



## **Investment Committee Agenda**

**REGULAR MEETING**

**TUESDAY, JULY 9, 2019**

**TIME: 10:30 A.M. OR IMMEDIATELY FOLLOWING THE REGULAR BOARD MEETING**

**MEETING LOCATION:**

LACERS Ken Spiker Boardroom  
202 West First Street, Suite 500  
Los Angeles, CA 90012-4401

Live Committee Meetings can be heard at: (213) 621-CITY (Metro), (818) 904-9450 (Valley), (310) 471-CITY (Westside), and (310) 547-CITY (San Pedro Area).

Chair: Sung Won Sohn  
Committee Members: Elizabeth Lee  
Nilza R. Serrano  
Manager-Secretary: Neil M. Guglielmo  
Executive Assistant: Ani Ghoukassian  
Legal Counselor: City Attorney's Office  
Public Pensions General  
Counsel Division

Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, or other auxiliary aids and/or services may be provided upon request. To ensure availability, you are advised to make your request at least 72 hours prior to the meeting you wish to attend. Due to difficulties in securing Sign Language Interpreters, five or more business days' notice is strongly recommended. For additional information, please contact: Board of Administration Office at (213) 473-7169.

- I. PUBLIC COMMENTS ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION
- II. [APPROVAL OF MINUTES FOR THE SPECIAL MEETING OF JUNE 11, 2019 AND POSSIBLE COMMITTEE ACTION](#)
- III. CHIEF INVESTMENT OFFICER VERBAL REPORT
- IV. [CONTINUED DISCUSSION OF PRIVATE CREDIT INVESTMENT MANAGER SEARCH FINALISTS AND POSSIBLE COMMITTEE ACTION](#)
- V. [CONTINUED DISCUSSION OF INVESTMENT MANAGER CONTRACT WITH BARROW, HANLEY, MEWHINNEY & STRAUSS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE NON-U.S. DEVELOPED MARKETS VALUE EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION](#)
- VI. [INVESTMENT MANAGER CONTRACT WITH AXIOM INTERNATIONAL INVESTORS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE EMERGING MARKETS GROWTH EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION](#)

- VII. [INVESTMENT MANAGER CONTRACT WITH OBERWEIS ASSET MANAGEMENT, INC. REGARDING THE MANAGEMENT OF AN ACTIVE NON-U.S. SMALL CAP EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION](#)
- VIII. [INVESTMENT MANAGER CONTRACT WITH PANAGORA ASSET MANAGEMENT, INC. REGARDING THE MANAGEMENT OF AN ACTIVE U.S. SMALL CAP VALUE EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION](#)
- IX. [SEMI-FINALISTS OF THE ACTIVE U.S. SMALL CAP EQUITIES INVESTMENT MANAGER SEARCH AND POSSIBLE COMMITTEE ACTION](#)
- X. OTHER BUSINESS
- XI. NEXT MEETING: The next Regular Meeting of the Investment Committee is scheduled for Tuesday, August 13, 2019, in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.
- XII. ADJOURNMENT



**Board of Administration Agenda**

**SPECIAL MEETING**

**TUESDAY, JULY 9, 2019**

**TIME: 10:30 A.M. OR IMMEDIATELY  
FOLLOWING THE REGULAR  
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President: Cynthia M. Ruiz  
Vice President: Vacant

Commissioners: Annie Chao  
Elizabeth Lee  
Sandra Lee  
Nilza R. Serrano  
Sung Won Sohn  
Michael R. Wilkinson

Manager-Secretary: Neil M. Guglielmo

Executive Assistant: Ani Ghoukassian

Legal Counsel: City Attorney's Office  
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- XII. ADJOURNMENT

MINUTES OF THE SPECIAL MEETING  
BOARD OF ADMINISTRATION  
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

LACERS Ken Spiker Boardroom  
202 West First Street, Suite 500  
Los Angeles, California

June 11, 2019

Agenda of: July 9, 2019

Item No: II

9:48 a.m.

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PRESENT:	Chair:	Sung Won Sohn
	Committee Members:	Elizabeth Lee Nilza R. Serrano
	Commissioners:	Elizabeth L. Greenwood Cynthia M. Ruiz Michael R. Wilkinson
	Manager-Secretary:	Neil M. Guglielmo
	Executive Assistant:	Ani Ghoukassian
	Legal Counselor:	(left at 4:35 p.m.) Anya Freedman (arrived at 4:35 p.m) James Napier

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*The Items in the Minutes are numbered to correspond with the Agenda.*

Commissioners Greenwood, Ruiz, and Wilkinson were present, this is considered a Special Meeting of the Board of Administration. Any votes will be taken by Investment Committee Members only.

*Item II was taken out of order.*

II

APPROVAL OF MINUTES FOR THE INVESTMENT COMMITTEE MEETING OF MAY 14, 2019 AND POSSIBLE COMMITTEE ACTION – A Motion to approve the minutes of May 14, 2019 was moved by Committee Member Serrano, and adopted by the following vote: Ayes, Committee Members Elizabeth Lee, Serrano, and Chair Sohn –3; Nays, None.

I

PUBLIC COMMENTS ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION – Chair Sohn asked if any persons wished to speak on matters within the Committee's jurisdiction, to which there was no response and no public comment cards received.

*Item IV was taken out of order*

IV

INVESTMENT MANAGER CONTRACT WITH AJO, LP REGARDING THE MANAGEMENT OF AN ACTIVE LARGE CAP VALUE PORTFOLIO AND POSSIBLE COMMITTEE ACTION – Rod June, Chief Investment Officer and Barbara Sandoval, Investment Officer III presented this item to the Committee. Committee Member Serrano moved approval, and adopted by the following vote: Ayes, Committee Members Elizabeth Lee, Serrano, and Chair Sohn –3; Nays, None.

Chair Sohn recessed the Special Meeting at 9:58 a.m and reconvened the Special Meeting at 12:27 p.m..

### III

CHIEF INVESTMENT OFFICER VERBAL REPORT – There was no report.

### V

PRIVATE CREDIT INVESTMENT MANAGER SEARCH FINALIST PRESENTATIONS AND POSSIBLE COMMITTEE ACTION – Rod June, Chief Investment Officer and Wilkin Ly, Investment Officer III provided a brief overview of the Private Credit Investment Manager Search Finalists.

Scott Hamilton, Managing Director, Graeme Delaney-Smith, Co-Head of Direct Lending, Natalia Tsitoura, Managing Director, and Joanna Layton, Head of European Direct Lending Portfolio Monitoring with Alcentra presented to the Committee.

Committee Member Serrano left the Special Meeting at 12:57 p.m.

Chair Sohn recessed the Special Meeting at 1:36 p.m. for a break and reconvened at 1:43 p.m.

Mark Attanasio, Co-Founder & Managing Director, Christine Vanden Beukel, Managing Director European Credit, and Nicole Waibel, Managing Director European Credit with Crescent presented to the Committee.

Chair Sohn recessed the Special Meeting at 2:37 p.m. for a break and reconvened at 2:50 p.m.

Allison Davi, Managing Director and Blair Faulstich, Senior Portfolio Manager with Benefit Street Partners presented to the Committee.

Chair Sohn recessed the Special Meeting at 3:40 p.m. for a break and reconvened at 3:42 p.m.

R. Sean Duff, Partner, Managing Director and Theodore Koenig, President & CEO with Monroe Capital presented to the Committee.

Assistant City Attorney left the Special Meeting at 4:35 p.m. and Deputy City Attorney James Napier represented Legal Counsel for the remainder of the Special Meeting.

After discussion with the staff, the Committee decided to table this decision until the next Investment Committee Meeting.

### VI

OTHER BUSINESS – There was no other business.

VII

NEXT MEETING – The next Regular Meeting of the Investment Committee is scheduled for Tuesday, July 9, 2019, in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.

VIII

ADJOURNMENT – There being no further business before the Committee, Chair Sohn adjourned the Meeting at 4:58 p.m.

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Sung Wohn Sohn  
Chair

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Neil M. Guglielmo  
Manager-Secretary



# LACERS

LOS ANGELES CITY EMPLOYEES'  
RETIREMENT SYSTEM



**REPORT TO INVESTMENT COMMITTEE**  
**From: Neil M. Guglielmo, General Manager**

**MEETING: JULY 9, 2019**  
**ITEM: IV**

*Neil M. Guglielmo*

**SUBJECT: CONTINUED DISCUSSION OF PRIVATE CREDIT INVESTMENT MANAGER SEARCH FINALISTS AND POSSIBLE COMMITTEE ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

### Recommendation

That the Committee recommend to the Board:

- 1) Benefit Street Partners L.L.C. and Monroe Capital LLC as finalists for the U.S. portion of the Private Credit Mandate search;
- 2) Alcentra Limited and Crescent Capital Group LP as finalists for the non-U.S. portion of the Private Credit Mandate search;
- 3) Award contracts to Benefit Street Partners L.L.C. and Alcentra Limited with initial commitments of \$100 million each; and
- 4) Award contracts to Monroe Capital LLC and Crescent Capital Group LP and commit capital at a future date as determined by the Committee and Board.

### Executive Summary

The Board approved a Request for Proposal process to evaluate the current marketplace for private credit investment managers on October 9, 2018. On June 11, 2019, the Committee interviewed Benefit Street Partners L.L.C. (Benefit Street) and Monroe Capital LLC (Monroe) as finalists for the U.S. portion of the search; and Alcentra Limited (Alcentra) and Crescent Capital Group LP (Crescent) as finalists for the non-U.S. portion of the search. The Committee further instructed staff to explore options to fund the finalist candidates. After exploring all the options, staff recommends moving all four candidates forward while initially funding \$100 million each to Benefit Street and Alcentra. Funding for Crescent and Monroe will be determined at a later date.

### Discussion

#### *Background*

On June 11, 2019, the Committee interviewed Benefit Street and Monroe as finalists for the U.S. portion of the Private Credit Mandate search; and Alcentra and Crescent as finalists for the non-U.S. portion of the search. After interviewing the finalist firms, the Committee directed staff to explore the option of retaining all four finalist firms while initially funding Alcentra and Benefit Street with \$100 million each,



as outlined in the Private Credit Mandate Update and Implementation Plan approved by the Board on May 28, 2019. Alcentra and Benefit Street invest in the middle market space; whereas Crescent and Monroe invest in the lower market space.

In light of the current position in the market cycle, the Committee preferred Alcentra and Benefit Street for initial funding due to their investments into larger companies with a more diversified portfolio approach. Crescent and Monroe have indicated their willingness to cooperate with LACERS in being funded at later dates, as determined by the Committee. No management fees will accrue until the investment managers are funded. This option maximizes LACERS flexibility to deploy assets to the lower middle market private credit space without going through the entire RFP process at a future point.

*General Fund Consultant Opinion*

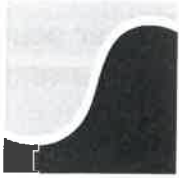
NEPC, LLC, LACERS' General Fund Consultant concurs with this recommendation.

**Strategic Plan Impact Statement**

Private Credit Mandate allows the fund to maintain a diversified exposure to Credit Opportunities, which is expected to help optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: James Wang, Investment Officer I, Investment Division

RJ/BF/WL/JW:sg



# LACERS

LOS ANGELES CITY EMPLOYEES'  
RETIREMENT SYSTEM



## REPORT TO INVESTMENT COMMITTEE

From: Neil M. Guglielmo, General Manager

*Neil M. Guglielmo*

MEETING: JULY 9, 2019

ITEM: V

SUBJECT: CONTINUED DISCUSSION OF INVESTMENT MANAGER CONTRACT WITH BARROW, HANLEY, MEWHINNEY & STRAUSS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE NON-U.S. DEVELOPED MARKETS VALUE EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

### Recommendation

That the Committee recommend to the Board a one-year contract extension with Barrow, Hanley, Mewhinney & Strauss, LLC for management of an active non-U.S. developed markets value equities portfolio.

### Executive Summary

Barrow, Hanley, Mewhinney & Strauss, LLC (BHMS) has managed an active non-U.S. developed markets value equities portfolio for LACERS since November 2013. LACERS' portfolio is currently valued at \$484 million. BHMS was placed on "On Watch" for an initial one-year period effective April 17, 2019, due to performance. In light of BHMS "On Watch" status and consistent with the LACERS Manager Monitoring Policy, staff recommends a one-year contract extension and will closely monitor performance.

### Discussion

#### *Background*

Barrow, Hanley, Mewhinney & Strauss, LLC (BHMS) has managed an active non-U.S. developed markets value equities portfolio for LACERS since November 2013, and is benchmarked against the MSCI EAFE Value Index. BHMS' fundamental research-based and value-oriented investment strategy emphasizes companies with low price/earnings ratios, low price/book ratios, and high dividend yields to provide a measure of protection in down markets, as well as participation in improving economic cycles. The portfolio is managed by Rand Wrighton, who has 19 years of industry experience, and TJ Carter, who has 15 years of industry experience. LACERS' portfolio was valued at \$484 million as of May 31, 2019.

BHMS was hired through the 2013 Active Non-U.S. Developed Markets Equities Manager search process and a three-year contract was authorized by the Board on June 11, 2013. BHMS was awarded a contract renewal on June 28, 2016. The current contract expires on September 30, 2019.

**Organization**

BHMS is an investment management firm that specializes in long-only value investing. The firm is a majority owned affiliate of BrightSphere Investment Group (BSIG), a public company listed on the New York Stock Exchange (Ticker Symbol: BSIG). BSIG was formerly branded as OM Asset Management, plc. BHMS is headquartered in Dallas and has 98 employees. As of May 31, 2019, the firm had over \$72 billion in total assets under management with \$1.9 billion in the non-U.S. value equity strategy.

**Due Diligence**

BHMS' organizational structure, investment philosophy, strategy, and process have not changed over the contract period. In early 2018, David Hodges, Co-Portfolio Manager, retired after having built the non-U.S. value strategy at BHMS with Rand Wrighton, Co-Portfolio Manager. Mr. Wrighton continues to serve as portfolio manager alongside TJ Carter, who was promoted to portfolio manager following the retirement of Mr. Hodges.

**Performance**

BHMS has outperformed its benchmark, net-of-fees, since inception, and underperformed in the three-month, one-year, three-year, and five-year time periods as presented in the table below.

Annualized Performance, Unaudited as of 5/31/19 (Net-of-Fees)					
	3-Month	1-Year	3-Year	5-Year	Since Inception <sup>^</sup>
BHMS	-4.60	-12.62	3.31	-1.13	0.54
MSCI EAFE Value Index	-4.08	-8.23	4.81	-0.75	0.41
% of Excess Return	-0.52	-4.39	-1.50	-0.38	0.13

<sup>^</sup>Inception date: 11/30/13

Calendar year performance is presented in the table below as supplemental information.

Calendar Year Performance, Unaudited as of 5/31/19 (Net-of-Fees)							
	1/1/19-5/31/19	2018	2017	2016	2015	2014	11/30/13-12/31/13
BHMS	5.75	-18.12	23.12	3.23	-6.56	-2.06	2.26
MSCI EAFE Value Index	4.04	-14.78	21.44	5.02	-5.68	-5.39	1.36
% of Excess Return	1.71	-3.34	1.68	-1.79	-0.88	3.33	0.90

Pursuant to the LACERS Manager Monitoring Policy (Policy), BHMS was placed on "On Watch" status for an initial one-year period effective April 17, 2019. The following Policy watch list criteria triggered the "On Watch" status based on the performance as of March 31, 2019:

1. Annualized net underperformance relative to its benchmark for trailing 5 years.
2. Annualized net Information Ratio trailing 5 years relative to its benchmark is below .20.

In March 2019, BHMS provided an update on the firm and performance to staff and discussed their plan of action to return to compliance with the Policy. Staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, will closely monitor the portfolio's performance during the "On Watch" period.

#### *Fees*

LACERS pays BHMS an effective fee of 51 basis points (0.51%), which is approximately \$2.5 million annually based on the value of LACERS' assets as of May 31, 2019. This fee ranks in the 33rd percentile among its peers in the eVestment EAFE Value Universe (i.e., BHMS's fee is lower than 67% of peers).

#### *General Fund Consultant Opinion*

NEPC concurs with this recommendation.

#### **Strategic Plan Impact Statement**

A contract renewal with Barrow, Hanley, Mewhinney & Strauss, LLC will allow the fund to maintain a diversified exposure to the non-U.S. developed markets equities, which is expected to help optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Barbara Sandoval, Investment Officer II, Investment Division.

RJ/BF/BS:sg

Attachments:       1. Consultant Recommendation – NEPC, LLC  
                          2. Workforce Composition



**To:** Los Angeles City Employees' Retirement System Investment Committee

**From:** NEPC, LLC

**Date:** July 9, 2019

**Subject:** Barrow, Hanley, Mewhinney & Strauss, LLC - Contract extension

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### **Recommendation**

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) extend the contract that is currently in place with Barrow, Hanley, Mewhinney & Strauss, LLC ('BHMS') for a period of one year from the date of contract expiry.

### **Background**

BHMS was hired into the Non-U.S. Equity asset class in 2013 to provide the Plan with public equity exposure across international developed countries/markets. The portfolio's strategy is benchmarked against the MSCI EAFE Value Index and has a performance inception date of November 30, 2013.

As of May 31, 2019, BHMS managed \$484.4 million, or 2.8% of Plan assets in an international developed markets separately managed account. The performance objective is to outperform the MSCI EAFE Value Index, net of fees, annualized over a full market cycle (normally three-to-five years). The BHMS account is currently on Watch due to performance according to LACERS' manager monitoring policy.

BHMS was founded and registered with the SEC in July of 1979 to manage U.S. tax-exempt portfolios for institutional clients. In January of 1988, BHMS sold themselves to United Asset Management Corporation (UAM), a Boston-based holding company, listed on the New York Stock Exchange. On October 5, 2000, UAM was acquired by Old Mutual plc, an international financial services group based in London. Following the acquisition, Old Mutual plc renamed UAM, "Old Mutual Asset Management". In 2014, Old Mutual plc conducted an initial public offering of Old Mutual Asset Management. OM Asset Management plc rebranded as BrightSphere Investment Group plc in March 2018, following its separation from Old Mutual plc. BrightSphere Investment Group plc is a publicly-listed company traded on the New York Stock Exchange (Ticker symbol: BSIG). Many key employees, including portfolio managers and analysts, have economic ownership in BHMS through a limited partnership that owns a 24.9% equity interest in BHMS LLC. The firm's assets under management were \$76 billion at March 31, 2019.

The portfolio is managed by two portfolio managers, Rand Wrighton and TJ Carter. Mr. Wrighton has been a lead portfolio manager on the strategy since 2006. In March of 2018 David Hodges, Co-Portfolio Manager, retired after having built the non-US Value portfolio capability at BHMS with Mr. Wrighton. TJ Carter was promoted into the portfolio manager role when David Hodges retired. In addition, Charlie Radtke was brought aboard as a third Portfolio Manager. Mr. Radtke left the firm in September of 2018. Mr. Radtke was with the



firm for approximately a year and he did not have a significant impact on the names in the portfolio, therefore, a replacement has not been pursued.

BHMS' approach to the equity market is based on the underlying philosophy that markets are inefficient. These inefficiencies can best be exploited through adherence to a value-oriented investment process dedicated to the selection of securities on a bottom-up basis. No attempt to time the market or rotate in and out of broad market sectors is attempted, as they believe that it is difficult, if not impossible, to add incremental value on a consistent basis by top-down or thematic market timing. BHMS stays fully invested with a defensive, conservative orientation, based on the belief that superior returns can be achieved while taking below-average risks. They implement this strategy by constructing portfolios of individual stocks that reflect value characteristics such as: price/earnings, price/book, and enterprise value/free cash flow ratios at or below the market (MSCI EAFE Index), and dividend yields at or above the market.

BHMS' value investing strategy emphasizes low price/earnings ratios, low price/book ratios, and high dividend yields as a way to add protection in down markets, as well as participation in improving economic cycles. Within a broad universe of more than 4,000 non-U.S. stocks, there are approximately 2,600 stocks with market capitalizations greater than \$1 billion with levels of liquidity that they consider sufficient. This subset of stocks is the starting point for their Non-US Value stock selection process. This universe is reduced to the least expensive portion of the universe resulting in approximately 250 stocks that receive the highest ranking by the screening model. These stocks are then placed on BHMS' Non-U.S. Security Guidance List. They then perform bottom-up, fundamental securities analysis on these stocks for potential inclusion in the Non-US Value portfolio. The Security Guidance List is reviewed weekly.

The firm seeks to build equally-weighted portfolios generally consisting of 50 to 70 stocks. While the "core" position size is approximately 2%, positions may be larger if the conviction level is unusually high or the target company's weight in the Index mandates a larger weight in order to generate sufficient alpha. However, no more than 5% of the portfolio, at market value, will be invested in any one security. Sector and country weightings are a residual of the bottom-up stock selection process and they may vary meaningfully at times from the respective weightings in the MSCI EAFE Index. Sector weightings are limited to an absolute weight of 40% of the portfolio. Individual country weightings are limited to 25%, at market value (ex-Japan and the UK). While the Non-US Value strategy is primarily invested in companies domiciled in developed non-U.S. markets, BHMS may, on an opportunistic basis, invest in companies domiciled in emerging markets, as defined by MSCI.

## **Performance**

Ending May 31, 2019, the portfolio has outperformed the benchmark since inception by 0.13% (0.54% vs. 0.41%). In the past year, ended May 31, 2019 the portfolio underperformed the benchmark by 4.39% (-12.62% vs. -8.23%). Referring to Exhibit 1, since inception of the BHMS portfolio on November 30, 2013 and ended March 31, 2019, the strategy has outperformed the MSCI EAFE Value Index by 0.30%, returning 1.41%, net of fees. The portfolio ranked in the 79<sup>th</sup> percentile in its peer universe since November 30, 2013. The information ratio was 0.09 and active risk, as measured by tracking error was



3.3%. In the one-year period ended March 31, 2019, the portfolio underperformed the index by 2.42% and ranked in the 59<sup>th</sup> percentile in its peer universe. Underperformance in the trailing one-year, ended March 31, 2019, has been driven by stock selection, primarily in the Financials sector. On a global regions basis, detractors from relative performance have been stock selection in Emerging Markets and Europe Ex-United Kingdom in addition to being overweight to North America.

Since December 1, 2013, referring to Exhibit 2, historical cumulative performance had been positive when compared to the benchmark until the second quarter of 2018. Relative outperformance in the first quarter of 2019 has resulted in positive cumulative performance versus the benchmark. This was primarily related to stock selection in Energy, Industrials and Consumer Discretionary sectors.

### **Fees**

The portfolio has an asset-based fee of 0.51% (51 basis points) annually. This fee ranks in the 33<sup>rd</sup> percentile among its peers in the eVestment EAFE Value Universe. In other words, 67% of the 75 products included in the peer universe have a higher fee than the LACERS account

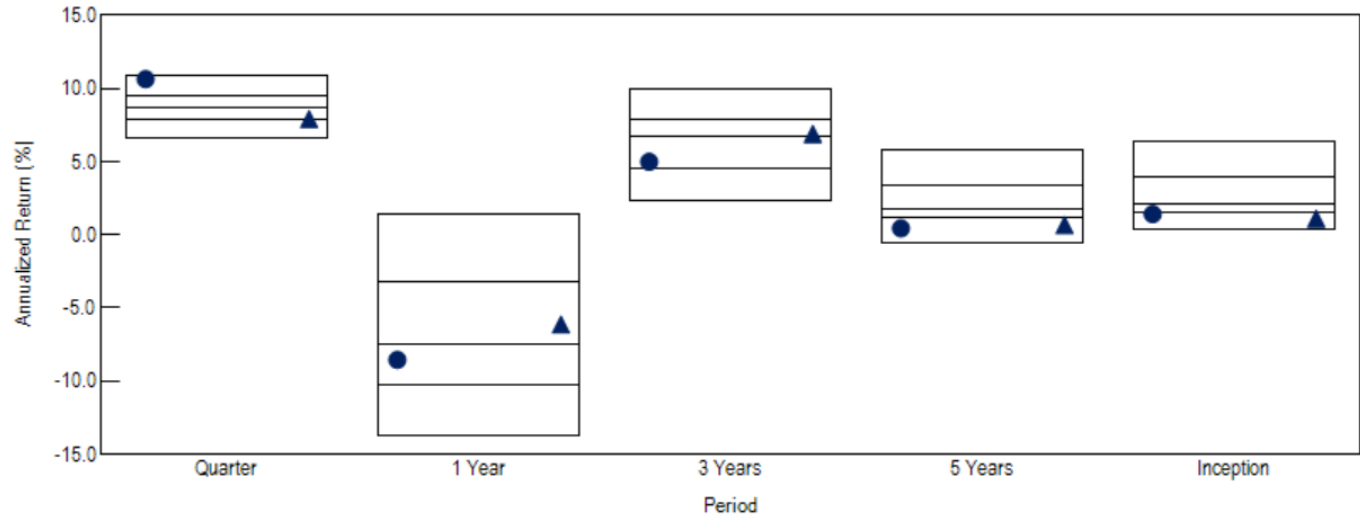
### **Conclusion**

BHMS has performed within the range of anticipated outcomes against its benchmark since inception in a time period in which deep value equity investments have not been favored by markets. The firm has had some turnover in portfolio management, though a founding member of the team is still with the firm/product as the lead portfolio manager. The investment process and philosophy have remained intact, yet the portfolio has been unrewarded in the short-run. BHMS' international equity platform is rated as neutral by NEPC's research team. Note, a neutral rating means that the firm may be an acceptable investment but is simply not currently a 'preferred product'. NEPC recommends a contract extension for a period of one year from the period of contract expiry.

The following tables provide specific performance information, net of fees referenced above.

Exhibit 1

**eV EAFE Value Equity Net Return Comparison**  
 Ending March 31, 2019

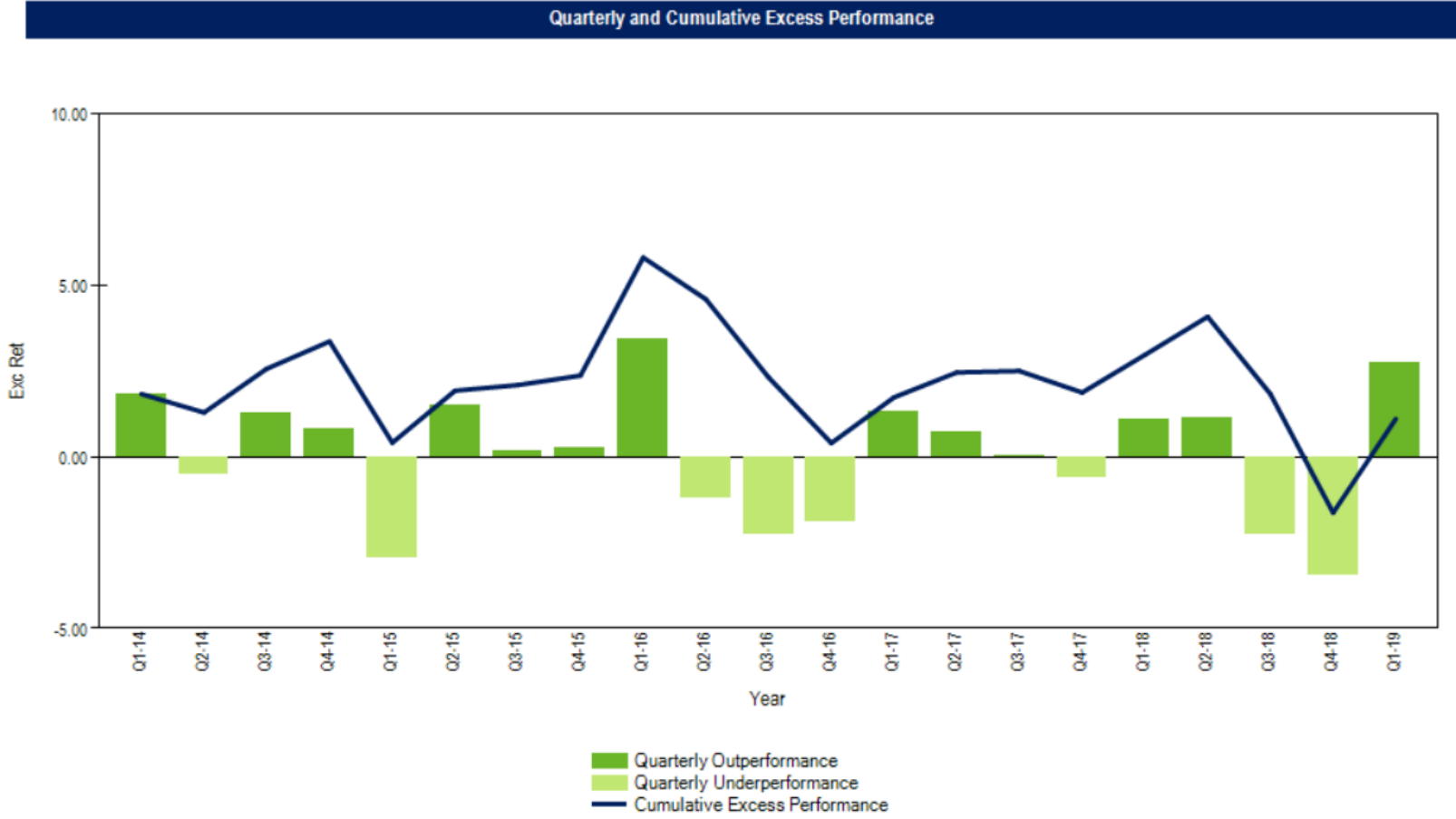


	Quarter		1 Year		3 Years		5 Years		Inception	
<b>Return (Rank)</b>	10.88		1.41		10.02		5.83		6.42	
5th Percentile	10.88		1.41		10.02		5.83		6.42	
25th Percentile	9.46		-3.22		7.83		3.42		3.99	
Median	8.69		-7.45		6.71		1.77		2.13	
75th Percentile	7.91		-10.23		4.50		1.19		1.53	
95th Percentile	6.60		-13.69		2.37		-0.61		0.32	
<b># of Portfolios</b>	52		50		48		43		42	
● Barrow Hanley	10.65	(11)	-8.55	(59)	5.00	(70)	0.45	(82)	1.41	(79)
▲ MSCI EAFE Value	7.92	(75)	-6.13	(45)	6.90	(47)	0.67	(80)	1.11	(80)





Exhibit 2



Vendor  
Address

Barrow, Hanley, Mewhinney & Strauss, LLC  
2200 Ross Avenue, 31st Floor  
Dallas, TX 75201

Date Completed: 3/31/19

Category

Non-U.S. Developed Markets Equities Value

BHMS TOTAL COMPOSITION OF WORK FORCE										
<u>Occupation</u>	<u>African American Full Time</u>	<u>Hispanic Full Time</u>	<u>Asian or Pacific Islander Full Time</u>	<u>American Indian/ Alaskan Native Full Time</u>	<u>2 or More Races Full Time</u>	<u>Caucasian (Non Hispanic) Full Time</u>	<u>Total Employees Full Time</u>	<u>Percent (%) Minority Full Time</u>	<u>Gender Full Time</u>	
									<u>Male</u>	<u>Female</u>
Officials & Managers	0	0	0	0	0	4	4	0.00%	3	1
Professionals	0	2	6	0	1	49	58	15.52%	49	9
Technicians	1	1	0	0	0	2	4	50.00%	3	1
Sales Workers	2	0	0	0	0	4	6	33.33%	6	0
Office/Clerical	1	1	0	0	3	21	26	19.23%	3	23
Semi-Skilled	0	0	0	0	0	0	0	0.00%	0	0
Unskilled	0	0	0	0	0	0	0	0.00%	0	0
Service Workers	0	0	0	0	0	0	0	0.00%	0	0
Other	0	0	0	0	0	0	0	0.00%	0	0
<b>Total</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>80</b>	<b>98</b>	<b>18.37%</b>	<b>64</b>	<b>34</b>



# LACERS

LOS ANGELES CITY EMPLOYEES'  
RETIREMENT SYSTEM



**REPORT TO INVESTMENT COMMITTEE**  
From: Neil M. Guglielmo, General Manager

**MEETING: JULY 9, 2019**  
**ITEM: VI**

*Neil M. Guglielmo*

**SUBJECT: INVESTMENT MANAGER CONTRACT WITH AXIOM INTERNATIONAL INVESTORS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE EMERGING MARKETS GROWTH EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

### Recommendation

That the Committee recommend to the Board a one-year contract extension with Axiom International Investors, LLC for management of an active emerging markets equities growth portfolio.

### Executive Summary

Axiom International Investors, LLC (Axiom) has managed an active emerging markets growth equities portfolio for LACERS since March 2014. LACERS' portfolio is currently valued at \$408 million. Axiom was placed "On Watch" for an initial one-year period effective April 17, 2019, due to performance. In light of Axiom's "On Watch" status and consistent with the LACERS Manager Monitoring Policy, staff recommends a one-year contract extension and will monitor performance.

### Discussion

#### *Background*

Axiom International Investors, LLC (Axiom) has managed an active emerging markets growth equities portfolio for LACERS since March 2014, and is benchmarked against the MSCI Emerging Markets Growth Index. Axiom uses a fundamental research-driven investment strategy that focuses on companies with key growth drivers, such as company-specific improvements and favorable macro-economic and political factors. Such drivers tend to be indicators of positive company financial and stock price performance. The investment team consists of six professionals including co-portfolio managers Christopher Lively and Don Elefson, who have 33 and 37 years of experience, respectively. LACERS' portfolio was valued at \$408 million as of May 31, 2019.

Axiom was hired through the 2013 Active Emerging Market Growth Equities manager search process and a three-year contract was authorized by the Board on July 23, 2013. Axiom was awarded a contract renewal on September 27, 2016. The current contract expires on September 30, 2019.

### Organization

Axiom is 100% employee-owned, with 50 employees, and is headquartered in Greenwich, Connecticut. As of May 31, 2019, Axiom managed over \$11 billion in total assets with \$5.8 billion in the emerging markets growth equity strategy.

### Due Diligence

Axiom's investment philosophy, strategy, and process have not changed over the contract period.

### Performance

As of May 31, 2019, Axiom has outperformed its benchmark, net-of-fees, over the last 3-month and 1-year time period but underperformed over the remaining time periods as presented in the table below.

<b>Annualized Performance, Unaudited as of 5/31/19 (Net-of-Fees)</b>						
	3-Month	1-Year	2-Year	3-Year	5-Year	Since Inception <sup>1</sup>
Axiom	-2.51	-10.43	1.59	9.31	2.19	2.59
MSCI EM Growth Index	-4.97	-11.83	1.90	10.01	2.92	3.53
% of Excess Return	2.46	1.40	-0.31	-0.70	-0.73	-0.94

<sup>1</sup>Inception Date: 3/31/14

Calendar year performance is presented in the table below as supplemental information.

<b>Calendar Year Performance, Unaudited as of 5/31/19 (Net-of-Fees)</b>						
	1/1/19-5/31/19	2018	2017	2016	2015	3/31/14-12/31/14
Axiom	5.98	-17.64	40.56	8.40	-12.44	-2.01
MSCI EM Growth Index	4.84	-18.26	46.80	7.59	-11.34	-0.30
% of Excess Return	1.14	0.62	-6.24	0.81	-1.10	-1.71

Pursuant to the LACERS Manager Monitoring Policy (Policy), Axiom was placed on "On Watch" status for an initial one-year period effective April 17, 2019. The following Policy watch list criteria triggered the "On Watch" status based on the performance as of March 31, 2019:

1. Annualized net underperformance relative to its benchmark for trailing 3 years.
2. Annualized net underperformance relative to its benchmark for trailing 5 years.
3. Annualized net Information Ratio trailing 5 years relative to its benchmark is below .20.

In May 2019, Axiom provided an update on the firm and performance to staff and discussed their plan of action to return to compliance with the Policy. Staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, will monitor the portfolio's performance closely during the "On Watch" period.

### Fees

LACERS pays Axiom an effective fee of 70 basis points (0.70%), which is approximately \$2.9 million annually based on the value of LACERS' assets as of May 31, 2019. This fee ranks in the 37<sup>th</sup> percentile

among its peers in the eVestment Global Emerging Markets All Cap Growth Equity Universe (i.e. Axiom's fee is lower than 63% of peers).

*General Fund Consultant Opinion*

NEPC concurs with this recommendation.

**Strategic Plan Impact Statement**

A contract renewal with Axiom International Investors, LLC will allow the fund to maintain a diversified exposure to the non-U.S. equities emerging markets, which is expected to help optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared by: Eduardo Park, Investment Officer I, Investment Division.

RJ/BF/EP:sg

Attachments:       1. Consultant Recommendation – NEPC, LLC  
                          2. Workforce Composition



**To:** Los Angeles City Employees' Retirement System Investment Committee  
**From:** NEPC, LLC  
**Date:** July 9, 2019  
**Subject:** Axiom Investors - Contract Extension

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**Recommendation**

NEPC recommends the Los Angeles City Employees' Retirement System ('LACERS') extend the contract that is currently in place with Axiom Investors ('Axiom') for a period of one year from the date of contract expiry.

**Background**

Axiom was hired into the Non-U.S. Equity asset class in March 2014 to provide the Plan with public equity exposure across international emerging countries/markets. The portfolio's strategy is benchmarked against the MSCI Emerging Markets Growth Index and has a performance inception date of March 31, 2014.

As of May 31, 2019, Axiom managed \$407.5 million, or 2.4% of Plan assets in an international emerging markets separately managed account. The performance objective is to outperform the benchmark, net of fees, annualized over a full market cycle (normally three-to-five years). The account is currently on Watch due to performance under the LACERS' Manager Monitoring Policy.

Axiom is an independent employee-owned investment management firm founded in 1998 by Andrew Jacobson. As of May 31, 2019 the firm had \$11.4 billion in assets under management and had 21 employees. Prior to forming Axiom, the investment team was responsible for developing and managing the international equity strategy at Columbus Circle Investors, a division of PIMCO Advisors LP. The Axiom Emerging Markets team is led by Chris Lively and co-portfolio manager Donald Elefson. José Morales joined the firm in 2017 as a portfolio manager. The portfolio managers split the emerging markets by region. Chris Lively retains final buy and sell authority, and ultimately decides portfolio positioning and stock weightings. The team also leverages a shared research platform across all of Axiom's non-U.S. equity products.

The Axiom investment philosophy is to invest in quality companies that are growing and evolving better and more rapidly than expected. Critical to the investment process is the ability to identify these changes in growth, prior to them being reflected in expectations or market valuations. Axiom employs a bottom-up, growth-oriented investment discipline that relies on detailed fundamental stock analysis to identify companies that are improving more quickly than generally expected. The primary emphasis is to isolate those companies that are likely to exceed expectations, which they do by identifying and monitoring the key business drivers of each stock. Key business drivers are essentially the leading indicators of stock price performance. Key drivers can include company specific, industry,



macroeconomic and political factors. For each of these drivers, they survey a wide variety of sources to determine investor expectations.

The universe is defined as securities that have a minimum market cap of \$1.0 billion, are covered by 1 or more brokerage analysts and have liquidity of over \$5 MM/day. About 80% of Axiom's new ideas are typically identified as a consequence of specific, positive, fundamental developments in a company's operations (e.g., favorable sales of a new product, a significant restructuring initiative or a change in industry conditions). Axiom also screens the investment universe on a variety of financial and technical factors to help identify new ideas for further detailed fundamental analysis. These factors include positive earnings growth, positive earnings estimate revisions, positive price movement and favorable valuation characteristics.

### **Performance**

As of May 31, 2019, since inception, the portfolio has underperformed its benchmark by 0.94% (2.59% vs 3.53%). Over the past year, ended May 31, 2019, the portfolio has outperformed the benchmark by 1.40% (-10.43% vs. -11.83%). Referring to Exhibit 1, since inception of the Axiom portfolio ended March 31, 2019, the portfolio ranked in the 52<sup>nd</sup> percentile among its peers and underperformed the benchmark by 1.45%. In the trailing one-year ended March 31, 2019, the portfolio ranked in the 69<sup>th</sup> percentile in its peer group underperforming its benchmark by 0.97%. Since inception, ended May 31, 2019, the information ratio was -0.35 and active risk, as measured by tracking error was 2.72%. Underperformance in the trailing five-years, ended May 31, 2019, was driven by stock selection primarily in the Communication Services and Financials sectors. Being underweight Information Technology also detracted from relative returns. On a country basis, security selection in Taiwan, Korea and South Africa were detractors relative to benchmark returns.

Referring to Exhibit 2, since inception, historical cumulative performance has been negative when compared to the benchmark. Security selection in the Information Technology, Industrials and Communication Services sectors have been responsible for cumulative negative returns since the first quarter of 2017.

### **Fees**

The portfolio has an asset-based fee of 0.70% annually. This fee ranks in the 37<sup>th</sup> percentile among its peers in the eVestment Global Emerging Markets All Cap Growth Equity Universe. In other words, 63% of the 45 products included in the peer universe have a higher fee than the LACERS account.

### **Conclusion**

Axiom has performed within the range of anticipated outcomes against its benchmark since inception, though has underperformed the benchmark. The strategy is a high conviction strategy at NEPC and the philosophy, investment process and team used to implement it have been stable. We believe in the long-term efficacy of a strategy that focuses on understanding the business fundamentals of companies that are growing faster than



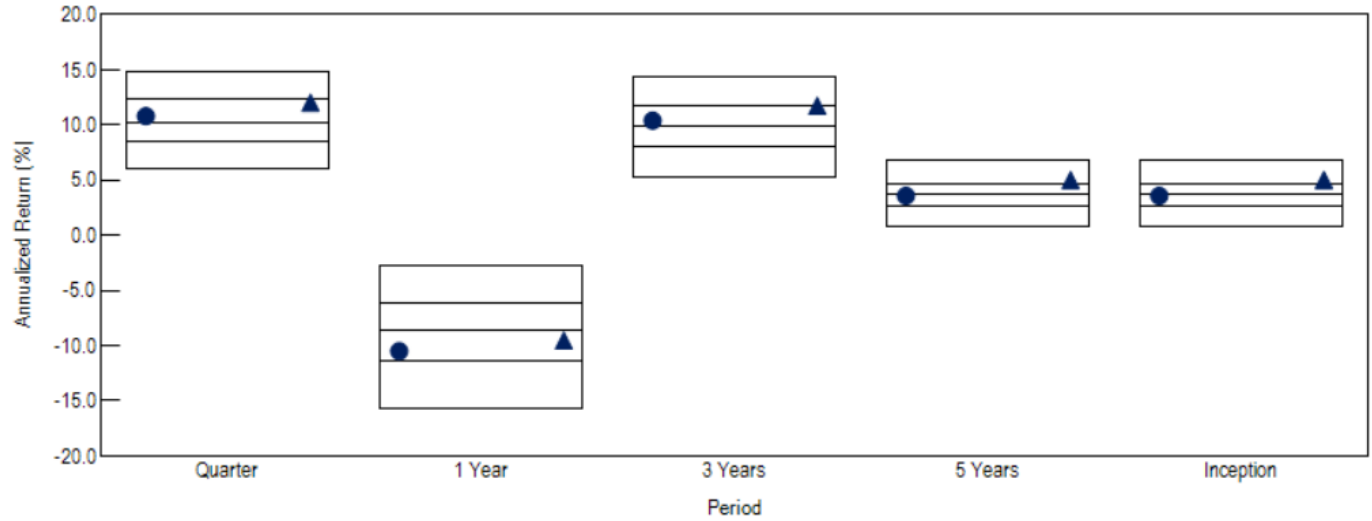
markets anticipate. NEPC recommends a contract extension for a period of one-year from the period of contract expiry.

The following tables provide specific performance information, net of fees referenced above.



Exhibit 1

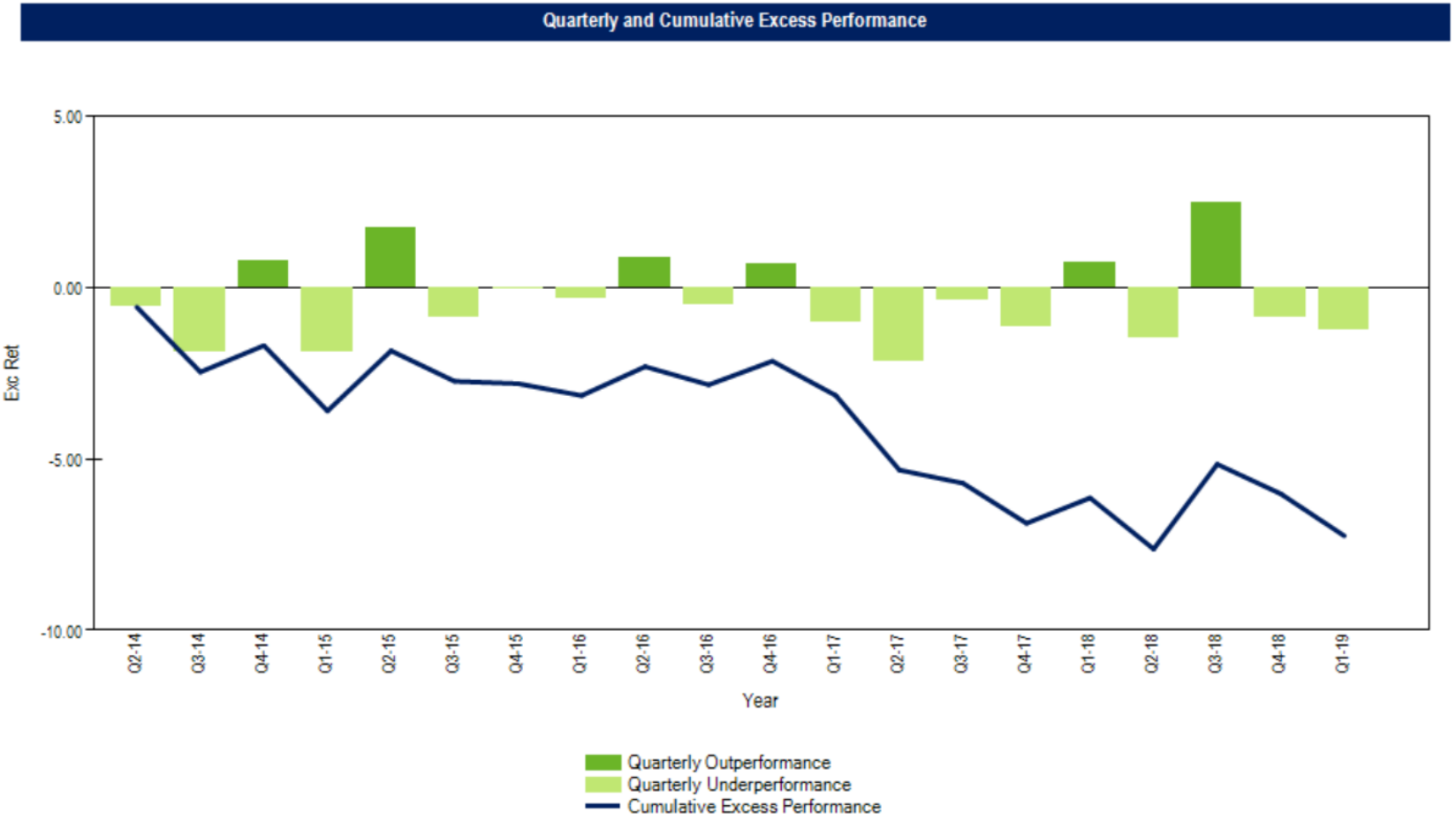
**eV Emg Mkts Equity Net Return Comparison**  
 Ending March 31, 2019



	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	Inception	Quarter	1 Year	3 Years	5 Years	Inception
5th Percentile	14.84	-2.80	14.36	6.86	6.86					
25th Percentile	12.38	-6.19	11.80	4.68	4.68					
Median	10.27	-8.63	9.86	3.70	3.70					
75th Percentile	8.59	-11.38	8.04	2.71	2.71					
95th Percentile	6.08	-15.67	5.33	0.87	0.87					
# of Portfolios	216	205	189	163	163					
● Axiom Emerging Markets	10.82 (41)	-10.49 (69)	10.41 (44)	3.59 (52)	3.59 (52)					
▲ MSCI Emerging Markets Growth NR USD	12.04 (29)	-9.52 (59)	11.75 (26)	5.04 (20)	5.04 (20)					



Exhibit 2



Vendor **Name: Axiom International Investors, LLC**  
Address **Address: 33 Benedict Place**

Date Completed: May 2019

Category **Asset Class**

TOTAL COMPOSITION OF WORK FORCE									
<u>Occupation</u>	<u>African American Full Time</u>	<u>Hispanic Full Time</u>	<u>Asian or Pacific Islander Full Time</u>	<u>American Indian/ Alaskan Native Full Time</u>	<u>Caucasian (Non Hispanic) Full Time</u>	<u>Total Employees Full Time</u>	<u>Percent (%) Minority Full Time</u>	<u>Gender Full Time</u>	
								<u>Male</u>	<u>Female</u>
Officials & Managers	0	1	3	0	11	15	26.67%	11	4
Professionals	0	2	2	0	26	30	13.33%	22	8
Technicians	0	0	0	0	0	0	0.00%	0	0
Sales Workers	0	0	0	0	4	4	0.00%	2	2
Office/Clerical	0	0	0	0	1	1	0.00%	0	1
Semi-Skilled	0	0	0	0	0	0	0.00%	0	0
Unskilled	0	0	0	0	0	0	0.00%	0	0
Service Workers	0	0	0	0	0	0	0.00%	0	0
Other	0	0	0	0	0	0	0.00%	0	0
<b>Total</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>42</b>	<b>50</b>	<b>16.00%</b>	<b>35</b>	<b>15</b>



**REPORT TO INVESTMENT COMMITTEE**  
From: Neil M. Guglielmo, General Manager

**MEETING: JULY 9, 2019**  
**ITEM: VII**

*Neil M. Guglielmo*

**SUBJECT: INVESTMENT MANAGER CONTRACT WITH OBERWEIS ASSET MANAGEMENT, INC. REGARDING THE MANAGEMENT OF AN ACTIVE NON-U.S. SMALL CAP EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

**Recommendation**

That the Committee recommend to the Board a three-year contract extension with Oberweis Asset Management, Inc. for management of an active non-U.S. small cap equities portfolio.

**Executive Summary**

Oberweis Asset Management, Inc. (Oberweis) has managed an active non-U.S. small cap equities portfolio for LACERS since January 2014. At the time of hire, the firm qualified as an emerging investment manager. LACERS' portfolio is currently valued at \$162 million. The strategy has outperformed its benchmark since inception and is in compliance with the LACERS Manager Monitoring Policy.

**Discussion**

*Background*

Oberweis has managed an active non-U.S. small cap equities portfolio for LACERS since January 2014, and is benchmarked against the MSCI EAFE Small Cap Index. Oberweis employs a growth-biased, fundamental research-based approach to investing. The manager seeks companies that have reasonable valuations and the potential for revenue and earnings growth resulting from innovations in products or technology. The strategy is managed by Ralf Scherschmidt, Lead Portfolio Manager, who is supported by Jeff Papp, CFA, Assistant Portfolio Manager, Charles Hill-Wood, Equity Analyst, and four additional research specialists. LACERS' portfolio was valued at \$162 million as of May 31, 2019.

Oberweis was hired through the 2013 Active Non-U.S. Small Cap Equities Mandate search, and a three-year contract was authorized by the Board on August 13, 2013. The contract was renewed by the Board on September 27, 2016, and the current contract expires on December 31, 2019.

### Organization

Oberweis is 100% employee-owned, and is headquartered in Lisle, IL with investment professionals based in New York City, Hong Kong, and the United Kingdom. At the time LACERS hired Oberweis, the firm qualified as an emerging investment manager pursuant to the LACERS Emerging Investment Manager Policy. The firm's total assets under management have grown to over \$3.2 billion, with \$2.7 billion in the non-U.S. small cap equities strategy, as of April 30, 2019.

### Due Diligence

Oberweis' organizational structure, key personnel, investment philosophy, strategy, and process have not changed over the contract period.

### Performance

As of May 31, 2019, Oberweis has outperformed its benchmark, net-of-fees, over all time periods except the 1-year period as presented in the table below. Oberweis is in compliance with the LACERS Manager Monitoring Policy.

Annualized Performance, Unaudited as of 5/31/19 (Net-of-Fees)						
	3-Month	1-Year	2-Year	3-Year	5-Year	Since Inception <sup>1</sup>
Oberweis	1.96	-12.39	1.84	6.00	5.36	5.83
MSCI EAFE Small Cap Index	-2.28	-11.91	0.50	5.64	3.84	4.66
% of Excess Return	4.24	-0.48	1.34	0.36	1.52	1.17

<sup>1</sup>Inception date as 1/14/14

Calendar year performance is presented in the table below as supplemental information.

Calendar Year Performance, Unaudited as of 5/31/19 (Net-of-Fees)						
	1/1/19-5/31/19	2018	2017	2016	2015	3/31/14-12/31/14
Oberweis	16.70	-23.77	41.49	-4.97	15.73	-5.75
MSCI EAFE Small Cap Index	7.97	-17.89	33.01	2.18	9.59	-8.04
% of Excess Return	8.73	-5.88	8.48	-7.15	6.14	2.29

### Fees

LACERS currently pays Oberweis an effective fee of 89 basis points (0.89%), which is approximately \$1.4 million annually based on the value of LACERS' assets as of May 31, 2019. This fee ranks in the 89th percentile among its peers in the eVestment EAFE Small Cap Universe (i.e., Oberweis' fee is higher than 88% of peers).

### General Fund Consultant Opinion

NEPC, LLC, LACERS' General Fund Consultant, concurs with this recommendation.

## **Strategic Plan Impact Statement**

A contract renewal with Oberweis Asset Management, Inc. will allow the fund to maintain a diversified exposure to the non-U.S. developed market equities, which is expected to help optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: James Wang, Investment Officer I, Investment Division

RJ/BF/WL/JW:sg

- Attachments:
1. Consultant Recommendation – NEPC, LLC
  2. Workforce Composition



**To:** Los Angeles City Employees' Retirement System Investment Committee  
**From:** NEPC, LLC  
**Date:** July 9, 2019  
**Subject:** Oberweis Asset Management, Inc. - Contract extension

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**Recommendation**

NEPC recommends the Los Angeles City Employees' Retirement System ('LACERS') extend the contract that is currently in place with Oberweis Asset Management, Inc. ('OAM') for a period of three years from the date of contract expiry.

**Background**

OAM was hired into the Non-U.S. Equity asset class on January 1, 2014 to provide the Plan with public equity exposure across small capitalization international developed countries/markets. The portfolio's strategy is benchmarked against the MSCI EAFE Small Cap Index and has a performance inception date of January 31, 2014.

As of May 31, 2019, OAM managed \$162.4 million, or 1.0% of Plan assets in an international developed markets small cap separately managed account. The performance objective is to outperform the MSCI EAFE Small Cap Index, net of fees, annualized over a full market cycle (normally three-to-five years). The account is currently in good standing with the LACERS' manager monitoring policy.

OAM is an independent investment management firm founded in 1989 by James D. Oberweis. The firm is headquartered in suburban Chicago, with investment professionals based in Chicago, New York, Hong Kong, and the United Kingdom. In 1995, James W. Oberweis joined his father at OAM. In 1996, the firm added two new strategies, the Micro-Cap and Small-Cap Opportunities strategies. In 2001, James W. Oberweis became President of OAM, shortly before James D. Oberweis retired from the business in early 2002. In 2005, the firm expanded internationally by building out an Asia-focused team and launched the China Opportunities strategy. The firm is approximately 75% owned by employees and 25% owned by the Oberweis family. As of March 31, 2019, OAM had \$3.16 billion in assets under management.

The portfolio is managed by three investment professionals. The lead portfolio manager Ralf Scherschmidt is supported by Jeff Papp, Assistant Portfolio Manager and Charles Hill-Wood, Equity Analyst. The three are considered generalists covering a broad range of sectors in the portfolio. In addition, Messrs. Scherschmidt, Papp and Hill-Wood are supported by two dedicated research personnel on the International Team and two personnel on the Oberweis China Equity Team based in Hong Kong. The International Opportunities platform within which the Plan's portfolio is managed had a total AUM of \$2.7 billion as of March 31, 2019.



The strategy's investment philosophy is to identify smaller companies in the early stages of a meaningful change in business fundamentals which the market has not yet fully understood and therefore not yet correctly priced. They believe that understanding changes in fundamentals, earnings, cash flows and company net present values in advance of broad market digestion has a proven empirically supported alpha opportunity. To capture excess returns, the strategy in effect seeks to exploit two inefficiencies in capital markets. One is termed 'Post-Earnings Announcement Drift' which exists when investors do not consider or are slow to react to changes in business fundamentals that are contrary to their existing prior beliefs. Second, is driven by limited research coverage and readily available public information on companies in which they invest.

The investable universe generally consists of all developed market foreign companies (including ADRs) normally between \$300 million and \$5 billion in capitalization. The portfolio may invest up to 25% in non-benchmark names. Risk is managed relative to the benchmark with country allocations generally limited to 15% or three times the weighting in the index, whichever is greater. Sector allocations are limited to the greater of 200% of the index weighting or 50% of the portfolio's assets at market value and positions are reduced if the holding becomes greater than 7% of total portfolio value. The portfolio also considers liquidity management an important aspect of portfolio management and is monitored in an automated fashion on a pre-trade and post-trade basis through an order management system called, Eze Order Management System.

### **Performance**

Referring to Exhibit 1, since inception of the OAM portfolio on January 31, 2014, the strategy has outperformed the MSCI EAFE Small Cap Index by 0.61%, returning 5.92%, net of fees. The portfolio ranked in the 43<sup>rd</sup> percentile in its peer universe since January 31, 2014. The information ratio was 0.20 and active risk, as measured by tracking error was 6.23%. In the one-year period ended March 31, 2019, the portfolio underperformed the index by 4.06% and ranked in the 70<sup>th</sup> percentile in its peer universe. Underperformance in the trailing one-year, ended March 31, 2019, was driven by stock selection, primarily in the Information Technology and Health Care sectors. On a country basis, detractors from relative one-year performance have been stock selection in Japan, United Kingdom and Canada. Ended May 31, 2019, the portfolio has underperformed the benchmark by 0.48% in the trailing one-year and since inception has outperformed 1.17%. Security selection in Information Technology and Consumer Discretionary were the largest contributors to excess returns.

Since January 31, 2014, referring to Exhibit 2, historical cumulative performance has been positive when compared to the benchmark. Relative underperformance in the fourth quarter of 2016 and fourth quarter of 2018 have not been enough to erase the cumulative excess returns experienced since OAM was hired. Longer-term (three and five year) excess returns have been generated by security selection in the Information Technology, Consumer Discretionary and Financials sectors. From a country perspective, OAM has generated excess returns since inception by underweighting Hong Kong and overweighting China.





**Fees**

The portfolio has an asset-based fee of 0.89% (89 basis points) annually. This fee ranks in the 89<sup>th</sup> percentile among its peers in the eVestment EAFE Small Cap Universe. In other words, 88% of the 82 products included in the peer universe have a lower fee than the LACERS account.

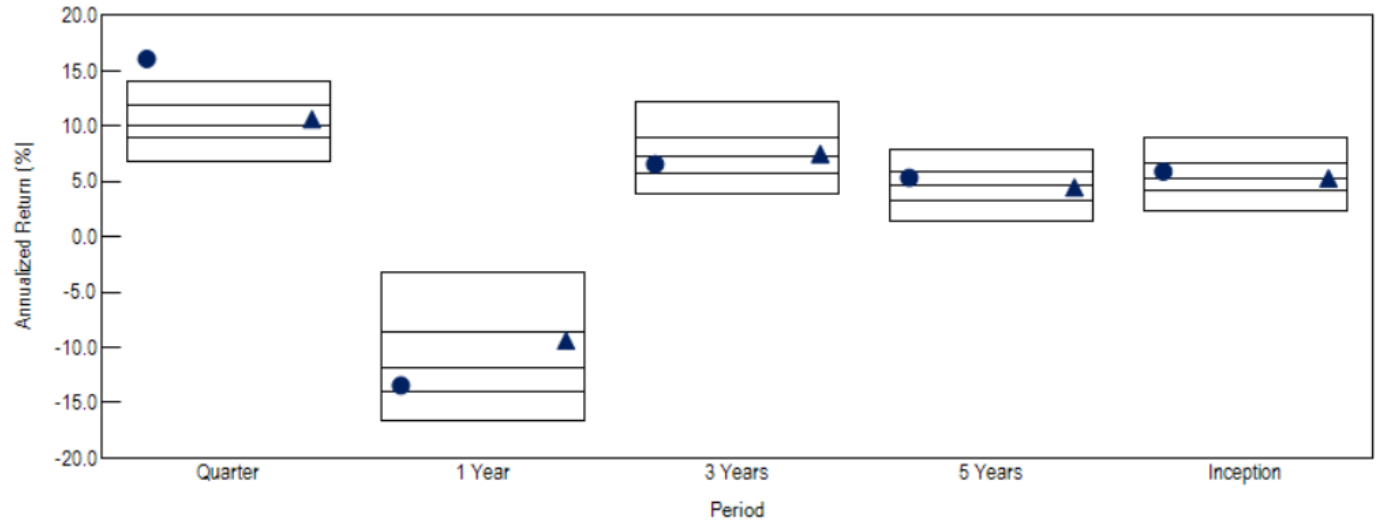
**Conclusion**

OAM has performed within the range of anticipated outcomes against its benchmark since inception and has generated returns above the benchmark for the Plan. This strategy is a high conviction strategy at NEPC and the philosophy, investment process and team used to implement it have been stable. We believe in the long-term efficacy of a strategy that focuses on understanding business fundamentals and executing this strategy within a less efficient portion of capital markets can lead to excess returns. NEPC recommends a contract extension for a period of three years from the period of contract expiry.

The following tables provide specific performance information, net of fees referenced above.

Exhibit 1

**eV EAFE Small Cap Equity Net Return Comparison**  
 Ending March 31, 2019

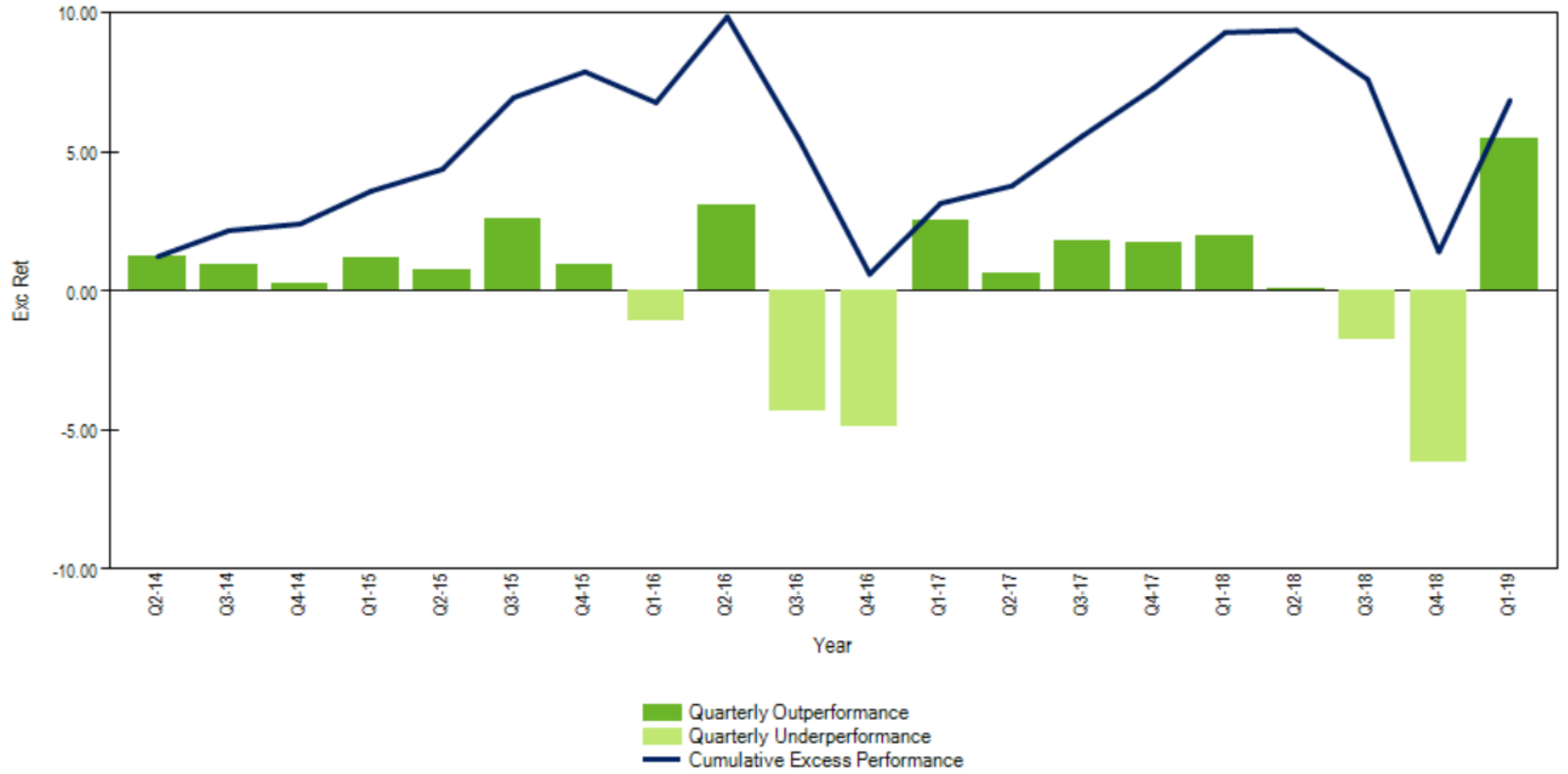


	Return (Rank)									
	Quarter		1 Year		3 Years		5 Years		Inception	
5th Percentile	14.08		-3.18		12.19		7.94		8.95	
25th Percentile	11.87		-8.62		8.97		5.89		6.59	
Median	10.06		-11.89		7.31		4.69		5.32	
75th Percentile	8.93		-13.97		5.76		3.27		4.13	
95th Percentile	6.81		-16.55		3.82		1.44		2.37	
# of Portfolios	59		59		57		47		46	
● Oberweis Asset Mgmt	16.10	(2)	-13.42	(70)	6.58	(61)	5.36	(36)	5.92	(43)
▲ MSCI EAFE Small Cap	10.65	(43)	-9.36	(29)	7.50	(48)	4.47	(53)	5.31	(51)



Exhibit 2

Quarterly and Cumulative Excess Performance



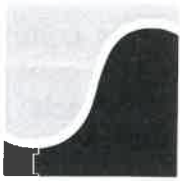
Vendor: Oberweis Asset Management, Inc,  
 Address: 3333 Warrenville Road, Suite 500, Lisle, IL 60532

Date Completed: May 30, 2019

Strategy: International Opportunities  
 Category/Asset Class: Non-U.S. Developed Market Small-Cap Equities

**TOTAL COMPOSITION OF WORK FORCE**

<b>Occupation</b>	<b>African American Full Time</b>	<b>Hispanic Full Time</b>	<b>Asian or Pacific Islander Full Time</b>	<b>American Indian/Alaskan Native Full Time</b>	<b>Caucasian (Non Hispanic) Full Time</b>	<b>Total Employees Full Time</b>	<b>Percent (%) Minority Full Time</b>	<b>Gender Full Time</b>	
								<b>Male</b>	<b>Female</b>
Officials & Managers	0	0	1	0	8	9	11.11%	9	0
Professionals	0	0	6	0	5	11	54.55%	9	2
Technicians	0	0	0	0	1	1	0.00%	1	0
Sales Workers	0	0	1	0	2	3	33.33%	2	1
Office/Clerical	0	2	0	0	5	7	28.57%	4	3
Semi-Skilled	0	0	0	0	0	0	N/A	0	0
Unskilled	0	0	0	0	0	0	N/A	0	0
Service Workers	0	0	0	0	0	0	N/A	0	0
Other	0	0	0	0	0	0	N/A	0	0
<b>Total</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>21</b>	<b>31</b>	<b>32.26%</b>	<b>25</b>	<b>6</b>



**REPORT TO INVESTMENT COMMITTEE**  
From: Neil M. Guglielmo, General Manager

**MEETING: JULY 9, 2019**  
**ITEM: VIII**

*Neil M. Guglielmo*

**SUBJECT: INVESTMENT MANAGER CONTRACT WITH PANAGORA ASSET MANAGEMENT, INC. REGARDING THE MANAGEMENT OF AN ACTIVE U.S. SMALL CAP VALUE EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

**Recommendation**

That the Committee recommend to the Board:

- 1) Termination of the contract with PanAgora Asset Management, Inc. for management of an active U.S. small cap value equities portfolio.
- 2) Redeployment of the assets into the existing passive Russell 2000 Value Index portfolio managed by RhumbLine Advisers Limited Partnership.

**Executive Summary**

PanAgora Asset Management, Inc. (PanAgora) has managed an active U.S. small cap value equities portfolio for LACERS since February 2006. LACERS' portfolio is currently valued at \$106 million. PanAgora was placed "On-Watch" for an initial one-year period effective November 20, 2018, due to performance. PanAgora's overall relative performance has not improved and continues to breach Policy criteria. PanAgora submitted a proposal to LACERS U.S. small cap investment manager search issued on February 25, 2019 and did not receive a recommendation to proceed beyond the initial proposal evaluation stage.

**Discussion**

*Background*

PanAgora Asset Management, Inc. (PanAgora) has managed an active U.S. small cap value equities portfolio for LACERS since February 2006, and is benchmarked against the Russell 2000 Value Index. The small cap value equity strategy is part of PanAgora's "Dynamic Equity" suite of strategies, which use a quantitative investment model to exploit market inefficiencies. The Dynamic Equity investment philosophy consists of three components: 1) purchasing reasonably priced stocks; 2) purchasing companies that are managed well and operate efficiently; and 3) exploiting stock price momentum by considering market sentiments. The Dynamic Equity team is led by Jaime Lee, Ph.D. LACERS' portfolio was valued at \$106 million as of May 31, 2019.

The Board approved a three-year contract renewal with PanAgora in 2014. A two-year contract extension with PanAgora was approved by the Board on September 26, 2017. The current contract expires on January 31, 2020. As of November 20, 2018, PanAgora has been “On-Watch” for performance pursuant to the LACERS Manager Monitoring Policy (Policy). As detailed in the Performance section of this report, PanAgora’s overall relative performance has not improved and continues to breach three Policy criteria.

PanAgora submitted a proposal to the active U.S. small cap investment manager search issued on February 25, 2019; the search is currently in progress. PanAgora’s strategy was evaluated qualitatively and quantitatively according to the LACERS Manager Search and Selection Policy and will not be proceeding beyond the initial scoring stage. Staff and NEPC, LLC (NEPC), LACERS’ General Fund Consultant, believe that a suitable replacement may be available from the current U.S. small cap investment manager search process.

### Organization

PanAgora has approximately 135 employees and is headquartered in Boston. The firm is owned by a combination of two parties: Power Financial Corporation Group of Companies (Power Financial) and PanAgora employees. Power Financial owns 80% of the firm while PanAgora employees own 20%. As of May 31, 2019, PanAgora managed \$46 billion of total firm assets, with \$123 million of assets in the small cap value equity strategy.

In 2015, Jaime Lee, Ph.D. joined the firm and assumed leadership of the Dynamic Equity team from George Mussalli, Chief Investment Officer, who now oversees all equity teams at PanAgora. Additionally, there has been some turnover and additions to the investment team over the past two years.

### Performance

In November 2018, PanAgora was placed “On Watch” for an initial one-year period due to a breach of the following Policy watch list criteria have been triggered based on the performance as of September 30, 2018:

1. Annualized net underperformance relative to its benchmark for trailing 3 years
2. Annualized net underperformance versus the benchmark for trailing 5 years
3. Annualized net Information Ratio trailing 5 years relative to its benchmark below 0.20

As of May 31, 2019, PanAgora continues to underperform the benchmark over multiple time periods, particularly since inception, as presented in the table below. PanAgora continues to breach the Policy criteria.

Annualized Performance, Unaudited as of 5/31/19 (Net-of-Fees)									
	3-Month	1-Year	2-Year	3-Year	4-Year	5-Year	7-Year	10-Year	Since Inception <sup>1</sup>
PanAgora	-8.81	-15.16	-1.18	3.99	2.76	4.01	10.42	13.18	5.27
Russell 2000 Value Index	-7.44	-11.32	1.58	7.68	4.97	5.00	10.08	11.67	5.75
% of Excess Return	-1.37	-3.84	-2.76	-3.69	-2.21	-0.99	0.34	1.51	-0.48

<sup>1</sup>Inception date 2/28/06

Calendar year performance is presented in the table below as supplemental information.

Calendar Year Performance, Unaudited as of 5/31/19 (Net-of-Fees)										
	YTD 2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
PanAgora	4.84	-14.52	2.48	28.97	-4.15	7.75	41.91	19.50	-0.10	30.53
Russell 2000 Value Index	6.67	-12.86	7.84	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50
% of Excess Return	-1.83	-1.66	-5.36	-2.77	3.32	3.53	7.39	1.45	5.40	6.03

In light of PanAgora's continued underperformance and LACERS current active small cap equities manager search, staff and NEPC recommend termination of the contract and redeployment of the assets into the existing passive Russell 2000 Value Index portfolio managed by RhumbLine Advisers Limited Partnership (RhumbLine). These assets would be held temporarily in the passive strategy until a new active small cap value manager is identified via the search. LACERS pays PanAgora an effective fee of 67 basis points (0.67%), which is approximately \$712,607 annually based on the value of LACERS' assets as of May 31, 2019. The annual fee for RhumbLine's passive strategy would be 0.5 basis points (0.005%), or approximately \$5,318 annually.

Should a contract termination be approved, staff will initiate the 30-day written notice of termination clause and transfer of assets as soon as practicable

*General Fund Consultant Opinion*

NEPC concurs with this recommendation.

**Strategic Plan Impact Statement**

A contract termination with PanAgora and reallocation of the assets into a passively managed Russell 2000 Value portfolio will allow the fund to maintain a diversified exposure to the U.S. small cap value equities market, which is expected to help optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared by: Barbara Sandoval, Investment Officer II, Investment Division.

RJ/BF/BS:sg

Attachments: 1. Consultant Recommendation – NEPC, LLC



**To:** Los Angeles City Employees' Retirement System Investment Committee  
**From:** NEPC, LLC  
**Date:** July 9, 2019  
**Subject:** PanAgora Asset Management, Inc. – Contract Extension

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**Recommendation**

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) terminate the contract that is currently in place with PanAgora Asset Management, Inc. ('PanAgora') and to redeploy the assets to the Russell 2000 Value Index passively managed by Rhumblin Advisers.

**Background**

PanAgora was hired into the U.S. Equity asset class on February 28, 2006 to provide the Plan with public equity exposure across U.S. small capitalization markets. As of May 31, 2019, PanAgora managed \$106.4 million, or 0.6% of Plan assets. The performance objective is to outperform the Russell 2000 Value Index by at least 200 basis points, net of fees, annualized over a full market cycle (normally three-to-five years). The account is currently on Watch due to performance based on LACERS' Manager Monitoring Policy.

The firm is owned by a combination of two parties: Power Financial Corporation Group of Companies ('Power Financial') through Great-West Life of Canada/ Putnam Investments, and PanAgora employees. Power Financial owns 80% of the firm while PanAgora employees own 20%.

PanAgora has made a concerted effort to build out their Dynamic Equity Management Team. In 2015 Jaime Lee, Ph.D., Director, Equity joined the team and now leads the Dynamic Equity strategy. Jaime replaced George Mussalli, Chief Investment Officer and Head of Equity Research, who currently oversees PanAgora's broader equity group. More recently, the Dynamic Equity Management Team welcomed two new additions, Sevinc Cukurova, Ph.D., Analyst and Rohit Shrivastava, Portfolio Manager, who joined in May 2016 and August 2016, respectively. There was, however, one Senior Portfolio Manager departure in 2016, Jane Zhao and one Director level departure, Joel Feinberg, Equity Director in 2018. PanAgora's strategy is very much quantitatively driven and so the turnover mentioned above has not adversely impacted the team's resources or investment process.

The firm manages approximately \$45.8 billion on behalf of over 150 clients with approximately 135 employees, all located in Boston. The firm's Dynamic US Small Cap Value product has \$123 million in total AUM with one other U.S. based corporate pension client invested in the product. NEPC has grown uncomfortable with both the value of total assets and number of investors in the product. Though the firm has the economic base to





support the research and management of the strategy because it is quantitatively managed and shares the same investment process with many of PanAgora's other products, we have growing concern about the economics of running the small cap value product. From a client concentration perspective, LACERS represents approximately 86% of the strategy's assets, however, we recognize this has always been the case based on historical AUM.

PanAgora did submit a proposal to the small cap investment manager search issued on February 25, 2019. The strategy was scored according to the LACERS investment manager scoring policy incorporating both qualitative and quantitative measures resulting in our belief that a suitable replacement may be available.

The philosophy underpinning the Dynamic Small Cap Value portfolio is that behavioral biases of investors create pricing inefficiencies. PanAgora's quantitative approach is based on the premise that predictors of return vary for each individual stock, largely due to the fact that the 2,000 companies in the universe evolve at various paces through their life cycles. This fact necessitates a unique model be applied to each individual stock for analysis. The firm's proprietary Contextual Alpha Modeling process seeks to address this inconsistency in a systematic and repeatable process. Every stock in the universe is ranked based on PanAgora's unique "alpha score" and the highest ranking stocks will form the basis for consideration to be included in the portfolio. The strategy's performance is expected to be driven primarily by stock selection.

### **Performance**

Since inception, the PanAgora portfolio has underperformed the Russell 2000 Value Index by 0.48%, returning 5.27%, net of fees, through May 31, 2019. In the five-year period ended May 31, 2019, the portfolio underperformed the index by 0.99% (4.01% vs. 5.00%). Referring to Exhibit 1, ended March 31, 2019, since inception the portfolio underperformed by 0.40% and ranked in the 87<sup>th</sup> percentile in its peer group. In the one-year ended March 31, 2019, the portfolio underperformed 3.65% and ranked in the 60<sup>th</sup> percentile in its peer group. The portfolio has an information ratio of -0.15 and active risk as measured by tracking error was 3.20% since inception ending May 31, 2019.

Referring to Exhibit 2, on a cumulative basis, the portfolio has been eroding its cumulative gains from past periods since the first quarter of 2016 with underperformance in the past 11 of 12 quarters; note, underperformance in eight of the last 12 quarters is one rule in the LACERS Manager Monitoring Policy. Investment gains from periods of outperformance have been eroded and are negative since inception ending May 31, 2019.

### **Fees**

The PanAgora portfolio has an asset-based fee of 0.67% annually. The fee ranks in the 13<sup>th</sup> percentile among its peers in the eVestment U.S. Small Cap Value Equity Universe. In other words, 87% of the 218 products included in the peer universe have a higher fee than the LACERS account.

### **Conclusion**



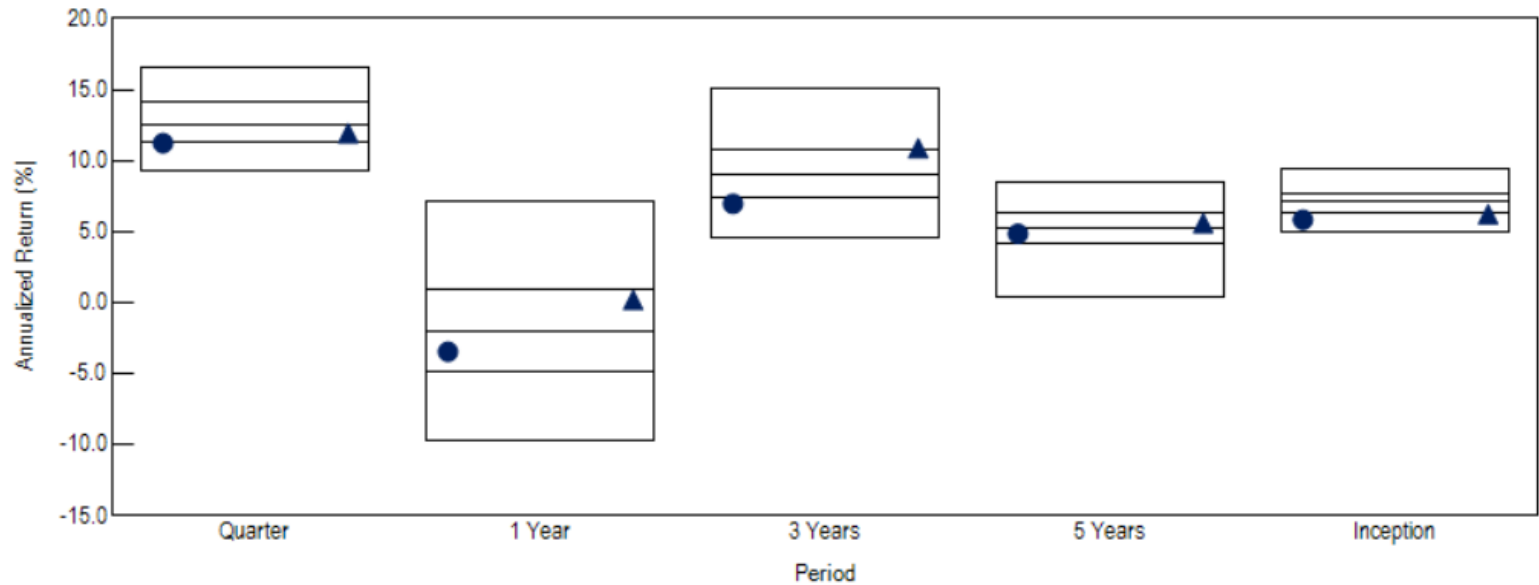
PanAgora has struggled to outperform the index since the beginning of 2016. While there has been turnover in the team, our belief is that the quantitative process is repeatable and stable though we are not convinced in the efficacy of its merits given years of underperformance and relatively low asset levels in the product despite the firm's focus on the team running the product. NEPC has also concluded that suitable replacement firms have been identified through the competitive bid process within which PanAgora's strategy was evaluated based on its quantitative and qualitative merits. The strategy is rated "neutral" by NEPC Research or a "three" on a one-to-five scale. The definition of a three rating within NEPC Research is *"The strategy lacks a compelling investment thesis. There are no significant concerns with the manager, but the strategy's weaknesses may offset the strengths."*

The following tables provide specific performance information, net of fees referenced above.



Exhibit 1

eV US Small Cap Value Equity Net Return Comparison  
Ending March 31, 2019

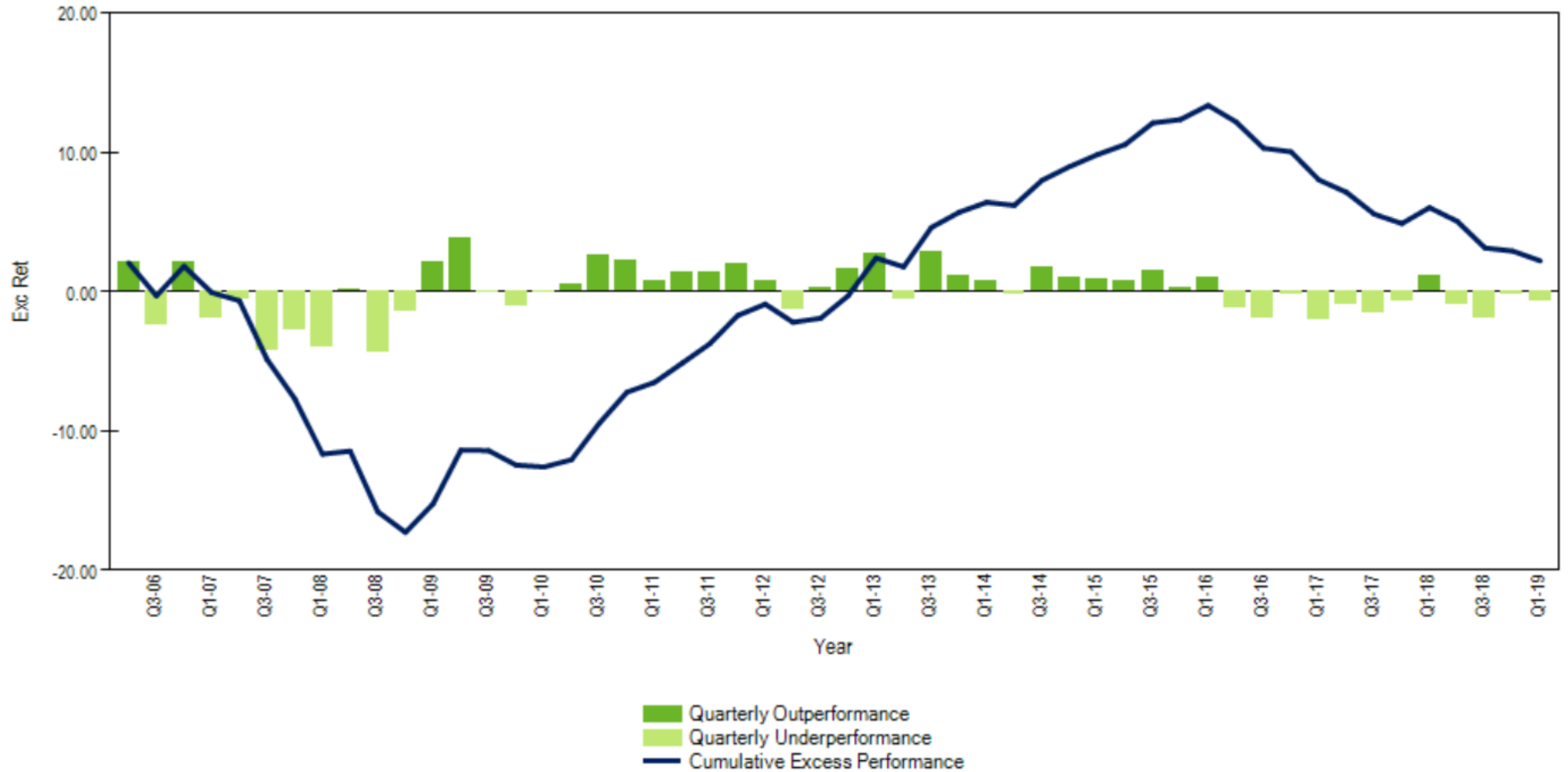


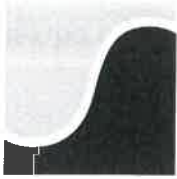
	Quarter		1 Year		3 Years		5 Years		Inception	
<b>Return (Rank)</b>	<hr/>									
5th Percentile	16.59		7.07		15.08		8.42		9.42	
25th Percentile	14.07		0.93		10.82		6.34		7.68	
Median	12.56		-2.08		8.95		5.16		7.06	
75th Percentile	11.29		-4.85		7.43		4.10		6.35	
95th Percentile	9.27		-9.81		4.54		0.36		4.90	
<b># of Portfolios</b>	167		164		159		149		92	
● PanAgora	11.22	(76)	-3.48	(60)	6.95	(81)	4.84	(64)	5.82	(87)
▲ Russell 2000 Value	11.93	(66)	0.17	(29)	10.86	(25)	5.59	(43)	6.22	(78)



Exhibit 2

Quarterly and Cumulative Excess Performance





# LACERS

LOS ANGELES CITY EMPLOYEES'  
RETIREMENT SYSTEM



**REPORT TO INVESTMENT COMMITTEE**

**From: Neil M. Guglielmo, General Manager**

*Neil M. Guglielmo*

**MEETING: JULY 9, 2019**

**ITEM: IX**

**SUBJECT: SEMI-FINALISTS OF THE ACTIVE U.S. SMALL CAP EQUITIES INVESTMENT  
MANAGER SEARCH AND POSSIBLE COMMITTEE ACTION**

**ACTION:**  **CLOSED:**  **CONSENT:**  **RECEIVE & FILE:**

**Recommendation:**

That the Committee concur with staff's recommendation to advance the following managers as semi-finalists for the respective mandates for the Active U.S. Small Cap Equities investment manager search:

- 1) Core: ClearBridge Investments, LLC; Copeland Capital Management, LLC; Legato Capital Management, LLC; PIMCO; QMA LLC; Rothschild & Co Asset Management US.
- 2) Growth: EAM Investors, LLC; Goldman Sachs Asset Management; Granahan Investment Management, Lisanti Capital Growth, LLC; Westfield Capital Management Co, L.P.; William Blair Investment Management, LLC.
- 3) Value: Ariel Investments, LLC; Bernzott Capital Advisors; Dimensional Fund Advisors LP; Hotchkis & Wiley Capital Management, LLC; Investment Counselors of Maryland, LLC; Segall Bryant & Hamill.

**Executive Summary**

The Board-approved request for proposal (RFP) for active U.S. small cap equities investment managers opened on February 25, 2019, and closed on April 12, 2019. A total of 142 proposals were received, representing 123 firms, including 26 emerging investment managers. Following review, 131 firms met the minimum qualifications and 18 firms are recommended to advance as semi-finalists for this search.

**Discussion:**

*Background*

The Board approved a request for proposal (RFP) process to evaluate the current marketplace for active U.S. small cap equities investment managers on October 23, 2018. Based upon the asset allocation targets approved by the LACERS Board on April 10, 2018, approximately \$648 million (3% of total fund assets) will be allocated to this mandate. LACERS seeks qualified investment management firms to actively manage one or more of the following long-only, publicly-traded U.S. small cap equities

investment strategies: small cap core equities, small cap growth equities, and small cap value equities. LACERS will consider separately managed accounts and fund-of-funds.

The search opened on February 25, 2019, and closed on April 12, 2019. The RFP was published on LACERS' website and NEPC's website. The search was advertised in the Pensions and Investments and Emerging Manager Monthly publications. The RFP was also advertised online through the Association of Asian American Investment Managers and the New America Alliance. Further, the RFP was emailed to all contacts within the LACERS Investment RFP/RFI Notification System database.

**Search Results**

A total of 142 proposals were received, representing 123 firms, including 26 emerging investment managers. Following a review of the minimum qualifications (MQs) required to participate in the search, 131 proposals met the MQs: 42 for small cap core, 40 for small cap growth, and 49 for small cap value.

**Evaluation Criteria and Recommendation**

Staff and NEPC evaluated the respondents based on the methodology published in LACERS Manager Search and Selection Policy. The scoring criteria and corresponding weightings established in the RFP are as follows:

<b>Criteria</b>	<b>Weight</b>	<b>Sub-weighting</b>
Qualitative Assessment	70%	
<i>Organization/People</i>		30%
<i>Investment Process</i>		40%
<i>Risk Management</i>		30%
Quantitative Assessment	20%	
Expected Fees	10%	

The attached evaluation report includes the summary findings of all firms as well as additional information for each of the proposed semi-finalists:

- 1) Core: ClearBridge Investments, LLC; Copeland Capital Management, LLC; Legato Capital Management, LLC (emerging manager); PIMCO; QMA LLC; Rothschild & Co Asset Management US
- 2) Growth: EAM Investors, LLC (emerging manager); Goldman Sachs Asset Management; Granahan Investment Management (emerging manager); Lisanti Capital Growth, LLC (emerging manager); Westfield Capital Management Co, L.P.; William Blair Investment Management, LLC
- 3) Value: Ariel Investments, LLC; Bernzott Capital Advisors; Dimensional Fund Advisors LP; Hotchkis & Wiley Capital Management, LLC; Investment Counselors of Maryland, LLC; Segall Bryant & Hamill

Upon Investment Committee concurrence of the proposed semi-finalist firms, staff will conduct additional due diligence, which may include on-site visits and reference checks. Following completion of this assessment, staff will recommend finalists for interview and consideration for the Committee, consistent with the process approved by the Board on October 23, 2018.

## **Strategic Plan Impact Statement**

The Request for Proposal (RFP) for U.S. Small Cap Equities investment management assists the fund to optimize long-term risk adjusted investment returns (Goal IV). Implementing a competitive bidding process by issuing an RFP upholds good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V).

Prepared by: Barbara Sandoval, Investment Officer II

RJ/BF/BS:sg

Attachment: 1. Semi-Finalists of the U.S. Small Cap Equities investment manager search



# SEMI-FINALISTS OF THE SMALL CAP INVESTMENT MANAGER SEARCH

LOS ANGELES CITY EMPLOYEES'  
RETIREMENT SYSTEM

July 9, 2019



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

# SMALL CAP SEARCH SUMMARY

## Summary

- **LACERS received 142 proposals for small cap mandates from 123 different investment management firms**
  - 26 proposals were submitted from Emerging Firms
- **After a review of the minimum requirements, 11 proposals did not pass**
  - Majority failed the information ratio test
  - One firm did not provide a performance track record
  - One firm did not have a 5-year GIPS compliant track record
- **Before scoring, we sorted proposals by investment style**
  - Growth – 40 proposals
  - Core – 42 proposals
  - Value – 49 proposals
- **Using the scoring matrix from LACERS' Manager Search and Selection Policy, semi-finalist firms were identified**

# SEMI-FINALIST FIRMS

Core
<ul style="list-style-type: none"><li>• <b>ClearBridge Investments, LLC</b></li><li>• <b>Copeland Capital Management, LLC</b></li><li>• <b>Legato Capital Management, LLC*</b></li><li>• <b>PIMCO</b></li><li>• <b>QMA LLC</b></li><li>• <b>Rothschild &amp; Co Asset Management US</b></li></ul>

Growth
<ul style="list-style-type: none"><li>• <b>EAM Investors, LLC*</b></li><li>• <b>Goldman Sachs Asset Management</b></li><li>• <b>Granahan Investment Management*</b></li><li>• <b>Lisanti Capital Growth, LLC*</b></li><li>• <b>Westfield Capital Management Co, L.P.</b></li><li>• <b>William Blair Investment Management, LLC</b></li></ul>

Value
<ul style="list-style-type: none"><li>• <b>Ariel Investments, LLC</b></li><li>• <b>Bernzott Capital Advisors</b></li><li>• <b>Dimensional Fund Advisors LP</b></li><li>• <b>Hotchkis &amp; Wiley Capital Management, LLC</b></li><li>• <b>Investment Counselors of Maryland, LLC</b></li><li>• <b>Segall Bryant &amp; Hamill</b></li></ul>

\* Denotes emerging manager



# CORE

NEPC, LLC

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# CANDIDATE EVALUATION SCORES - CORE

Firm	Qualitative Assessment (70%)			Quantitative Assessment (20%)	Fees (10%)	Total
	Organization / People (30%)	Investment Process (40%)	Risk Management (30%)			
Copeland Capital Management, LLC	3.75	4.25	4.00	4.70	5.00	4.26
ClearBridge Investments, LLC	3.75	4.00	4.00	4.15	5.00	4.08
PIMCO	3.25	3.00	4.00	4.60	5.00	3.78
QMA LLC	3.50	3.00	3.25	4.90	5.00	3.74
Legato Capital Management, LLC*	3.75	4.00	4.00	2.40	5.00	3.73
Rothschild & Co Asset Management US	3.75	3.50	3.50	4.11	4.00	3.72
Firm A	3.50	3.75	3.50	3.80	4.00	3.68
Firm B	3.50	3.75	3.50	3.75	4.00	3.67
Firm C	3.25	3.00	3.50	4.55	5.00	3.67
Firm D	3.25	3.50	3.75	4.40	3.00	3.63
Firm E	3.00	3.50	4.00	3.40	5.00	3.63
Firm F	4.00	3.50	3.75	3.50	3.00	3.61
Firm G	3.00	3.00	3.00	4.95	4.00	3.49
Firm H	3.00	3.00	3.00	4.20	5.00	3.44
Firm I	3.00	3.25	3.25	3.55	5.00	3.43
Firm J	3.75	3.25	3.25	3.15	4.00	3.41
Firm K	3.75	3.50	3.25	3.60	2.00	3.37
Firm L	2.75	3.00	3.00	4.05	5.00	3.36
Firm M	3.50	3.50	3.00	4.00	2.00	3.35
Firm N	3.00	3.00	3.00	4.05	4.00	3.31
Firm O	2.75	3.00	3.50	3.25	5.00	3.30

\* Denotes emerging manager



# CANDIDATE EVALUATION SCORES - CORE

Firm	Qualitative Assessment (70%)			Quantitative Assessment (20%)	Fees (10%)	Total
	Organization / People (30%)	Investment Process (40%)	Risk Management (30%)			
Firm P	3.00	3.00	3.00	3.90	4.00	3.28
Firm Q	3.50	3.00	3.00	2.80	5.00	3.27
Firm R	3.00	3.00	3.00	4.00	3.00	3.20
Firm S	2.50	3.00	3.00	4.00	4.00	3.20
Firm T	2.75	3.00	3.00	3.70	4.00	3.19
Firm U	3.00	3.00	3.00	3.10	4.00	3.12
Firm V*	3.50	2.00	3.50	4.80	1.00	3.09
Firm W	3.00	3.00	3.50	3.35	2.00	3.08
Firm X	2.75	3.00	3.25	3.65	2.00	3.03
Firm Y	3.00	3.00	3.00	4.15	1.00	3.03
Firm Z	3.00	3.25	2.75	4.01	1.00	3.02
Firm AA	2.50	3.00	3.00	3.00	4.00	3.00
Firm AB	3.00	3.00	2.50	2.40	5.00	2.98
Firm AC	3.75	2.75	3.00	3.40	1.00	2.97
Firm AD	2.75	3.00	2.75	3.75	2.00	2.95
Firm AE*	2.75	3.50	3.00	3.20	1.00	2.93
Firm AF	2.75	3.00	2.75	3.55	2.00	2.91
Firm AG	2.75	3.00	3.00	3.50	1.00	2.85
Firm AH	2.75	3.00	3.00	3.30	1.00	2.81
Firm AI	2.50	3.00	3.00	2.50	2.00	2.70
Firm AJ*	2.50	2.00	2.00	3.50	3.00	2.51

\* Denotes emerging manager



# COPELAND CAPITAL MANAGEMENT, LLC

Firm/Personnel Information	
<b>Firm Name</b>	Copeland Capital Management, LLC
<b>Main Office</b>	Conshohocken, PA
<b>Additional Offices</b>	Wellesley, MA, Atlanta, GA
<b>Year Founded</b>	2005
<b>Ownership Structure</b>	100% employee owned
<b>Firm Assets* (\$millions)</b>	2,815.80
<b>Product Assets* (\$millions)</b>	1,563.10
<b>Number of Employees Firm</b>	23
<b>Number of Employees Product</b>	5
<b>Number of Employees Spending &gt;50% on the Product</b>	5
<b>Team</b>	One lead portfolio manager supported by three portfolio manager/analysts and one analysts
<b>Key Team Members</b>	Mark Giovanniello, CIO/Portfolio Manager

Fund Strategy	
<b>Fund Strategy</b>	Small Cap Dividend Growth Equity
<b>Target Company Size</b>	\$250 million to \$4 billion
<b>Typical Number of Stocks</b>	45 - 50 names
<b>Typical Turnover /Holding Period</b>	Expected turnover is 20-30%
<b>Maximum Position Size</b>	Initial weight is 2%, maximum 5% at market value
<b>Investment Restrictions</b>	Minimum average daily trading value \$4-5 million, sector/industry +/- 5% of benchmark, cash 10% maximum
<b>Strategy Description</b>	The firm employs a fundamental research process that focuses on small cap companies who have issued a dividend and have the ability to grow that dividend in the future. They believe that by focusing on Dividend Growth firms, they have the ability to outperform the benchmark with less risk.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	50 bps
<b>Management Fees \$150M</b>	48 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	4.28x
<b>ESG</b>	The firm focuses heavily on corporate governance within the companies they own and examine if there are any ESG specific risks that might impair their business and therefore limit their ability to raise their dividend going forward.
<b>PRI Signatory / Year Signed</b>	No
<b>Diversity</b>	17.4% Minority, 21.7% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (9/30/2009)
Small Cap Dividend Growth Equity	9.94	14.25	11.22	15.52	---	15.17
Russell 2000	2.05	12.92	7.05	10.74	---	13.57
Excess	7.89	1.33	4.17	4.78	---	1.6

\*As of 3/31/2019



# CLEARBRIDGE INVESTMENTS, LLC

Firm/Personnel Information	
<b>Firm Name</b>	ClearBridge Investments, LLC
<b>Main Office</b>	New York, NY
<b>Additional Offices</b>	Baltimore, MD, London, UK, San Francisco, CA, Wilmington, DL
<b>Year Founded</b>	2005
<b>Ownership Structure</b>	Wholly-owned subsidiary of Legg Mason, a publicly traded company
<b>Firm Assets* (\$millions)</b>	142,260.02
<b>Product Assets* (\$millions)</b>	1,457.85
<b>Number of Employees Firm</b>	217
<b>Number of Employees Product</b>	3
<b>Number of Employees Spending &gt;50% on the Product</b>	3
<b>Team</b>	Two portfolio managers, one dedicated investment analyst and 13 analysts from the Fundamental Research Team.
<b>Key Team Members</b>	Albert Grosman Brian Lund

Fund Strategy	
<b>Fund Strategy</b>	ClearBridge Small Cap
<b>Target Company Size</b>	\$300 million - \$3.5 billion
<b>Typical Number of Stocks</b>	70 - 90 names
<b>Typical Turnover /Holding Period</b>	~50 % turnover
<b>Maximum Position Size</b>	3% at cost
<b>Investment Restrictions</b>	Broad latitude to over/underweight sectors and industries
<b>Strategy Description</b>	The investment process is centered on the market's inability to efficiently factor in all new information into a company's value. The team seeks to uncover situations in which the market's imbedded expectations for growth, profitability, capital needs and sustainability of competitive advantages diverge from the range of likely scenarios.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	55 bps
<b>Management Fees \$150M</b>	52 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	4.15x
<b>ESG</b>	ClearBridge actively integrates criteria inclusive of ESG issues into the portfolio construction of strategies. ClearBridge's Research Analysts integrate ESG factors within their sector and company research and assign a proprietary rating to each stock covered at the Firm.
<b>PRI Signatory / Year Signed</b>	Yes / 2008
<b>Diversity**</b>	10.5% Minority, 31.8% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (7/9/2009)
ClearBridge Small Cap	8.44	15.73	10.12	13.23	---	17.23
Russell 2000	2.05	12.92	7.05	10.74	---	13.57
Excess	6.39	2.81	3.07	2.49	---	3.66

\*As of 3/31/2019

\*\*May not include multiple races.





# LEGATO CAPITAL MANAGEMENT, LLC

Firm/Personnel Information	
<b>Firm Name</b>	Legato Capital Management, LLC
<b>Main Office</b>	San Francisco, CA
<b>Additional Offices</b>	n/a
<b>Year Founded</b>	2004
<b>Ownership Structure</b>	100% employee-owned, certified minority business enterprise
<b>Firm Assets* (\$millions)</b>	1,883.08
<b>Product Assets* (\$millions)</b>	332.54
<b>Number of Employees Firm</b>	11
<b>Number of Employees Product</b>	7
<b>Number of Employees Spending &gt;50% on the Product</b>	7
<b>Team</b>	Three person Investment Committee, supported by four research analysts
<b>Key Team Members</b>	Victor Hymes, CEO/CIO Adam Lawlor, EVP Eric Pollack, SVP

Fund Strategy	
<b>Fund Strategy</b>	Legato Small Cap Equities
<b>Target Company Size</b>	Various based on underlying sub-advisors
<b>Typical Number of Stocks</b>	400 - 500 names
<b>Typical Turnover /Holding Period</b>	~100% turnover of stocks ~1 manager turnover per year
<b>Maximum Position Size</b>	n/a
<b>Investment Restrictions</b>	Sectors with >10% weighting in the benchmark are restricted to 2.5x benchmark weight
<b>Strategy Description</b>	The small cap core portfolios managed by Legato are comprised of several new, emerging investment managers or "sub-advisors" utilizing various investment philosophies and approaches to investing in small cap equity. The strategic allocation of managers reflects a combination of Legato's conviction in each manager's ability to generate attractive risk-adjusted returns as well as their complementary characteristics when viewed in relationship to other managers.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	59 bps
<b>Management Fees \$150M</b>	57 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	-1.44x
<b>ESG</b>	Legato assess the degree to which managers have integrated ESG into the investment product and organization as a whole. On the quantitative side, Legato is leveraging their Sustainalytics data to compare managers' EGS metrics on an absolute and relative basis to peers.
<b>PRI Signatory / Year Signed</b>	Yes / 2016
<b>Diversity</b>	63.6% Minority, 22.2% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (2/28/2007)
Legato Small Cap Equities	6.37	12.81	7.49	11.1	15.08	7.82
Russell 2000	2.05	12.92	7.05	10.74	15.36	7.11
Excess	4.32	-0.11	0.44	0.36	-0.28	0.71

\*As of 3/31/2019

\*\*\*Maximum amount LACERS could allocate due to investment policy restriction is approximately \$83mm with a fee of 58.4 bps.



# PIMCO

Firm/Personnel Information	
<b>Firm Name</b>	PIMCO
<b>Main Office</b>	Newport Beach, CA
<b>Additional Offices</b>	13 additional offices
<b>Year Founded</b>	1971
<b>Ownership Structure</b>	Majority owned by Allianz Asset Management of America L.P., with minority interests held by certain of AAM's affiliates and current and former employees
<b>Firm Assets* (\$millions)</b>	1,758,074.98
<b>Product Assets* (\$millions)</b>	10,483,46
<b>Number of Employees Firm</b>	2,505
<b>Number of Employees Product</b>	12
<b>Number of Employees Spending &gt;50% on the Product</b>	12
<b>Team</b>	12 members of StocksPLUS Strategy team supported by a 70-person credit research team
<b>Key Team Members</b>	Mohsen Fahmi, Lead PM Bryan Tsu, PM Jing Yang, PM

Fund Strategy	
<b>Fund Strategy</b>	StocksPLUS Small AR
<b>Target Company Size</b>	Futures contracts provide exposure of the Russell 2000 index.
<b>Typical Number of Stocks</b>	Futures contracts or total return swaps to replicate the index plus 100-1,000 bonds in the actively managed fixed income portion.
<b>Typical Turnover /Holding Period</b>	The stock futures turnover 4 times per year, as the equity futures contracts expire every three months. The fixed income portfolio averages 200-300% turnover.
<b>Maximum Position Size</b>	n/a
<b>Investment Restrictions</b>	Portfolio duration -3 to 8+ years, Issue or Issuer max 5%, Below BBB- 20% max, Minimum average portfolio quality A-, Foreign Currency Exposure 35% max, Emerging markets 25% max, Non-U.S. Dollar Denominated 20% max.
<b>Strategy Description</b>	The strategy is designed to provide small cap core equity exposure and a consistent and reliable alpha source. The small cap core exposure is from futures contracts or total return swaps tied to the Russell 2000 index representing 100% of the portfolio's overall market value. These instruments require very little capital which frees up the remaining capital to pursue alpha. The alpha source comes from investing in fixed income with the aim to outperform the money-market cost of the equity exposure.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	45 bps
<b>Management Fees \$150M</b>	45 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	6.84x
<b>ESG</b>	While ESG is integrated in PIMCO's credit research and part of their portfolio construction process, the proposed mandate is not an ESG-dedicated portfolio.
<b>PRI Signatory / Year Signed</b>	Yes / 2011
<b>Diversity**</b>	10% Minority, 33% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (3/31/2006)
StocksPLUS Small AR	2.12	15.98	8.62	13.15	20.27	11.13
Russell 2000	2.05	12.92	7.05	10.74	15.36	7.03
Excess	0.07	3.06	1.57	2.41	4.91	4.1

\*As of 3/31/2019  
\*\*Based on US business only



# QMA LLC

Firm/Personnel Information	
<b>Firm Name</b>	QMA LLC
<b>Main Office</b>	Newark, NJ
<b>Additional Offices</b>	San Francisco, London
<b>Year Founded</b>	1975
<b>Ownership Structure</b>	QMA is a wholly-owned subsidiary of PGIM, Inc., and an indirect, wholly-owned subsidiary of Prudential Financial, Inc., a publicly held company.
<b>Firm Assets* (\$millions)</b>	121,839.08
<b>Product Assets* (\$millions)</b>	1,946.41
<b>Number of Employees Firm</b>	229
<b>Number of Employees Product</b>	4
<b>Number of Employees Spending &gt;50% on the Product</b>	4
<b>Team</b>	Portfolios are managed by the Quantitative Equity team, which is lead by Peter Xu and George Patterson. Stacie Mintz leads 3 portfolio managers responsible for implementation and data integrity.
<b>Key Team Members</b>	Peter Xu, Co-Head of Quantitative Equity Team Stacie Mintz

Fund Strategy	
<b>Fund Strategy</b>	QMA US Small Cap Core Equity
<b>Target Company Size</b>	Smallest 2,000 stocks within the Russell 3000 and S&P 1500 indices.
<b>Typical Number of Stocks</b>	300 - 500 names
<b>Typical Turnover /Holding Period</b>	Typical turnover is 80-100%
<b>Maximum Position Size</b>	Positions are constrained to +/- 0.75% versus the benchmark weight
<b>Investment Restrictions</b>	Industry/sector exposure +/- 0.75% of benchmark, non-benchmark names <10% of the market value
<b>Strategy Description</b>	The firm's philosophy is based on the idea that fundamentals drive prices, but prices do not always follow fundamentals. Portfolios are constructed with names that have valuation, growth and quality characteristics. They use a quantitative process to balance risk and return within the portfolio. They are adjusting for industry, size and transaction costs.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	55 bps
<b>Management Fees \$150M</b>	54 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	3.65x
<b>ESG</b>	In the instances related to ESG factors where the firm's research has identified a clear historic link with higher returns, they firm has incorporated these signals as part of their regular alpha generation process.
<b>PRI Signatory / Year Signed</b>	Yes / 2015
<b>Diversity</b>	34.8% Minority, 38% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (10/1/2009)
QMA US Small Cap Core Equity	-0.91	11.61	8.72	12.95	---	15.05
Russell 2000	2.05	12.92	7.05	10.74	---	11.86
Excess	-2.96	-1.31	1.67	2.21	---	3.19

\*As of 3/31/2019



# ROTHSCHILD & CO ASSET MANAGEMENT US

Firm/Personnel Information	
<b>Firm Name</b>	Rothschild & Co Asset Management US
<b>Main Office</b>	New York, NY
<b>Additional Offices</b>	n/a
<b>Year Founded</b>	1962
<b>Ownership Structure</b>	Wholly owned subsidiary of Rothschild & Co North America Inc. Ultimate ownership lies with Rothschild & Co, a publicly traded French partnership, over which the Rothschild & Co family has voting control.
<b>Firm Assets* (\$millions)</b>	9,600.47
<b>Product Assets* (\$millions)</b>	1,012.56
<b>Number of Employees Firm</b>	44
<b>Number of Employees Product</b>	37**
<b>Number of Employees Spending &gt;50% on the Product</b>	6
<b>Team</b>	Six member team with one lead portfolio manager and five supporting portfolio manager/analysts
<b>Key Team Members</b>	Joe Bellantoni, PM Small Cap Corre

Fund Strategy	
<b>Fund Strategy</b>	Rothschild & Co US Small-Cap Core
<b>Target Company Size</b>	Stocks within the market capitalization range of the Russell 2000 index
<b>Typical Number of Stocks</b>	100+ names
<b>Typical Turnover /Holding Period</b>	32%
<b>Maximum Position Size</b>	3%
<b>Investment Restrictions</b>	Sector weight maximum of benchmark plus 500 basis points, with no minimum
<b>Strategy Description</b>	Investment process is designed to take advantage of behavioral bias of other investors including: 1) lack of objectivity when sourcing new ideas; 2) tendency to rationalize deteriorating fundamentals; 3) tendency for analysts to underestimate both positivity and negativity.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	62 bps
<b>Management Fees \$150M</b>	51 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	0.04x
<b>ESG</b>	The firm looks into the business practices, environmental influences, public sentiment, etc. regarding a company before we invest as we understand that there are inherent risks involved when investing in non-ESG compliant securities. They are in the process of evaluating third party ESG data providers which would allow the firm to greatly incorporate ESG factors into their fundamental research.
<b>PRI Signatory / Year Signed</b>	No
<b>Diversity</b>	Did not disclose workforce diversity with the exception of 39% female.

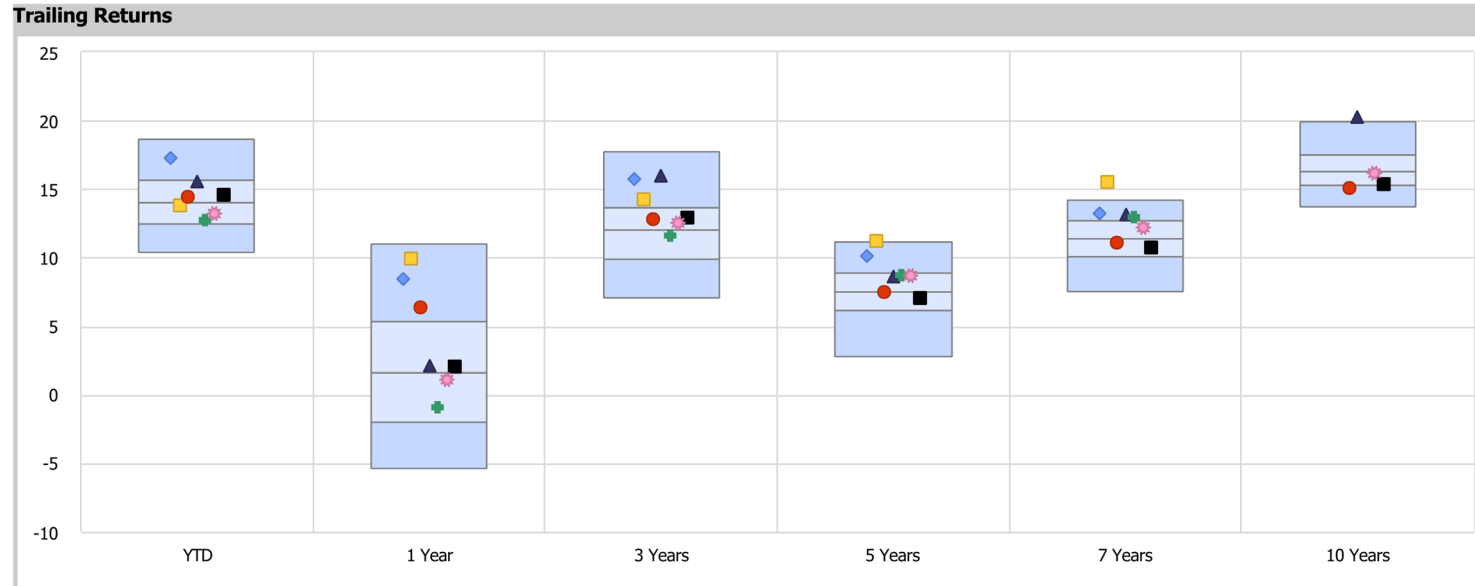
Fund Name	Annualized Performance* (Gross of Fees)					
	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (1/1/1991)
Rothschild & Co US Small-Cap Core	1.00	12.5	8.58	12.16	16.1	14.64
Russell 2000	2.05	12.92	7.05	10.74	15.36	10.6
Excess	-1.05	-0.42	1.53	1.42	0.74	4.04

\*As of 3/31/2019

\*\*Includes product specialists, distribution/sales, marketing and operations.



# CANDIDATE PERFORMANCE COMPARISON



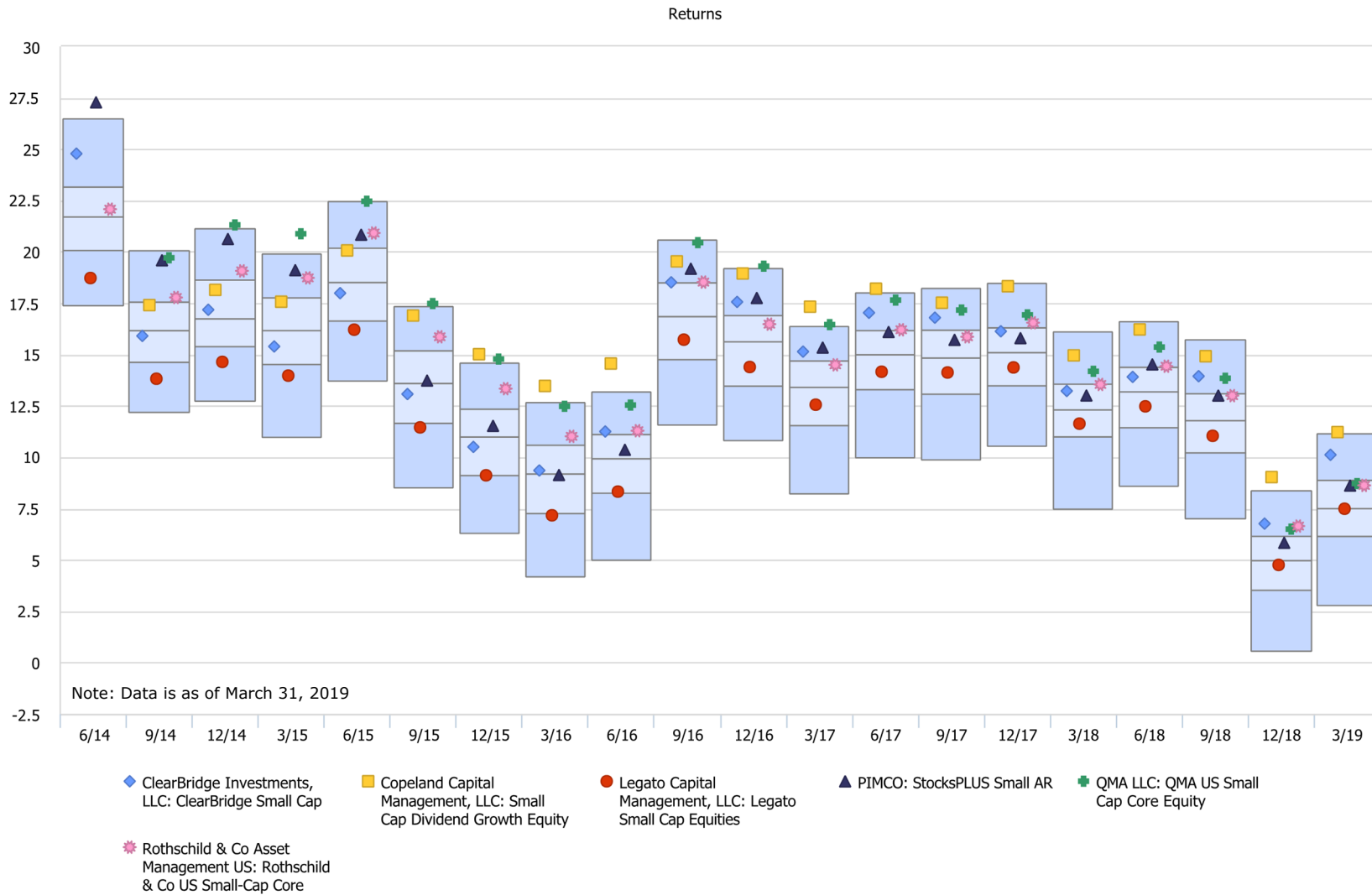
Universe: eVestment US Small Cap Core Equity  
 Note: Data is as of March 31, 2019

	YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
		Rk		Rk		Rk		Rk		Rk		Rk
5th percentile	18.6		11.0		17.7		11.1		14.2		19.9	
25th percentile	15.6		5.3		13.6		8.9		12.7		17.5	
Median	14.0		1.6		12.0		7.5		11.4		16.3	
75th percentile	12.4		-2.0		9.9		6.1		10.1		15.3	
95th percentile	10.4		-5.4		7.1		2.8		7.5		13.7	
# of Observations	208		208		199		192		181		155	
◆ ClearBridge Investments, LLC	17.3	13	8.4	8	15.7	12	10.1	12	13.2	15	---	---
■ Copeland Capital Management, LLC	13.8	53	9.9	7	14.3	19	11.2	4	15.5	2	---	---
● Legato Capital Management, LLC	14.4	44	6.4	18	12.8	37	7.5	50	11.1	56	15.1	81
▲ PIMCO	15.6	27	2.1	45	16.0	11	8.6	30	13.2	17	20.3	4
⊕ QMA LLC	12.7	71	-0.9	68	11.6	56	8.7	28	13.0	21	---	---
✿ Rothschild & Co Asset Management US	13.1	63	1.0	55	12.5	43	8.6	31	12.2	32	16.1	57
■ Russell Index	14.6	42	2.0	45	12.9	35	7.1	59	10.7	65	15.4	73

- Candidate strategies outperform the index over longer periods of time

# CANDIDATE PERFORMANCE COMPARISON

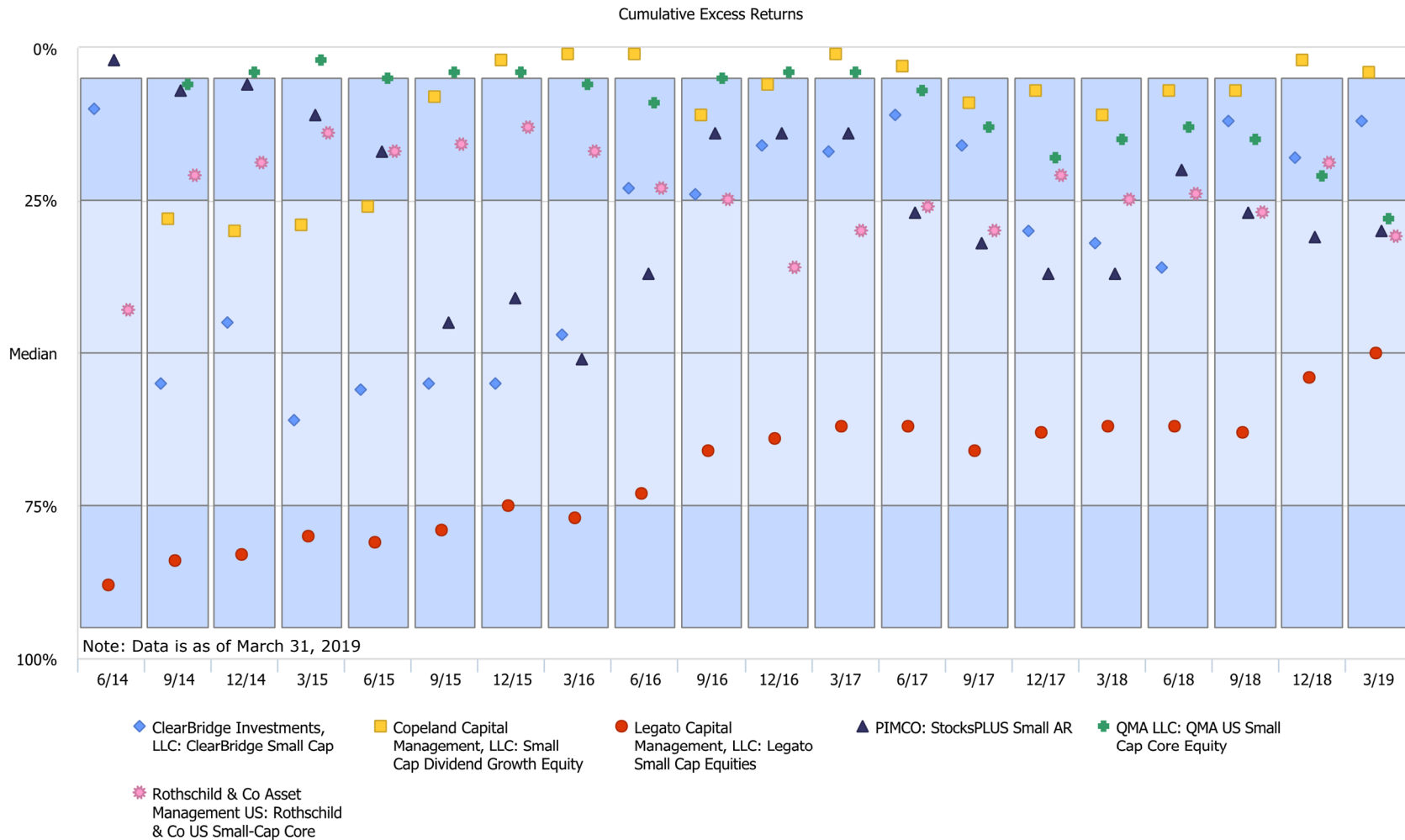
Rolling 5 Year Returns (past 20 quarters)



- Candidate strategies show persistent outperformance through time

# CANDIDATE PERFORMANCE COMPARISON

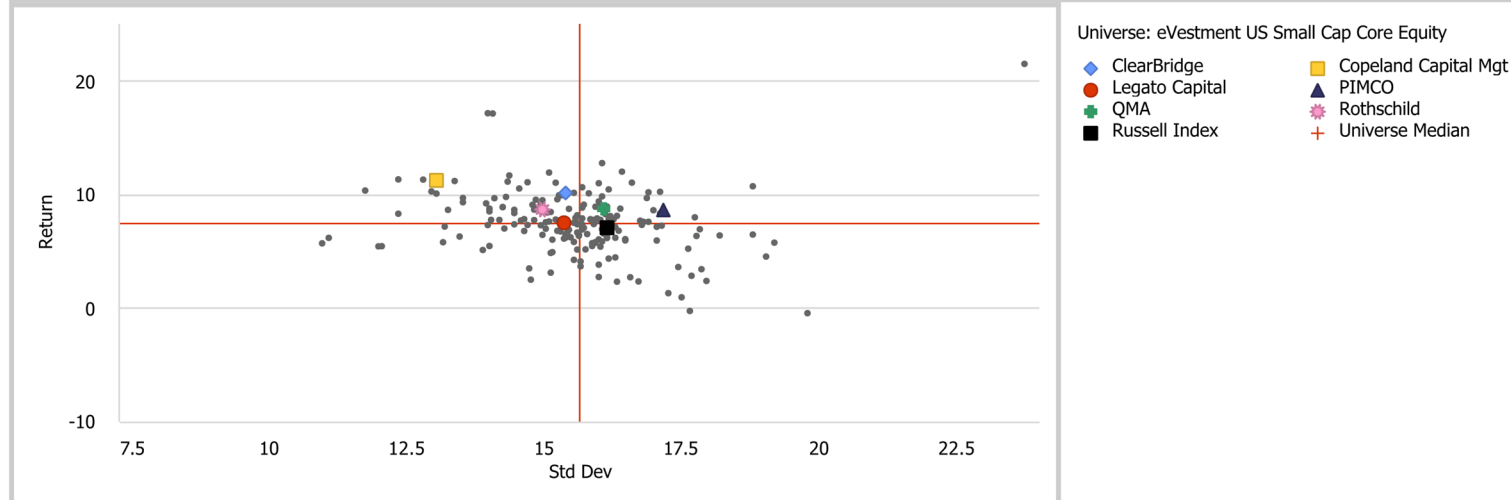
Cumulative Excess Rolling 5 Years (past 20 quarters)



- Candidate strategies show persistent outperformance through time

# CANDIDATE PERFORMANCE COMPARISON

Risk-Reward (5-Yr)



Risk-Reward (5-Yr)

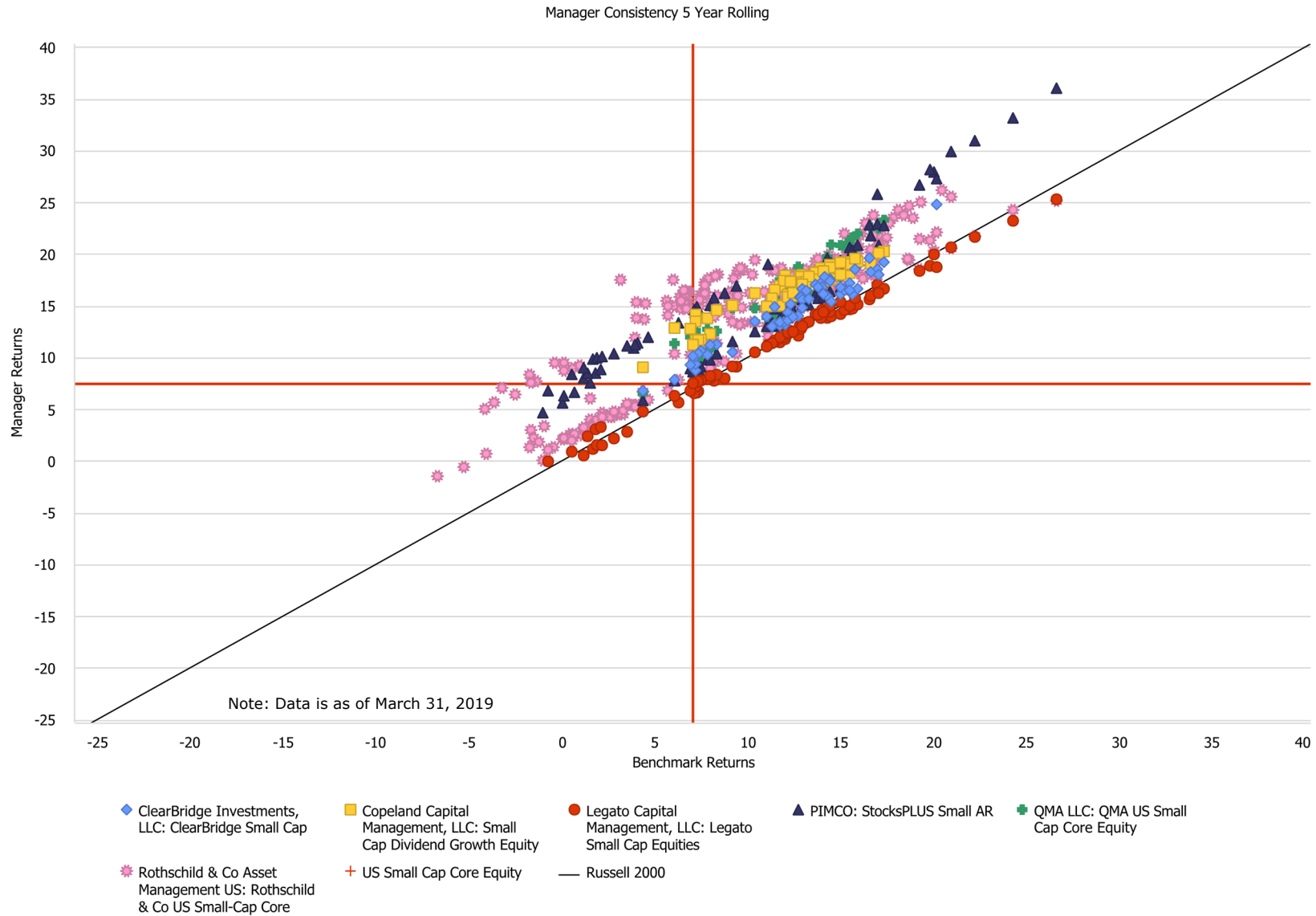
Firm Name	Returns	Std Dev	Alpha	Beta	Batting Average	Info Ratio	Up Mkt Capture	Down Mkt Capture	Tracking Error	Treynor
ClearBridge Investments, LLC	10.12	15.38	3.40	0.92	0.58	0.77	98.95	86.63	3.96	10.18
Copeland Capital Management, LLC	11.22	13.03	5.42	0.77	0.47	0.75	87.51	70.12	5.54	13.70
Legato Capital Management, LLC	7.49	15.35	0.75	0.94	0.42	0.21	96.58	95.20	2.12	7.18
PIMCO	8.62	17.17	1.18	1.06	0.68	0.74	110.67	102.99	2.11	7.48
QMA LLC	8.72	16.08	1.69	0.98	0.52	0.66	102.13	95.28	2.53	8.13
Rothschild & Co Asset Management US	8.58	14.98	1.95	0.92	0.57	0.54	93.14	87.49	2.82	8.59
Russell Index	7.05	16.15	0.00	1.00	0.00	---	100.00	100.00	0.00	6.33

Percentiles	Returns	Std Dev	Alpha	Beta	Batting Average	Info Ratio	Up Mkt Capture	Down Mkt Capture	Tracking Error	Treynor
High	21.48	10.97	16.84	1.14	0.70	1.54	124.02	49.30	1.40	25.07
5th	11.14	13.12	5.15	1.04	0.63	0.92	108.88	69.59	2.39	12.45
25th	8.87	14.85	2.41	0.97	0.55	0.49	98.53	85.32	3.31	9.20
Median	7.49	15.64	0.92	0.94	0.52	0.11	92.71	93.02	4.28	7.31
75th	6.14	16.20	-0.39	0.88	0.45	-0.23	86.76	97.00	5.43	5.77
95th	2.78	17.81	-3.66	0.76	0.39	-0.78	73.20	103.82	7.68	2.13
Low	-0.46	23.74	-6.26	0.54	0.32	-1.02	48.57	116.28	19.81	-1.34
Observations	192	192	192	192	192	192	192	192	192	192

Note: Data is as of March 31, 2019



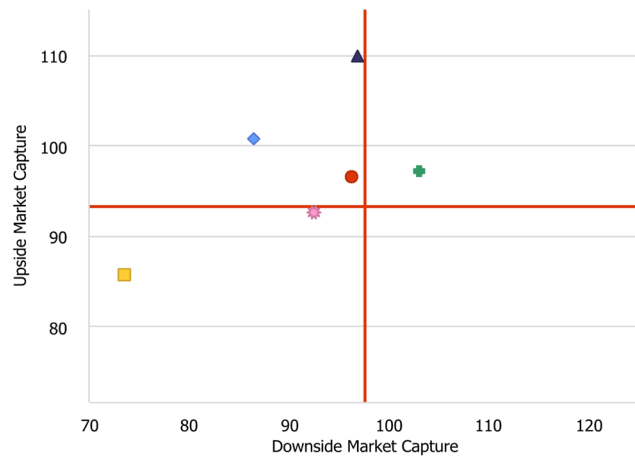
# CANDIDATE PERFORMANCE COMPARISON



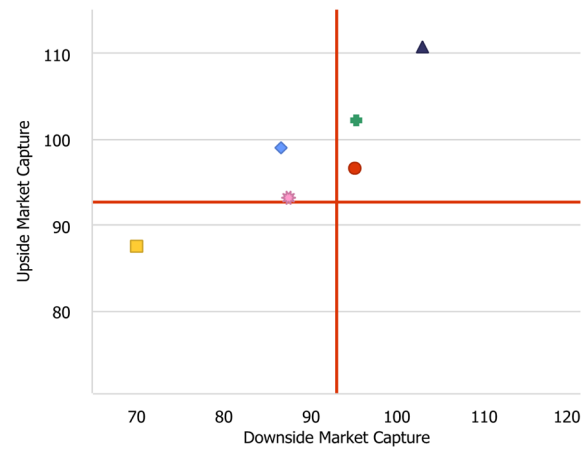
- Candidate strategies show persistent outperformance through time

# CANDIDATE UP/DOWN MARKET CAPTURE

3 Years As Of: 3/31/2019

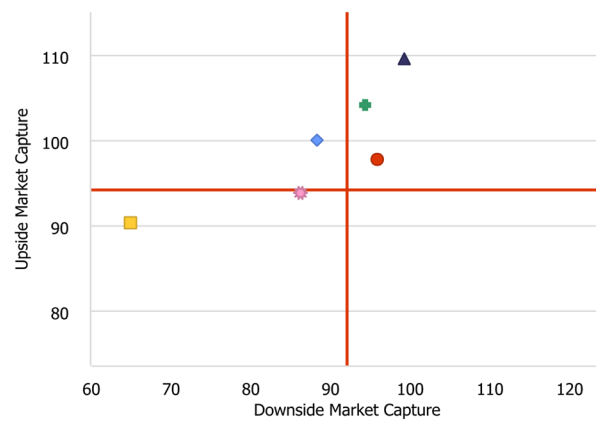


5 Years As Of: 3/31/2019

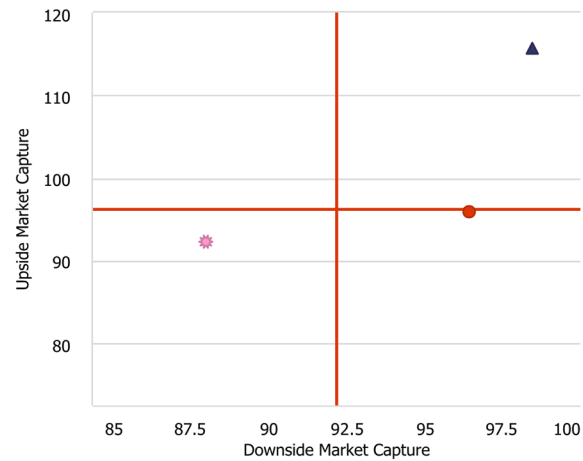


Note: Data is as of March 31, 2019

7 Years As Of: 3/31/2019



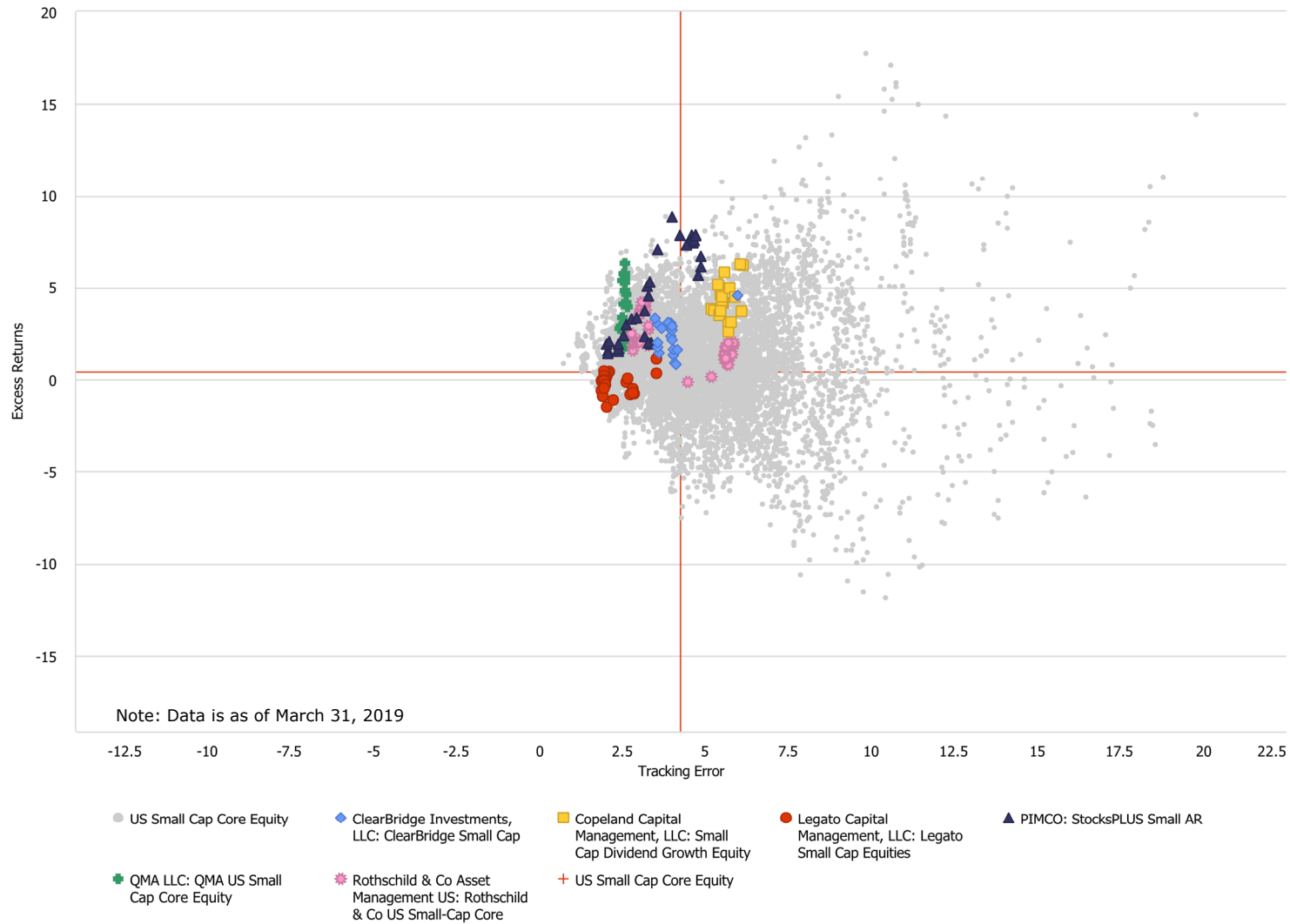
10 Years As Of: 3/31/2019



- ◆ ClearBridge Investments, LLC: ClearBridge Small Cap
- Copeland Capital Management, LLC: Small Cap Dividend Growth Equity
- Legato Capital Management, LLC: Legato Small Cap Equities
- ▲ PIMCO: StocksPLUS Small AR
- ✚ QMA LLC: QMA US Small Cap Core Equity
- ✱ Rothschild & Co Asset Management US: Rothschild & Co US Small-Cap Core

- Candidate strategies show persistent upside/downside market capture skill

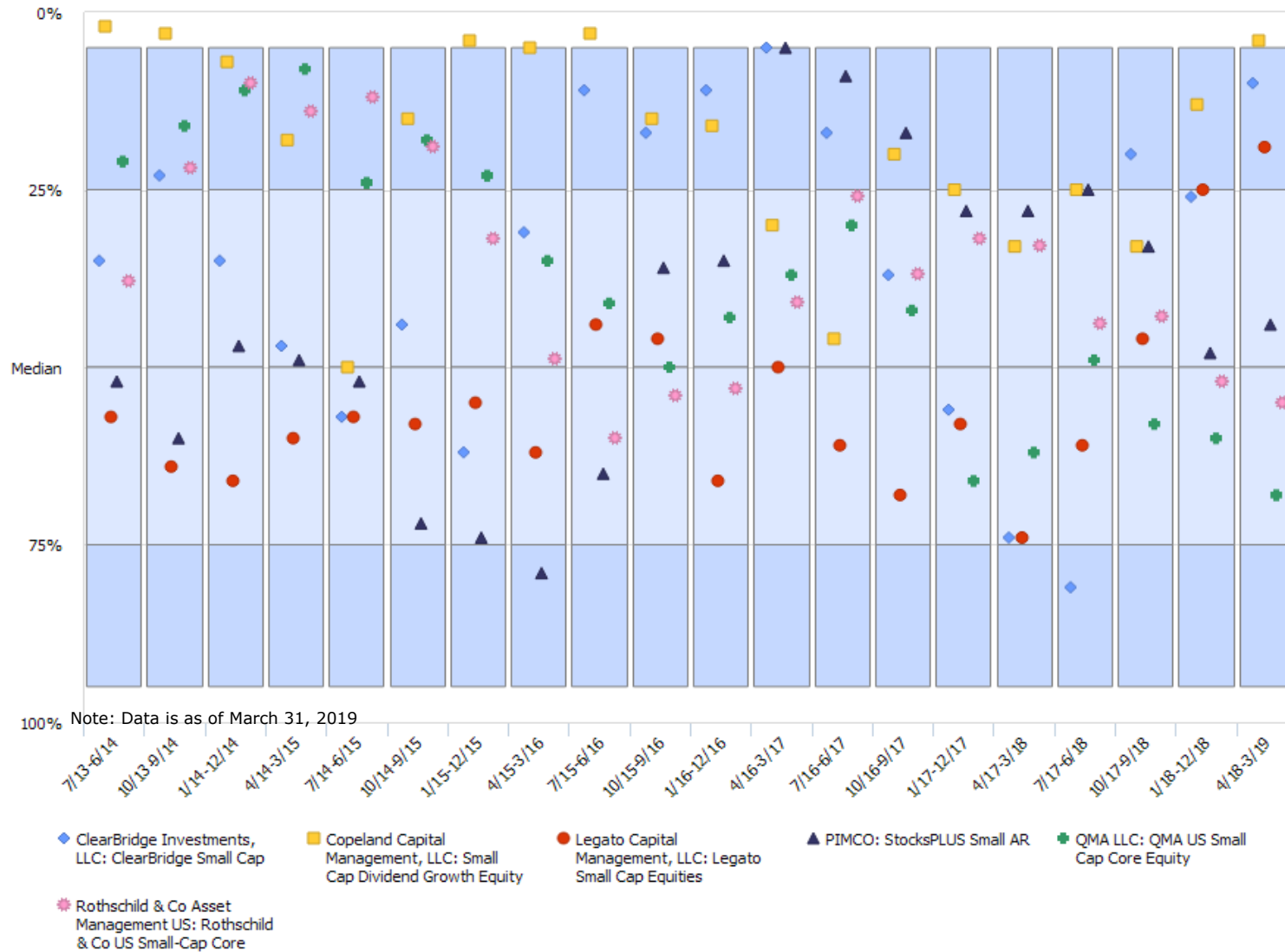
# CANDIDATE INFORMATION RATIO COMPARISON



- Candidate strategies exhibit persistent excess returns per unit of active risk

# CANDIDATE SHARPE RATIO COMPARISON

Rolling 3 Year Sharpe Ratio (past 20 quarters)



- Candidate strategies show consistency in being positively rewarded per unit of risk taken

# GROWTH

NEPC, LLC

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# CANDIDATE EVALUATION SCORES – GROWTH

Firm	Qualitative Assessment 70%			Quantitative Assessment (20%)	Fees (10%)	Total
	Organization / People (30%)	Investment Process (40%)	Risk Management (30%)			
Granahan Investment Management	4.00	4.50	4.50	4.95	3.00	4.34
William Blair Investment Management, LLC	4.25	4.50	4.75	2.40	1.00	3.73
Goldman Sachs Asset Management	3.00	3.00	4.25	4.00	5.00	3.66
Westfield Capital Management Company, L.P.	4.00	4.25	3.75	3.10	2.00	3.64
Lisanti Capital Growth, LLC	3.75	3.75	4.00	2.60	4.00	3.60
EAM Investors, LLC	3.75	4.25	3.75	2.60	3.00	3.59
Firm A	4.00	4.00	3.00	2.70	4.00	3.53
Firm B	3.50	3.75	3.75	4.20	1.00	3.51
Firm C	3.25	4.00	3.75	3.50	2.00	3.49
Firm D	2.75	3.00	3.25	4.30	5.00	3.46
Firm E	2.75	3.25	4.00	3.50	4.00	3.43
Firm F	3.50	3.75	3.75	3.70	1.00	3.41
Firm G	2.75	3.00	3.00	4.80	4.00	3.41
Firm H	3.00	3.00	3.00	3.80	5.00	3.36
Firm I	3.75	3.75	3.75	3.00	1.00	3.33
Firm J	3.00	3.00	3.00	4.60	3.00	3.32
Firm K	3.75	4.00	3.00	2.80	2.00	3.30
Firm L	3.25	3.50	3.00	4.00	2.00	3.29
Firm M	3.25	4.00	3.25	2.90	2.00	3.27
Firm N	3.00	3.00	3.00	3.80	4.00	3.26

\* Denotes emerging manager



# CANDIDATE EVALUATION SCORES - GROWTH

Firm	Organization / People (30%)	Investment Process (40%)	Risk Management (30%)	Quantitative Assessment (20%)	Fees (10%)	Total
Firm O	3.50	3.75	3.25	3.30	1.00	3.23
Firm P	3.25	3.50	3.25	2.70	3.00	3.19
Firm Q	3.75	3.00	3.50	2.10	4.00	3.18
Firm R	2.75	3.00	2.75	3.25	5.00	3.15
Firm S	3.00	3.00	3.00	3.10	4.00	3.12
Firm T	3.00	3.00	3.00	3.50	3.00	3.10
Firm U	2.75	3.25	3.00	2.90	4.00	3.10
Firm V	3.75	3.75	3.50	2.10	1.00	3.09
Firm W	2.25	3.00	2.25	4.00	5.00	3.09
Firm X	3.50	3.25	3.50	2.00	3.00	3.08
Firm Y*	2.75	3.75	3.00	3.00	1.00	2.96
Firm Z	3.25	3.00	3.25	3.20	1.00	2.95
Firm AA	2.75	3.00	3.75	2.80	1.00	2.87
Firm AB	3.00	3.00	2.75	3.50	1.00	2.85
Firm AC	2.25	3.00	4.25	2.90		2.79
Firm AD*	2.00	2.50	2.25	4.10	3.00	2.71
Firm AE	2.00	1.00	3.00	3.90	3.00	2.41
Firm AF*	2.00	3.00	2.00	2.10	2.00	2.30
Firm AG	3.00	1.00	2.50	3.50	1.00	2.24
Firm AH	2.00	2.00	1.00	2.40	3.00	1.97

\* Denotes emerging manager



# EAM INVESTORS, LLC

Firm/Personnel Information	
<b>Firm Name</b>	EAM Investors, LLC
<b>Main Office</b>	Cardiff-by-the-Sea, CA
<b>Additional Offices</b>	N/A
<b>Year Founded</b>	2007
<b>Ownership Structure</b>	56% Employee owned, 44% owned by CR Financial Holdings Inc.
<b>Firm Assets* (\$millions)</b>	1,752.52
<b>Product Assets* (\$millions)</b>	471.85
<b>Number of Employees Firm</b>	17
<b>Number of Employees Product</b>	15
<b>Number of Employees Spending &gt;50% on the Product</b>	10
<b>Team</b>	One main portfolio manager supported by a back-up portfolio manager and a team of 8 US analysts and 2 Non-US analysts
<b>Key Team Members</b>	Montie Weisenberger, Managing Director and Portfolio Manager, Research Analyst

Fund Strategy	
<b>Fund Strategy</b>	EAM Small Cap Growth
<b>Target Company Size</b>	Market capitalization <\$4 billion at time of purchase
<b>Typical Number of Stocks</b>	100-150 names
<b>Typical Turnover /Holding Period</b>	Average holding period is 6-18 months with a typical turnover of 150%
<b>Maximum Position Size</b>	2% maximum position size at time of purchase; maximum position size at market value will vary
<b>Investment Restrictions</b>	No more than 15% of the portfolio will be outside the market capitalization range of the benchmark
<b>Strategy Description</b>	The firm uses a behaviorally-based, fundamentally-driven investment process. They focus on companies that are accelerating their potential earnings growth due to positive, fundamental change.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	73 bps
<b>Management Fees \$150M</b>	68 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	1.78x
<b>ESG</b>	ESG risks are mitigated at the research phase of the process and when constructing the final portfolio. Their investment process does not systematically apply negative or exclusionary screening of ESG factors. They take a holistic approach to considering ESG risks and their implications to financial performance within the fundamental research phases of their investment process to the extent that they may be relevant.
<b>PRI Signatory / Year Signed</b>	No
<b>Diversity</b>	23.5% Minority, 23.5% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (10/02/2007)
EAM Small Cap Growth	15.73	20.15	9.05	13.94	19.04	9.98
Russell 2000 Growth	3.85	14.87	8.41	11.79	16.52	8.31
Excess	11.88	5.28	0.64	2.15	2.52	1.67

\*As of 3/31/2019





# GOLDMAN SACHS ASSET MANAGEMENT

Firm/Personnel Information	
<b>Firm Name</b>	Goldman Sachs Asset Management
<b>Main Office</b>	New York, NY
<b>Additional Offices</b>	30 additional offices
<b>Year Founded</b>	1988
<b>Ownership Structure</b>	Wholly owned subsidiary of The Goldman Sachs Group, Inc., a publicly traded company
<b>Firm Assets* (\$millions)</b>	1,383,699.74
<b>Product Assets* (\$millions)</b>	1,197.11
<b>Number of Employees Firm</b>	2,109
<b>Number of Employees Product</b>	24
<b>Number of Employees Spending &gt;50% on the Product</b>	Not disclosed
<b>Team</b>	Team approach consisting of 24 research and portfolio construction personnel. There are two co-heads of the Quantitative Investment Strategy group.
<b>Key Team Members</b>	Armen Avanesians, CIO and Co-head QIS, Gary Chropuvka, Co-head QIS, Len Ioffe, Sr. PM, Osman Ali, Sr. PM, Dennis Walsh, Sr. PM and Co-head Research, Takashi Suwabe, Sr. PM and Co-head Research

Fund Strategy	
<b>Fund Strategy</b>	US Small Cap Growth Equity Insights
<b>Target Company Size</b>	No targeted company size provided
<b>Typical Number of Stocks</b>	200 - 450 names
<b>Typical Turnover /Holding Period</b>	Typical turnover is 100-150% for a holding period of 8-12 months
<b>Maximum Position Size</b>	Stock active weight +/-1%
<b>Investment Restrictions</b>	Stock active weight +/- 1%, Sector active weight +/- 3%
<b>Strategy Description</b>	Quantitative process designed to identify small cap companies that are mispriced, positioned to grow their businesses beyond market expectation, and companies that will benefit from positive themes, trends and sentiment. The firm uses traditional and alternative data sources, including artificial intelligence, as part of their quantitative process.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	44 bps
<b>Management Fees \$150M</b>	40 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	2.63x
<b>ESG</b>	ESG related considerations are incorporated both directly and indirectly into the firm's investment process. They evaluate investment decisions made by company management and to the extent to which they believe they are shareholder friendly. The firm includes a direct environmental impact factor into the decision-making process.
<b>PRI Signatory / Year Signed</b>	Yes / 2011
<b>Diversity</b>	37.7% Minority, 38.4% Female

Fund Name	Annualized Performance* (Gross of Fees)					
	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (7/1/2007)
US Small Cap Growth Equity Insights	4.98	15.55	10.14	12.8	18.49	9.03
Russell 2000 Growth	3.85	14.87	8.41	11.79	16.52	8.13
Excess	1.13	0.68	1.73	1.01	1.97	0.9

\*As of 3/31/2019



# GRANAHAN INVESTMENT MANAGEMENT

Firm/Personnel Information	
<b>Firm Name</b>	Granahan Investment Management
<b>Main Office</b>	Waltham, MA
<b>Additional Offices</b>	n/a
<b>Year Founded</b>	1985
<b>Ownership Structure</b>	100% employee-owned, 41% female-owned
<b>Firm Assets* (\$millions)</b>	1,893
<b>Product Assets* (\$millions)</b>	898.00
<b>Number of Employees Firm</b>	16
<b>Number of Employees Product</b>	7
<b>Number of Employees Spending &gt;50% on the Product</b>	1
<b>Team</b>	Product is managed by a lead portfolio manager, six analysts and two traders.
<b>Key Team Members</b>	Andrew Beja, CFA

Fund Strategy	
<b>Fund Strategy</b>	Small Cap Focused Growth
<b>Target Company Size</b>	Market capitalization between \$200 million and \$3 billion at purchase
<b>Typical Number of Stocks</b>	30-45 names
<b>Typical Turnover /Holding Period</b>	Average holding period is 2 years for 45%-55% turnover per year
<b>Maximum Position Size</b>	7% at cost, 10% at market value
<b>Investment Restrictions</b>	Up to 15% in ADRs
<b>Strategy Description</b>	The strategy is based on bottom-up fundamental research that looks for sustainable growth companies positioned to grow at 15%+ for many years. Portfolios are typically constructed with concentration in sectors that exhibit strong secular growth companies (i.e., Technology Services, Business Services, Consumer and Producer Durables).

Investment Fees/Performance, ESG	
<b>Management Fees \$75M</b>	77 bps
<b>Management Fees \$150M</b>	73 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	7.04x
<b>ESG</b>	The firm's investment process is not driven by ESG factors. ESG factors are considered by the team members along with fundamental factors as part of their investment process. The firm relies on internal and third-party ESG research.
<b>PRI Signatory / Year Signed</b>	Yes / 2018
<b>Diversity</b>	0% Minority, 56% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (8/1/2007)
Granahan Small Cap Focused Growth	42.51	44.1	20.43	23.41	27.19	18.5
Russell 2000 Growth	3.85	14.87	8.41	11.79	16.52	8.69
Excess	38.66	29.23	12.02	11.62	10.67	9.81

\*As of 3/31/2019



# LISANTI CAPITAL GROWTH, LLC

Firm/Personnel Information	
<b>Firm Name</b>	Lisanti Capital Growth, LLC
<b>Main Office</b>	New York, NY
<b>Additional Offices</b>	n/a
<b>Year Founded</b>	2003
<b>Ownership Structure</b>	52% employee-owned, 48% owned by Dinosaur Group Holdings, LLC (passive financial investor). Firm is 52% female-owned and certified as a woman owned business by WBENC.
<b>Firm Assets* (\$millions)</b>	295.81
<b>Product Assets* (\$millions)</b>	208.23
<b>Number of Employees Firm</b>	4
<b>Number of Employees Product</b>	3
<b>Number of Employees Spending &gt;50% on the Product</b>	2
<b>Team</b>	Lead portfolio manager supported by two research analysts
<b>Key Team Members</b>	Mary Lisanti, Portfolio Manager, Timothy Woods, Senior Research Analyst, Chief Risk Officer

Fund Strategy	
<b>Fund Strategy</b>	Lisanti Small Cap Growth
<b>Target Company Size</b>	Market capitalization between \$500 million and \$5 billion at time of purchase
<b>Typical Number of Stocks</b>	70-90 names
<b>Typical Turnover /Holding Period</b>	50% for new names, significantly higher (~200%) for trimming and increasing position sizes.
<b>Maximum Position Size</b>	0.25% - 1.0% at cost with a maximum of 5% market
<b>Investment Restrictions</b>	Sector weights limited to 2X benchmark weight for smaller sectors and 400-600 bps over benchmark weight for larger sectors. Up to 5% in companies domiciled in other countries but whose stocks are listed on a U.S. exchange. Up to 10% in ADRs.
<b>Strategy Description</b>	Investment team marries a top-down, thematic approach (10-15 themes) with fundamental research. Firm focuses on small cap companies that are at the forefront of secular, structural and transformative changes. Specifically look for companies with strong/improving fundamentals, low debt levels, and high/improving profitability.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	55 bps***
<b>Management Fees \$150M</b>	n/a
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	1.90x
<b>ESG</b>	The firm does not have a formal ESG program at this time. The firm does integrate analysis of governance and social issues into its investment process and it does informally incorporate a significant percentage of these issues into its research.
<b>PRI Signatory / Year Signed</b>	No
<b>Diversity</b>	50% Minority, 50% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (1/1/2004)
Lisanti Small Cap Growth	13.72	21.91	11.72	15.25	19.32	11.01
Russell 2000 Growth	3.85	14.87	8.41	11.79	16.52	8.95
Excess	9.87	7.04	3.31	3.46	2.8	2.06

\*As of 3/31/2019

\*\*\*Maximum amount LACERS could allocate due to investment policy restriction is approximately \$50 million for a fee of 77 bps.



# WESTFIELD CAPITAL MANAGEMENT, L.P.

Firm/Personnel Information	
<b>Firm Name</b>	Westfield Capital Management, L.P.
<b>Main Office</b>	Boston, MA
<b>Additional Offices</b>	Denver, CO
<b>Year Founded</b>	1989
<b>Ownership Structure</b>	95% employee owned, 5% owned by Lincoln Peak
<b>Firm Assets* (\$millions)</b>	13,480.52
<b>Product Assets* (\$millions)</b>	1,795.55
<b>Number of Employees Firm</b>	63
<b>Number of Employees Product</b>	17
<b>Number of Employees Spending &gt;50% on the Product</b>	0
<b>Team</b>	Portfolio managed on a consensus basis by 17-member Investment Committee, with 14 members responsible for stock research
<b>Key Team Members</b>	17 Investment Committee members

Fund Strategy	
<b>Fund Strategy</b>	Small Cap Growth Equity
<b>Target Company Size</b>	Market capitalization of <\$1.5 billion at time of purchase. They will purchase larger market cap names as long as the stock is within the range of the benchmark.
<b>Typical Number of Stocks</b>	60-80 names
<b>Typical Turnover /Holding Period</b>	Time horizon 12-18 months, with turnover averaging 55-85%
<b>Maximum Position Size</b>	<2% at cost, maximum 5% at market value
<b>Investment Restrictions</b>	Up to 15% in ADRs, sectors limited to 20% or 2.5x benchmark weight, whichever is greater
<b>Strategy Description</b>	Firm uses a fundamental-based, growth-at-a-reasonable price investment process. They look for reasonably priced stocks of companies with accelerating or underappreciated earnings potential.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	83 bps
<b>Management Fees \$150M</b>	72 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	0.15x
<b>ESG</b>	Westfield's integration of ESG factors into the investment approach is focused on the materiality and relevancy of various ESG factors to each sector and specific company and how they may affect valuation, risk and the confidence of the investment thesis. Additionally, Bloomberg ESG data is used to rank companies on two dimensions: 1) the extent of their ESG disclosure, and 2) how they compare to sector peers on the metrics that they do disclose.
<b>PRI Signatory / Year Signed</b>	Yes / 2014
<b>Diversity</b>	17.5% Minority, 38% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (7/1/1989)
Small Cap Growth Equity	5.56	16.72	9.32	13.31	17.63	14.31
Russell 2000 Growth	3.85	14.87	8.41	11.79	16.52	8.07
Excess	1.71	1.85	0.91	1.52	1.11	6.24

\*As of 3/31/2019



# WILLIAM BLAIR INVESTMENT MANAGEMENT, LLC

Firm/Personnel Information	
<b>Firm Name</b>	William Blair Investment Management, LLC
<b>Main Office</b>	Chicago, IL
<b>Additional Offices</b>	London, Zurich, Sydney, Shanghai
<b>Year Founded</b>	1935
<b>Ownership Structure</b>	100% employee owned
<b>Firm Assets* (\$millions)</b>	54,495.70
<b>Product Assets* (\$millions)</b>	1,274.07
<b>Number of Employees Firm</b>	317
<b>Number of Employees Product</b>	12
<b>Number of Employees Spending &gt;50% on the Product</b>	12
<b>Team</b>	Two portfolio managers supported by 3 portfolio specialists, 7 dedicated small cap analysts and 9 research associates
<b>Key Team Members</b>	Mike Balkin, Partner Ward Secton, CFA, Partner

Fund Strategy	
<b>Fund Strategy</b>	Small Cap Growth
<b>Target Company Size</b>	Market capitalization range within the Russell 2000 index
<b>Typical Number of Stocks</b>	70 – 90 names
<b>Typical Turnover /Holding Period</b>	70-90% turnover
<b>Maximum Position Size</b>	5% at market value
<b>Investment Restrictions</b>	5% cash max
<b>Strategy Description</b>	The firm uses a fundamental research process that identifies quality growth companies that can achieve a higher growth rate for a longer period of time than the market expects due to its competitive strengths. They add value by investing in traditional quality growth, fallen quality growth and undiscovered quality growth companies.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	91 bps
<b>Management Fees \$150M</b>	86 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	1.57x
<b>ESG</b>	ESG factors are embedded in the firm's fundamental company analysis and addressed in their formal recommendation reports, highlighting material risks and opportunities. The analysts continually monitor ESG issues through their ongoing company due diligence and engagement with company management.
<b>PRI Signatory / Year Signed</b>	Yes / 2011
<b>Diversity</b>	18.3% Minority, 36% Female

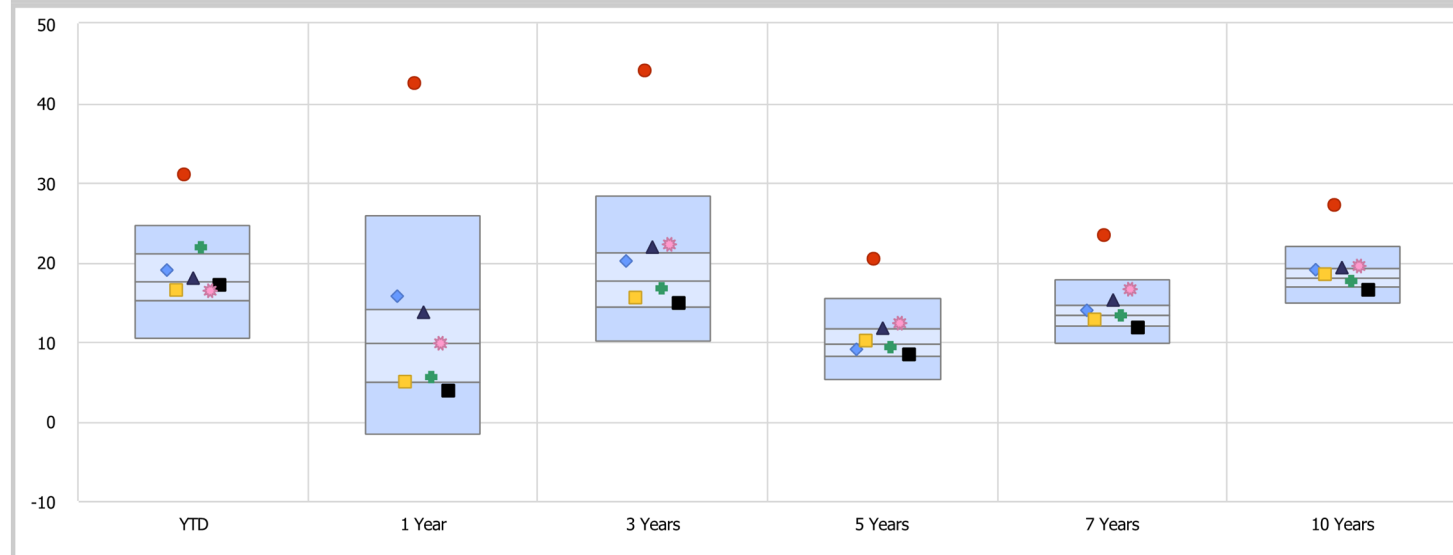
Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (1/1/1994)
Small Cap Growth	9.62	22.21	12.24	16.56	19.44	11.4
Russell 2000 Growth	3.85	14.87	8.41	11.79	16.52	7.55
Excess	5.77	7.34	3.83	4.77	2.92	3.85

\*As of 3/31/2019



# CANDIDATE PERFORMANCE COMPARISON

Trailing Returns



Universe: eVestment US Small Cap Growth Equity

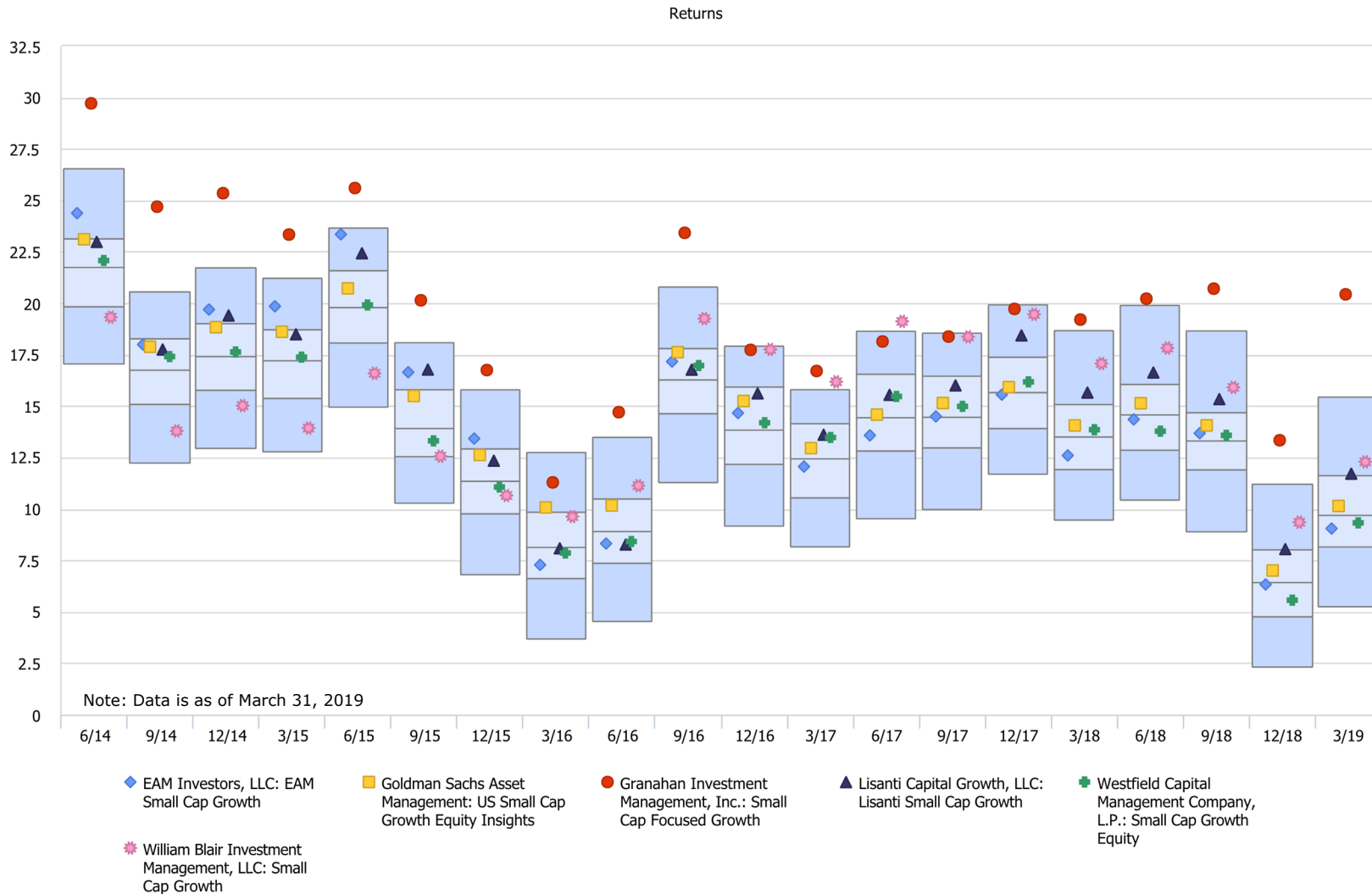
	YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
		Rk		Rk		Rk		Rk		Rk		Rk
5th percentile	24.6		25.8		28.3		15.4		17.8		22.0	
25th percentile	21.0		14.0		21.2		11.6		14.6		19.2	
Median	17.5		9.8		17.6		9.7		13.3		18.0	
75th percentile	15.2		4.9		14.3		8.1		12.0		16.9	
95th percentile	10.4		-1.6		10.1		5.2		9.8		14.9	
# of Observations	190		190		183		175		166		158	
◆ EAM Investors, LLC	19.0	42	15.7	18	20.1	28	9.0	63	13.9	36	19.0	26
■ Goldman Sachs Asset Management	16.5	60	5.0	74	15.6	67	10.1	43	12.8	58	18.5	38
● Granahan Investment Management, Inc.	31.0	1	42.5	1	44.1	1	20.4	1	23.4	1	27.2	1
▲ Lisanti Capital Growth, LLC	18.0	47	13.7	26	21.9	21	11.7	23	15.2	14	19.3	22
✚ Westfield Capital Management Company, L.P.	21.9	19	5.6	71	16.7	56	9.3	60	13.3	50	17.6	57
✿ William Blair Investment Management, LLC	16.3	62	9.6	52	22.2	19	12.2	19	16.6	8	19.4	19
■ Russell Index	17.1	54	3.9	81	14.9	73	8.4	74	11.8	78	16.5	80

Note: Data is as of March 31, 2019

- Candidate strategies outperform the index over longer periods of time

# CANDIDATE PERFORMANCE COMPARISON

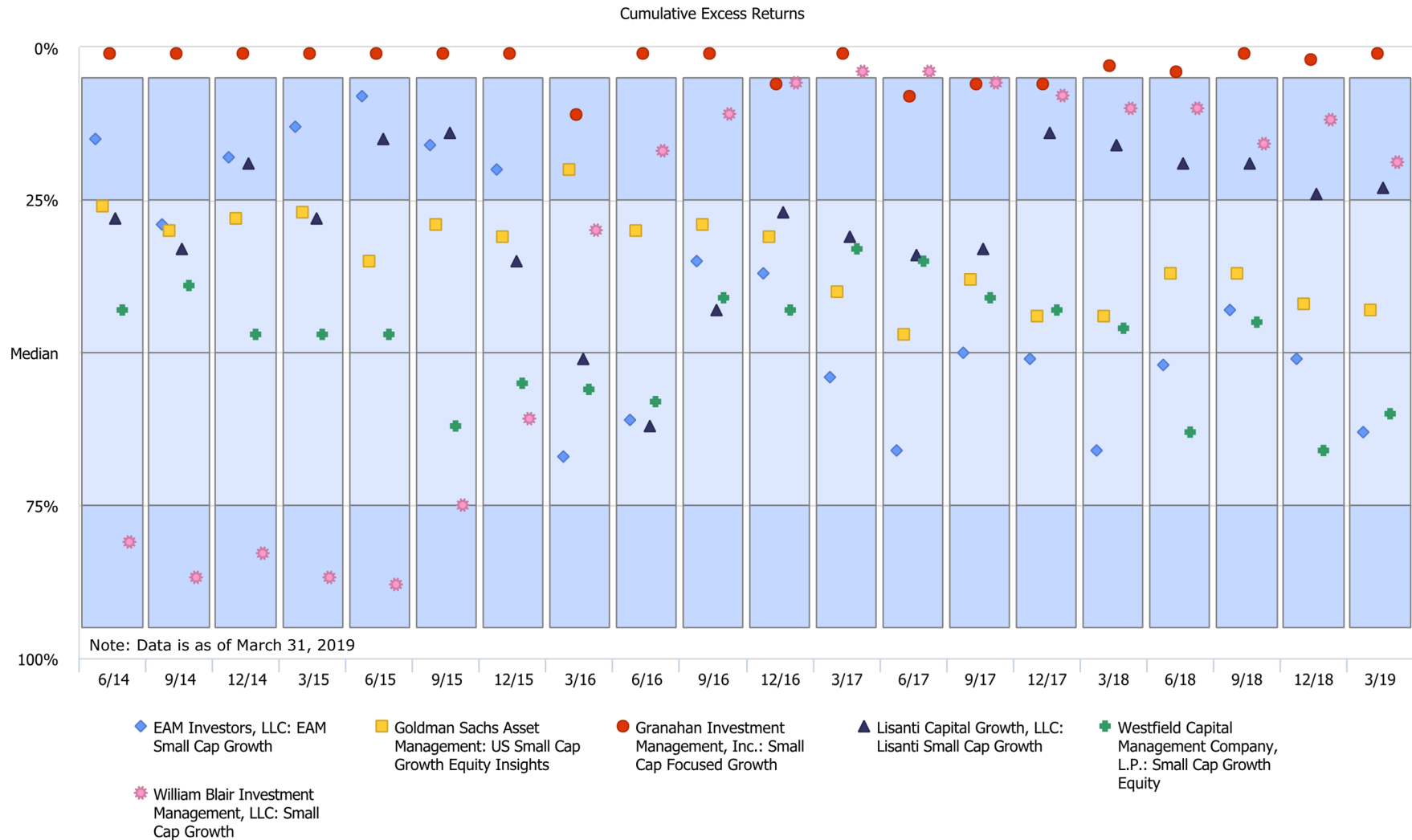
Rolling 5 Year Returns (past 20 quarters)



- Candidate strategies show persistent outperformance through time

# CANDIDATE PERFORMANCE COMPARISON

Cumulative Excess Rolling 5 Years (past 20 quarters)

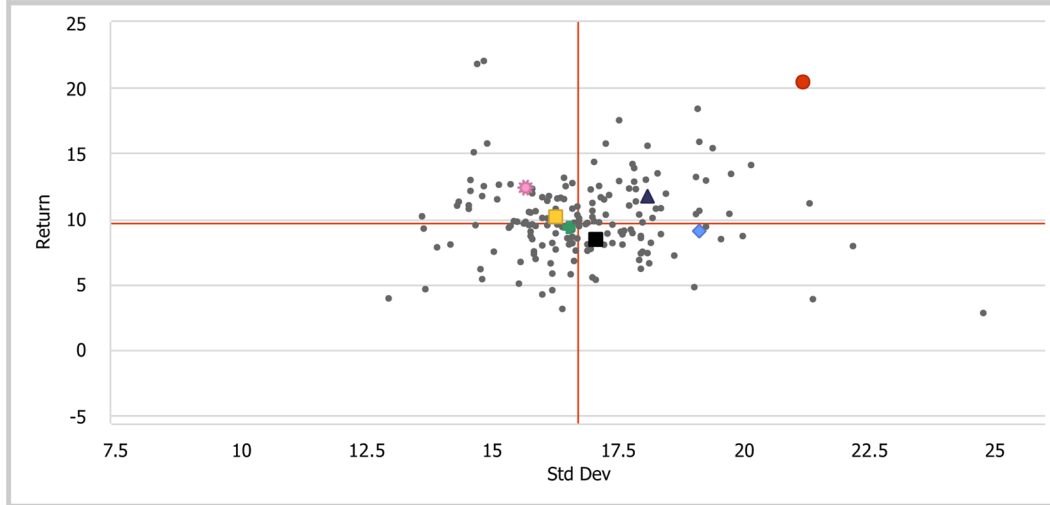


- Candidate strategies show persistent outperformance through time



# CANDIDATE PERFORMANCE COMPARISON

Risk-Reward (5-Yr)



Universe: eVestment US Small Cap Growth Equity

- ◆ EAM Investors, LLC
- Granahan
- Westfield Capital
- Russell Index
- GSAM
- ▲ Lisanti
- ★ William Blair
- + Universe Median

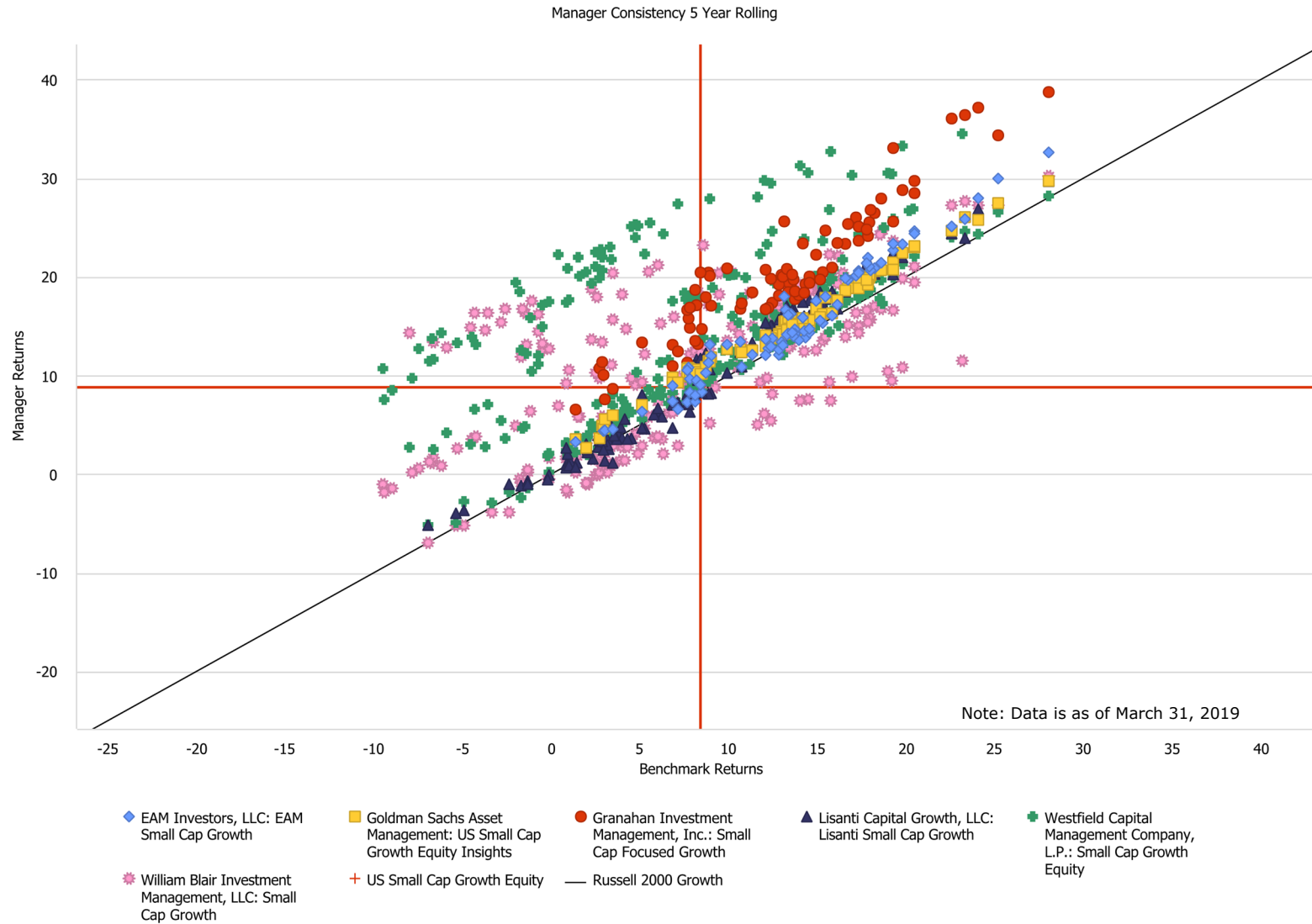
Risk-Reward (5-Yr)

Firm Name	Returns	Std Dev	Alpha	Beta	Batting Average	Info Ratio	Up Mkt Capture	Down Mkt Capture	Tracking Error	Treynor
EAM Investors, LLC	9.05	19.14	0.28	1.07	0.55	0.11	104.58	101.64	5.82	7.76
Goldman Sachs Asset Management	10.14	16.27	2.04	0.94	0.58	0.60	97.74	91.61	2.90	10.01
Granahan Investment Management, Inc.	20.43	21.18	11.31	1.06	0.65	1.10	139.25	90.76	10.96	18.51
Lisanti Capital Growth, LLC	11.72	18.09	3.25	1.00	0.63	0.54	107.17	94.34	6.10	11.01
Westfield Capital Management Company, L.P.	9.32	16.52	1.37	0.94	0.57	0.21	95.74	92.84	4.29	9.17
William Blair Investment Management, LLC	12.24	15.68	4.57	0.87	0.57	0.72	94.83	80.63	5.33	13.18
Russell Index	8.41	17.05	0.00	1.00	0.00	---	100.00	100.00	0.00	7.69

Percentiles	Returns	Std Dev	Alpha	Beta	Batting Average	Info Ratio	Up Mkt Capture	Down Mkt Capture	Tracking Error	Treynor
High	22.03	12.94	14.91	1.19	0.73	1.58	139.25	53.15	2.55	28.42
5th	15.43	14.52	7.08	1.07	0.65	1.02	114.32	75.54	3.19	15.24
25th	11.61	15.83	3.67	0.99	0.58	0.60	101.95	86.49	4.33	11.92
Median	9.68	16.70	1.74	0.94	0.53	0.29	96.76	92.32	5.20	9.54
75th	8.15	17.84	0.23	0.89	0.48	-0.04	91.83	96.02	6.46	7.78
95th	5.24	19.61	-1.94	0.77	0.42	-0.49	80.32	103.07	8.71	5.27
Low	2.80	24.78	-5.15	0.69	0.35	-0.97	55.55	123.16	17.40	2.00
Observations	175	175	175	175	175	175	175	175	175	175

Note: Data is as of March 31, 2019

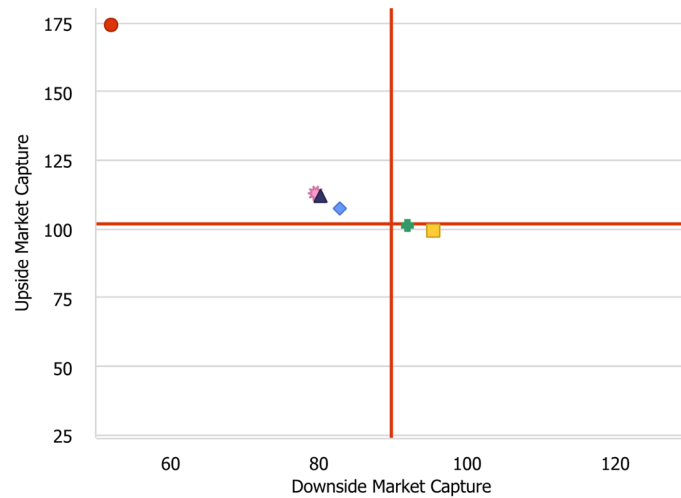
# CANDIDATE PERFORMANCE COMPARISON



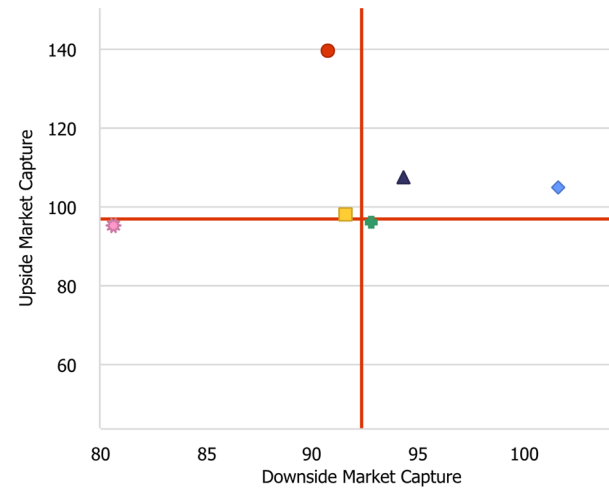
- Candidate strategies show persistent outperformance through time

# CANDIDATE UP/DOWN MARKET CAPTURE

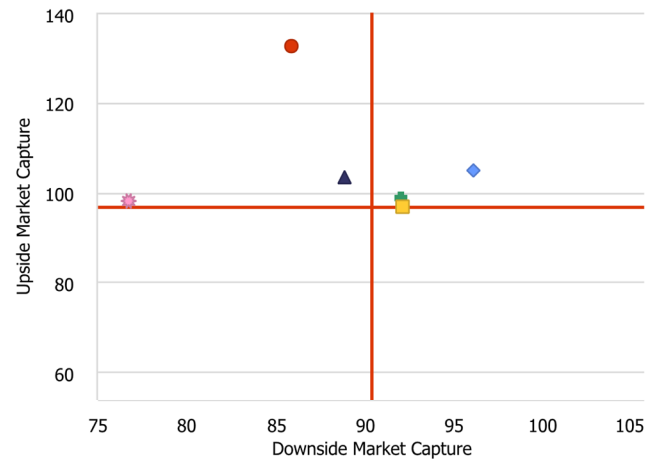
3 Years As Of: 3/31/2019



5 Years As Of: 3/31/2019

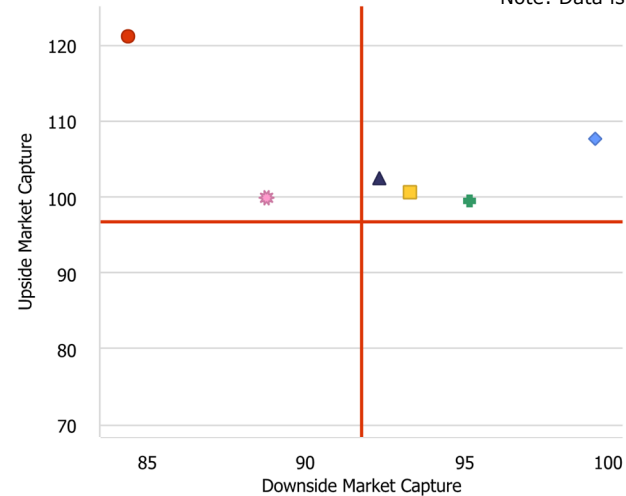


7 Years As Of: 3/31/2019



10 Years As Of: 3/31/2019

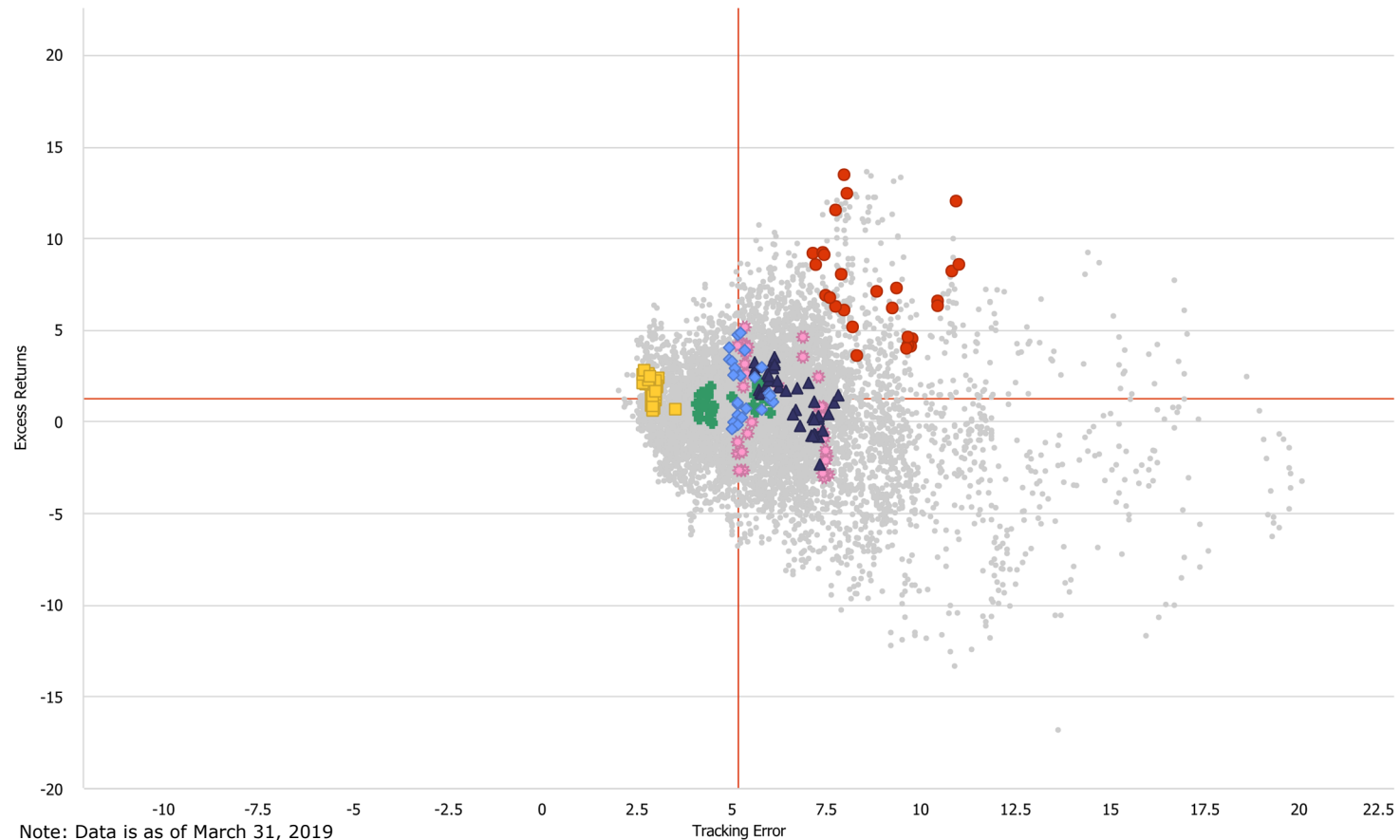
Note: Data is as of March 31, 2019



- ◆ EAM Investors, LLC: EAM Small Cap Growth
- Goldman Sachs Asset Management: US Small Cap Growth Equity Insights
- Granahan Investment Management, Inc.: Small Cap Focused Growth
- ▲ Lisanti Capital Growth, LLC: Lisanti Small Cap Growth
- Westfield Capital Management Company, L.P.: Small Cap Growth Equity
- ✱ William Blair Investment Management, LLC: Small Cap Growth

- Candidate strategies show persistent upside/downside market capture skill

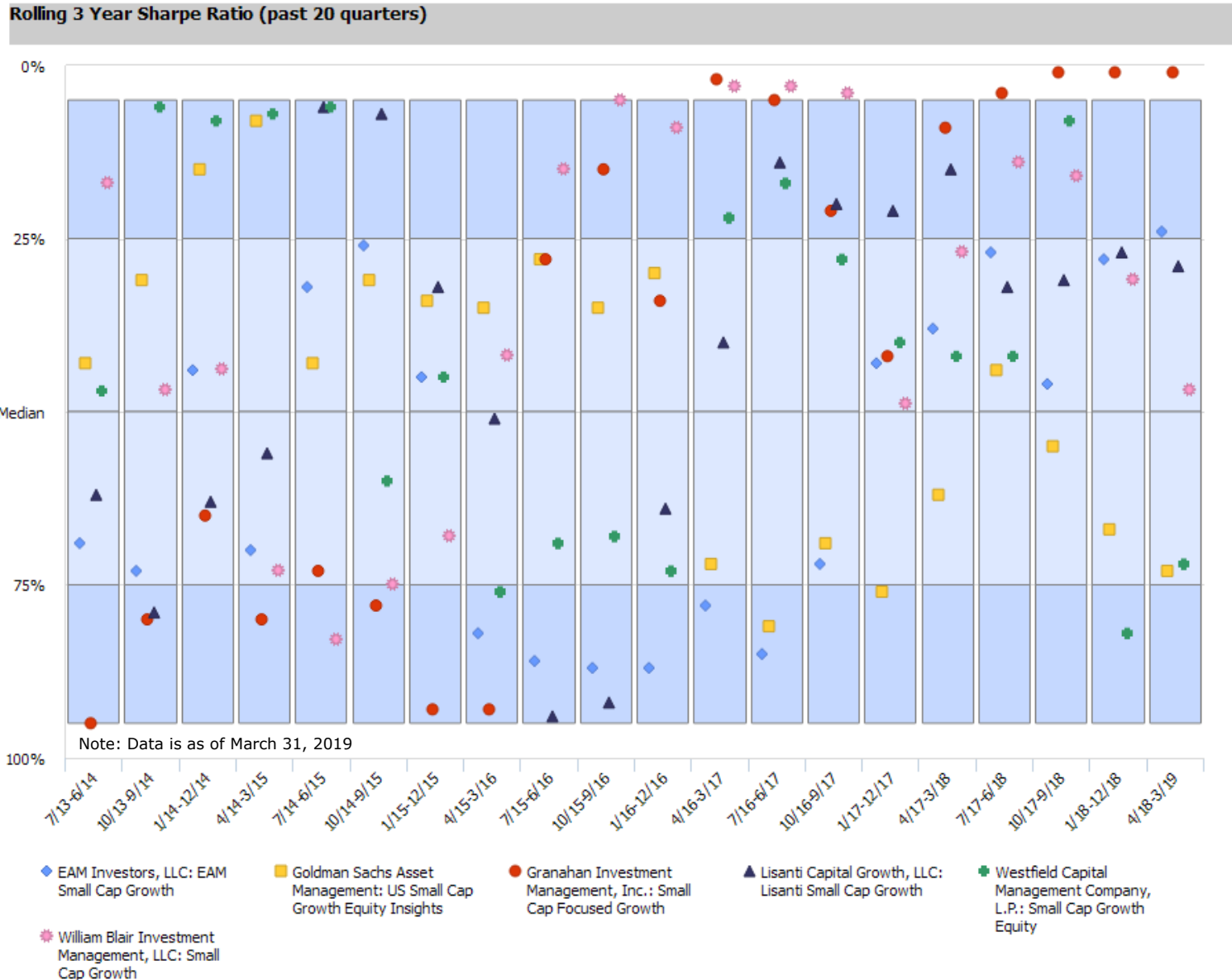
# CANDIDATE INFORMATION RATIO COMPARISON



- US Small Cap Growth Equity
- ◆ EAM Investors, LLC: EAM Small Cap Growth
- Goldman Sachs Asset Management: US Small Cap Growth Equity Insights
- Granahan Investment Management, Inc.: Small Cap Focused Growth
- ▲ Lisanti Capital Growth, LLC: Lisanti Small Cap Growth
- Westfield Capital Management Company, L.P.: Small Cap Growth Equity
- ★ William Blair Investment Management, LLC: Small Cap Growth
- + US Small Cap Growth Equity

- Candidate strategies exhibit persistent excess returns per unit of active risk

# CANDIDATE SHARPE RATIO COMPARISON



- Candidate strategies show consistency in being positively rewarded per unit of risk taken

# VALUE

NEPC, LLC

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# CANDIDATE EVALUATION SCORES - VALUE

	Qualitative Assessment 70%			Quantitative Assessment (20%)	Fees (10%)	Total
	Organization / People (30%)	Investment Process (40%)	Risk Management (30%)			
Hotchkis and Wiley Capital Management, LLC	3.50	3.75	4.00	3.70	5.00	3.87
Segall Bryant & Hamill	3.75	3.50	3.25	4.20	4.00	3.69
Bernzott Capital Advisors	3.75	3.75	3.50	4.00	3.00	3.67
Investment Counselors of Maryland, LLC	3.75	4.00	3.50	3.40	3.00	3.62
Dimensional Fund Advisors LP	3.50	3.50	3.75	3.01	5.00	3.60
Ariel Investments, LLC	4.00	4.00	3.25	2.30	5.00	3.60
Firm A	2.75	3.00	3.25	4.95	5.00	3.59
Firm B*	3.25	3.50	3.50	4.39	3.00	3.58
Firm C	3.25	3.75	4.00	3.98	2.00	3.57
Firm D	3.75	3.50	3.25	3.50	4.00	3.55
Firm E	3.50	3.25	3.50	3.32	5.00	3.54
Firm F	3.25	3.50	4.00	4.10	2.00	3.52
Firm G	3.25	3.25	3.00	4.00	5.00	3.52
Firm H	2.75	3.25	3.50	4.50	4.00	3.52
Firm I	4.25	4.00	3.50	3.16	1.00	3.48
Firm J*	3.00	3.75	3.00	3.71	4.00	3.45
Firm K	3.75	3.50	3.25	4.00	2.00	3.45
Firm L	3.75	3.75	3.50	3.76	1.00	3.42
Firm M	3.50	3.25	3.00	3.70	4.00	3.42
Firm N	2.75	3.25	3.50	3.90	4.00	3.40

\* Denotes emerging manager



# CANDIDATE EVALUATION SCORES – VALUE

	Qualitative Assessment 70%				Fees (10%)	Total
	Organization / People (30%)	Investment Process (40%)	Risk Management (30%)	Quantitative Assessment (20%)		
Firm O	3.00	3.25	3.50	3.60	4.00	3.40
Firm P	3.00	3.25	3.25	3.19	5.00	3.36
Firm Q*	3.25	3.00	2.75	3.79	5.00	3.36
Firm R	3.50	3.25	4.00	3.14	2.00	3.31
Firm S	3.00	3.00	3.00	3.96	4.00	3.29
Firm T	3.50	3.50	3.25	3.80	1.00	3.26
Firm U*	3.00	3.50	2.75	3.75	3.00	3.24
Firm V	3.25	3.50	3.25	3.30	2.00	3.21
Firm W	2.50	3.50	3.00	4.20	2.00	3.18
Firm X	3.00	3.00	3.00	3.74	3.00	3.15
Firm Y	3.25	3.25	3.00	3.58	2.00	3.14
Firm Z	3.25	3.25	3.25	3.29	2.00	3.13
Firm AA	3.25	3.25	3.00	4.01	1.00	3.12
Firm AB	3.25	3.00	2.75	4.00	2.00	3.10
Firm AC*	3.50	3.25	3.00	2.60	3.00	3.10
Firm AD	2.50	3.25	3.00	3.58	3.00	3.08
Firm AE	3.00	3.25	3.00	4.00	1.00	3.07
Firm AF*	3.00	3.00	2.75	3.50	3.00	3.05
Firm AG	3.50	3.25	3.25	3.10	1.00	3.05
Firm AH	3.00	3.00	2.75	3.99	2.00	3.05

\* Denotes emerging manager





# CANDIDATE EVALUATION SCORES – VALUE

	Qualitative Assessment 70%			Quantitative Assessment (20%)	Fees (10%)	Total
	Organization / People (30%)	Investment Process (40%)	Risk Management (30%)			
Firm AI	3.25	3.25	3.00	3.10	2.00	3.04
Firm AJ	3.50	3.75	3.00	2.55	1.00	3.03
Firm AK	2.75	2.75	2.75	4.40	2.00	3.01
Firm AL	2.00	3.00	3.00	3.50	4.00	2.99
Firm AM	3.00	3.25	3.25	3.05	1.00	2.93
Firm AN	3.75	3.00	3.00	2.80	1.00	2.92
Firm AO	3.00	3.00	2.75	3.30	2.00	2.91
Firm AP	3.00	2.00	2.00	3.55	5.00	2.82
Firm AQ	3.25	2.75	2.75	2.50	2.00	2.73

\* Denotes emerging manager



# ARIEL INVESTMENTS, LLC

Firm/Personnel Information	
<b>Firm Name</b>	Ariel Investments, LLC
<b>Main Office</b>	Chicago, IL
<b>Additional Offices</b>	New York, NY, Sydney, Australia
<b>Year Founded</b>	1983
<b>Ownership Structure</b>	93% employee owned, 7% owned by company directors, outside shareholders, and former employees
<b>Firm Assets* (\$millions)</b>	13,123.10
<b>Product Assets* (\$millions)</b>	872.82
<b>Number of Employees Firm</b>	101
<b>Number of Employees Product</b>	11
<b>Number of Employees Spending &gt;50% on the Product</b>	Not disclosed
<b>Team</b>	Two co-portfolio managers are supported by 9 research analysts. Stock purchases only are voted on by Investment Committee.
<b>Key Team Members</b>	John W. Rogers, Jr., Co-Portfolio Manager Kenneth E. Kuhrt, Co-Portfolio Manager

Fund Strategy	
<b>Fund Strategy</b>	Ariel Small Cap Value
<b>Target Company Size</b>	Market capitalization within the benchmark at time of purchase
<b>Typical Number of Stocks</b>	25 - 45 names
<b>Typical Turnover /Holding Period</b>	Turnover averages 20-30% and the holding period is 4-5 years on average
<b>Maximum Position Size</b>	6% at market value
<b>Investment Restrictions</b>	<10% in companies that produce the exact same product or offer the same service
<b>Strategy Description</b>	Firm is looking for companies that are high quality, show potential for growth and are trading at a 40% discount to their estimated private market value. Portfolios are concentrated and names are held for relatively long periods of time, i.e., five years.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	60 bps
<b>Management Fees \$150M</b>	55 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	3.76x
<b>ESG</b>	We have always believed that a company's philosophy/approach to corporate governance, environmental and social issues has potential to impact a business's success. For over 35 years, the firm has encouraged portfolio companies to have proactive diversity practices. More recently, the firm has enhanced their process by adding a Director of Impact Investing updating their research and formally tracking engagement with management on ESG issues.
<b>PRI Signatory / Year Signed</b>	No
<b>Diversity</b>	48.5% Minority, 51.5% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (9/30/1983)
Small Cap Value	0.30	11.67	6.53	10.17	17.82	12.41
Russell 2000 Value	0.17	10.86	5.59	9.61	14.12	11.29
Excess	0.13	0.81	0.94	0.56	3.70	1.12

\*As of 3/31/2019



# BERNZOTT CAPITAL ADVISORS

Firm/Personnel Information	
<b>Firm Name</b>	Bernzott Capital Advisors
<b>Main Office</b>	Camarillo, CA
<b>Additional Offices</b>	Hingham, MA
<b>Year Founded</b>	1994
<b>Ownership Structure</b>	100% employee owned
<b>Firm Assets* (\$millions)</b>	906.00
<b>Product Assets* (\$millions)</b>	538.00
<b>Number of Employees Firm</b>	9
<b>Number of Employees Product</b>	4
<b>Number of Employees Spending &gt;50% on the Product</b>	3
<b>Team</b>	Four-person Investment Committee
<b>Key Team Members</b>	Kevin Bernzott, Founder & Chairman Scott Larson, CFA, CIO, PM/Analyst Thomas Derse, CFA, President, PM/Analyst Ryan Ross, CFA, Vice President, PM/Analyst

Fund Strategy	
<b>Fund Strategy</b>	US Small Cap Value
<b>Target Company Size</b>	\$250 million - #5 billion
<b>Typical Number of Stocks</b>	25 - 35 names
<b>Typical Turnover /Holding Period</b>	~25% turnover
<b>Maximum Position Size</b>	6% at market value
<b>Investment Restrictions</b>	5% cash max
<b>Strategy Description</b>	The firm constructs concentrated portfolios of high quality companies trading at a significant discount (30%) to fair value. The fundamental investment process is behavioral-based and looks for companies going through temporary events which have caused them to be undervalued.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	75 bps
<b>Management Fees \$150M</b>	65 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	1.36x
<b>ESG</b>	ESG approaches are not incorporated into the investment process.
<b>PRI Signatory / Year Signed</b>	No
<b>Diversity</b>	0% Minority, 28.5% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (1/1/1995)
US Small Cap Value	6.78	16.99	10.81	13.16	16.23	13.99
Russell 2000 Value	0.17	10.86	5.59	9.61	14.12	10.07
Excess	6.61	6.13	5.22	3.55	2.11	3.92

\*As of 3/31/2019



# DIMENSIONAL FUND ADVISORS LP

Firm/Personnel Information	
<b>Firm Name</b>	Dimensional Fund Advisors LP
<b>Main Office</b>	Austin, TX
<b>Additional Offices</b>	Santa Monica, Charlotte, London, Sydney, Singapore, Tokyo, Vancouver, Berlin, Amsterdam, Toronto, Melbourne, Hong Kong
<b>Year Founded</b>	1981
<b>Ownership Structure</b>	70% owned by co-founders, current and former board members, and employees with remaining amount attributed to outside individual investors
<b>Firm Assets* (\$millions)</b>	576,214.53
<b>Product Assets* (\$millions)</b>	16,656.40
<b>Number of Employees Firm</b>	1,382
<b>Number of Employees Product</b>	255
<b>Number of Employees Spending &gt;50% on the Product</b>	None identified.
<b>Team</b>	Investment committee has ultimate oversight for the portfolio and receives input from Investment Research Committee and research team. The portfolio management and trading teams manage the implementation of the portfolios.
<b>Key Team Members</b>	No key team members for the small cap value product were identified.

Fund Strategy	
<b>Fund Strategy</b>	US Small Cap Value Strategy
<b>Target Company Size</b>	Smallest 10% of US companies based on market capitalization with a minimum market cap of \$10 million
<b>Typical Number of Stocks</b>	900 - 1,300 names
<b>Typical Turnover /Holding Period</b>	Typically less than 25%
<b>Maximum Position Size</b>	4% at time of purchase
<b>Investment Restrictions</b>	Sector weight is capped at 10% versus the benchmark at time of purchase, industry weight is capped at 25% of the benchmark at time of purchase, REITS, highly-regulated utilities and companies without earnings are restricted
<b>Strategy Description</b>	Firm uses a relative price (value) screen to identify the least expensive 35% of the US small cap universe. Companies with the lowest profitability or negative earnings are excluded. Additionally, REITs are typically excluded. The cost of transacting in any one name is factored into their buy/sell decisions allowing for flexibility in the implementation of their process.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	51 bps
<b>Management Fees \$150M</b>	48 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	2.50x
<b>ESG</b>	Dimensional takes the position that any expected value attributable to a company's current ESG efforts will be already reflected in a company's price. DFA also takes ESG principles into consideration across all the portfolios it manages where those principles may impact performance.
<b>PRI Signatory / Year Signed</b>	Yes / 2012
<b>Diversity</b>	26.8% Minority, 35.7% Female

Fund Name	Annualized Performance* (Gross of Fees)					
	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (3/31/1992)
US Small Cap Value Strategy	-2.78	8.92	4.78	10.18	16.29	10.02
Russell 2000 Value	0.17	10.86	5.59	9.61	14.12	8.28
Excess	-2.95	-1.94	-0.81	0.57	2.17	1.74

\*As of 3/31/2019



# HOTCHKIS & WILEY CAPITAL MANAGEMENT, LLC

Firm/Personnel Information	
<b>Firm Name</b>	Hotchkis & Wiley Capital Management, LLC
<b>Main Office</b>	Los Angeles, CA
<b>Additional Offices</b>	Corona Del Mar, CA, London, UK
<b>Year Founded</b>	1980
<b>Ownership Structure</b>	54% employees owned, 43% owned by Stephens-H&W LLC and 3% former employees
<b>Firm Assets* (\$millions)</b>	30,462.13
<b>Product Assets* (\$millions)</b>	1,378.42
<b>Number of Employees Firm</b>	64
<b>Number of Employees Product</b>	21
<b>Number of Employees Spending &gt;50% on the Product</b>	2
<b>Team</b>	Portfolios are managed by a team of two portfolio managers supported by 20 analysts
<b>Key Team Members</b>	Judd Peters, Portfolio Manager Ryan Thomes, Portfolio Manager

Fund Strategy	
<b>Fund Strategy</b>	Small Cap Diversified Value
<b>Target Company Size</b>	\$100 million to \$4 billion
<b>Typical Number of Stocks</b>	350 - 400 names
<b>Typical Turnover /Holding Period</b>	Most recent period had 62% turnover
<b>Maximum Position Size</b>	0.40% at time of purchase
<b>Investment Restrictions</b>	35% max sector weight, 15% (or 10% above benchmark) max industry weight
<b>Strategy Description</b>	The firm employs a fundamental research process that focuses on the purchase of stocks where the firm's research indicates the present value of the company's future cash flows exceeds the current market value.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	49 bps
<b>Management Fees \$150M</b>	47 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	6.19x
<b>ESG</b>	The firm regularly screens investments across all strategies for ESG criteria. The screen is designed to compare ESG criteria of individual companies to competitors in the same industry group, with adjustments made for company size. Analysts will incorporate ESG issues into their analysis (models, risk assessment, etc.) when relevant.
<b>PRI Signatory / Year Signed</b>	Yes / 2013
<b>Diversity</b>	31.3% Minority, 40% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (7/1/2005)
Small Cap Diversified Value	-0.97	13.75	8.11	12.67	18.94	8.76
Russell 2000 Value	0.17	10.86	5.59	9.61	14.12	6.81
Excess	-1.14	2.89	2.52	3.06	4.82	1.95

\*As of 3/31/2019



# INVESTMENT COUNSELORS OF MARYLAND, LLC

Firm/Personnel Information	
<b>Firm Name</b>	Investment Counselors of Maryland, LLC
<b>Main Office</b>	Baltimore, MD
<b>Additional Offices</b>	n/a
<b>Year Founded</b>	1972
<b>Ownership Structure</b>	35% employee owned, 65% owned by BrightSphere Investment Group plc
<b>Firm Assets* (\$millions)</b>	2,120.42
<b>Product Assets* (\$millions)</b>	2,036.39
<b>Number of Employees Firm</b>	17
<b>Number of Employees Product</b>	15
<b>Number of Employees Spending &gt;50% on the Product</b>	9
<b>Team</b>	One lead portfolio manager supported by a team of seven analysts.
<b>Key Team Members</b>	William V. Heaphy, CIO/Portfolio Manager/Principal

Fund Strategy	
<b>Fund Strategy</b>	ICM Small Cap Value Equity
<b>Target Company Size</b>	Market capitalization range within the benchmark
<b>Typical Number of Stocks</b>	~100 names
<b>Typical Turnover /Holding Period</b>	Typical turnover is 30%
<b>Maximum Position Size</b>	5% at time of purchase
<b>Investment Restrictions</b>	Relative sector weight +/- 15% to the index, <5% of company's float
<b>Strategy Description</b>	The firm is focused on finding high quality companies that are trading at temporarily discounted valuations. Fundamental analysis is applied to find companies that have attractive valuations, strong balance sheets, and generate consistent cash flow.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	75 bps
<b>Management Fees \$150M</b>	63 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	1.91x
<b>ESG</b>	Firm does not formally incorporate ESG factors into investment process.
<b>PRI Signatory / Year Signed</b>	No
<b>Diversity</b>	5.9% Minority, 35.3% Female

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (4/30/1993)
ICM Small Cap Value Equity	0.84	13.11	8.24	11.44	16.8	12.3
Russell 2000 Value	0.17	10.86	5.59	9.61	14.12	9.84
Excess	0.67	2.25	2.65	1.83	2.68	2.46

\*As of 3/31/2019



# SEGALL BRYANT & HAMILL

Firm/Personnel Information	
<b>Firm Name</b>	Segall Bryant & Hamill
<b>Main Office</b>	Chicago, IL
<b>Additional Offices</b>	Denver, Philadelphia, St. Louis
<b>Year Founded</b>	1994
<b>Ownership Structure</b>	53% Employee owned, 47% owned by Thoma Bravo, LLC, a private equity firm.
<b>Firm Assets* (\$millions)</b>	19,669.71
<b>Product Assets* (\$millions)</b>	694.71
<b>Number of Employees Firm</b>	134
<b>Number of Employees Product</b>	6
<b>Number of Employees Spending &gt;50% on the Product</b>	2
<b>Team</b>	Lead portfolio manager supported by team of 5 sector analysts
<b>Key Team Members</b>	Mark Dickherber, CFA, CPA, Principal and Director of Small Cap Strategies

Fund Strategy	
<b>Fund Strategy</b>	Small Cap Value
<b>Target Company Size</b>	
<b>Typical Number of Stocks</b>	75 - 85 names
<b>Typical Turnover /Holding Period</b>	55% - 70% turnover
<b>Maximum Position Size</b>	5% at market value
<b>Investment Restrictions</b>	Sector max 125% of benchmark
<b>Strategy Description</b>	The small cap value strategy employs a bottom-up security selection process to seek to identify companies with improving Return On invested Capital (ROIC). The team looks for stocks with a minimum reward/risk ratio of 3:1 when initiating positions and uses a contrarian approach with a goal of purchasing companies with lower embedded expectations.

Investment Fees/Performance	
<b>Management Fees \$75M</b>	67 bps
<b>Management Fees \$150M</b>	58 bps
<b>Margin on Fees Paid (Net Gain/Fee Paid)</b>	3.17x
<b>ESG</b>	ESG analysis services as another layer within their individual security selection process. ESG exposures are considered in the context of the issuer's underlying business model, operating fundamentals and market position.
<b>PRI Signatory / Year Signed</b>	Yes / 2017
<b>Diversity</b>	

Annualized Performance* (Gross of Fees)						
Fund Name	One Year	Three Years	Five Years	Seven Years	Ten Years	Inception (1/1/2008)
Small Cap Value	11.07	14.76	9.06	13.48	17.69	12.73
Russell 2000 Value	0.17	10.86	5.59	9.61	14.12	6.99
Excess	10.9	3.9	3.47	3.87	3.57	5.74

\*As of 3/31/2019



# CANDIDATE PERFORMANCE COMPARISON

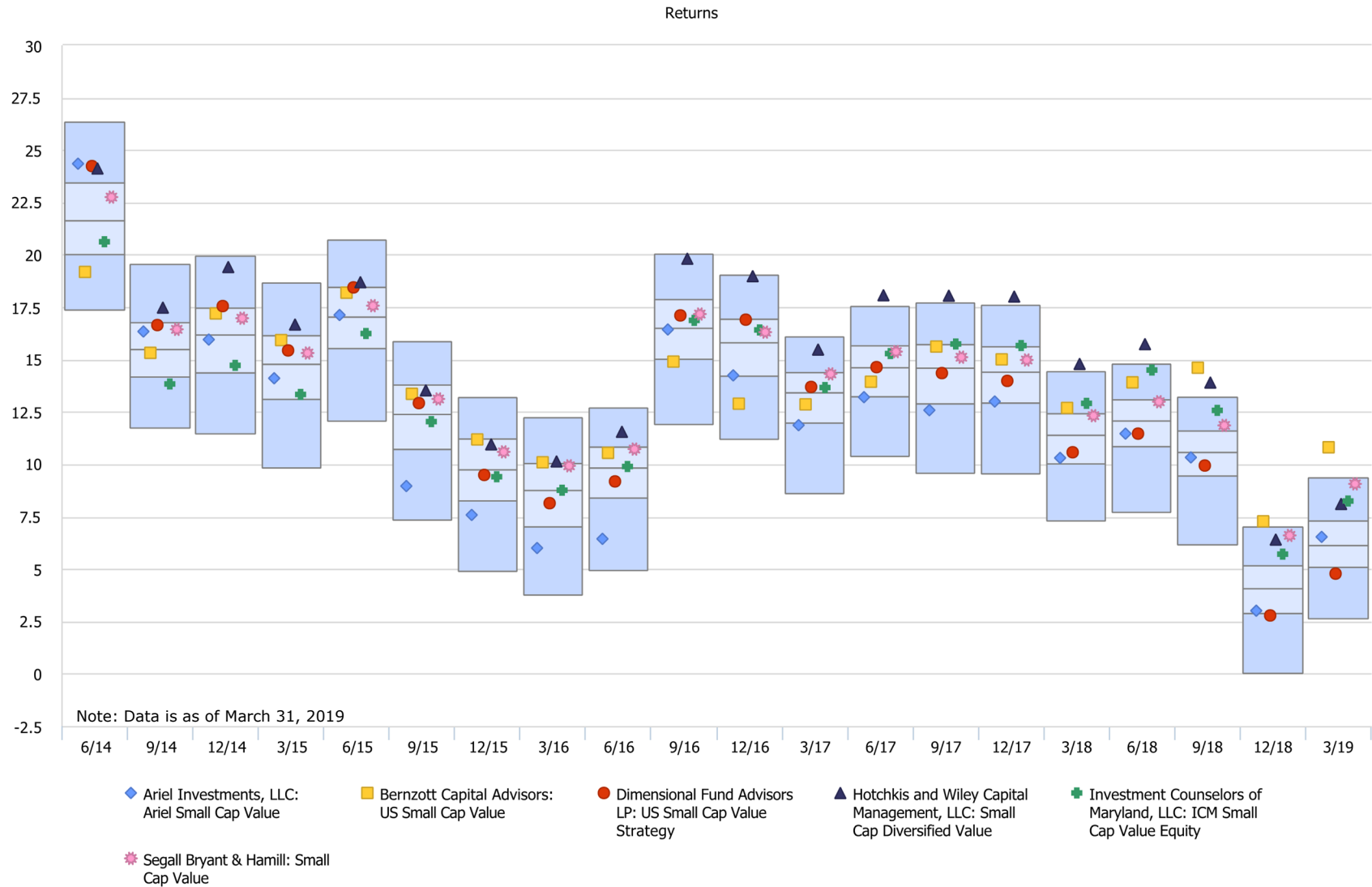


- Candidate strategies outperform the index over longer periods of time



# CANDIDATE PERFORMANCE COMPARISON

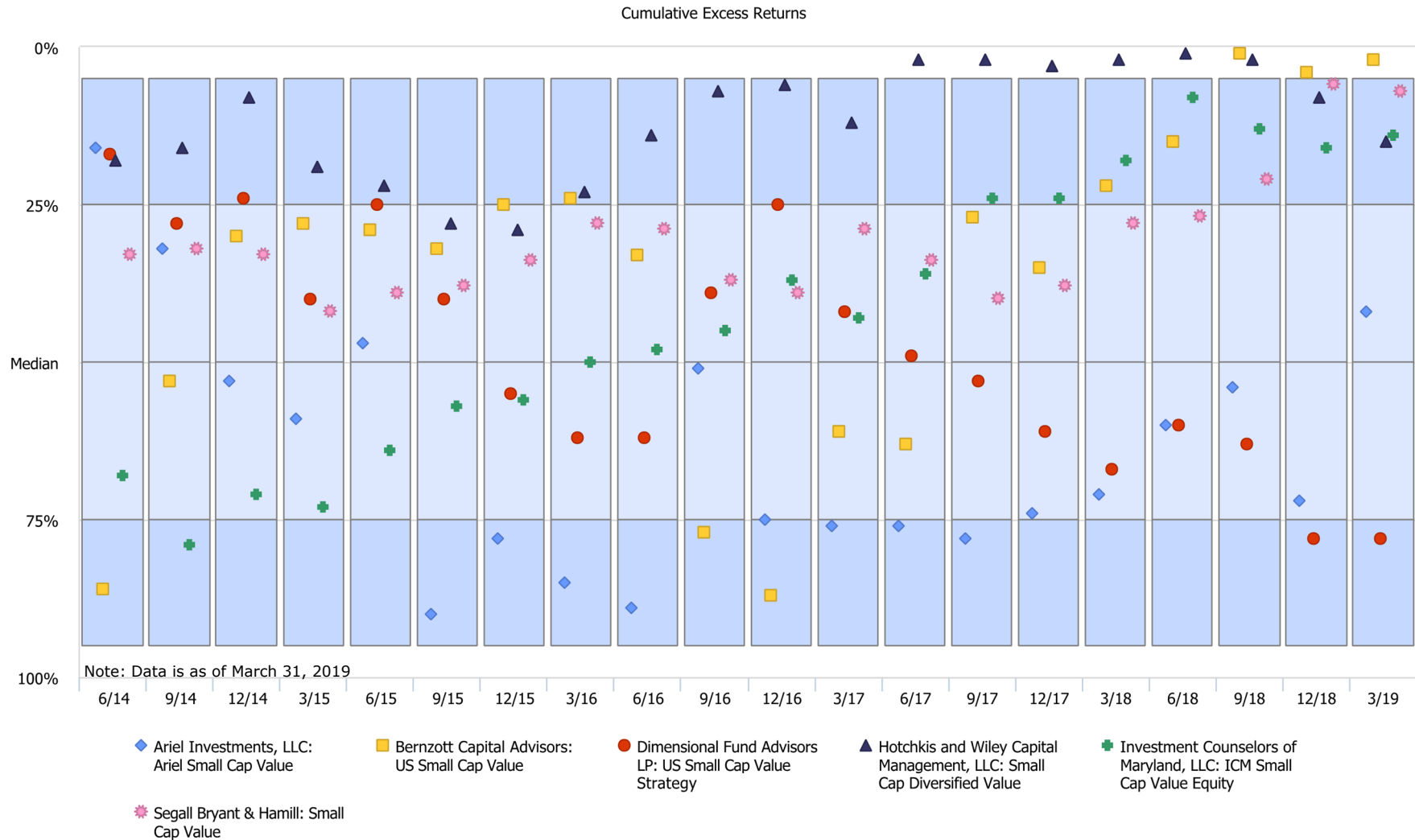
Rolling 5 Year Returns (past 20 quarters)



- Candidate strategies show persistent outperformance through time

# CANDIDATE PERFORMANCE COMPARISON

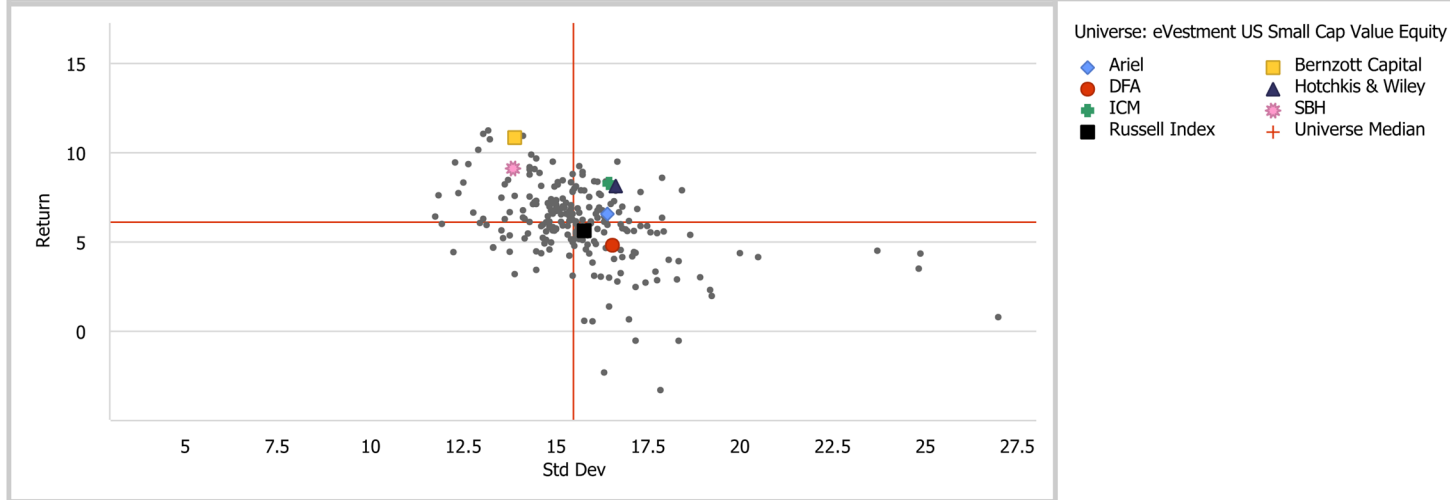
## Cumulative Excess Rolling 5 Years (past 20 quarters)



- Candidate strategies show persistent outperformance through time

# CANDIDATE PERFORMANCE COMPARISON

Risk-Reward (5-Yr)



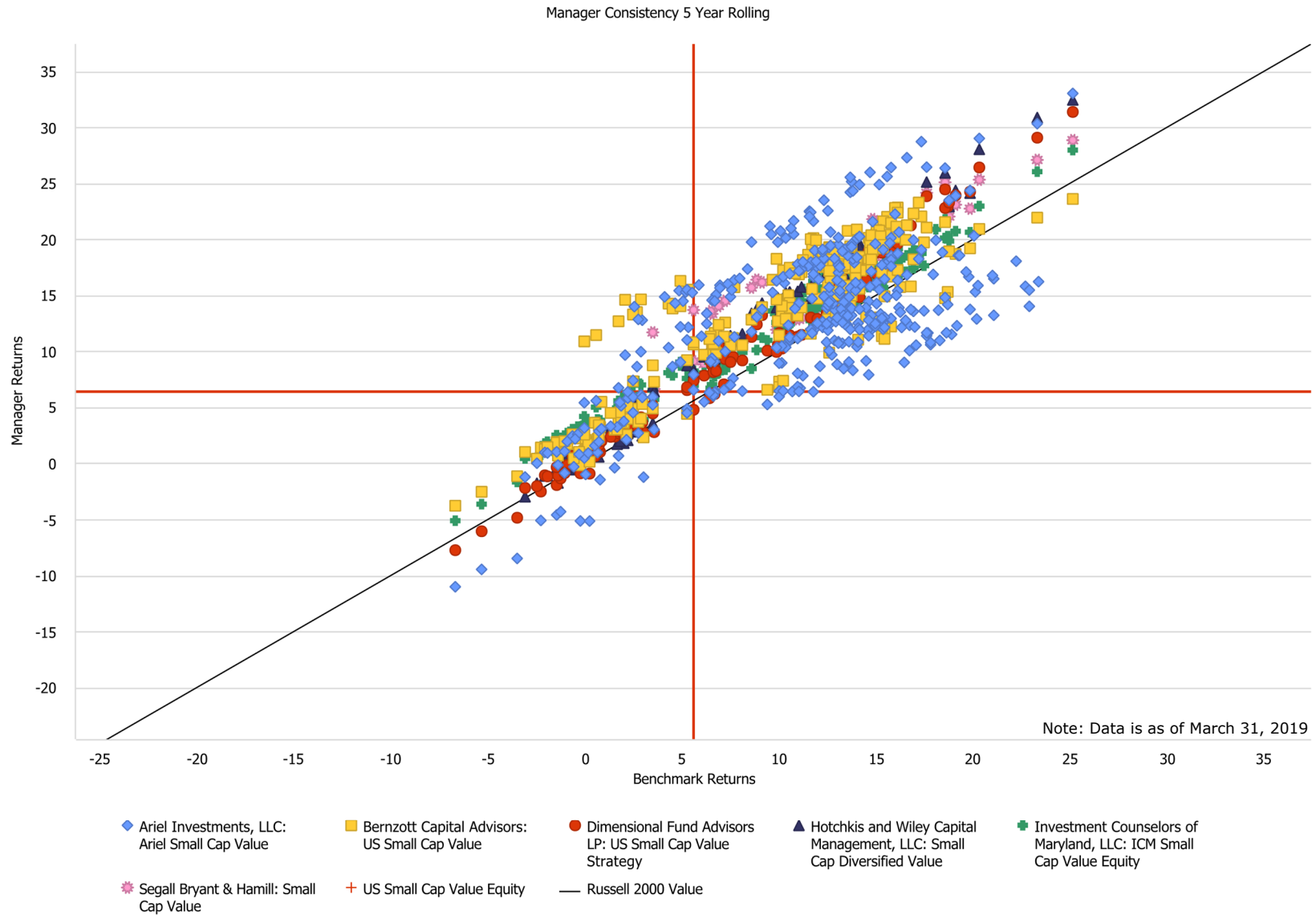
Risk-Reward (5-Yr)

Firm Name	Returns	Std Dev	Alpha	Beta	Batting Average	Info Ratio	Up Mkt Capture	Down Mkt Capture	Tracking Error	Treynor
Ariel Investments, LLC	6.53	16.42	1.29	0.96	0.55	0.15	95.09	91.88	6.38	6.07
Bernzott Capital Advisors	10.81	13.90	6.30	0.77	0.57	0.68	87.95	65.92	7.63	13.10
Dimensional Fund Advisors LP	4.78	16.56	-0.90	1.04	0.48	-0.32	98.43	101.96	2.53	3.92
Hotchkis and Wiley Capital Management, LLC	8.11	16.63	2.31	1.03	0.63	0.75	108.44	96.95	3.33	7.16
Investment Counselors of Maryland, LLC	8.24	16.48	2.46	1.03	0.57	0.89	109.19	97.02	2.99	7.34
Segall Bryant & Hamill	9.06	13.86	4.15	0.83	0.58	0.70	92.83	78.87	4.98	9.99
Russell Index	5.59	15.81	0.00	1.00	0.00	---	100.00	100.00	0.00	4.87

Percentiles	Returns	Std Dev	Alpha	Beta	Batting Average	Info Ratio	Up Mkt Capture	Down Mkt Capture	Tracking Error	Treynor
High	11.21	11.77	7.31	1.43	0.70	1.18	127.24	49.99	1.79	15.76
5th	9.35	13.07	4.28	1.09	0.63	0.79	109.05	71.17	2.55	10.06
25th	7.29	14.74	2.04	1.00	0.57	0.41	100.03	86.08	3.48	7.17
Median	6.12	15.48	1.01	0.94	0.53	0.14	94.60	92.91	4.41	5.89
75th	5.08	16.39	-0.16	0.87	0.48	-0.11	87.95	98.12	5.79	4.60
95th	2.63	18.33	-2.71	0.73	0.43	-0.56	73.33	107.70	9.78	1.79
Low	-3.34	26.99	-8.31	0.57	0.32	-1.24	53.89	130.32	21.84	-3.97
Observations	236	236	236	236	236	236	236	236	236	236

Note: Data is as of March 31, 2019

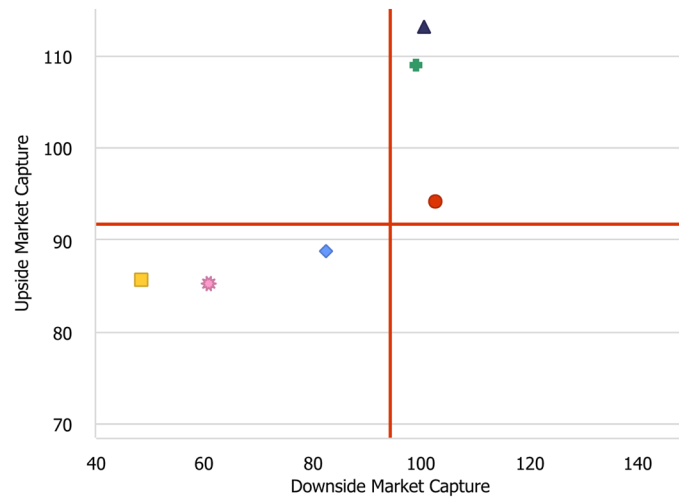
# CANDIDATE PERFORMANCE COMPARISON



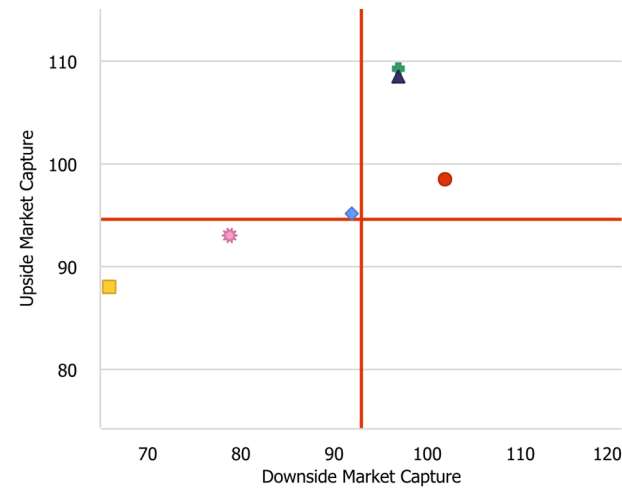
- Candidate strategies show persistent outperformance through time

# CANDIDATE UP/ DOWN MARKET CAPTURE

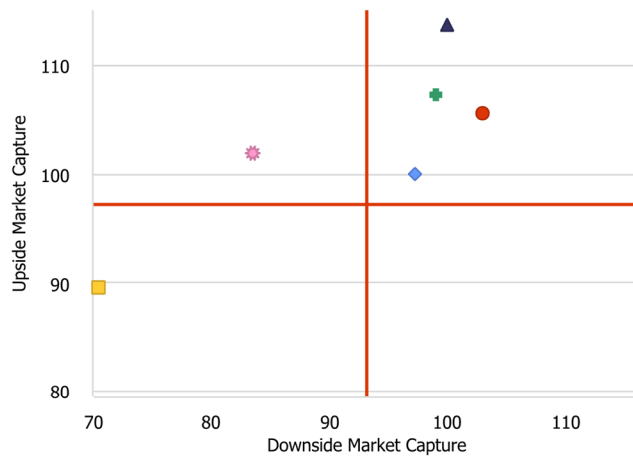
3 Years As Of: 3/31/2019



5 Years As Of: 3/31/2019

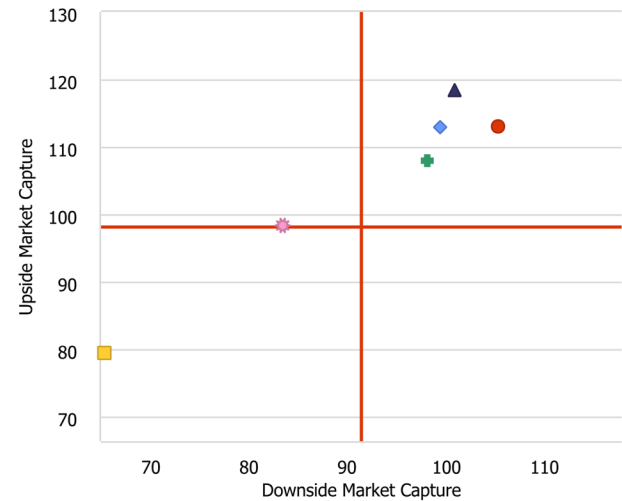


7 Years As Of: 3/31/2019



10 Years As Of: 3/31/2019

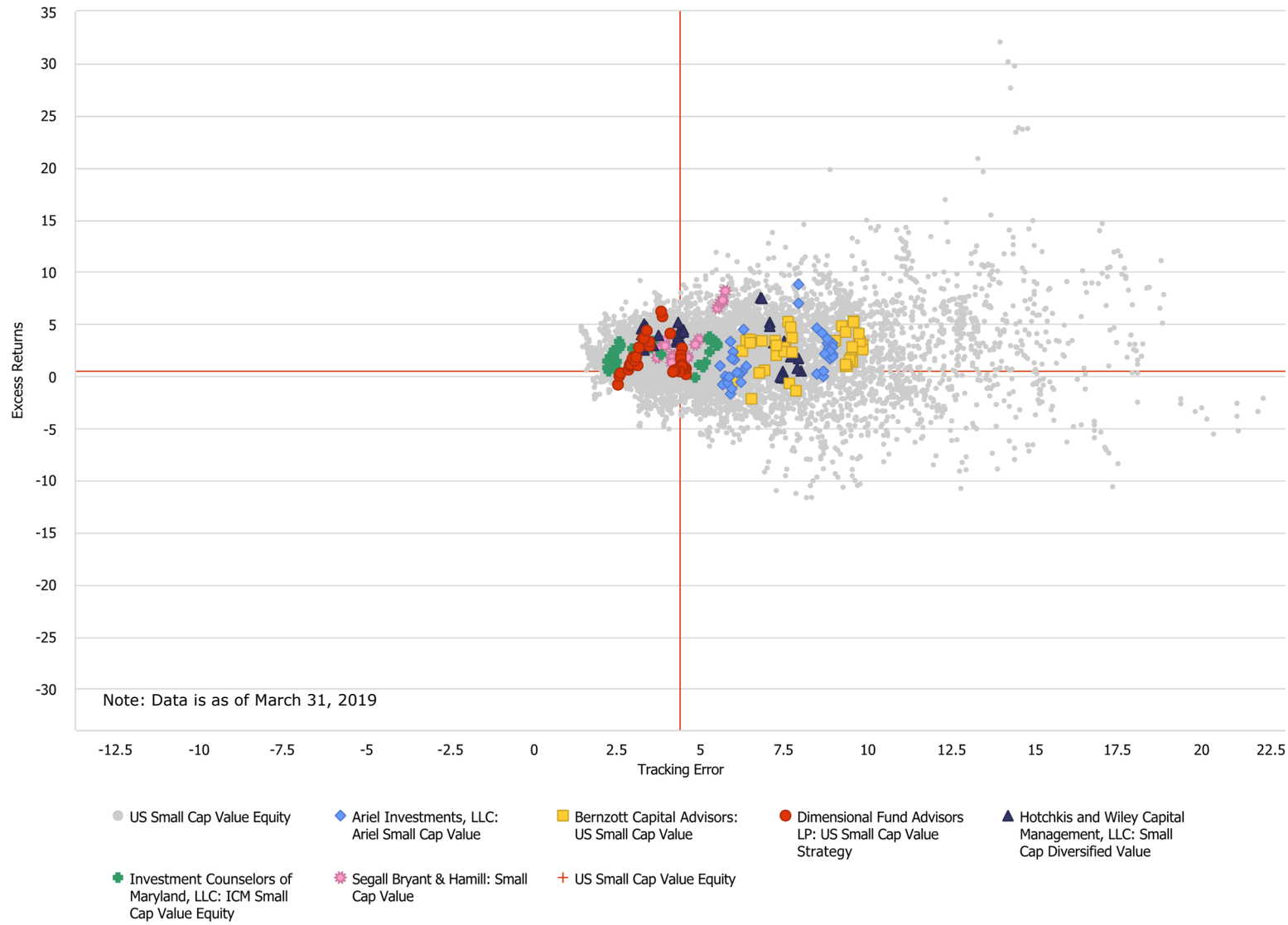
Note: Data is as of March 31, 2019



- ◆ Ariel Investments, LLC: Ariel Small Cap Value
- Bernzott Capital Advisors: US Small Cap Value
- Dimensional Fund Advisors LP: US Small Cap Value Strategy
- ▲ Hotchkis and Wiley Capital Management, LLC: Small Cap Diversified Value
- ✦ Investment Counselors of Maryland, LLC: ICM Small Cap Value Equity
- ✧ Segall Bryant & Hamill: Small Cap Value

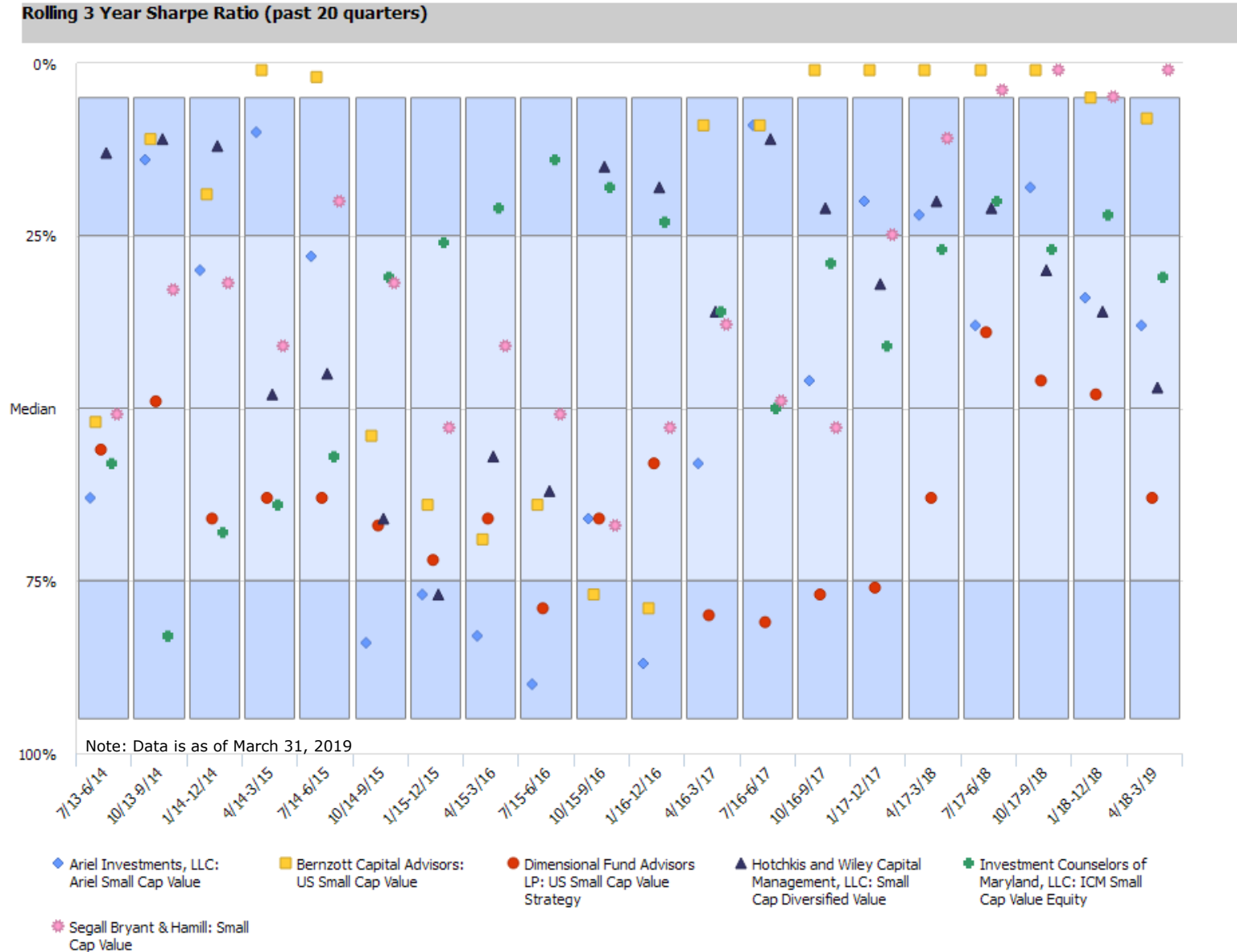
- Candidate strategies show persistent upside/downside market capture skill

# CANDIDATE INFORMATION RATIO COMPARISON



- Candidate strategies exhibit persistent excess returns per unit of active risk

# CANDIDATE SHARPE RATIO COMPARISON



- Candidate strategies show consistency in being positively rewarded per unit of risk taken

# APPENDIX

NEPC, LLC

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# PROPOSALS RECEIVED

Firm	Product Proposed	Emerging Firm	Pass/Fail	Reason
361 Capital, LLC	361 U.S. Small Cap Equity; 361 U.S. Small Cap Equity Fund	No	Pass	
Aberdeen Standard Investments Inc.	US Equity Small Cap Core	No	Pass	
Acuitas Investments, LLC	Acuitas Investments LL Microcap Equity	Yes	Pass	
Alliance Bernstein	AB US Small Cap Growth Equity	No	Pass	
Allianz Global Investors	AllianzGI US Systematic Small Cap	No	Pass	
AltraVue Capital, LLC	AltraVue Small Cap Value Equity	Yes	Fail	Didn't meet minimum criteria
American Century Investment Mangement, Inc. (ACIM)	U.S. Small Cap Growth	No	Pass	
American Century Investment Mangement, Inc. (ACIM)	U.S. Small Cap Value	No	Pass	
AMI Asset Mangement Corporation	AMI Small Cap Growth	Yes	Pass	
Anchor Capital Advisors LLC	Anchor Small Cap Value	Yes	Fail	Didn't meet minimum criteria
Ariel Investments, LLC	Ariel Small Cap Value	No	Pass	
Aristotle Capital Boston, LLC	Small Cap Equity	No	Pass	
Axiom Investors	Axiom US Small Cap Equity Strategy	No	Fail	Didn't meet minimum criteria
Baron Capital	Baron Discovery Strategy	No	Pass	
Barrow, Hanley, Mewhinney, Strauss, LLC (BHMS)	BHMS Small Cap Value Equity (SCV)	No	Pass	
Bernzott Capital Advisors	Bernzott US Small Cap Value	No	Pass	
Bivium Capital Partners, LLC	Bivium Small Cap Opportunities	No	Pass	
BlackRock, Inc.	Systematic Active Equity Strategiques, the Russell 2000 Alpha Tilts Strategy	No	Pass	
BMO Global Asset Management	BMO Disciplined Small-Cap Growth	No	Pass	
BMO Global Asset Management	BMO Disciplined Small-Cap Value	No	Pass	
BNP Paribas Asset Management USA Inc	U.S. Small Cap Equity	No	Pass	
Boston Advisors, LLC	Small Cap Growth Equity	No	Pass	
Boston Partners Global Investors, Inc.	Boston Partners Small Cap Value	No	Pass	
Boston Partners Global Investors, Inc.	Boston Partners Small Cap Value II	No	Pass	
Bridge City Capital, LLC (BCC)	Bridge City Capital Small Cap Growth (BCCSCG)	Yes	Pass	



# PROPOSALS RECEIVED

Firm	Product Proposed	Emerging Firm	Pass/Fail	Reason
Cadence Capital Management LLC	Cadence Capital Mangement LLC: Emerging Companies	No	Pass	
Capital Impact Advisors, LLC	Capital Impact Advisors LLC: US Small Cap Strategy	Yes	Pass	
Capital Prospects LLC	Capital Prospects LLC U.S. Small Cap Value Composite	Yes	Pass	
Ceredex Value Advisors LLC ("Ceredex" or the "Firm")	Ceredex Small Cap Value Equity Strategy	No	Pass	
Channing Capital Management, LLC	Channing Small Cap Value	No	Pass	
Chartwell Investments Partners	Chartwell Small Cap Value	No	Pass	
Chicago Equity Partners, LLC	Small Cap Growth	No	Pass	
Chicago Equity Partners, LLC	Small Cap Value	No	Pass	
ClearBridge Investments, LLC	ClearBridge Small Cap	No	Pass	
Columbia Threadneedle Investments	Columbia Small Cap Value II	No	Pass	
Columbia Threadneedle Investments	Wagner Small Cap Equity Composite	No	Pass	
Copeland Capital Management, LLC	Small Cap Dividend Growth Equity	No	Pass	
CornerCap Investment Counsel	Fundamentrics Small-Cap	Yes	Pass	
Cortina Asset Management, LLC	Cortina Small Cap Growth	No	Pass	
Cortina Asset Management, LLC	Cortina Small Cap Opportunity	No	Pass	
Cramer Rosenthal McGlynn, LLC ("CRM" or the "Firm")	CRM Small Cap Value	No	Pass	
Dimensional Fund Advisors LP	US Small Cap Value Strategy	No	Pass	
Driehaus Capital Management LLC	Driehaus Small Cap Growth	No	Pass	
Eagle Asset Management	Small Cap Core Institutional	No	Pass	
EAM Investors, LLC	EAM Small Cap Growth	Yes	Pass	
EARNEST Partners, LLC	Small Cap Core	No	Pass	
Eastern Shore Capital Management	Eastern Shore Capital Management Small Cap Equity Composite	Yes	Pass	
Eaton Vance Management	Eaton Vance Management U.S. Small-Cap Equity	No	Pass	
Elk Creek Partners LLC	Elk Creek Partners Small Cap Growth Strategy	Yes	Fail	Didn't meet minimum criteria
Falcon Point Capital, LLC	Falcon Point Smaller Cap Opprtunities Strategy	No	Fail	Didn't meet minimum criteria



# PROPOSALS RECEIVED

Firm	Product Proposed	Emerging Firm	Pass/Fail	Reason
Federated MDTA, LLC	MDT Small Cap Core	No	Pass	
FIAM LLC	Small Company	No	Pass	
Fisher Investments (FI)	Small Cap Core	No	Pass	
Fisher Investments (FI)	Small Cap Value	No	Pass	
Franklin Advisers, Inc.	Franklin U.S. Small Cap Growth Equity	No	Pass	
Frontier Capital Management Company, LLC	Frontier Small Cal Growth	No	Pass	
Goldman Sachs Asset Management	US Small Cap Equity Insights	No	Pass	
Goldman Sachs Asset Management	US Small Cap Growth Equity Insights	No	Pass	
Goldman Sachs Asset Management	US Small Cap Value	No	Pass	
Granahan Investment Management	Small Cap Focused Growth	Yes	Pass	
Granite Investment Partners, LLC	Small Growth Equity	Yes	Pass	
Granite Investment Partners, LLC	Small Core Select Equity	Yes	Pass	
Great Lakes Advisors, LLC	Great Lake Advisors, LLC: Fundamental Small Cap	No	Pass	
GW&K Investment Mangement, LLC	GW&K Small Cap Growth Strategy	No	Pass	
Hood River Capital Management LLC	Small-Cap Growth		Pass	
Hotchkis and Wiley Capital Management, LLC	Small Cap Diversified Value	No	Pass	
ICMA Retirement Corporation	Vantagepoint Discovery Fund	No	Pass	
Investment Counselors of Maryland, LLC	ICM Small Cap Value Equity	No	Pass	
Jacobs Levy Equity Management, Inc. ("Jacobs Levy")	Small Value (Russell 2000 Value)	No	Pass	
Jennison Associates	Small Cap Core Equity	No	Pass	
JP Morgan	JPM Small Cap Growth	No	Pass	
Kayne Anderson Rudnick Investment Mangement, LLC (KAR)	Small Cap Core	No	Pass	
Kayne Anderson Rudnick Investment Mangement, LLC (KAR)	Small Cap Sustainable Growth	No	Pass	
Kayne Anderson Rudnick Investment Mangement, LLC (KAR)	Small Cap Quality Value	No	Pass	
Legato Capital Management, LLC	Legato Small Cap Equities	Yes	Pass	



# PROPOSALS RECEIVED

Firm	Product Proposed	Emerging Firm	Pass/Fail	Reason
Legion Partners Asset Management, LLC (LPAM or Legion)	Legion Composite	Yes	Pass	
Lisanti Capital Growth, LLC	Lisanti Capital Growth, LLC: Lisanti Small Cap Growth	Yes	Pass	
LMCG Investments	Small Cap Value Free Cash Flow	No	Pass	
Loomis, Sayles & Company, L.P.	Small Cap Growth	No	Pass	
Los Angeles Capital Management and Equity Research, Inc. ("Los Angeles Capital")	LA Capital U.S. Small Cap Growth Equity	No	Pass	
Macquarie Investment Management (MIM)	US Small Cap Value Equity	No	Pass	
Manulife Asset Management (US) LLC	US Small Cap Core Strategy ("Strategy")	No	Pass	
Matarin Capital Management (Matarin)	Matarin North America Small Cap (NASC)	Yes	Pass	
Mellon Investments Corporation ("Mellon")	US Small Cap Growth Equity TBCAM	No	Pass	
MFS Institutional Advisors, Inc.	MFS Small Cap Growth Equity	No	Pass	
Monarch Partners Asset Management, LLC	MPAM Small Cap Value Equity	Yes	Pass	
Morgan Stanley Investment Management	Morgan Stanley Inception	No	Fail	Didn't meet minimum criteria
Neuberger Berman	Small Cap Intrinsic Value	No	Pass	
NewSouth Capital Management, Inc.	NSCM Small Cap Value Equity	No	Pass	
Next Century Growth Investors, LLC	Small Capitalization Equity	No	Fail	Didn't meet minimum criteria
Next Century Growth Investors, LLC	Micro Cap Growth	No	Pass	
Northern Trust Investments, Inc. ("NTI")	NT Quality Small Cap Core Strategy	No	Pass	
Northern Trust Investments, Inc. ("NTI")	NT Quality Small Cap Value Strategy	No	Pass	
OFI Global Institutions, Inc.	OFI Global: Small Cap Core	No	Pass	
Pacific Ridge Capital Partners, LLC	Small Cap Value	Yes	Pass	
Pacific View Asset Management, LLC	Pacific View U.S. Small Cap Growth Composite (the "Composite" or "Strategy")	Yes	Pass	
Palisade Capital Management, L.L.C	Small Cap Core Equity	No	Pass	
PanAgora Asset Management, Inc.	PanAgora U.S. Small Cap Core Stock Selector	No	Pass	
PanAgora Asset Management, Inc.	PanAgora Dynamic U.S. Small Cap Value	No	Pass	
Peregrine Capital Mangement, LLC	Peregrine Small Cap Value	No	Pass	



# PROPOSALS RECEIVED

Firm	Product Proposed	Emerging Firm	Pass/Fail	Reason
Perkins Investment Management LLC	Perkins Small Cap Value	No	Pass	
Pier Capital, LLC	Pier Small Cap Growth	Yes	Pass	
PIMCO	StocksPLUS Small AR	No	Pass	
PIMCO	RAE US Small	No	Pass	
Portolan Capital Management LLC ("Portolan")	Portolan Equity Strategy	No	Pass	
Principal Global Equities	U.S. Small Cap Select Equity	No	Pass	
Pzena Investment Management	Pzena Small Cap Focused Value	No	Pass	
QMA LLC	QMA US Small Cap Core Equity	No	Pass	
Ranger Investment Management, LP	Ranger Small Cap Growth Equity	Yes	Pass	
Riverbridge Partners, LLC	Riverbridge Small Cap Growth	No	Pass	
RockCreek	The RockCreek Public Equity Program	No	Fail	Incomplete Proposal
Rothschild & Co Asset Management US	Rothschild & Co US Small-Cap Core	No	Pass	
Sapience Investments, LLC	Sapience Small Cap Value	Yes	Fail	Didn't meet minimum criteria
Schroder Investment Management North America Inc.	Schroder Investment Management Limited: US Small Cap	No	Pass	
Segall Bryant & Hamill	Small Cap Core	No	Pass	
Segall Bryant & Hamill	Small Cap Value	No	Pass	
Seizert Capital Partners	Seizert Small Cap Value	No	Pass	
Smith Asset Management Group	Small Cap Diversified Growth	No	Fail	Didn't meet minimum criteria
Snyder Capital Management, L.P.	Snyder Capital Management Small-Cap Value	No	Pass	
Summit Creek Advisors, LLC	Small Cap Growth	No	Pass	
Systematic Financial Mangement, L.P.	Small Cap Value Free Cash Flow	No	Pass	
T. Rowe Price Associates, Inc.	US Small-Cap Value Equity Strategy	No	Pass	
Teton Advisors, Inc.	Teton Small Cap Select Value Equity Strategy	No	Pass	
THB Asset Management	THB Micro Cap	Yes	Pass	
Tygh Capital Management	Small Cap Growth Equity	No	Pass	



# PROPOSALS RECEIVED

Firm	Product Proposed	Emerging Firm	Pass/Fail	Reason
Victory Capital Management Inc.	RS Small Cap Growth	No	Pass	
Victory Capital Management Inc.	Intergrity Small-Cap Value	No	Pass	
Voya Investment Management (Voya IM)	Voya Small Cap Core	No	Pass	
Walthausen & Co., LLC	Walthausen Small Cap Value	Yes	Pass	
Wasatch Advisors	Small Cap Value Free Cash Flow	No	Pass	
Weatherbie Capital, LLC	Weatherbie Specialized Growth	No	Pass	
Wedge Capital Management	Small Cap Value	No	Fail	Didn't meet minimum criteria
Wellington Management Company LLP	Small Cap Core	No	Pass	
Wellington Management Company LLP	Small Cap Vaue	No	Pass	
Wells Fargo Asset Management (WFAM) Investment Advisor: Wells Capital Management	Heritage Small cap Growth Equity	No	Pass	
Wells Fargo Asset Management (WFAM) Investment Advisor: Wells Capital Management	Special U.S. Small Cap Value	No	Pass	
Westfield Capital Management Company, L.P.	Small Cap Growth Equity	No	Pass	
William Blair Investment Management, LLC	Small Cap Growth	No	Pass	
William Blair Investment Management, LLC	Small Cap Value	No	Pass	
WisdomTree Asset Management, Inc.	WisdomTree U.S. SmallCap Value Strategy	No	Pass	
Zacks Investment Management	Zacks Small Cap Equity	No	Pass	
Ziegler Capital Management, LLC	MVP Small Cap Core	No	Pass	
Ziegler Capital Management, LLC	Piermont Small Cap Value	No	Pass	



# GLOSSARY

NEPC, LLC

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# GLOSSARY OF INVESTMENT TERMINOLOGY

**Alpha** - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

**Alpha Jensen** - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

**Annualized Excess Return over Benchmark** - Annualized fund return minus the annualized benchmark return for the calculated return.

**Annualized Return** - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

**Beta** - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

**Information Ratio** - A measure of the risk adjusted return of a financial security, asset, or portfolio.

*Formula: (Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return - Period Benchmark Return). To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.*

**R-Squared** - Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

**Sharpe Ratio** - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

**Sortino Ratio** - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

*Formula: Calculation Average (X-Y)/Downside Deviation (X-Y) \* 2 Where X=Return Series Y = Return Series Y which is the risk free return (91 day T-bills)*



**Standard Deviation** - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

*Formula: (Annualized Return of Portfolio - Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)*

**Tracking Error** - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

$$\text{Formula: Tracking Error} = \sqrt{\frac{\sum_{i=1}^n (R_p - R_b)^2}{N-1}}$$

*Where X = periods portfolio return and Y = the period's benchmark return For monthly returns, the periods per year = 12 For quarterly returns, the periods per year = 4*

**Treynor Ratio** - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

*Formula: (Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta*

**Up/Down Capture Ratio** - A measure of what percentage of a market's re-turns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

*UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0*

*UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0*