staff hopes to be able to lock in the current competitive flat fee for a longer period.
- F. ACERA's General Investment Consultant, Verus Advisory, concurs that a Contract extension would be advantageous under the circumstances presented.

Conclusion:

Staff believes that SSB has fulfilled its obligations to ACERA with improved service quality since last year's review. Staff expects that SSB will continue to strive for further improvement in the effectiveness, efficiency, and timeliness of its over-all services to ACERA and to ACERA's investment managers. If approved by the Board, any contract extension would be subject to legal due diligence and successful contract negotiations.

¹ Under the current custody contract, ACERA pays SSB a flat \$ \$500,000 per year. Additionally, ACERA pays approximately \$45,650 per year to keep record of private placements and open real estate funds. As the Total Fund continues to grow, staff anticipates making more commitments to private placements.



To: Members of the Investment Committee
Date: January 8, 2020
From: Betty Tse, Chief Investment Officer 
Subject: Discussion of and Possible Motion to Recommend to the Board to Approve the Short List of Candidates for ACERA's Large Cap Value Manager Search

Recommendation

Staff recommends that the Investment Committee select the following U.S. Large Cap Value Equity Managers (candidates) to be included in the short-list of candidates for further review and evaluation by ACERA. Staff and Verus are recommending three finalists listed below in alphabetical order.

- Aristotle Capital Management, LLC (U.S. Large Cap Value)
- Eagle Capital Management, LLC (U.S. Large Cap Value)
- Wellington Management LLP (Select Equity Income)

Background

At the August 14, 2019 ICM, Staff and Verus outlined and recommended a plan to prepare a focus-list approach to select qualified candidates, including ACERA's incumbent manager, for the Large Cap Value search. The Board of Retirement authorized a search for a U.S. Large Cap Value Equity manager¹ at the August 15, 2019 Board Meeting.

To prepare a focus-list, Staff and Verus discussed and applied a pre-defined quantitative screening process – such as relative long-term performance vs. the benchmark, to narrow the universe of U.S. Large Cap Value managers to a list of 18 consistent strong performing candidates that meet the Minimum Qualifications and are suitable for ACERA (see Attachment #1). Subsequently, Staff issued a questionnaire to 18 selected candidates of which ACERA received 14 responses to the questionnaire. Pzena, ACERA's incumbent manager, was included as one of the 14 responses reviewed.

Discussion

Initial Process: Upon receipt of the responses, Staff and Verus verified that all 14 responding candidates met the Board-adopted Minimum Qualifications. Subsequently, Staff and Verus independently scored each candidate utilizing the Board-adopted Evaluation Matrix (please see attachment #2). Separately, in the category of Performance & Risk in the Evaluation Matrix, and under the sub-category fields of 1) Consistency-Beating-Benchmark, 2) Peer-Group-Rankings, and 3) Risk, Staff and Verus scored quantitatively for consistency. For example, when calculating Consistency-Beating-Benchmark, the

¹ The manager structure for ACERA's large cap value allocation is 5% of the U.S. equity asset class.

three-year rolling average returns were ranked by quartiles and then scored, accordingly. The scores generated for each of the 14 candidates were averaged to determine the rankings (See Attachment #3).

Evaluation Matrix (see attachment #2): Staff used the criteria adopted by the Board to evaluate the responses that could best meet ACERA’s needs. In general, Staff sought to find active managers that could produce on a consistent and sustainable basis. Investment management companies that exhibited a clearly defined investment process, research capabilities, and well-defined roles and responsibilities seem to exhibit better performance numbers.

Evaluation and Scoring of Responses²: The scores from Staff and Verus were averaged together to produce rankings for each candidate. The candidates with the highest average scores are presented in the table below. For the complete list and rankings, please see Attachment #3.

<i>(out of 100)</i>	Proposed Finalists		
	Staff	Verus	Average
Aristotle Capital Management	79.25	80.0	79.63
Eagle Capital Management	81.0	79.0	80.0
Wellington Management	79.25	79.0	79.13

These three managers demonstrated superior strength across the three major categories of Organization (Structure), Investment Team (Strategy, Experience, Research), and Performance and Risk, when compared to the other respondents. Responses to the questionnaire revealed an ability to achieve consistent and repeatable excess returns as measured by the frequency of their relative outperformance to the benchmark, Sharpe Ratio, and other metrics stated in the endnote. Additionally, the firms exhibited well-defined investment process, resources, roles, and expertise to manage money in the U.S. Large Cap Value equity markets. For scoring details, please see Attachments #3 and #4.

Fee Schedule Proposals: All top three candidates for ACERA’s U.S. Large Cap Value Equity search provided a fee proposal for the mandate in question. The following table provides the fee proposal submitted from each candidate:

Manager	Fee Proposal³
Aristotle Capital Management	\$557,500
Eagle Capital Management	\$987,500
Wellington Management	\$557,500

Summary of Managers Chosen for Finalist List: Below is a brief summary of the three candidates proposed for the short list for further evaluation, on-site interviews, additional due diligence, and reference checks.

² RFP responses are dated as of 6/30/19; performance numbers and risk-adjust returns were updated to 9/30/2019

³ Fee proposals are based on a Large Cap Value allocation of \$130,000,000.00.

Aristotle Capital Management

The history of Aristotle Capital Management LLC dates back to 1997 when Howard Gleicher co-founded Metropolitan West Capital Management with four other individuals. In 2008, MetWest Capital was acquired by Wells Fargo Bank. Subsequently, Aristotle Capital was founded in 2010 (separate from Wells Fargo) and is a S.E.C. Registered Investment Adviser. Headquartered in Los Angeles, California, Aristotle Capital is 100% employee-owned with 29 employees having equity interest. As of December 2018, Aristotle Capital had \$15.5 billion in total assets under management (AUM); their proposed strategy, U.S. Value Equity, had \$13.9 billion in AUM. This strategy generated approximately 72% of the firm's consolidated revenues in 2018. The 17-member investment team, led by Howard Gleicher and Gregory Padilla, CIO-PM and Principal-PM, respectively, consists of individuals who conduct research, manage portfolios, and provide oversight of the client guidelines. All members of the research team are global research analysts and conduct bottom-up, fundamental company research across the Value Equity, International Equity, and Global Equity strategies.

Eagle Capital Management

Eagle Capital Management was formed in August 1988 by co-founders, Ravenel Curry and his wife Elizabeth Curry. In 1995, the organizational structure of the firm changed to a Limited Liability Company. Eagle Capital, headquartered in New York City, New York, is a S.E.C. Registered Investment Adviser. Unlike the other firms in this focused-list, Eagle Capital offers one strategy, the Eagle Equity portfolio, which it has been managing since its inception. Eagle has approximately \$29.5 billion in the strategy (and Total AUM). Eagle Capital is 100% employee-owned; however, Ravenel Curry, in his capacity as a managing director of Eagle and the executor of his late wife's estate, controls over 50% of Eagle. Over time, ownership has been and will be more widely distributed among firm employees as employees who have added value to the firm are made partners. Eagle Capital has 37 employees; the investment team consists of one CIO (Ravenel Curry), three deputy CIOs (Ravenel's son, Boykin Curry, Adrian Meli, and Alec Henry), three research analysts, and three traders.

Wellington Management

Founded in 1928, Wellington Management Company is a Delaware Limited Liability Partnership, based out of Boston Massachusetts and has a long history in the investment management business worldwide. Wellington is a S.E.C. Registered Investment Adviser. Wellington manages \$1.1 trillion in total AUM, \$323.7 million in the strategy AUM. The Select Equity Income team (8) is composed of one Equity Portfolio Manager (Michael Reckmeyer), three Equity PMs/Analysts, and four Equity Research Analysts. Proprietary research is the most significant factor in the investment process at Wellington Management. The team conducts bottom-up fundamental equity research on companies within their assigned industries and leverage the firms broad resource base which includes global industry analysts, credit and technical analysts, macro strategists, traders, and other value-oriented portfolio managers and analysts at the firm. They consider their ability to make independent evaluations and to establish its own research priorities central to their ability to identify investment opportunities for clients. Wellington is a 100% employee-owned private company with no one-employee controlling more than 5%.

Next Steps:

Upon approval of this recommendation, Staff will proceed to the next steps for each short-list candidate, which include:

1. Site visits to each finalist's headquarters
2. Additional due diligence
3. Reference checks
4. Recommend finalist(s) to the Investment Committee

Conclusion:

Based on Staff's and Verus' review and scoring of the questionnaire responses, it is recommended that the Investment Committee recommend to the Board of Retirement the following fund managers for further review and evaluation:

- Aristotle Capital Management, LLC
- Eagle Capital Management, LLC
- Wellington Management LLP

Attachments:

1. Board Approved Minimum Qualifications for Large Cap Value Manager Search
2. Evaluation Matrix – U.S. Large Cap Value Manager Search
3. Scoring Summary – U.S. Large Cap Value Manager Search
4. Staff and Verus Scoring Detail – U.S. Large Cap Value Manager Search
5. Verus Advisory, Inc. Memo

ACERA – U.S. LARGE CAP VALUE MANAGER SEARCH

Minimum Qualifications

1. The Firm must agree to act as a fiduciary to ACERA.
2. The Firm must be registered as an investment adviser under the Investment Advisers Act of 1940, a bank (as defined in that Act) or an insurance company qualified to perform investment management services under state law in more than one state, including the State of California.
3. ACERA's investment portfolio (or account) should not comprise more than 25% of the Firm's total assets under management at any time in accordance with the General Investment Guidelines, Policies and Procedures.
4. The Firm must be directly responsible for the management of the account, and all personnel responsible for the account must be employees of the Firm or a legal joint venture partner.
5. The Firm must have a minimum five-year, continuous performance history managing the U.S Large Cap Value product for institutional investors by the existing portfolio manager or portfolio manager team. The performance history must be real time (i.e. not simulated or back-tested) and in compliance with CFA Institute (CFAI) Global Investment Performance Standards (GIPS).
6. The U.S Large Cap Value product must be benchmarked against the Russell 1000 Value Index.
7. The Firm must be able to provide monthly GIPS-compliant performance reports to ACERA, its General Consultant, and its Custodian Bank.
8. The Firm must be able to provide a minimum of weekly liquidity.
9. The Firm should carry the following minimum insurance coverage or should apply for it by contract execution¹:
 - a. Commercial General Liability – \$4,000,000
 - b. Crime Coverage
 - i. Employee Dishonesty Coverage - \$10,000,000
 - ii. Computer Theft Coverage - \$1,000,000
 - c. Error and Omissions (Professional Liability) - \$10,000,000
 - d. Fiduciary Liability - \$25,000,000, or 10% of the total assets managed in the ACERA account, whichever is higher, unless the proposed contract specifies otherwise
 - e. Workers' Compensation and Employer's Liability - \$1,000,000
10. Attend ACERA's Investment Committee Meetings as needed.
11. The Firm must be willing to allow ACERA to review the latest 3-5 years of the firm's audited financial statements. In-office reviews are acceptable.
12. Once selected by ACERA as the finalist Firm, the Firm must consent to a background investigation of the investment management firm and key individuals.

¹ Subject to change upon final contract negotiation.

ACERA – U.S. LARGE CAP VALUE MANAGER SEARCH**Recommended Evaluation Matrix**

The following is the proposed evaluation matrix for a U.S. Large Cap Value manager search.

- | | |
|--|------------------|
| A. Organization | 25 Points |
| 1. History | |
| 2. Ownership, Organization, and Staffing | |
| 3. Compliance | |
| 4. Client Service | |
| B. Investment Team | 30 Points |
| 1. Strategy | |
| i. Philosophy | |
| ii. Process | |
| 2. Experience | |
| 3. Research Capabilities | |
| 4. Trading/Operations | |
| 5. Other Resources | |
| C. Performance and Risk | 35 Points |
| 1. Consistency Beating Benchmark | |
| 2. Peer Group Ranking | |
| 3. Risk (to benchmark/tracking error, upside/downside) | |
| 4. Risk-Adjusted Returns | |
| 5. Risk Management | |
| D. Proposed Fee Schedule/Structure | 10 Points |

Combined Scores	Rank	Organization	Investment Team	Performance & Risk	Fees	Totals
		<i>Sub-Total (25 pts)</i>	<i>Sub-Total (30 pts)</i>	<i>Sub-Total (35 pts)</i>	<i>Sub-Total (10 pts)</i>	<i>Totals (100 pts)</i>
American Century	10	19.5	22.5	23	6	71.0
Aristotle	2	22.1	27.5	26	4	79.6
Columbia	6	17.5	22	29	6	74.5
Eagle	1	21.5	27.5	29	2	80.0
Manning & Napier	11	17.5	19.25	26	8	70.8
Mellon	13	19.8	21.5	16	8	65.3
Pimco	9	19.9	22.5	29	2	73.4
Pzena	14	20.1	26	11	2	59.1
Sterling	7	16.8	25.5	28	4	74.3
T. Rowe Price	12	20.6	27.5	13	6	67.1
The London Company	8	21.1	26.5	22	4	73.6
Wellington	3	20.1	28	27	4	79.1
Westwood	4	18.5	25.25	27	6	76.8
WF MetWest	5	18.5	23.75	25	8	75.3

ACERA	Rank	Organization	Investment Team	Performance & Risk	Fees	Totals
		<i>Sub-Total (25 pts)</i>	<i>Sub-Total (30 pts)</i>	<i>Sub-Total (35 pts)</i>	<i>Sub-Total (10 pts)</i>	<i>Totals (100 pts)</i>
American Century	10	19	23	23	6	71.0
Aristotle	2	22.25	27	26	4	79.3
Columbia	5	17	24	29	6	76.0
Eagle	1	21	29	29	2	81.0
Manning & Napier	9	18	19.5	26	8	71.5
Mellon	12	19.5	22	16	8	65.5
Pimco	11	17.75	22	29	2	70.8
Pzena	14	18.25	24	11	2	55.3
Sterling	6	16.5	27	28	4	75.5
T. Rowe Price	13	18.25	26	13	6	63.3
The London Company	8	21.25	26	22	4	73.3
Wellington	3	19.25	29	27	4	79.3
Westwood	4	19	24.5	27	6	76.5
WF MetWest	7	19	22.5	25	8	74.5

VERUS ADVISORY						
American Century	10	20	22	23	6	71.0
Aristotle	1	22	28	26	4	80.0
Columbia	8	18	20	29	6	73.0
Eagle	2	22	26	29	2	79.0
Manning & Napier	12	17	19	26	8	70.0
Mellon	13	20	21	16	8	65.0
Pimco	5	22	23	29	2	76.0
Pzena	14	22	28	11	2	63.0
Sterling	9	17	24	28	4	73.0
T. Rowe Price	11	23	29	13	6	71.0
The London Company	7	21	27	22	4	74.0
Wellington	3	21	27	27	4	79.0
Westwood	4	18	26	27	6	77.0
WF MetWest	6	18	25	25	8	76.0

Prepared by Investment Staff

ICM 1/8/2020

Memorandum

To: ACERA Investment Committee
From: Verus
Date: January 8, 2020
RE: U.S. Large Cap Value Equity Search Process and Short List

Executive Summary

A questionnaire for a U.S. Large Cap Value Equity manager was issued to a pre-screened, focused list of 18 potential managers on September 17, 2019. Prospective managers were asked to submit proposals by October 18, 2019. ACERA received 14 questionnaires; four managers did not submit a response. Upon receipt of the questionnaires, Verus and Staff followed the process outlined below in order to create a finalist list of three managers best suited for the mandate based on Verus and Staff analysis.

Initial Manager Identification

Verus and Staff discussed potential screens in order to produce a competitive list of large cap value managers that met ACERA's minimum qualifications as approved by the ICM in August. Upon mutual agreement of the criteria, Verus screened the universe for the following criteria to come up with a list of 18 managers that would be issued a questionnaire.

- Competitive rolling 3-year returns versus the Russell 1000 Value;
- Competitive rolling 3-year return versus the peer median;
- Competitive and consistent 3 and 5-year batting averages versus median;
- Competitive and consistent 3 and 5-year information ratios versus median;
- Competitive and consistent 3 and 5-year Sharpe Ratios versus median;
- ACERAs portfolio would not comprise more than 25% of the Firm's total; and
- Product open to new business in eVestment Alliance database.

After inviting the 18 identified managers, four managers choose not to respond for a variety of reasons, including the product being soft-closed and/or recently reaching capacity constraints.

Manager review

Verus and ACERA Staff independently read and ranked each of the 14 responses based on consistent criteria and percentage weights in the scoring system. Our analysis considered the following:

- Firm History – Are there any issues with the history of the firm or any mergers?
- Ownership – How concentrated is the ownership of the firm, does it cause any risk?
- Compliance – Is compliance independent/ how is it reviewed?
- Client Service – Are there any concerns with client service?
- Strategy – Does the strategy make sense, and have unique characteristics.

- Experience – Depth and experience of portfolio managers/analysts.
- Research Capabilities – Research staff size, tenure, and experience.
- Other Resources – Other considerations not covered by other scoring items.
- Trading/Operations – Are there any concerns with the trading/operations of the firm?
- Consistency beating the benchmark – Compare batting average/ returns to benchmark
- Peer Group Rating – Average or above peer ranking.
- Risk – Compare tracking error and upside/downside capture ratio of candidates.
- Risk Adjusted Returns – Compare information ratio of managers.
- Risk Management – Does the firm have systems in place for risk management?
- Fee – Relative attractiveness of the fee schedule.

Following the independent review, Verus and Staff discussed the pros and cons of potential managers and combined each side’s scoring to come up with a list of three finalists that both Verus and ACERA Staff believe would best fit the mandate.

Recommendation

Verus and ACERA Staff have performed a thorough review of each manager’s questionnaire response. We have jointly identified three managers Aristotle Capital, Eagle Capital, and Wellington as the proposed finalists for the U.S. Large Cap Value mandate. Pzena, ACERA’s current large cap value manager, ranked in the bottom of the submissions on a relative basis, and we do not believe that the firm should be in the finalist group for that reason.

Verus and Staff seek approval to conduct on-site due diligence on Aristotle Capital, Eagle Capital, and Wellington and come back with a recommended finalist for the mandate in February.

Past performance is no guarantee of future results. This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus – also known as Verus Advisory™.



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



January 2020
Large Cap Value Search
ACERA

Manager overview

Manager comparison

	American Century	Aristotle	Columbia	Eagle	Manning & Napier	Mellon	PIMCO
FIRM OWNERSHIP	15% employee, 45% the Stowers family and affiliates, 40% Nomura	100% employee owned	Wholly-owned subsidiary of Ameriprise Financial	100% employee owned	82.5% employee owned; 17.5% publicly held	Wholly owned subsidiary of Bank of New York Mellon Corporation	Wholly owned subsidiary of Allianz Global
FIRM NAME	American Century Investments	Aristotle Capital Management, LLC	Columbia Management Investments	Eagle Capital Management, LLC	Manning & Napier Advisors, LLC	Mellon Investments Corporation	PIMCO
PRODUCT NAME	U.S. Value Yield	Value Equity	Columbia Dividend Value	Eagle Equity	Disciplined Value - U.S.	Equity Income	PIMCO RAE PLUS
FIRM TOTAL AUM (\$MM)	\$169,259	\$19,557	\$347,672	\$29,472	\$20,473	\$521,104	\$1,878,306
STRATEGY AUM (\$MM)	\$15,271	\$17,223	\$18,972	\$29,472	\$1,069	\$836	\$5,072
INCEPTION DATE	Sep-94	Nov-09	Dec-03	Dec-88	Oct-11	May-98	Jun-05
PREFERRED BENCHMARK	Russell 1000 Value	Russell 1000 Value	Benchmark Agnostic	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value
INVESTMENT APPROACH	Fundamental	Fundamental	Top-Down Bottom-Up	Fundamental	Quantitative	Fundamental	Top-Down Bottom-Up
SCREENING APPROACH	Bottom-Up	Bottom-Up	Combined	Bottom-Up	Top-Down	Bottom-Up	Combined

Manager comparison

	Pzena	Sterling	T. Rowe Price	The London Company	Wellington	Wells Fargo	Westwood
FIRM OWNERSHIP	56% employee owned; 25% publicly held; 29% held by a third party	100% parent owned (BB&T Corp)	17% employee owned; 83% publicly owned (NYSE: TROW)	79% employee owned, 21% Lincoln Peak Capital Management	100% employee owned	100% owned by Wells Fargo Asset Management	Public Company (NYSE: WHG)
FIRM NAME	Pzena Investment Management, LLC	Sterling Capital Management LLC	T. Rowe Price	The London Company of Virginia	Wellington Management Company LLP	Wells Fargo Asset Management	Westwood Management Corp.
PRODUCT NAME	Pzena Large Cap Focused Value	Equity Income	US Value Equity Strategy	Income Equity	Select Equity Income	MetWest Capital Large Cap Intrinsic Value Equity	LargeCap Value
FIRM TOTAL AUM (\$MM)	\$35,766	\$58,031	\$1,126,300	\$25,086	\$1,101,580	\$409,026	\$11,641
STRATEGY AUM (\$MM)	\$3,321	\$2,776	\$45,068	\$18,098	\$862	\$1,162	\$3,258
INCEPTION DATE	Oct-00	Nov-09	Dec-95	Dec-99	May-09	Jan-92	Jan-87
PREFERRED BENCHMARK	Russell 1000 Value	Russell 1000 Value	Benchmark Agnostic	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value
INVESTMENT APPROACH	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental
SCREENING APPROACH	Bottom-Up	Bottom-Up	Bottom-Up	Bottom-Up	Bottom-Up	Bottom-Up	Bottom-Up

Investment vehicle information

	INVESTMENT VEHICLES	EXPENSE RATIO	FEE SCHEDULE	ESTIMATED FEE (\$125 MILLION MANDATE)
American Century	Separate Account	0.38% 0.33%	First \$100 million, Next \$400 million	0.37%
Aristotle	Separate Account	0.50% 0.45% 0.40%	First \$50 million, Next \$50 million, thereafter	0.39%
Columbia	Separate Account	0.39% 0.35% 0.32%	First \$50 million, Next \$50 million, thereafter	0.36%
Eagle	Separate Account	1.00% 0.75%	First \$5 million, thereafter	0.76%
Manning & Napier	Separate Account	0.20%	All assets (\$100 million minimum)	0.20%
Mellon	Separate Account	0.40% 0.30%	First \$50 million, thereafter	0.34%
PIMCO	Separate Account	0.60% 0.55%	First \$150 million, thereafter	0.60%

Investment vehicle information

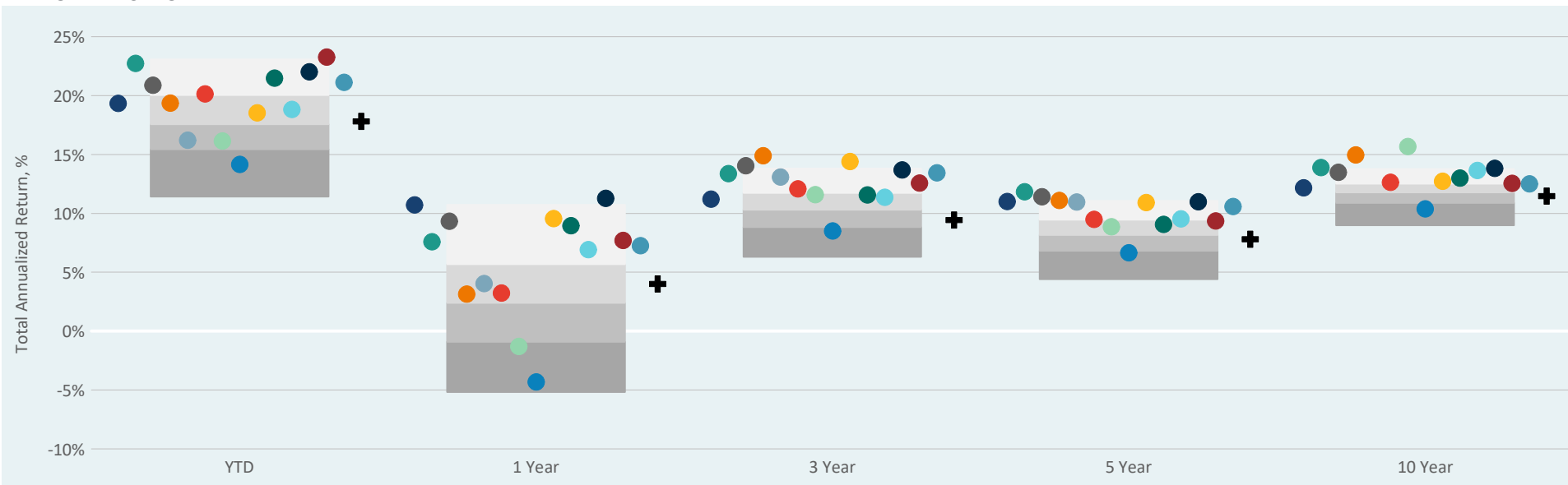
	INVESTMENT VEHICLES	EXPENSE RATIO	FEE SCHEDULE	ESTIMATED FEE (\$125 MILLION MANDATE)
Pzena	Separate Account	0.70% 0.50% 0.40%	First \$25 million, Next \$75 million, Next \$200 million	0.52%
Sterling	Separate Account	0.50% 0.45% 0.40% 0.35%	First \$25 million, Next \$50 million, Next \$25 million, Next \$25 million	0.43%
T. Rowe Price	Separate Account	0.375%	All assets (\$100 million minimum)	0.375%
The London Company	Separate Account	0.50% 0.40% 0.35%	First \$50 million, Next \$50 million, thereafter	0.43%
Wellington	Separate Account	0.50% 0.45% 0.40%	First \$25 million, Next \$25 million, thereafter	0.43%
Wells Fargo	Separate Account	0.30% 0.27%	First \$75 million, Next \$75 million	0.29%
Westwood	Separate Account	0.50% 0.40% 0.35%	First \$50 million, Next \$50 million, thereafter	0.43%

Performance Analysis

Performance comparison - as of September 2019

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ✚ Russell 1000 Value Index

PERFORMANCE TO DATE



EXCESS ANNUALIZED RETURN TO DATE, %	YTD	1 Year	3 Year	5 Year	10 Year
American Century	1.5	6.7	1.8	3.2	0.7
Aristotle	4.9	3.6	4.0	4.1	2.4
Columbia	3.1	5.4	4.6	3.6	2.0
Eagle	1.6	-0.9	5.5	3.3	3.5
Manning & Napier	-1.6	0.0	3.7	3.2	---
Mellon	2.3	-0.8	2.7	1.7	1.2
PIMCO	-1.7	-5.3	2.2	1.1	4.2
Pzena	-3.6	-8.3	-0.9	-1.1	-1.1
Sterling	0.7	5.6	5.0	3.1	1.3
T. Rowe Price	3.7	5.0	2.1	1.3	1.6
The London Company	1.0	2.9	1.9	1.8	2.2
Wellington	4.2	7.3	4.3	3.2	2.4
Wells Fargo	5.5	3.7	3.1	1.6	1.1
Westwood	3.3	3.3	4.0	2.8	1.0

Calendar year performance

ANNUAL PERFORMANCE + RANKING	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
American Century	-19.3	13.3	14.4	4.7	12.6	20.8	13.5	1.6	20.6	14.4	-3.5	19.3
Rank	2	97	55	24	78	99	28	8	9	81	12	31
Aristotle	-36.3	32.5	19.2	-3.2	22.1	30.8	11.6	3.6	17.6	22.7	-8.3	22.7
Rank	59	21	8	79	5	75	55	2	24	6	48	7
Columbia	-27.2	19.3	13.9	7.8	12.0	29.6	13.5	1.3	14.3	21.6	-3.7	20.9
Rank	11	81	62	12	83	82	29	10	57	13	13	17
Eagle	-35.0	34.8	20.8	5.8	17.9	36.7	13.1	2.2	11.0	24.0	-4.3	19.4
Rank	46	16	4	20	26	25	35	7	83	4	17	31
Manning & Napier					10.3	31.3	14.7	-0.3	16.2	23.7	-3.5	16.2
Rank					91	70	15	24	35	5	12	66
Mellon	-33.5	24.1	15.8	-2.7	18.5	38.5	12.3	-1.5	19.7	16.8	-8.9	20.2
Rank	33	58	35	76	20	16	46	38	11	55	56	24
PIMCO	-42.8	58.5	31.4	6.2	27.9	35.9	13.2	-5.7	20.2	20.1	-7.5	16.2
Rank	92	3	1	18	1	30	34	81	10	21	39	67
Pzena	-44.1	38.5	16.3	-5.3	15.8	41.8	11.6	-6.1	23.3	18.2	-16.2	14.2
Rank	93	11	29	88	46	7	56	85	4	39	96	87
Sterling	-25.2	23.2	17.1	9.3	11.2	25.2	5.0	-2.1	16.7	21.7	0.2	18.5
Rank	6	61	20	9	87	95	96	45	32	11	3	40
T. Rowe Price	-39.2	38.3	17.0	-1.2	20.5	38.4	14.3	-1.0	11.8	19.8	-8.8	21.5
Rank	78	12	22	67	9	17	18	31	76	24	54	14
The London Company	-25.1	22.7	14.5	14.8	13.1	27.8	18.2	-0.2	11.7	14.7	-2.3	18.8
Rank	6	64	52	2	72	88	3	23	78	78	8	37
Wellington			17.1	7.4	14.8	32.6	11.6	1.0	16.6	19.9	-6.4	22.0
Rank			20	15	57	57	56	12	33	23	31	10
Wells Fargo	-36.6	32.1	18.9	-1.1	20.4	31.0	11.5	0.1	8.4	16.9	-4.6	23.3
Rank	62	21	9	66	9	73	58	18	93	54	20	4
Westwood	-32.4	14.5	13.7	0.1	16.8	30.7	13.0	0.5	11.8	21.5	-5.3	21.1
Rank	27	95	66	57	38	76	36	16	78	13	24	15
Russell 1000 Value Index	-36.8	19.7	15.5	0.4	17.5	32.5	13.5	-3.8	17.3	13.7	-8.3	17.8
Rank	65	79	39	55	29	58	30	67	25	85	48	49

Performance summary - as of September 2019

	American Century	Aristotle	Columbia	Eagle	Manning & Napier	Mellon	PIMCO	Russell 1000 Value Index
PERFORMANCE ANALYSIS - (5 Years)								
Alpha %	4.8	3.7	4.2	2.8	3.2	0.9	0.4	0.0
Beta	0.7	1.0	0.9	1.1	1.0	1.1	1.1	1.0
R-squared %	91.4	92.7	92.2	87.3	92.9	95.5	96.7	100.0
Sharpe Ratio	1.1	0.9	1.0	0.7	0.8	0.6	0.6	0.6
Treynor Ratio	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Tracking Error %	4.4	3.4	3.4	4.9	3.2	3.2	2.8	0.0
Annualized Std Dev %	8.8	12.6	10.7	13.5	11.9	13.6	13.5	11.9
Information Ratio	0.7	1.1	1.0	0.7	0.9	0.5	0.4	---
Max Drawdown %	-7.5	-13.6	-9.5	-13.6	-10.5	-14.1	-15.0	-11.7
Calmar Ratio	1.5	0.9	1.2	0.8	1.0	0.7	0.6	0.7
Excess Ann. Return %	3.2	4.1	3.6	3.3	3.2	1.7	1.1	0.0
PERFORMANCE TO DATE								
1 Year	10.7	7.6	9.4	3.1	4.0	3.2	-1.3	4.0
3 Year	11.2	13.4	14.1	14.9	13.1	12.1	11.6	9.4
5 Year	11.0	11.8	11.4	11.1	11.0	9.5	8.9	7.8
7 Year	12.0	14.4	13.2	14.2	13.3	13.4	12.7	11.3
10 Year	12.2	13.9	13.5	15.0	---	12.7	15.7	11.5
Common Inception (Oct-11)	13.5	16.1	15.0	15.9	14.7	15.6	16.1	13.6
CALENDAR YEAR RETURNS								
2018	-3.5	-8.3	-3.7	-4.3	-3.5	-8.9	-7.5	-8.3
2017	14.4	22.7	21.6	24.0	23.7	16.8	20.1	13.7
2016	20.6	17.6	14.3	11.0	16.2	19.7	20.2	17.3
2015	1.6	3.6	1.3	2.2	-0.3	-1.5	-5.7	-3.8
2014	13.5	11.6	13.5	13.1	14.7	12.3	13.2	13.5
2013	20.8	30.8	29.6	36.7	31.3	38.5	35.9	32.5
2012	12.6	22.1	12.0	17.9	10.3	18.5	27.9	17.5
2011	4.7	-3.2	7.8	5.8	---	-2.7	6.2	0.4
2010	14.4	19.2	13.9	20.8	---	15.8	31.4	15.5
2009	13.3	32.5	19.3	34.8	---	24.1	58.5	19.7

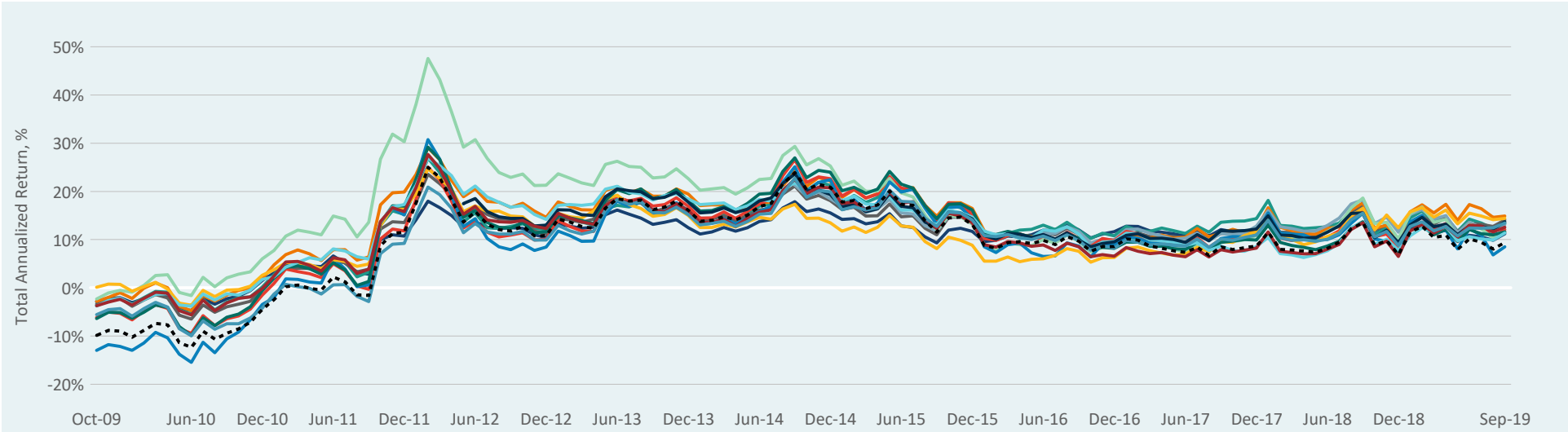
Performance summary - as of September 2019

	Pzena	Sterling	T. Rowe Price	The London Company	Wellington	Wells Fargo	Westwood	Russell 1000 Value Index
PERFORMANCE ANALYSIS - (5 Years)								
Alpha %	-2.6	3.5	1.7	2.6	3.5	1.5	3.3	0.0
Beta	1.3	0.9	0.9	0.8	0.9	1.0	0.9	1.0
R-squared %	88.0	87.5	93.8	88.5	94.1	95.2	93.9	100.0
Sharpe Ratio	0.3	0.8	0.7	0.8	0.9	0.7	0.9	0.6
Treynor Ratio	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Tracking Error %	6.7	4.2	3.0	4.1	2.9	2.7	3.0	0.0
Annualized Std Dev %	16.4	11.8	11.4	10.7	11.2	12.2	10.9	11.9
Information Ratio	-0.1	0.7	0.4	0.4	1.0	0.6	0.9	---
Max Drawdown %	-20.6	-10.7	-12.8	-10.0	-9.8	-12.6	-11.4	-11.7
Calmar Ratio	0.3	1.0	0.7	1.0	1.1	0.7	0.9	0.7
Excess Ann. Return %	-1.1	3.1	1.3	1.8	3.2	1.6	2.8	0.0
PERFORMANCE TO DATE								
1 Year	-4.3	9.6	9.0	6.9	11.3	7.7	7.3	4.0
3 Year	8.5	14.4	11.6	11.4	13.7	12.6	13.4	9.4
5 Year	6.7	10.9	9.1	9.6	11.0	9.4	10.6	7.8
7 Year	11.5	11.8	13.3	12.4	13.6	12.1	13.1	11.3
10 Year	10.4	12.7	13.0	13.7	13.8	12.6	12.5	11.5
Common Inception (Jun-09)	12.4	13.4	14.6	14.6	15.3	13.8	13.4	12.8
CALENDAR YEAR RETURNS								
2018	-16.2	0.2	-8.8	-2.3	-6.4	-4.6	-5.3	-8.3
2017	18.2	21.7	19.8	14.7	19.9	16.9	21.5	13.7
2016	23.3	16.7	11.8	11.7	16.6	8.4	11.8	17.3
2015	-6.1	-2.1	-1.0	-0.2	1.0	0.1	0.5	-3.8
2014	11.6	5.0	14.3	18.2	11.6	11.5	13.0	13.5
2013	41.8	25.2	38.4	27.8	32.6	31.0	30.7	32.5
2012	15.8	11.2	20.5	13.1	14.8	20.4	16.8	17.5
2011	-5.3	9.3	-1.2	14.8	7.4	-1.1	0.1	0.4
2010	16.3	17.1	17.0	14.5	17.1	18.9	13.7	15.5
2009	38.5	23.2	38.3	22.7	---	32.1	14.5	19.7

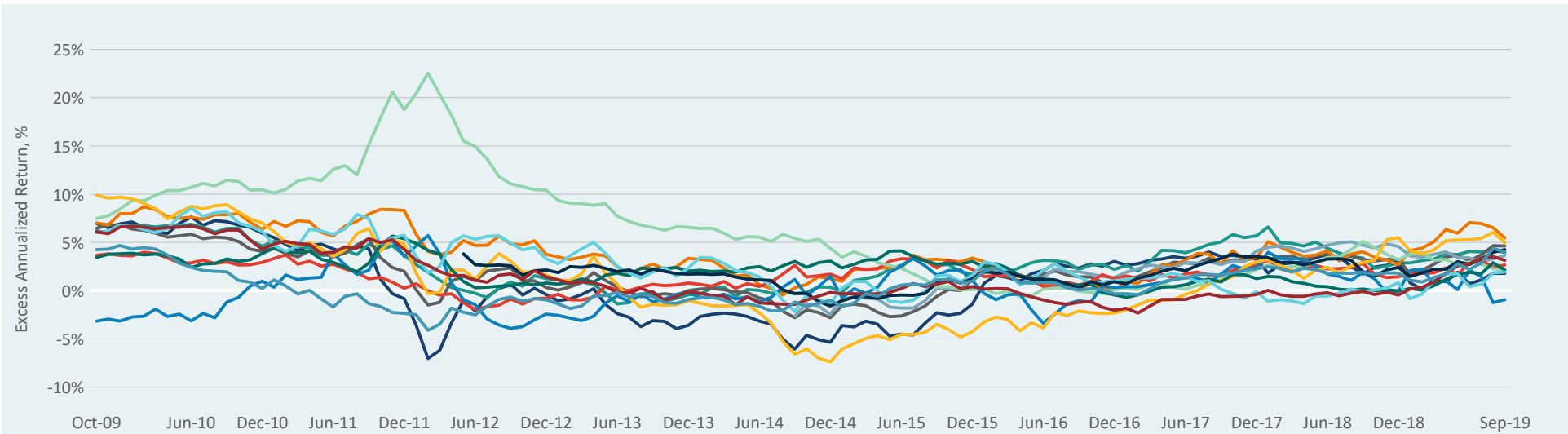
Rolling performance

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ⊕ Russell 1000 Value Index

TOTAL 36 MONTH ROLLING PERFORMANCE



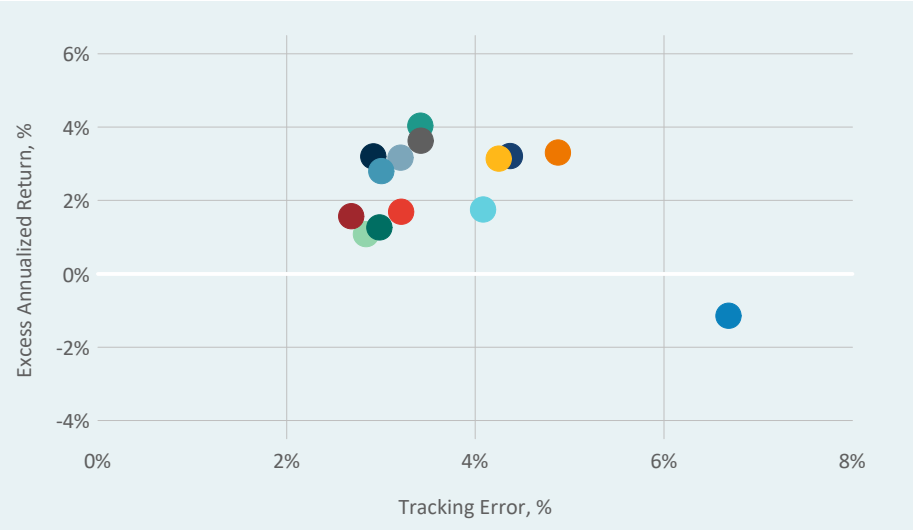
EXCESS 36 MONTH ROLLING PERFORMANCE



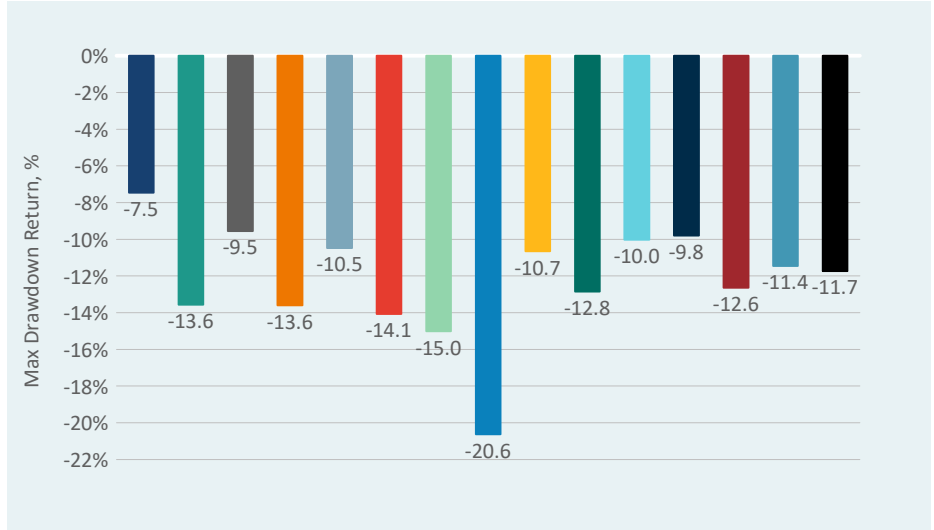
Performance statistics

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ⊕ Russell 1000 Value Index

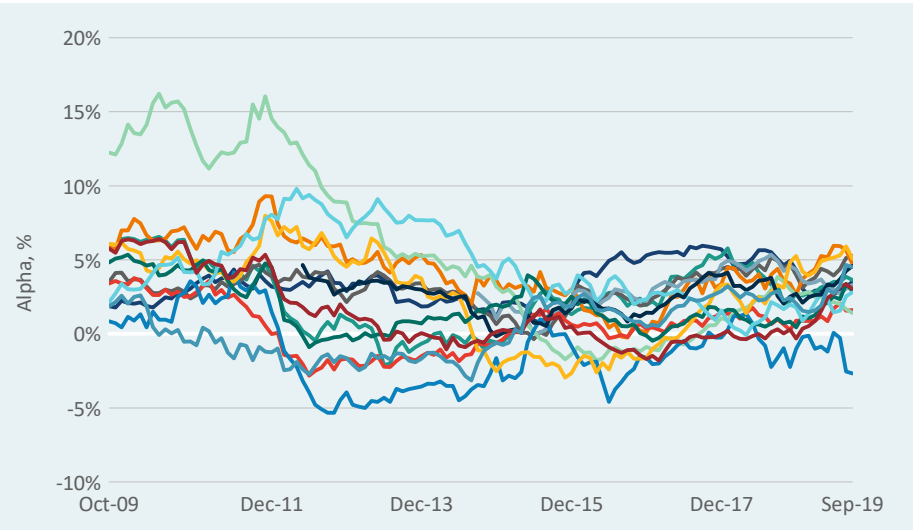
EXCESS PERFORMANCE VS. RISK, OCT-14 TO SEP-19



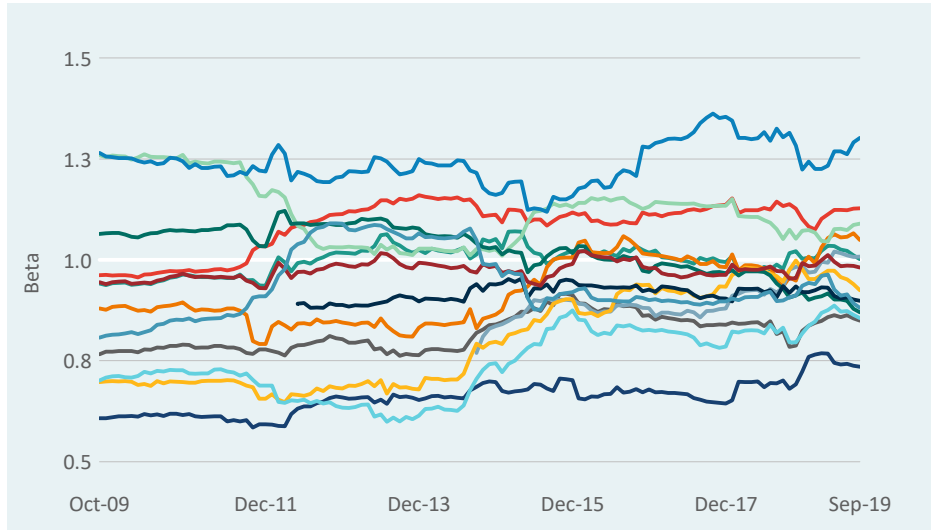
MAX DRAWDOWN RETURN, OCT-14 TO SEP-19



36 MONTH ROLLING ALPHA



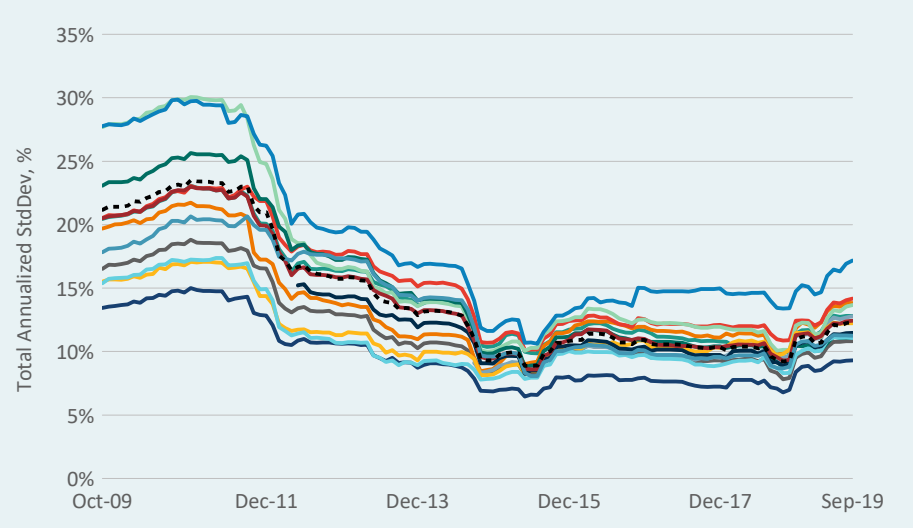
36 MONTH ROLLING BETA



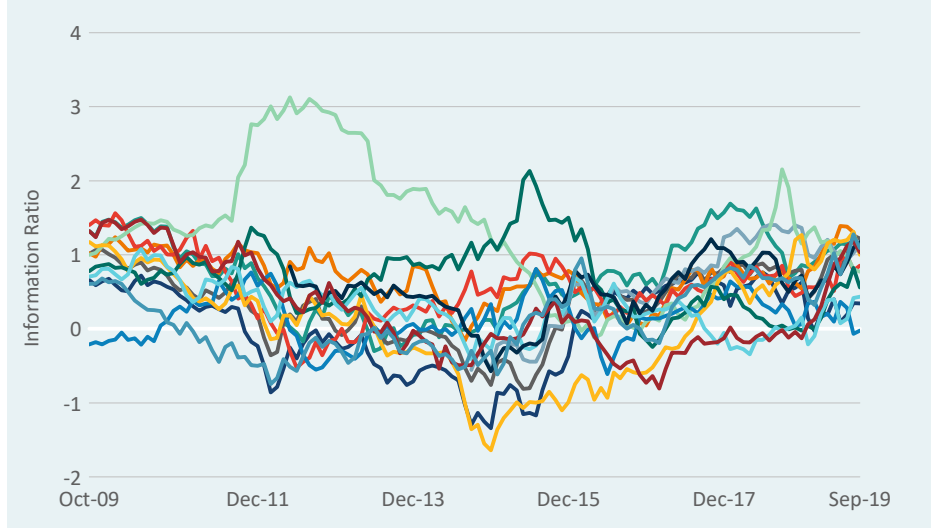
Performance statistics

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ✚ Russell 1000 Value Index

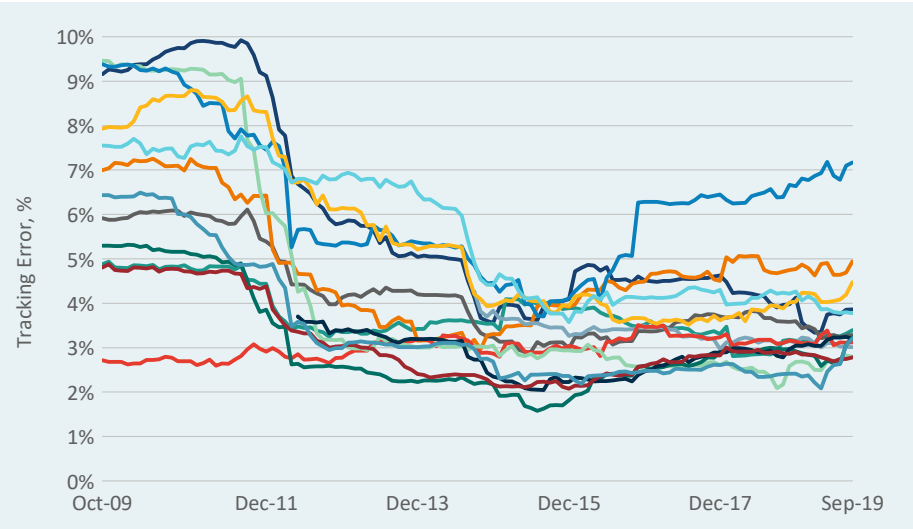
36 MONTH ROLLING RISK



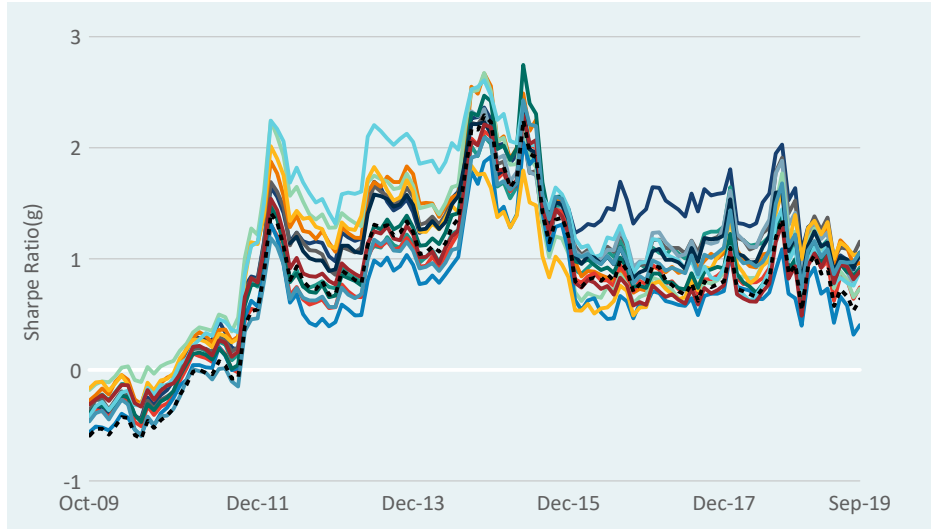
36 MONTH ROLLING INFORMATION RATIO



36 MONTH ROLLING TRACKING ERROR



36 MONTH ROLLING SHARPE RATIO(G)

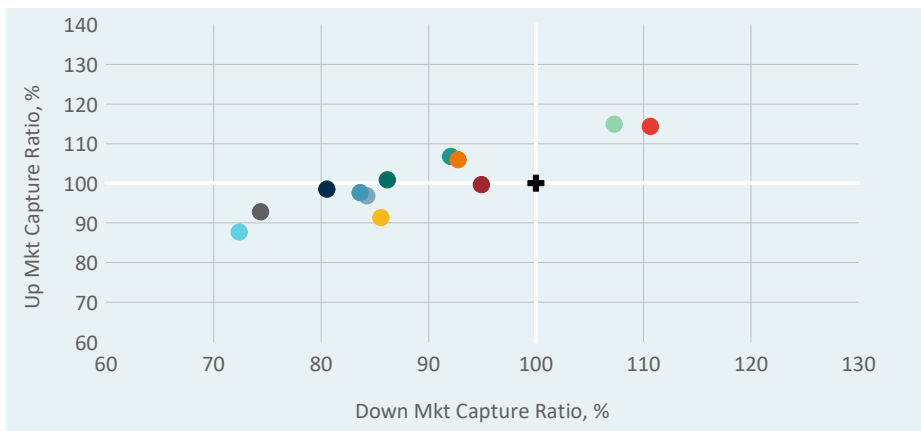


Style Analysis and Portfolio Analytics

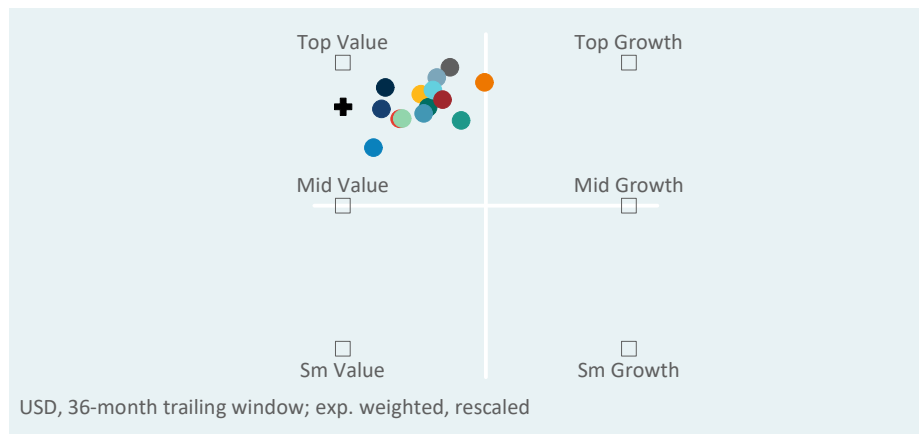
Style and portfolio comparison

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ✚ Russell 1000 Value Index

UP/DOWN MARKET CAPTURE, OCT-11 TO SEP-19



RUSSELL 6 STYLE MAP, SEP-14 TO SEP-19

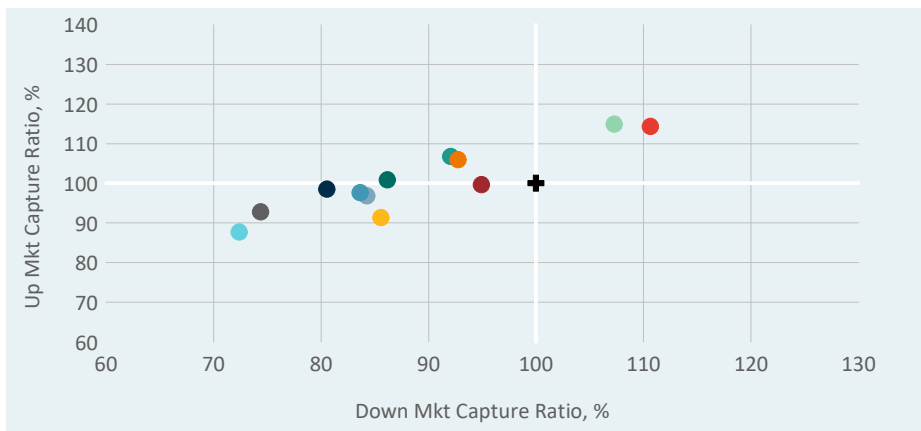


	American Century	Aristotle	Columbia	Eagle	Manning & Napier	Mellon	PIMCO
% HOLDINGS IN 10 LARGEST STOCKS	31.0%	33.1%	26.5%	61.3%	30.3%	32.0%	---
ANNUAL TURNOVER	84.0%	6.4%	8.8%	20.0%	35.3%	52.5%	---
CASH	2.9%	3.4%	3.2%	1.6%	1.8%	1.1%	---
CURRENT DIVIDEND YIELD	2.9%	1.7%	2.7%	1.2%	2.8%	2.5%	2.6%
CURRENT P/E	18.3	22.5	18.2	14.2	16.6	15.8	16.4
CURRENT P/B	2.3	4.9	3.0	2.2	3.0	1.8	2.0
PORTFOLIO HOLDINGS	108	42	82	29	88	71	766
WGTD. AVG. MKT. CAP	\$ 130,587	\$ 130,068	\$ 190,898	\$ 327,000	\$ 138,308	\$ 115,020	\$ 111,009
MAX CASH POSITION	3.0	5.0	10.0	10.0	3.0	5.0	---
MAX POSITION SIZE	5.0	6.0	3.0	10.0	5.0	5.0	---
DEV. MKTS.	0	0	0	0	0	0	0

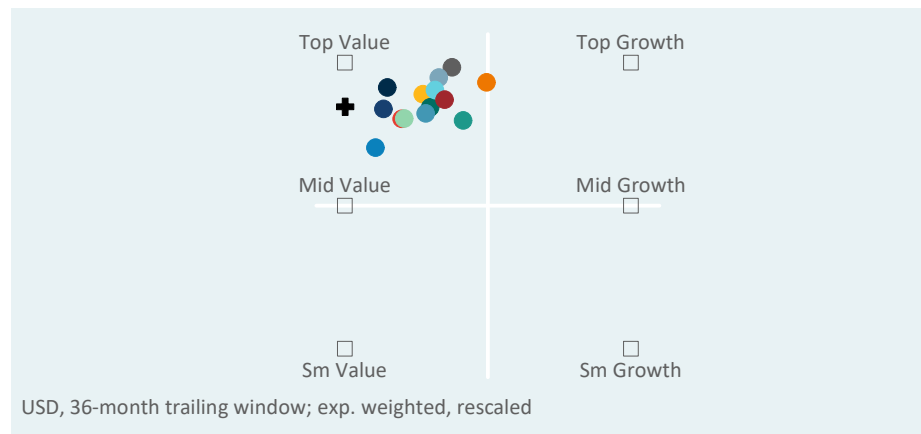
Style and portfolio comparison

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ✚ Russell 1000 Value Index

UP/DOWN MARKET CAPTURE, OCT-11 TO SEP-19



RUSSELL 6 STYLE MAP, SEP-14 TO SEP-19

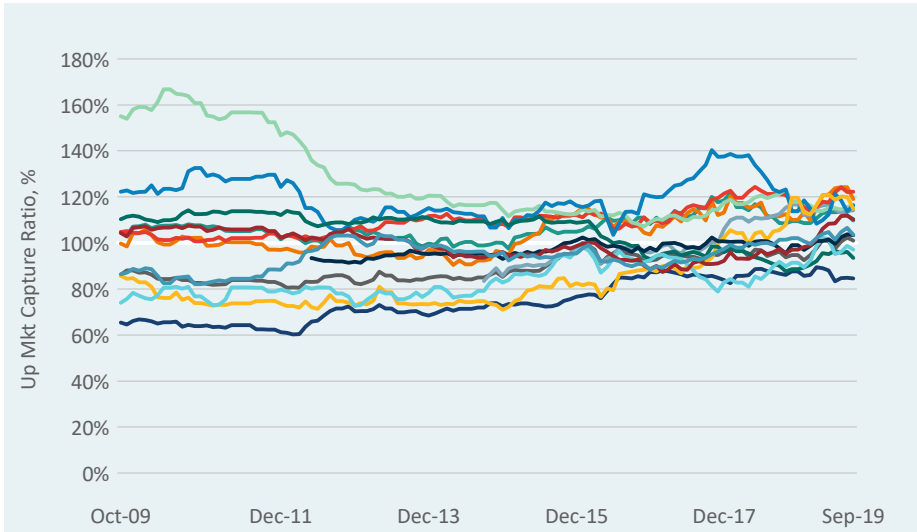


	Pzena	Sterling	T. Rowe Price	The London Company	Wellington	Wells Fargo	Westwood
% HOLDINGS IN 10 LARGEST STOCKS	36.2%	40.6%	32.3%	40.4%	47.0%	30.7%	31.8%
ANNUAL TURNOVER	40.2%	22.5%	113.6%	20.2%	48.0%	16.7%	24.2%
CASH	1.2%	3.5%	0.6%	1.3%	5.0%	2.9%	2.3%
CURRENT DIVIDEND YIELD	2.5%	2.9%	2.1%	2.8%	2.8%	2.0%	2.4%
CURRENT P/E	12.8	19.8	27.2	18.0	15.9	18.3	16.7
CURRENT P/B	1.2	3.4	3.2	3.3	2.8	2.4	2.3
PORTFOLIO HOLDINGS	38	32	95	32	25	46	46
WGTD. AVG. MKT. CAP	\$ 62,450	\$ 160,667	\$ 144,415	\$ 221,293	\$ 137,512	\$ 164,755	\$ 181,550
MAX CASH POSITION	10.0	20.0	---	5.0	---	10.0	5.0
MAX POSITION SIZE	7.5	7.0	---	10.0	10.0	6.0	3.5
DEV. MKTS.	0	0	0	0	0	0	0

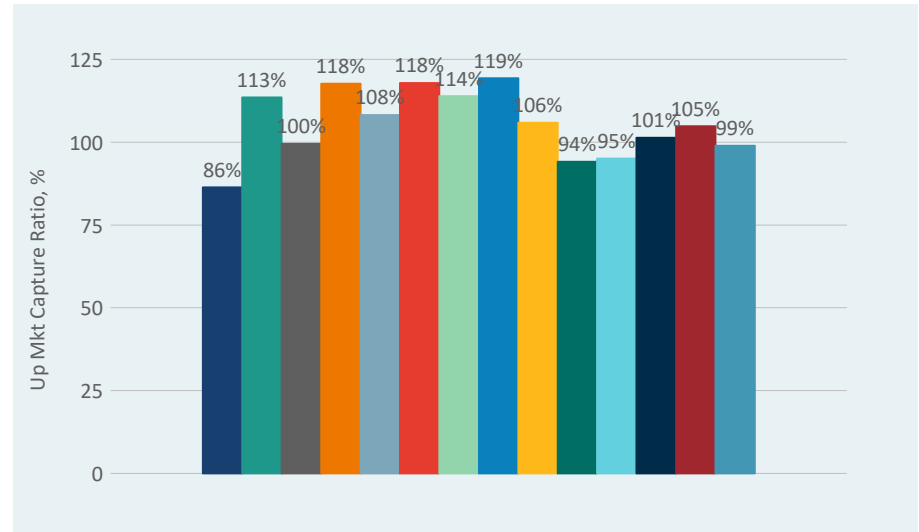
Up & down market analysis

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ✚ Russell 1000 Value Index

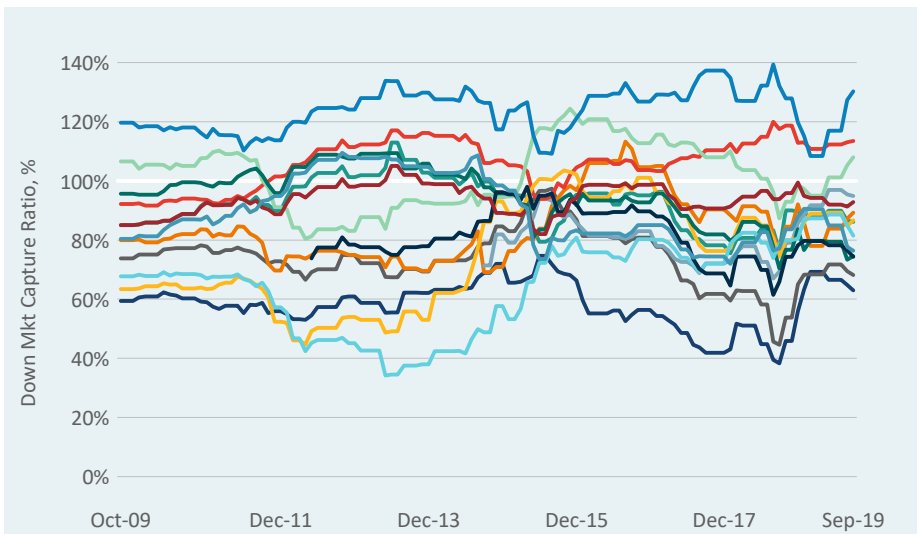
36 MONTH ROLLING UP MKT CAPTURE RATIO



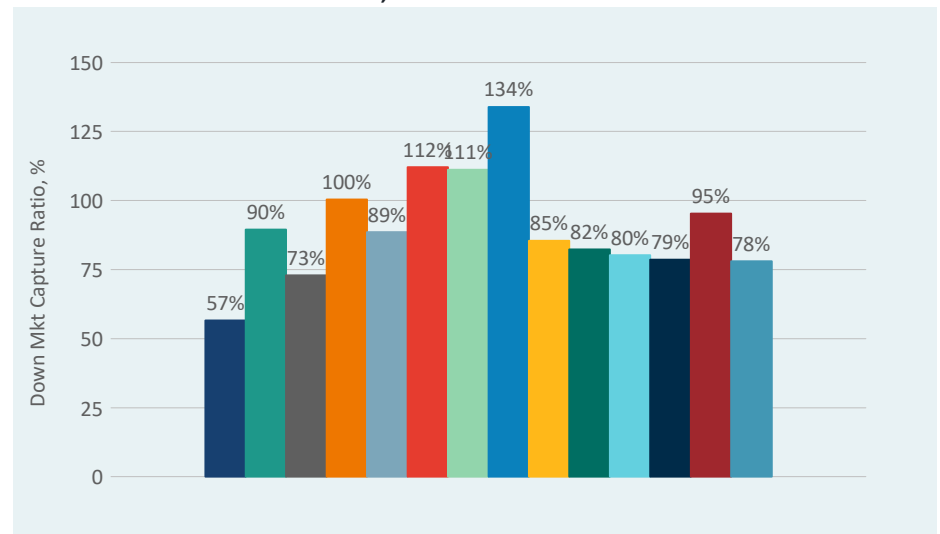
UP MARKET CAPTURE RATIO, OCT-14 TO SEP-19



36 MONTH ROLLING DOWN MKT CAPTURE RATIO



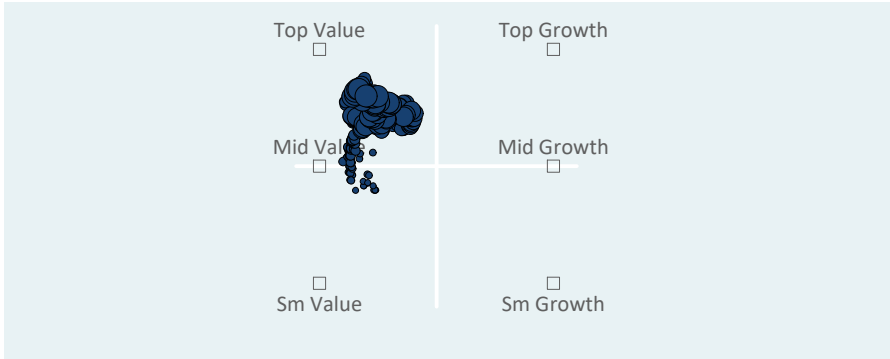
DOWN MARKET CAPTURE RATIO, OCT-14 TO SEP-19



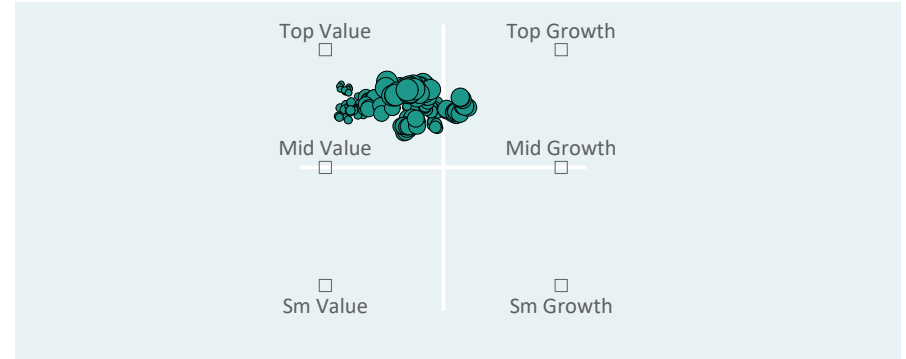
Style analysis (Russell 6 Style Map)

● American Century ● Aristotle ● Columbia ● Eagle ● Manning & Napier ● Mellon + Russell 1000 Value Index

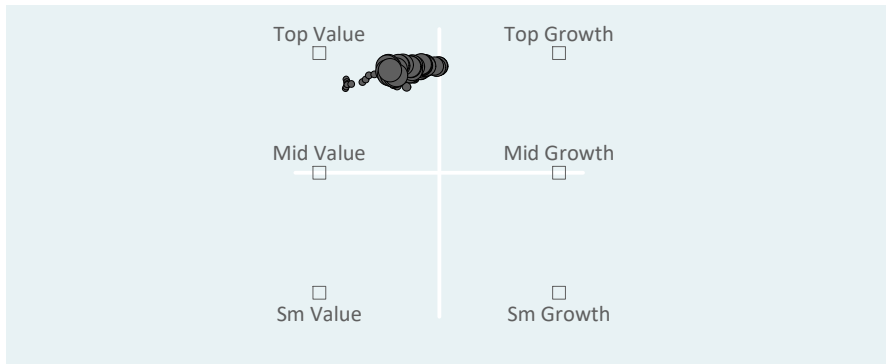
RUSSELL 6 STYLE MAP, AUG-97 TO SEP-19



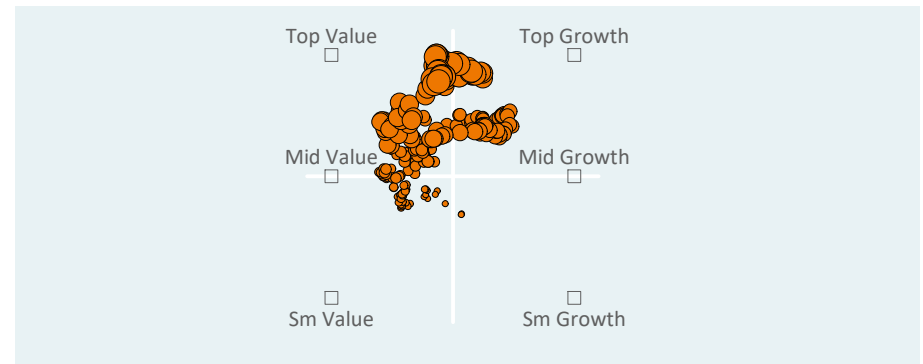
RUSSELL 6 STYLE MAP, DEC-03 TO SEP-19



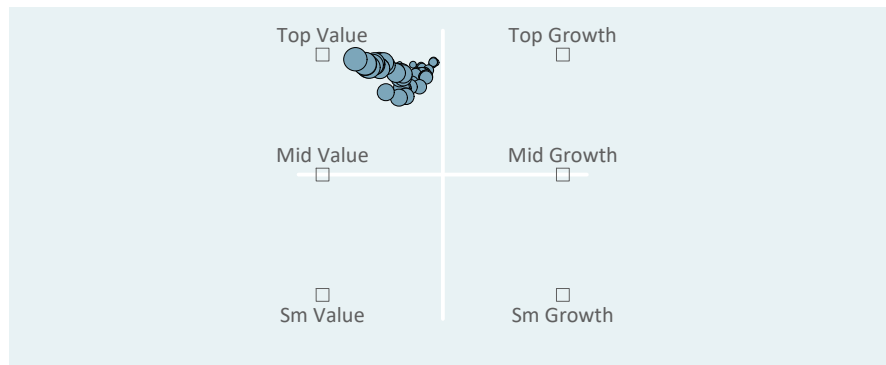
RUSSELL 6 STYLE MAP, DEC-06 TO SEP-19



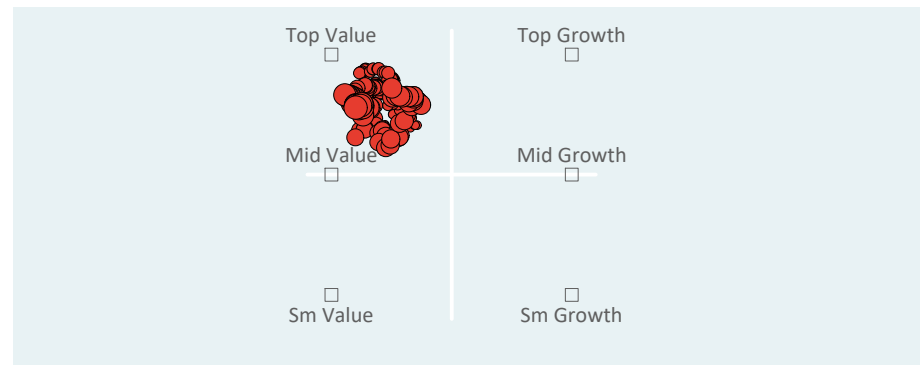
RUSSELL 6 STYLE MAP, DEC-99 TO SEP-19



RUSSELL 6 STYLE MAP, SEP-14 TO SEP-19



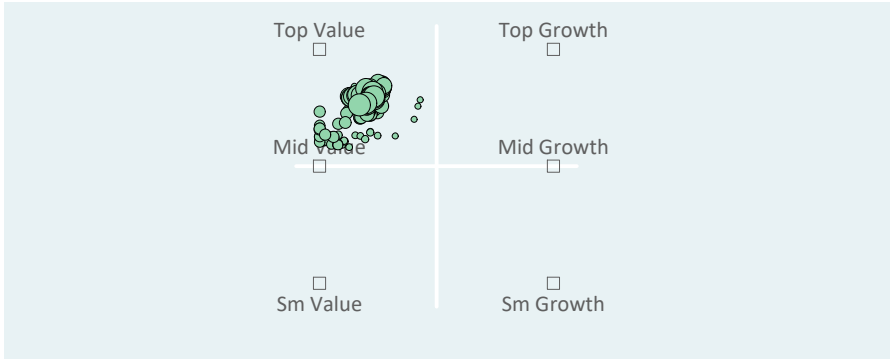
RUSSELL 6 STYLE MAP, APR-01 TO SEP-19



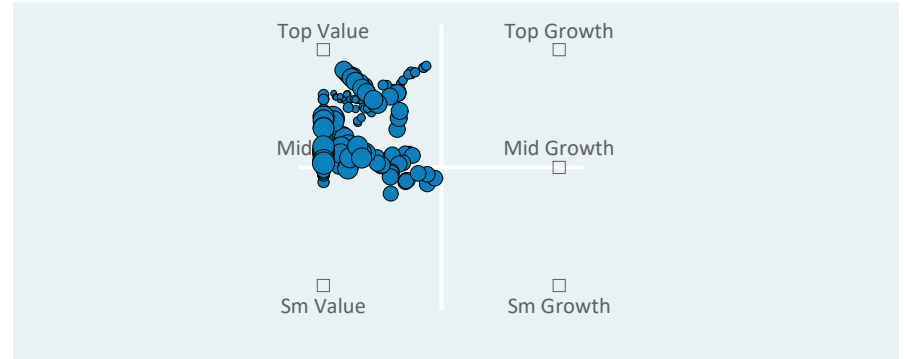
Style analysis (Russell 6 Style Map)

● PIMCO ● Pzena ● Sterling ● T. Rowe Price ● The London Company ● Wellington

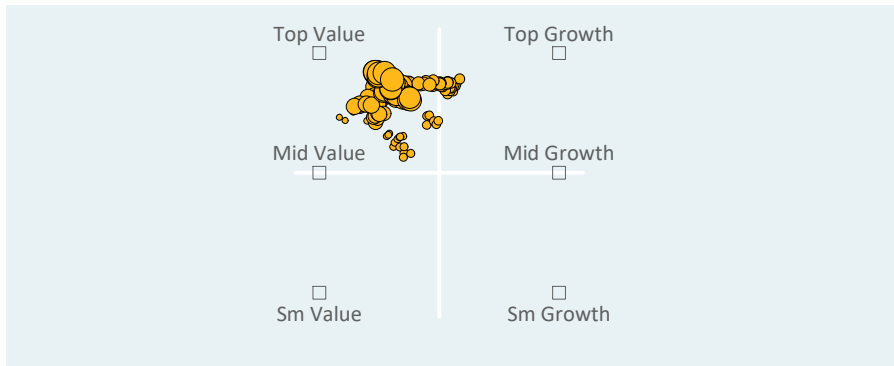
RUSSELL 6 STYLE MAP, JUL-08 TO SEP-19



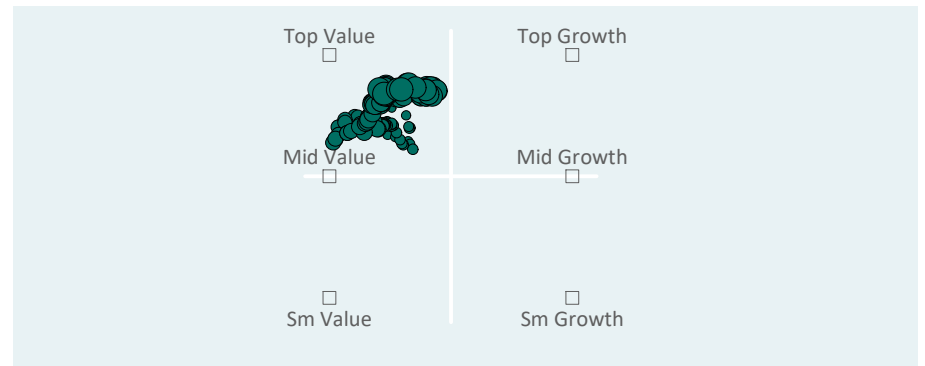
RUSSELL 6 STYLE MAP, SEP-03 TO SEP-19



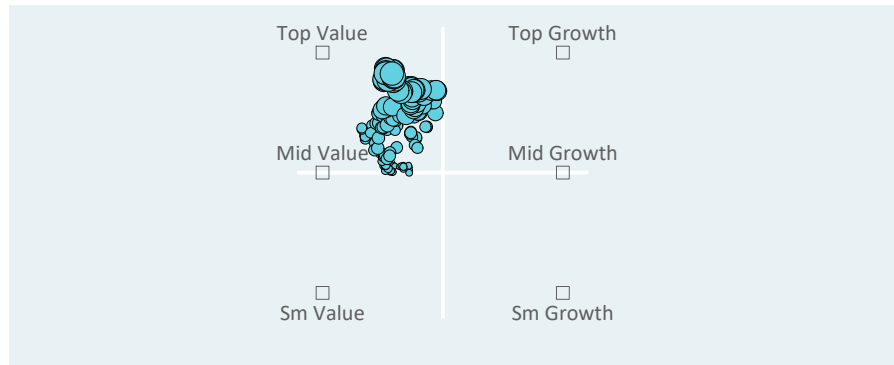
RUSSELL 6 STYLE MAP, JUN-07 TO SEP-19



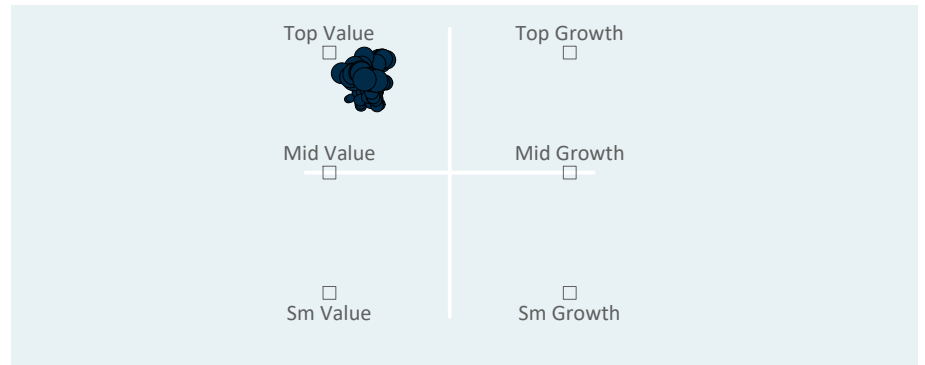
RUSSELL 6 STYLE MAP, DEC-05 TO SEP-19



RUSSELL 6 STYLE MAP, DEC-02 TO SEP-19



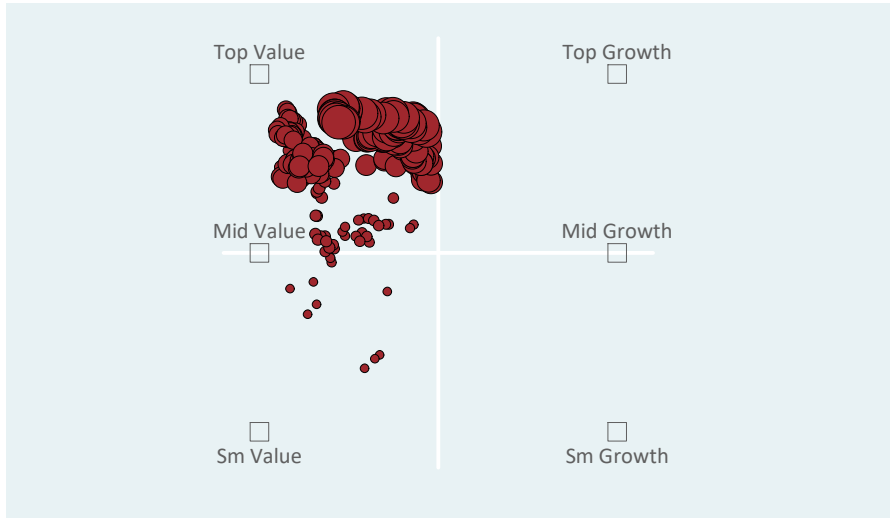
RUSSELL 6 STYLE MAP, MAY-12 TO SEP-19



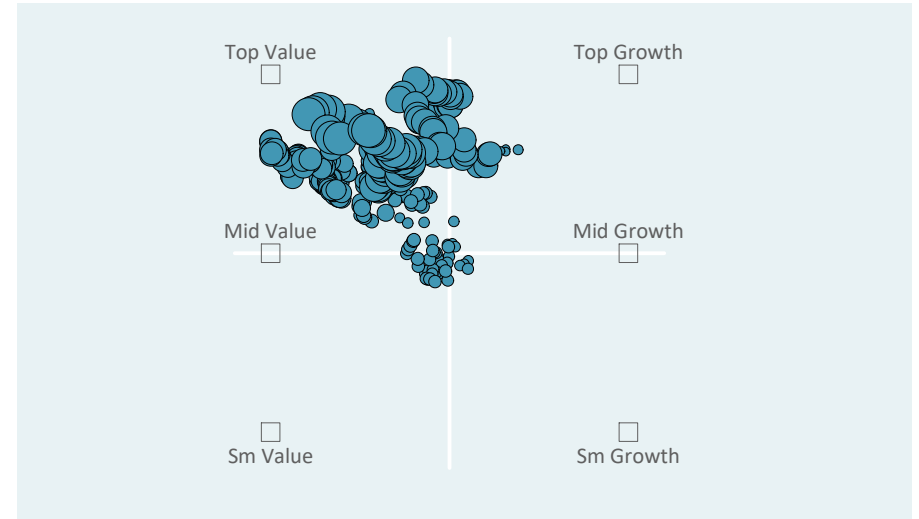
Style analysis (Russell 6 Style Map)

● Wells Fargo ● Westwood + Russell 1000 Value Index

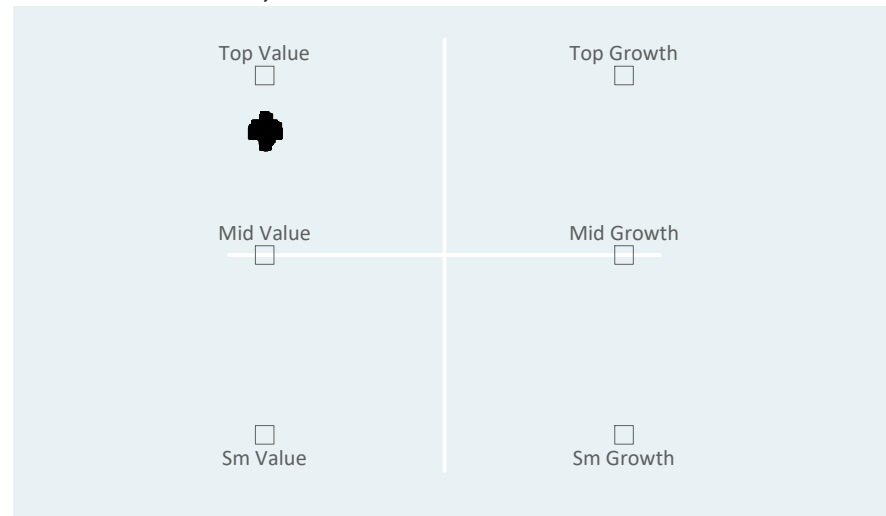
RUSSELL 6 STYLE MAP, DEC-94 TO SEP-19



RUSSELL 6 STYLE MAP, DEC-89 TO SEP-19

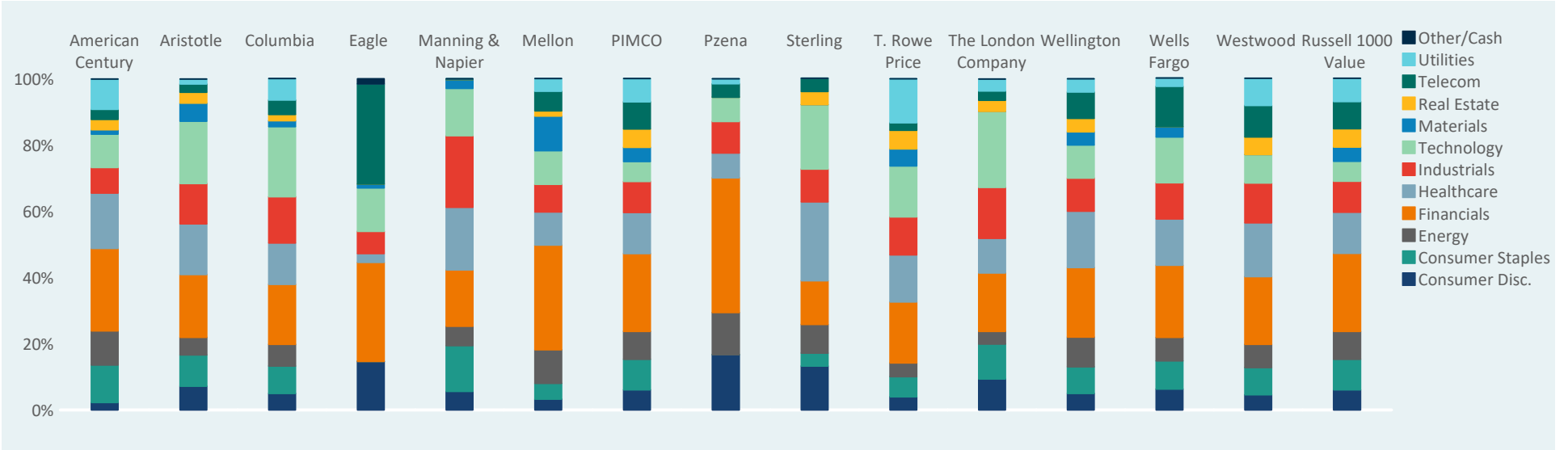


RUSSELL 6 STYLE MAP, DEC-88 TO SEP-19

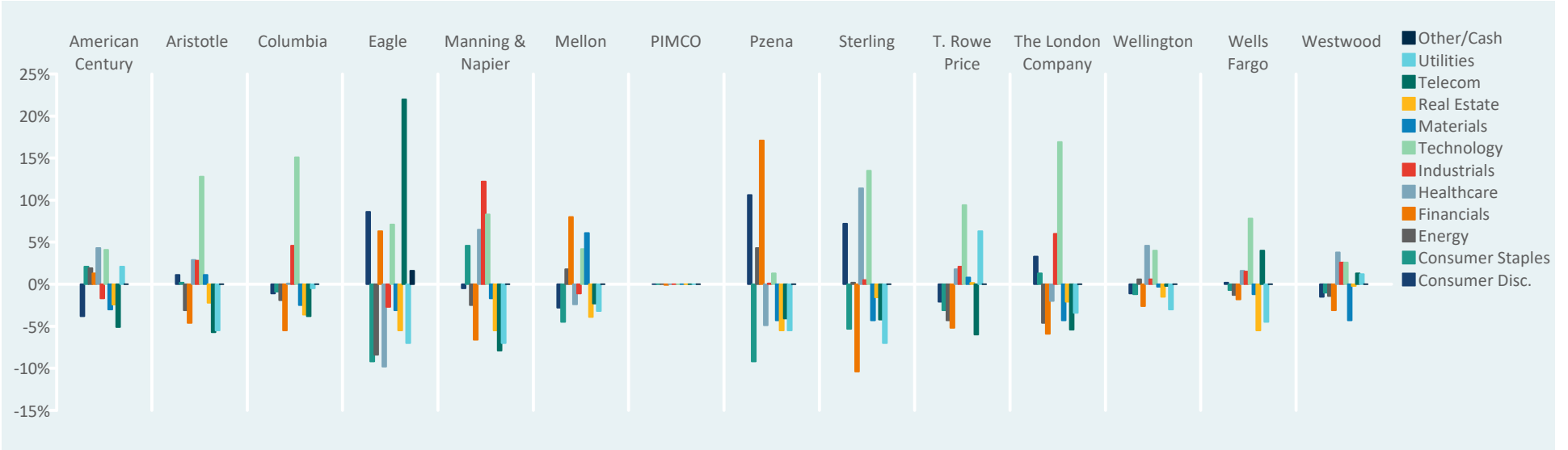


Equity sector exposure

CURRENT SECTOR POSITION, AS OF SEP-19



RELATIVE TO RUSSELL 1000 VALUE INDEX, AS OF SEP-19



Risk Analysis

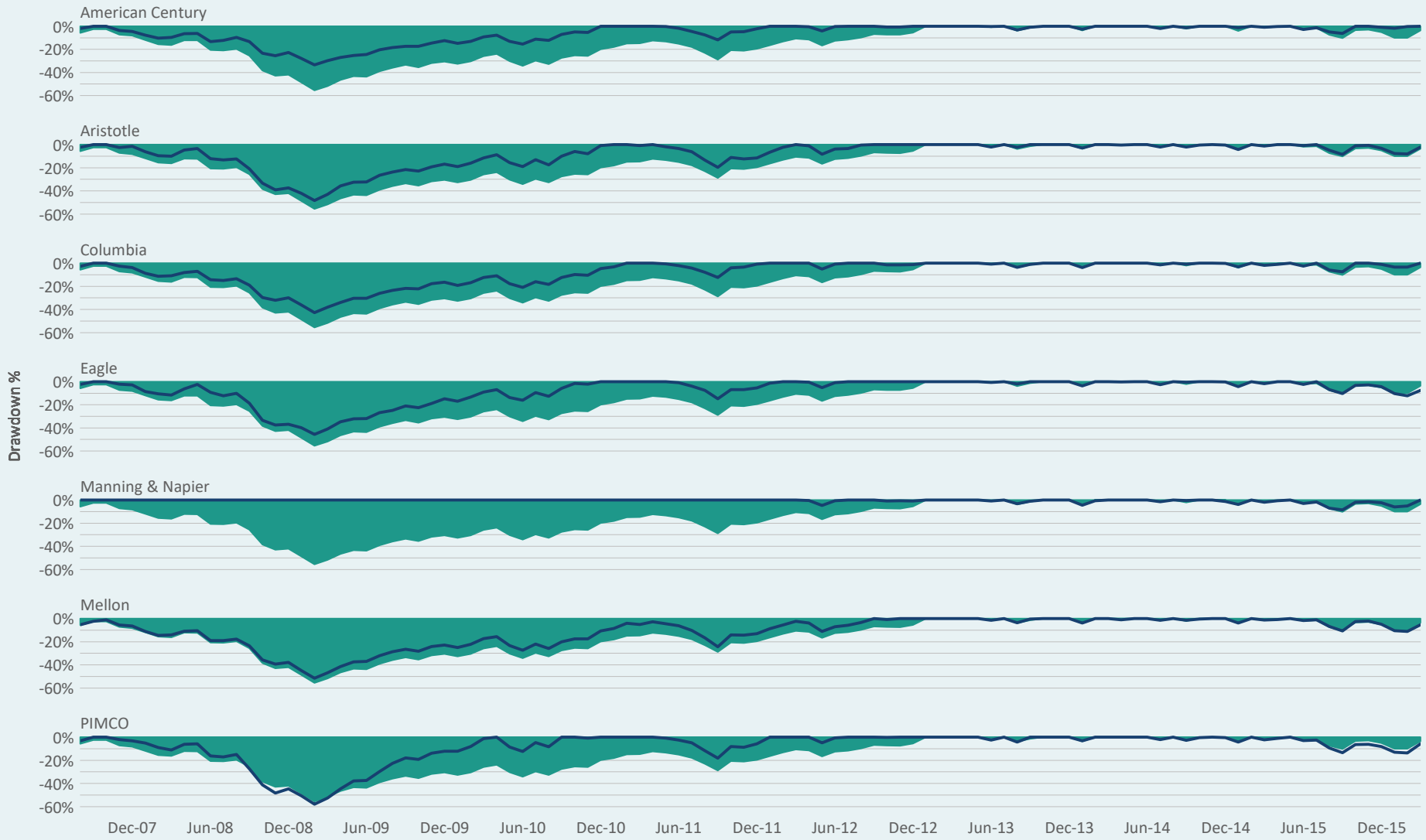
Historical drawdowns

CUMULATIVE PERFORMANCE EXTREMES

Cumulative Performance Extremes

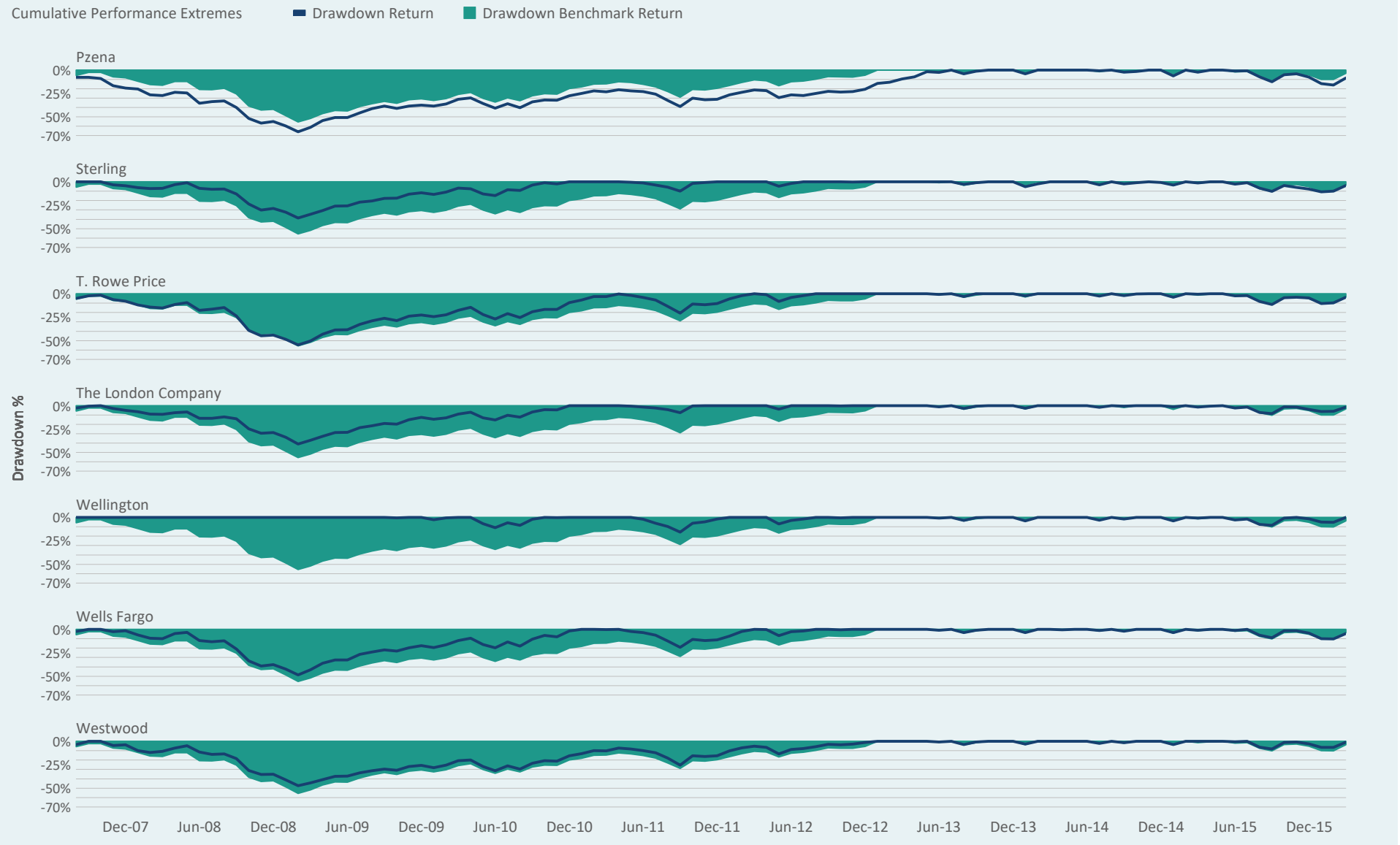
■ Drawdown Return

■ Drawdown Benchmark Return



Historical drawdowns

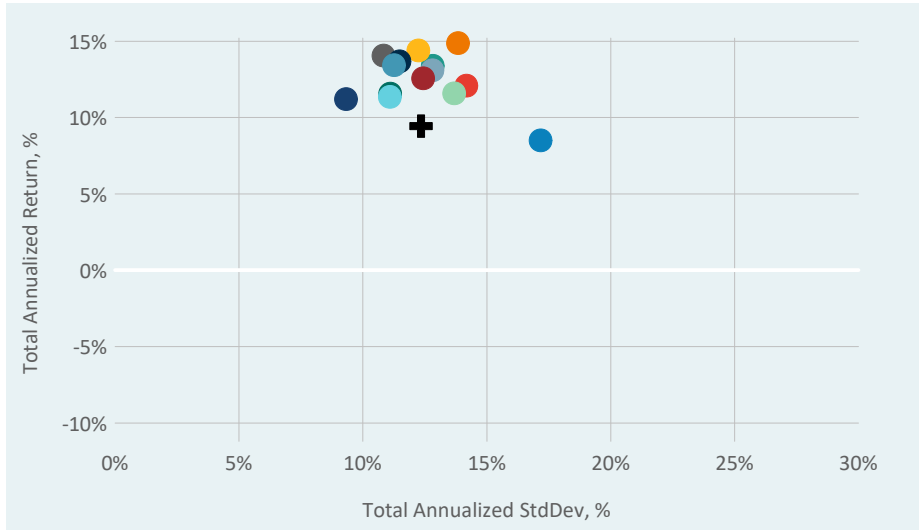
CUMULATIVE PERFORMANCE EXTREMES



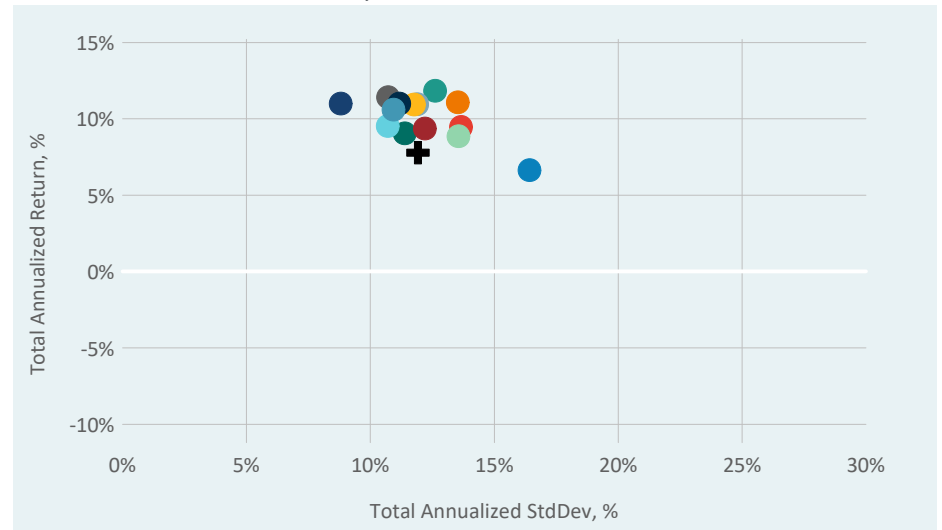
Risk vs. return

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ✚ Russell 1000 Value Index

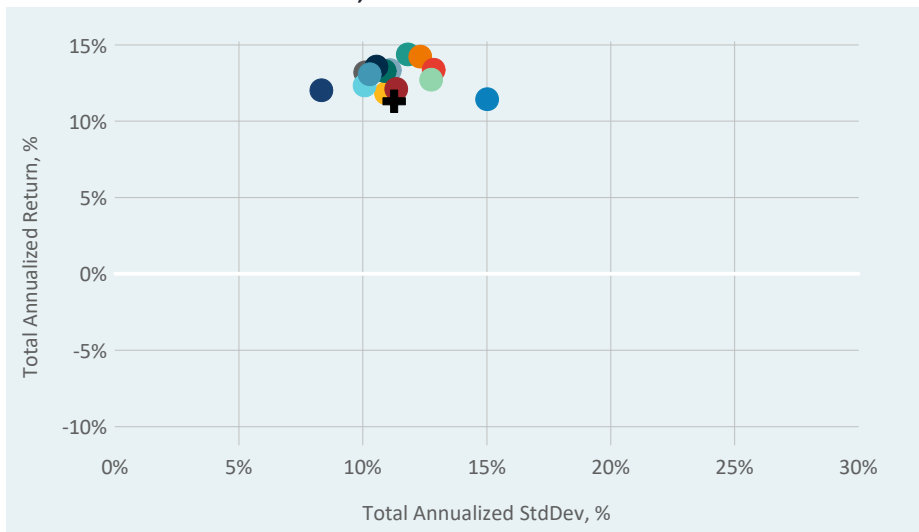
TOTAL PERFORMANCE VS. RISK, OCT-16 TO SEP-19



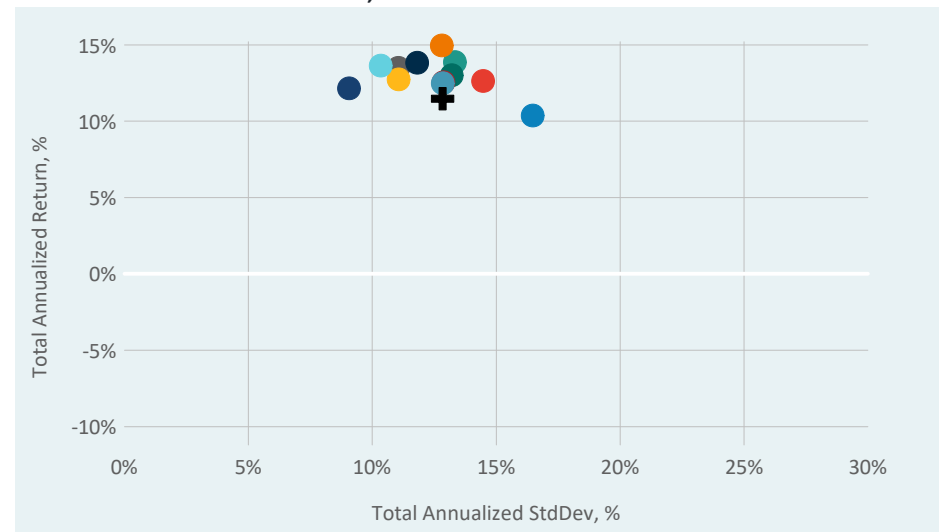
TOTAL PERFORMANCE VS. RISK, OCT-14 TO SEP-19



TOTAL PERFORMANCE VS. RISK, OCT-12 TO SEP-19



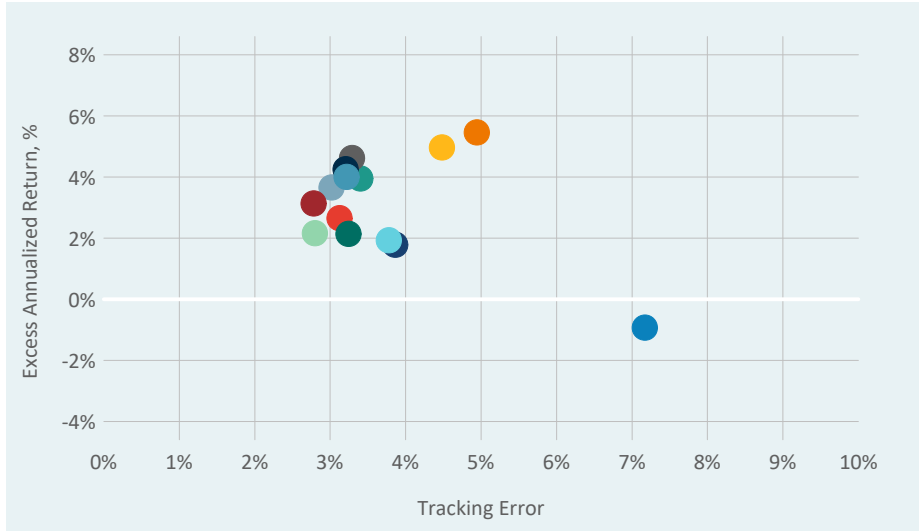
TOTAL PERFORMANCE VS. RISK, OCT-09 TO SEP-19



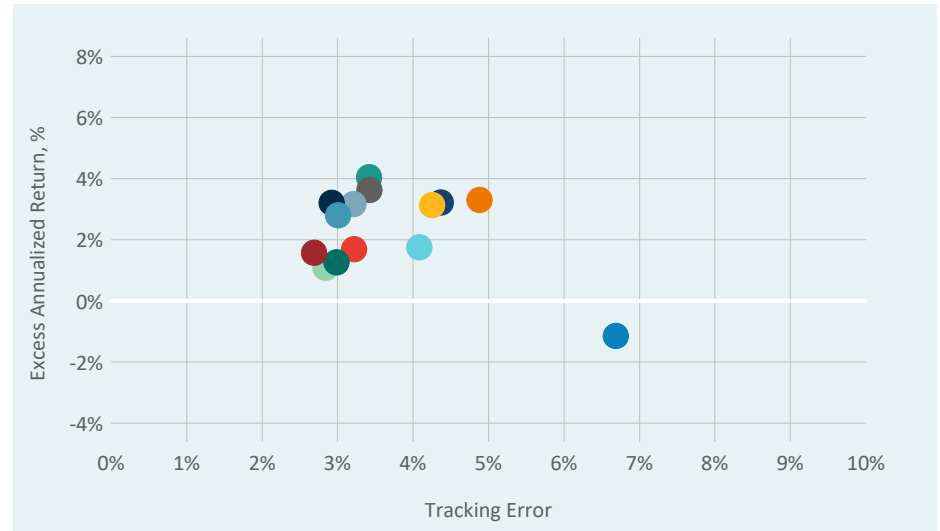
Performance efficiency

- American Century
- Aristotle
- Columbia
- Eagle
- Manning & Napier
- Mellon
- PIMCO
- Pzena
- Sterling
- T. Rowe Price
- The London Company
- Wellington
- Wells Fargo
- Westwood
- ✚ Russell 1000 Value Index

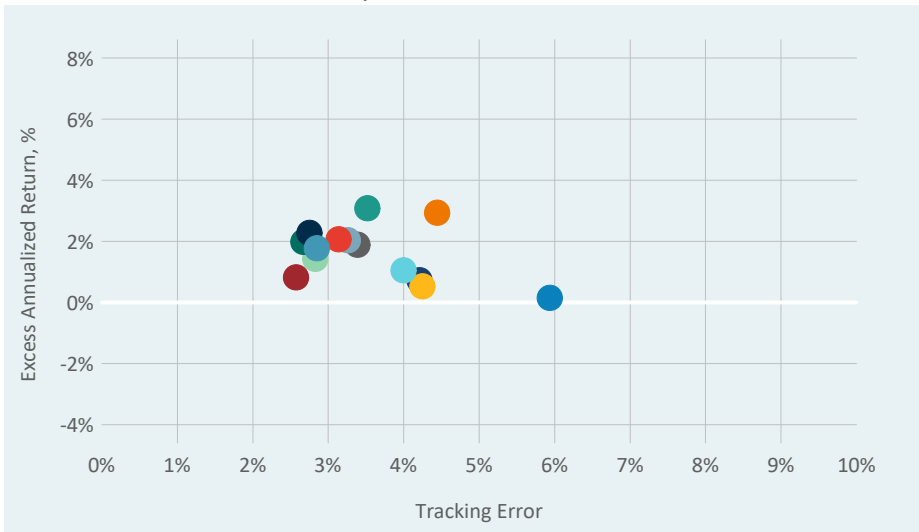
EXCESS PERFORMANCE VS. RISK, OCT-16 TO SEP-19



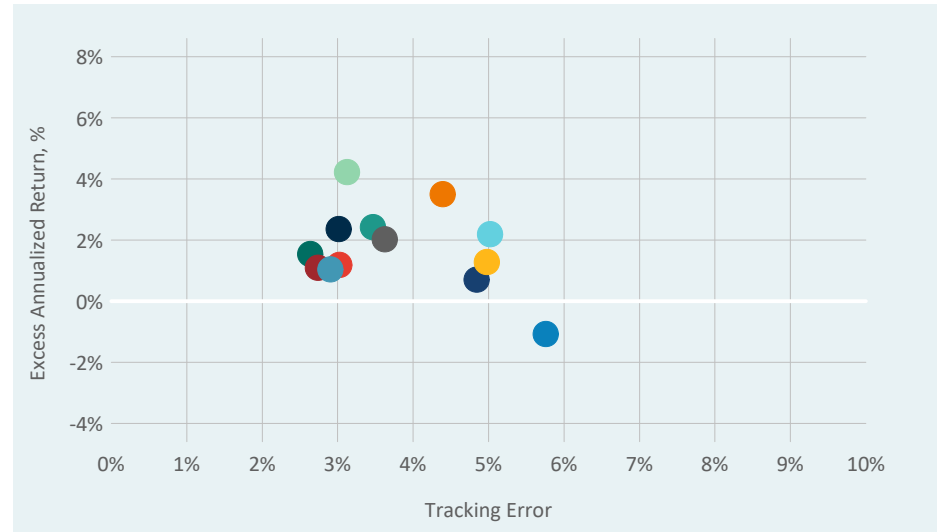
EXCESS PERFORMANCE VS. RISK, OCT-14 TO SEP-19



EXCESS PERFORMANCE VS. RISK, OCT-12 TO SEP-19



EXCESS PERFORMANCE VS. RISK, OCT-09 TO SEP-19



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**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



JANUARY 8, 2020

Overlay Education

ACERA

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Introduction

Goals

- What is an overlay, and how can it benefit ACERA?
- Review current policies regarding cash/rebalancing/asset allocation
- Discuss overlay manager's tools

What is an overlay

- An overlay program is a top down view of the entire investment portfolio, that uses derivatives and cash already in the portfolio to track the IC approved asset allocation relative to approved targets and ranges
- In a low return environment, some public Plans have decided to use overlays to equitize cash in order to decrease the operational cash drag in the portfolio relative to the policy index (stay fully invested at all times)
- Overlay programs allow the Plan to be 100% invested per its strategic asset allocation. Even efficient plans such as ACERA which run under 1% cash, can have significant cash in manager's accounts, which can hurt performance

Current policies

	Current	Overlay
Asset allocation	<ul style="list-style-type: none"> - Delayed 	<ul style="list-style-type: none"> - Fully invest excess cash to bring portfolio in-line with targets & ranges
Rebalancing	<ul style="list-style-type: none"> - External consultant (small provider) - Excel based 	<ul style="list-style-type: none"> - Robust, automatic system, which will rebalance when a rebalance trigger is hit
Cash	<ul style="list-style-type: none"> - Review cash monthly - ACERA is very efficient with Less than 1% in the cash account - Including cash in managed account, total cash is between \$200-250 million - Cash target is 0% 	<ul style="list-style-type: none"> - Daily review of cash, - Cash is “put to work” and invested per the strategic asset allocation

Types of Overlay Strategies

Overlay services and expected long-term benefits

Strategy	Tools	Expected Benefit
Asset allocation	<ul style="list-style-type: none"> - Rebalancing - Cash equitization 	<ul style="list-style-type: none"> - Allows the realignment of asset class exposures without the level of transaction costs associated with physicals and does not disrupt underlying managers
Liquidity management	<ul style="list-style-type: none"> - Cash equitization 	<ul style="list-style-type: none"> - Improve returns and flexibility
Liability-driven investing	<ul style="list-style-type: none"> - Duration management 	<ul style="list-style-type: none"> - Provide low cost and flexible means to modify effective duration or to match assets to liabilities
Active insights	<ul style="list-style-type: none"> - Rebalancing timing 	<ul style="list-style-type: none"> - Discretionary tilts and active management with the goal of increasing returns

Potential risks

Risk	Description
Basis risk	Risk attributable to uncertain movements in the spread between a futures price and a spot price.
Communication / Information risk	Overlay index exposures are maintained based on underlying investment values provided by one or more third parties. There may be delays in the receipt of updated information which can lead to exposure imbalance risks. Inadequate communication regarding cash flow moves into and out of fund and manager changes can lead to unwanted asset class exposures and potential loss.
Tracking error	Futures (synthetic) returns do not perfectly track benchmark index returns. This divergence between the price behavior of a position or portfolio and the price behavior of a benchmark is tracking error and can impact performance.
Margin / Liquidity risk	Potential that the market moves in a manner adverse to the futures or swap position resulting in the need to post additional margin or excess collateral.
Leverage	Creation of market exposure in excess of underlying collateral value may lead to significant capital losses if an insufficient cash cushion isn't maintained.
Counterparty	Counterparty credit risk on OTC trades.
Collateral	The program may experience losses on the underlying designated assets in addition to potential losses on the index market exposure overlaying these assets.
Market risk	Market performs in a way that was not anticipated. For example, cash outperforms capital markets in which case the overlay would detract versus maintaining the cash position.

Asset allocation

Overlay program manages asset allocation

- After the three year asset liability study, or annual asset allocation review, changes sometimes take a year to implement to find the right manager
- The risk of not implementing an asset allocation right away can be huge in turbulent markets (i.e. the Board's risk appetite for the Plan is lowered, but hold off on moving an allocation from equities to fixed income until we find a new fixed income manager)
- Having an overlay manager would allow for instant changes to the policy index and the manager would equitize cash to the new policy targets, giving staff time to conduct an RFP and find a manager

Cash overlay program

The overlay benchmark attempts to replicate the total fund policy index as closely as possible

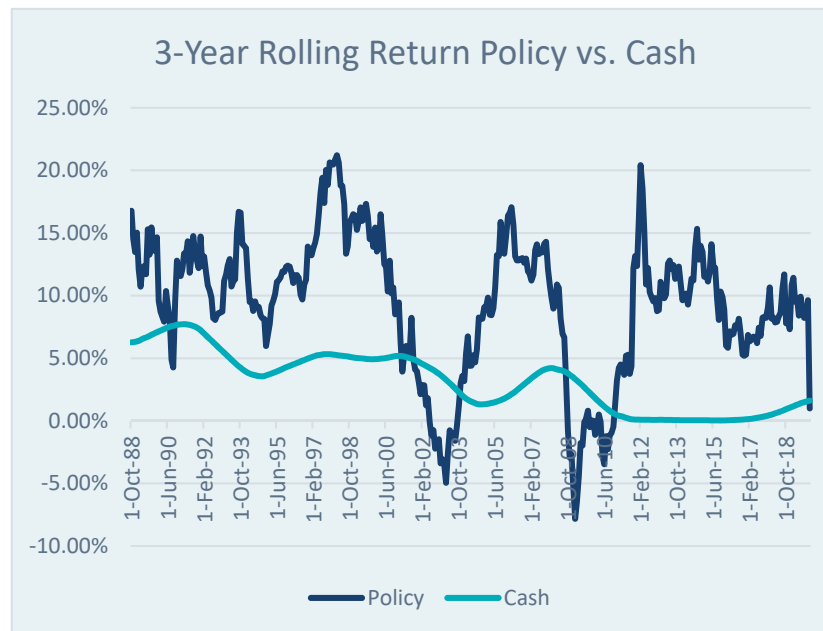
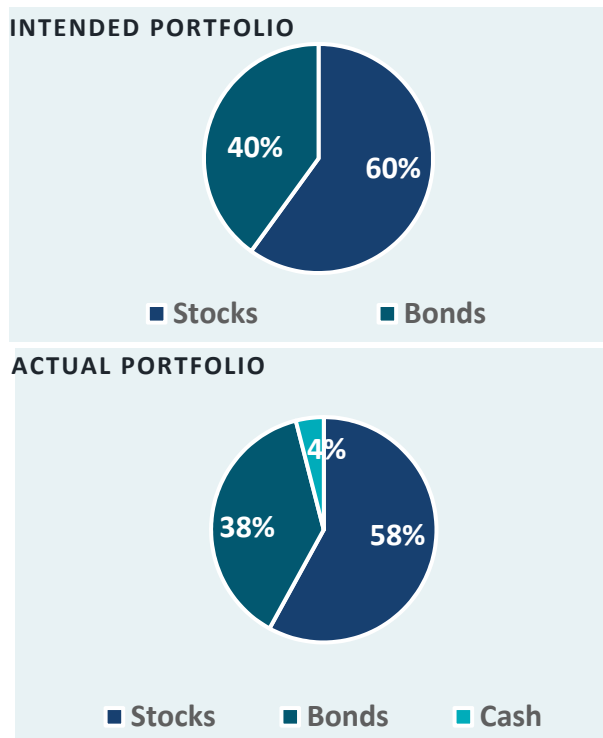
Asset Class	Target Weight	Total Policy Benchmark	Overlay Benchmark
Domestic Equity	25%	Russell 3000	S&P 500, Russell 2000
International Equity	25%	MSCI ACWI ex US IMI	MSCI EAFE & MSCI EM
Fixed Income		Custom	
Core	13%	BB Aggregate	US Treasuries
Global	3%	Citigroup WGBI ex-US	Citigroup WGBI ex-US
Private Equity	8%	TR Global All PE	Custom proxy (Russell 3000)
Real Return	13%	Custom	
Absolute Return	9%	HFRI FOF	
Private Credit	4%	S&P LSTA Leveraged Loan	

Since there are no contracts for private real estate, private markets or absolute return, these allocations can be excluded with the overlay restricted to investable asset classes. Custom proxies, which have basis risk, be used for privates (ex. Russell 3000 for private equity).

Cash drag

Holding some cash in a portfolio is necessary, but comes with side effects

- Excess cash prevents the portfolio from being fully invested relative to its policy benchmark
 - Example: a 60/40 portfolio with 4% cash is actually a 58/38/4 portfolio
- Tracking error results from the portfolio being out of balance relative to its policy
- Over time, cash generates a “drag” on return since it underperforms most other asset classes over the long term

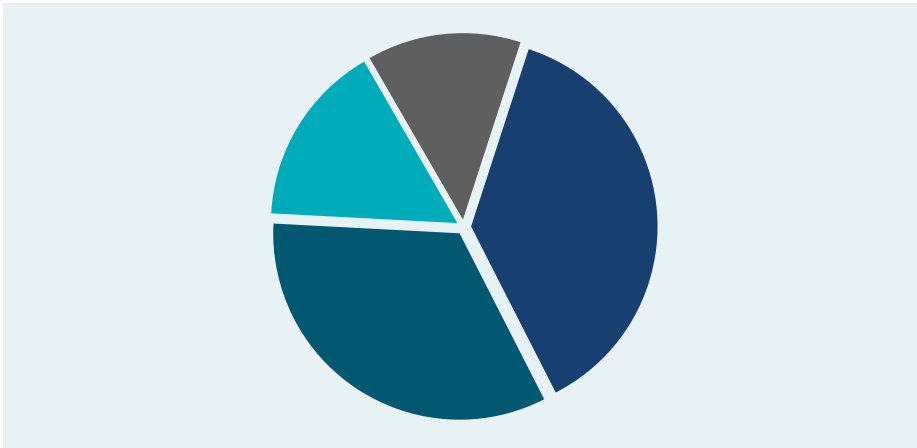


The historical premium for investing in risk assets has been 6%

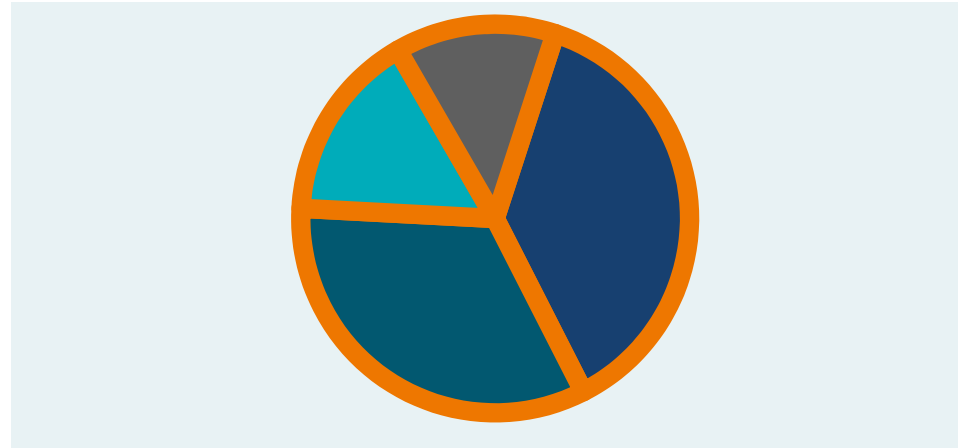
The overlay solution

- Through the use of derivatives, cash overlay strategies can efficiently gain exposure in a portfolio to reduce the effects of holding cash
- Derivatives allow the portfolio to gain the expected exposures to various asset classes without investing in the “physical” securities
- Overlay strategies “equitize” the cash position or rebalance a portfolio as desired
- For larger clients, an overlay manager offers operational efficiency to effect general asset class rebalancing while eliminating a potential “cash drag”

PORTFOLIO WITHOUT CASH OVERLAY



PORTFOLIO WITH CASH OVERLAY

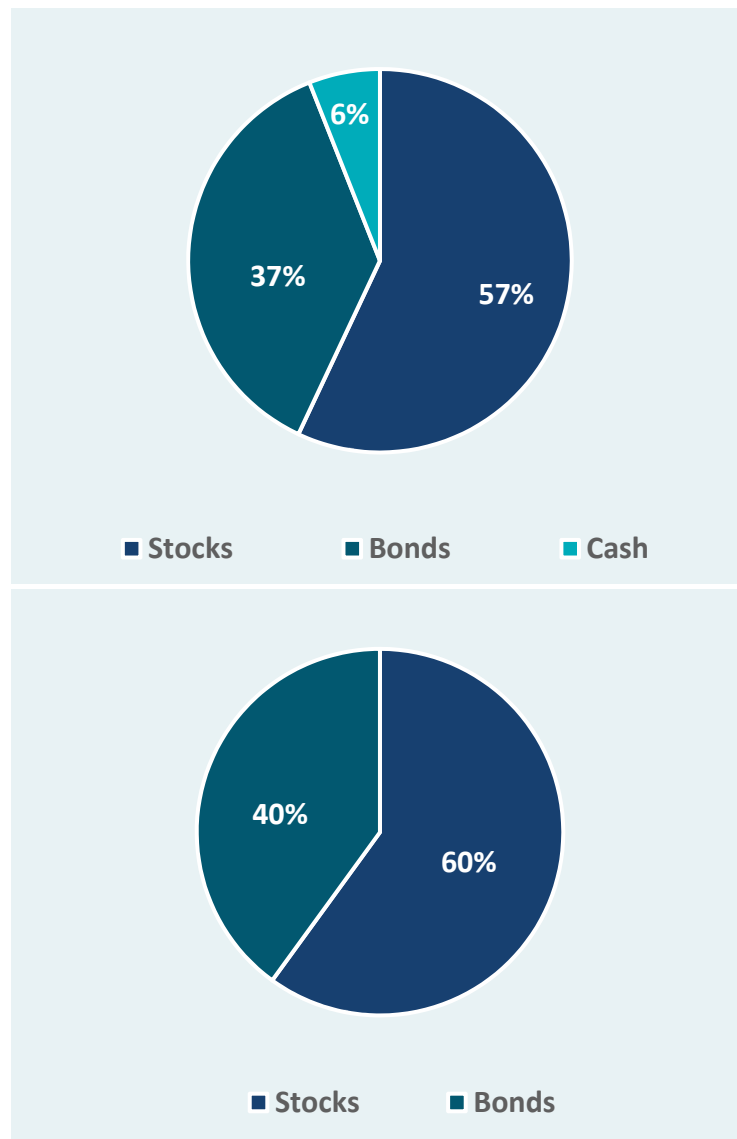


Cash equitization

Equitization: using derivatives to economically convert cash position to equity or other asset class exposures

Why?

- Improves tracking error relative to policy
- Increases capital efficiency
- Maintains flexibility of underlying assets



Passive rebalancing

Passive rebalancing: using derivatives to gain desired asset class exposures rather than trading actual portfolio positions

Why?

- Less disruptive to managers
- Typically lower cost to realign assets using derivatives

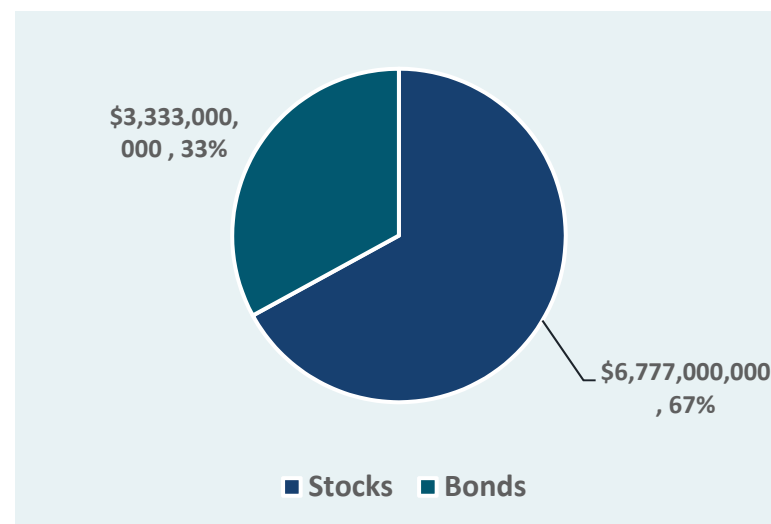
Example:

- \$10 billion portfolio; with 67% stocks, 33% bonds
- Policy targets = 60% stocks, 40% bonds
- Sell \$0.66B notional in stock futures
- Buy \$0.66B notional in bond futures
- Exposure after overlay = 60% stocks, 40% bonds

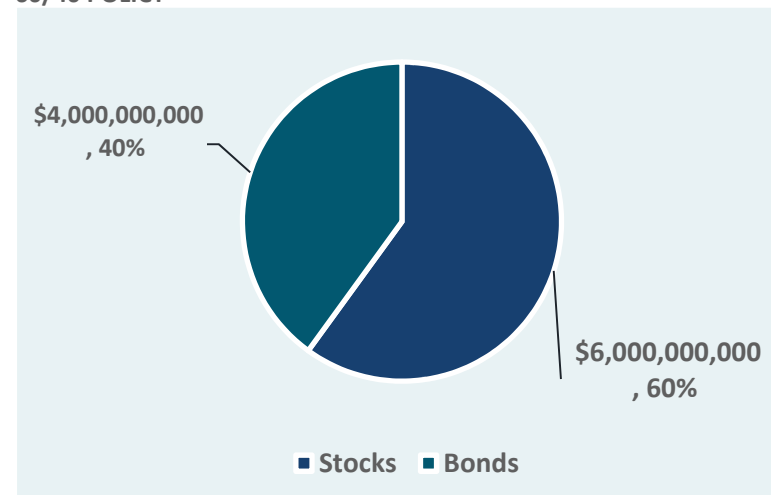
Risks

- Tracking error to component benchmarks
- Small rebalances are efficient through derivatives, larger adjustments should be implemented using physicals

CURRENT ALLOCATION \$10B PORTFOLIO



FINAL EXPOSURE AFTER REBALANCE OVERLAY \$10B PORTFOLIO AT 60/40 POLICY



Next Steps

Next steps

- If the Board is interested in learning more about Overlay services, we can conduct another education session
- If the Board is comfortable with what an overlay provides, we can move forward reviewing managers for implementation
- If there is no appetite for a change, no action needs to be taken

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ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14th Street, Suite 1000, Oakland, CA 94612 800/838-1932 510/628-3000 fax: 510/268-9574 www.acera.org

TO: Members of the Investment Committee

FROM: Agnes Ducanes – Administrative Specialist II *ADucanes*

DATE: January 8, 2020

SUBJECT: Investment Committee Meeting Date in February

The second Wednesday of February (02/12/2020) falls on a County Holiday – Lincoln's Birthday.

We need to reschedule the Investment Committee Meeting to a regular business date when you may attend the named meeting. The following are possible dates to reschedule the meeting to:

1. Thursday, February 13, 2020
2. Tuesday, February 18, 2020
3. Wednesday, February 19, 2020 (the date before the Board Meeting)

Callan and Verus are both available to attend ICM on these dates.

Please let us know by or before January 16, 2020 (Board Meeting) the schedule that is good for you.



Proposed Investment Committee Workplan for 2020

January 8, 2020

	Action Items	Information Items
January 8	<ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board a possible Extension of the Custody Contract with State Street Bank and Trust Company 2. Discussion of and Possible Motion to Recommend to the Board to approve the Short List of candidates for ACERA’s Large Cap Value Manager Search 	<ol style="list-style-type: none"> 1. Education Session: Cash Overlay 2. Proposed Investment Committee Workplan for 2020
February TBD (schedule change due to 2 nd Wednesday falls on Lincoln Birthday – County Holiday)	<ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board to Adopt ACERA’s ESG Belief Statement (tentative) 2. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Real Estate (Placeholder) 	<ol style="list-style-type: none"> 1. 2020 Capital Market Assumptions 2. Review of the Absolute Return Structure and Investment Plan 3. Investment Committee Workplan 2020
March 11	<ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Private Equities Portfolio (Placeholder) 2. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Real Assets Portfolio (Placeholder) 	<ol style="list-style-type: none"> 1. Education Session: Real Assets and ESG implications 2. <i>Report of ACERA’s Proxy Voting Activities in 2019</i> 3. <i>Quarterly report of ACERA’s investment manager, consultant, and custodian bank fees for the fourth quarter of 2019</i> 4. <i>Quarterly report on ACERA’s rebalancing activities for the fourth quarter of 2019</i> 5. <i>Quarterly report on ACERA’s securities lending activities for the fourth quarter of 2019</i> 6. <i>Quarterly report on ACERA’s Directed Brokerage (DB) Program for the fourth quarter of 2019</i> 7. <i>Quarterly report on Investment Products and Services Introduction (IPSI) for the fourth quarter of 2018</i>

Notes:

1. This workplan is subject to change without prior notice. Periodic rearrangements of agenda items will be made to the workplan to provide a reasonable length of time for each meeting.
2. Meeting date is assumed to be the second Wednesday of each month.
3. Educational sessions may be added to the Agenda from time-to-time e.g., Portable Alpha, Market and Currency Overlay, Equity Overlay, and Emerging Managers in Private Equity investments. Recommendations and reports on ACERA’s Real Estate, Private Equity, Absolute Return, and Real Assets investments will be added to the Agenda from time-to-time.



Proposed Investment Committee Workplan for 2020

January 8, 2020

Action Items	Information Items
	8. <i>Updated Investment Committee Workplan 2020</i>
April 8	1. Education Session: Portable Alpha – tentative
1. Interview of the Finalists for ACERA’s U.S. Large Cap Value Manager Search and Possible Motion by the Investment Committee to Recommend one Finalist to the Board	
May 20 (meeting moved to third Wednesday due to SACRS Conference)	1. Education Session: Risk Reporting
2. Discussion of and Possible Motion to Recommend to the Board to Approve an Investment in ACERA’s Real Estate Portfolio (Placeholder) 3. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Absolute Return Portfolio (Placeholder)	
June 10	1. Semiannual Performance Review for the Period Ending March 31, 2020 – Equities and Fixed Income 2. Semiannual Performance Review for the Period Ending December 31, 2019 – Private Equities 3. Semiannual Performance Review for the Period Ending March 31, 2020 – Absolute Return 4. Semiannual Performance Review for the Period Ending December 31, 2019 – Real Assets 5. Semiannual Performance Review for the Period Ending March 31, 2020 – Real Estate 6. <i>Quarterly report of ACERA’s investment manager, consultant, and custodian fees for the first quarter of 2020</i> 7. <i>Quarterly report on ACERA’s rebalancing activities for the first quarter of 2020</i>
1. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Private Equities Portfolio (Placeholder) 2. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Real Assets Portfolio (Placeholder)	

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Proposed Investment Committee Workplan for 2020

January 8, 2020

Action Items	Information Items
	8. <i>Quarterly report on ACERA’s securities lending activities for the first quarter of 2020</i> 9. <i>Quarterly report on ACERA’s Directed Brokerage (DB) Program for the first quarter of 2020</i> 10. <i>Quarterly report on Investment Products and Services Introduction (IPSI) for the first quarter of 2020</i> 11. <i>Updated Investment Committee Workplan 2020</i>
July 8	1. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Real Estate (Placeholder) 2. Discussion and Possible Motion to Recommend to the Board to Adopt an Investment in Private Credit Portfolio (Placeholder)
August 12	1. Discussion and Possible Motion to Recommend to the Board to Adopt an Investment in Private Equities Portfolio (Placeholder) 2. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Absolute Return (Placeholder)

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Proposed Investment Committee Workplan for 2020

January 8, 2020

	Action Items	Information Items
September 9	<ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Real Assets Portfolio (Placeholder) 2. Discussion and Possible Motion to Recommend to the Board to Adopt an Investment in Private Credit Portfolio (Placeholder) 	<ol style="list-style-type: none"> 1. <i>Quarterly report of ACERA’s investment manager, consultant, and custodian bank fees for the second quarter of 2020</i> 2. <i>Quarterly report on ACERA’s rebalancing activities for the second quarter of 2020</i> 3. <i>Quarterly report on ACERA’s securities lending activities for the second quarter of 2020</i> 4. <i>Quarterly report on ACERA’s Directed Brokerage (DB) Program for the second quarter of 2020</i> 5. <i>Quarterly report on Investment Products and Services Introduction (IPSI) for the second quarter of 2020</i> 6. <i>Updated Investment Committee Workplan for 2020</i>
October 14	<ol style="list-style-type: none"> 1. Discussion and Possible Motion to Recommend to the Board to Adopt an Investment in Private Equities Portfolio (Placeholder) 	
November 4 (meeting moved to first Wednesday due to SACRS Conference)	<ol style="list-style-type: none"> 1. Discussion of and Possible Motion to Recommend to the Board to Adopt an Investment in ACERA’s Real Estate (Placeholder) 	

Notes:

1. This workplan is subject to change without prior notice. Periodic rearrangements of agenda items will be made to the workplan to provide a reasonable length of time for each meeting.
2. Meeting date is assumed to be the second Wednesday of each month.
3. Educational sessions may be added to the Agenda from time-to-time e.g., Portable Alpha, Market and Currency Overlay, Equity Overlay, and Emerging Managers in Private Equity investments. Recommendations and reports on ACERA’s Real Estate, Private Equity, Absolute Return, and Real Assets investments will be added to the Agenda from time-to-time.



Proposed Investment Committee Workplan for 2020

January 8, 2020

	Action Items	Information Items
December 9	1. Discussion and Possible Motion to Recommend to the Board to Adopt an Investment in Absolute Return Portfolio (Placeholder)	1. Semiannual Performance Review for the Period Ending September 30, 2020 – Equities and Fixed Income 2. Semiannual Performance Review for the Period Ending June 30, 2020 – Private Equity 3. Semiannual Performance Review for the Period Ending September 30, 2020 – Absolute Return 4. Semiannual Performance Review for the Period Ending June 30, 2020 – Real Assets 5. Semiannual Performance Review for the Period Ending September 30, 2020 – Real Estate 6. CA Gov. Code § 7514.7 Information Report 7. <i>Quarterly report of ACERA’s investment manager, consultant, and custodian bank fees for the third quarter of 2020</i> 8. <i>Quarterly report on ACERA’s rebalancing activities for the third quarter 2020</i> 9. <i>Quarterly report on ACERA’s securities lending activities for the third quarter of 2020</i> 10. <i>Quarterly report on ACERA’s Directed Brokerage (DB) Program for the third quarter of 2020</i> 11. <i>Quarterly report on Investment Products and Services Introductions (IPSI) for the third quarter of 2020</i> 12. <i>Updated Investment Committee Workplan for 2020</i>

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