ACERA

# Alameda County Employees' Retirement Association

## *BOARD OF RETIREMENT*

## *INVESTMENT COMMITTEE/BOARD MEETING*

**THIS MEETING WILL BE CONDUCTED VIA TELECONFERENCE**
**SEE GOV'T CODE § 54953(e).**

**ACERA MISSION:**

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

**Wednesday, April 13, 2022**
**9:30 a.m.**

| ZOOM INSTRUCTIONS | COMMITTEE MEMBERS | |
|---|---|---|
| The public can view the Teleconference and comment via audio during the meeting. To join this Teleconference, please click on the link below.<br>https://zoom.us/join<br>Webinar ID: 879 6337 8479<br>Passcode: 699406<br>1 (669) 900-6833 US<br>For help joining a Zoom meeting, see:<br>https://support.zoom.us/hc/en-us/articles/201362193 | **TARRELL GAMBLE**<br>**CHAIR** | **APPOINTED** |
| | **GEORGE WOOD**<br>**VICE CHAIR** | **ELECTED GENERAL** |
| | **DALE AMARAL** | **ELECTED SAFETY** |
| | **OPHELIA BASGAL** | **APPOINTED** |
| | **KEITH CARSON** | **APPOINTED** |
| | **JAIME GODFREY** | **APPOINTED** |
| | **LIZ KOPPENHAVER** | **ELECTED RETIRED** |
| | **HENRY LEVY** | **TREASURER** |
| | **KELLIE SIMON** | **ELECTED GENERAL** |
| | **NANCY REILLY** | **ALTERNATE RETIRED**[1] |
| | **DARRYL WALKER** | **ALTERNATE SAFETY**[2] |

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

2 The Alternate Safety Member votes in the absence of the Elected Safety, either of the two Elected General Members, or both the Retired and Alternate Retired members.

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

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

The order of agendized items is subject to change without notice. Board and Committee agendas and minutes, and all documents distributed to the Board or a Committee in connection with a public meeting (unless exempt from disclosure), are available online at www.acera.org.

# *INVESTMENT COMMITTEE/BOARD MEETING*

**NOTICE and AGENDA – April 13, 2022**

**Call to Order:** 9:30 a.m.

**Roll Call**

**Public Input (The Chair allows public input on each agenda item at the time the item is discussed)**

**<u>Action Item: Matters for discussion and possible motion by the Committee</u>**

1. Discussion and Possible Motion to Recommend that the Board Approve the Qualified List of Candidates for ACERA's Emerging Markets Equity Manager Search – International Equities

   9:30 – 10:00

   Joe Abdou, Verus Advisory
   Margaret Jadallah, Verus Advisory
   Eileen Neill, Verus Advisory
   Thomas Taylor, ACERA
   Betty Tse, ACERA

**<u>Board Action Item:</u>**

1. Proposed Findings Regarding State of Emergency Pursuant to Gov't Code §54953(e) (3): Staff Recommendation: The Board finds that it has reconsidered the circumstances of the state of emergency and (1) the state of emergency continues to directly impact the ability of the members to meet safely in person, and (2) state or local officials continue to impose or recommend measures to promote social distancing.

   Dave Nelsen, ACERA
   Jeff Rieger, ACERA

**<u>Information Items: These items are not presented for Committee action but consist of status updates and cyclical reports</u>**

1. Discussion of Proposed Amendments to ACERA's General Investment Guidelines, Policies and Procedures

   Eileen Neill, Verus Advisory
   Margaret Jadallah, Verus Advisory
   Betty Tse, ACERA

2. Traditional Asset Allocation and Investment Strategy Review for the period ending December 31, 2021 – Public Markets

   Eileen Neill, Verus Advisory
   Margaret Jadallah, Verus Advisory
   Clint Kuboyama, ACERA
   Thomas Taylor, ACERA
   Betty Tse, ACERA

3. Update on Ares Senior Direct Lending Fund II in Response to the Public Comment Made at ACERA's Board Meeting on March 17, 2022[3]

Faraz Shooshani, Verus Advisory
Clint Kuboyama, ACERA
Betty Tse, ACERA

**Trustee Remarks**

**Future Discussion Items**

**Establishment of Next Meeting Date**
May 4, 2022 at 9:30 a.m.

[3]Written materials and investment recommendations from the consultants, fund managers and ACERA Investment Staff relating to this alternative investment are exempt from public disclosure pursuant to CA Gov. Codes § 6254.26 and § 6255.

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14TH STREET, SUITE 1000, OAKLAND, CA 94612 800/838-1932 510/628-3000 FAX: 510-268-9574 WWW.ACERA.ORG

To: Members of the Investment Committee

Date: April 13, 2022

From: Thomas Taylor, Investment Officer Thomas Taylor

Subject: Discussion and Possible Motion to Recommend that the Board Approve the Qualified List of Candidates for ACERA's Emerging Markets Equity Manager Search – International Equities

**Recommendation**

Staff recommends that the Investment Committee select the following International Emerging Markets Equity Managers to be included in the short-list of candidates for further due diligence review[1] and evaluation by ACERA Staff and Verus. In alphabetic order:

- Baillie Gifford & Company
- Fidelity Institutional Asset Management
- Wellington Management Company
- William Blair Investment Management[2]

**Background**

In June 2016, the Board adopted the Investment Committee's recommendation to amend the International Equity manager structure to include a 10% dedicated Emerging Markets equity allocation. In 2018-2019, ACERA completed a search for, and hiring of, ACERA's first EM equity manager, Newton Investment Management. Subsequently , at the September 8, 2021 Investment Committee Meeting, however, Staff reviewed the several changes at Newton –both at the 1) organizational level (CEO Hanneke Smits takes a new role at the parent company, BNY Mellon[3]), as well as, 2) EM strategy's investment manager changes (the departures of the lead PM[4], co-PM[3], and many analysts). In response, on November 16, 2021, the Board adopted the Investment Committee's recommendation for a new EM equity manager search inclusive of a Timeline, Search Criteria, and Evaluation Matrix for the replacement of ACERA's Emerging Market Manager. Accordingly, the Board approved a focused-list RFI approach with a mandate of approximately $300 million, the value of the account at the time.

In order to focus on finding the best manager with characteristics desirable to ACERA, Verus Advisory, with the input of Staff, created an initial set of performance screens and strictly applied the RFI's minimum qualifications to reduce the number of proposals to a more manageable quantity. According to the timeline adopted at the November 3, 2021 ICM, Staff and Verus issued a focused-list RFI seeking information from 26 of the best pre-screened and opened managers. By the December 31, 2021 deadline, ACERA had received

[1] Onsite due diligence for international travel requires Board approval.
[2] William Blair manages ACERA's U.S. Equity – Small Cap Growth allocation.
[3] November 8, 2021 ICM Staff Memo.
[4] Robert Marshall-Lee and Sophia Whitbread.

21 proposals –all managers meet ACERA's Minimum Qualifications (see Attachment #1). As the incumbent manager, Newton Investment Management would also be initially included but subject to Board adopted minimum qualifications; Newton did not meet the initial minimum qualifications.

Staff and Verus separately evaluated each of the proposals by utilizing the Board-adopted Evaluation Matrix. Scores, which were then averaged (Staff and Verus) to determine the overall rankings (see Attachment #3). The proposals with the highest average scores (in alphabetic order) are Baillie Gifford & Company, Fidelity Institutional Asset Management, Wellington Management Company, and William Blair Investment Management. Staff recommends these four Emerging Markets equity managers as the RFI's Finalists for the Committee's consideration for further review and onsite due diligence.

## Discussion

**Initial Process:** Staff applied the Minimum Qualifications to vet all responses as well as applied relevant quantitative performance measures to rank for consistent stronger performing managers from all of the manage reviewed. For example, Staff and Verus looked at long-term performance versus the benchmark and separately, the manager's consistency of beating the benchmark, as well as increasing AUM and number of clients.

**Evaluation Matrix:** Staff used the criteria adopted by the Board to evaluate the proposals, which could best meet ACERA's needs (please see Attachment #2).

**Evaluation and Scoring of Proposals:** The scores from Staff and Verus were averaged together to produce the following ranking. The four managers in the table below demonstrate to be the highest ranked and most suitable for ACERA.

| | **Proposed Finalists** | | |
|---|---|---|---|
| *(out of 100)* | **Staff** | **Verus** | **Average** |
| Baillie Gifford & Company | 77.08 (4) | 83.08 (2) | **80.08 (2)** |
| Fidelity Institutional Asset Management | 77.83 (3) | 78.83 (3) | **78.33 (3)** |
| Wellington Management Company | 79.58 (2) | 77.08 (4) | **78.33 (3)** |
| William Blair Investment Management | 86.36 (1) | 87.67 (1) | **87.02 (1)** |

Baillie Gifford, Fidelity, Wellington, and William Blair demonstrated greater strength across the three major categories of *Organization, Investment Team, Performance and Risk*, when compared to the other proposals. For example, all of these firms are well established and have the infrastructure to manage international equities in the emerging markets. In addition to *Organization* and *Investment Teams*, all four scored higher or well in quantitative *Performance and Risk Management,* including *ESG*. Baillie Gifford, Fidelity, Wellington, and William Blair's EM equity strategies have proven ability to achieve relative excess returns as measured by its 3-year returns, batting average, information ratio, upside/downside ratios, or Sharpe Ratio. Additionally, the firms exhibited well-defined investment process, the resources –including research, and expertise to manage money in the emerging equity markets. Lastly, all four of these managers display the attributes desirable to

ACERA in complementing the existing International Equity manager structure in ACERA's portfolio. For scoring details, please see Attachment #3.

**Fee Schedule Proposals**: All four of the proposed finalists for ACERA's Emerging Markets mandate included a separately managed account and some form of commingled product. The following table provides the approximate fee proposal for each that would hypothetically be charged based on ACERA's portfolio value as of December 31, 2021 and ACERA's target allocations.

| *Fee Proposal, by Investment Vehicle* | **Commingled Product** | **Total (Annual on $300M*)** |
|---|---|---|
| Baillie Gifford & Company | 77.0bps (>200m) | $2,310,000 |
| Fidelity Institutional Asset Management | 51.2bps (avg.) | $1,535,000 |
| Wellington Management Company | 82.5bps (avg.) | $2,475,000 |
| William Blair Investment Management | 60.5bps (avg.) | $1,815,000 |

*As of 12/31/2021, the EM Equity account NAV was $300,521,243.92

**Summary of Managers Chosen for Short List:** Below is a brief summary of the four fund managers proposed for the short list for further evaluation, on-site interviews, additional due diligence, and reference checks.

**Baillie Gifford** - Baillie Gifford & Co was founded in 1908 and is headquartered in Edinburgh, Scotland. It is one of the UK's largest independent investment management firms. Baillie Gifford & Co is a private partnership 100% owned by the current 47 partners who all work within the firm, none of whom individually own more than 10% of the capital of BG & Co. Baillie Gifford also has 10 smaller regional offices located from London to Zurich, Shanghai to Hong Kong, and San Francisco to New York. As of September 30, 2021, the firm had a total of $454 billion in assets under management of which approximately $17.4 billion or 3.8% of the firm's total AUM is in Emerging Market Equity strategies. Baillie Gifford's investment philosophy focuses on growth, fundamental analysis and proprietary research, which are core to its success. From a top-down perspective, Baillie Gifford emphasizes three particular features for the requirement of active management in Emerging Markets. First, roughly a quarter of the EM index consists of State Owned Enterprises, whose interests are not always aligned with minority shareholders. This insight helps to screen out underperformers. Second, most Emerging Countries do not emerge, so there will be times to take advantage of the tailwind provided by economic cycles in certain EM countries and times to limit exposure. Understanding economic and geopolitical risks are critical to managing funds in the emerging markets. Lastly, positive returns in the asset class are driven by a very small number of companies that do exceptionally well. These above considerations are where Baillie Gifford focuses for its portfolio construction. The Emerging Markets Equity Team are responsible for Baillie Gifford's Emerging Markets equity strategies. It is headed up by firm partners and portfolio managers Will Sutcliffe and Mike Gush. Five other team members (investment managers) have worked together for a decade or more.

**Fidelity** - Headquartered in Boston, MA, FMR LLC, commonly known as Fidelity, is privately owned[5] and has been managing institutional assets since 1981. Fidelity has several offices (10) in locations from Toronto to San Francisco, and London to Hong Kong. The Fidelity Institutional Asset Management (FIAM) group of companies is an indirectly wholly owned subsidiary of FMR LLC. As of 9/30/2021, FIAM manages $324 billion of which $9 billion or 2.8% in the Concentrated Emerging Markets Equity strategy. The investment process begins with a liquidity screen to narrow the emerging-market universe of roughly 4,400 stocks to about 1,500 companies for further evaluation. From there, bottom-up fundamental research then drives idea generation to find companies with structural growth underpinnings as well as underappreciated operating leverage. The Fidelity Concentrated Emerging Markets strategy is managed by portfolio manager Sam Polyak and Abhijeet Singh. Additionally, there are 20 equity research analyst dedicated to the Concentrated Emerging Markets Equity strategy. They are located in several of the regional emerging market offices including India and Hong Kong.

**Wellington** - The Wellington Management Company was incorporated in 1933, but traces its roots back to the Wellington Fund (1928). The Wellington Management Group LLP is a private partnership owned by 174 partners. Wellington is headquartered in Boston, Massachusetts and has more than 12 offices located around the world from Chicago to San Francisco; from London to Frankfurt, Singapore to Hong Kong, etc. As of September 30, 2021 assets under management for the Wellington Management organization totaled $1.426 trillion. The Emerging Market Development strategy makes up approximately 0.07% or $1 billion in AUM. As part of the investment process, portfolio construction and individual security selection is based on a fundamental research. Philosophically, Wellington facilitates a team approach to managing money including, but not limited to, input from underlying experts including research analyst, portfolio risk analyst, ESG and portfolio coordination teams. These various teams also assesses relative thematic scores and rankings using quantitative and qualitative views. The quantitative models assess valuations, price and earnings momentum, and profitability trends which then help inform the decision on whether to overweight or underweight specific themes. The Emerging Market Development strategy is led by portfolio manager Dáire Dunne, a partner of Wellington Management Group. He has ultimate decision-making authority. Simon Henry is the co-Portfolio Managers.

**William Blair** - William McCormick Blair founded the firm in 1935. Today, William Blair & Company, L.L.C. has 201 partners and over 1,800 employees; they are still an independent. William Blair is headquartered in Chicago with several office around the world including New York, London, Zurich and Singapore. As of September 30, 2021, the William Blair organization had a total $77 billion firm wide of which the Dedicated EM Equities strategy is approximately 8.6% or $6.6 billion. William Blair's quality growth philosophy is based on the belief that the market is inefficient with respect to distinguishing between an average growth company and a quality growth company. The Emerging Markets Growth Fund portfolio seeks to invest in emerging markets companies across all the market capitalization spectrum with superior quality and growth characteristics relative to competitors. William Blair seeks to invest in stocks of well-managed, quality growth companies expected to maintain superior growth, profitability and quality relative to local markets and relative to companies within the same industry worldwide. The selection of individual stocks through in-depth, bottom-up research is the Fund's primary focus. Following stock selection, analysis of the

[5] FMR LLC is a privately owned, and controlled by two groups: members of the Johnson family (49% vote) and non-Johnson family employees (51%). The Johnson family are considered to have controlling interest.

economic strength of various industries and countries are the next most important investment criteria. Partners Todd McClone, CFA, Casey Preyss, CFA and Vivian Thurston, CFA, manage the Emerging Markets Growth strategy. Research analysts (14) and portfolio managers collaborate to prioritize ideas for the team's "to do list" or research agenda, leveraging the in-depth sector and company knowledge of the analysts with the broad strategic view of the portfolio managers.

**Next Steps:**

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

1. Site visits to each finalist manager's headquarters (Chicago; Boston (2); Edinburgh, Scotland[6])
2. Additional due diligence
3. Reference checks
4. Recommend finalist(s) to the Investment Committee tentatively scheduled for the July 13, 2022 ICM.

**Conclusion:**

Based on Staff's and Verus' review and scoring of the proposals, Staff commends that the Investment Committee recommend to the Board of Retirement the following fund managers –in alphabetic order, for further evaluation, due diligence, and onsite visits (including international travel):

- Baillie Gifford & Company
- Fidelity Institutional Asset Management
- Wellington Management Company
- William Blair Investment Management

**Attachments:**

1. Board Approved Minimum Qualifications, November 16, 2021
2. Board Approved Evaluation Scoring Matrix, November 16, 2021
3. Emerging Markets Scoring Summary – Prepared by Staff
4. Verus Advisory, Inc. Memo

[6] Staff recommends that the primary staff (Thomas Taylor) visit candidate's headquarters of EM equity manager. The two secondary analysts (Agnes Ducanes, Noe Reynoso) would participate via Zoom.

**Minimum Qualifications for Proposal**

1. The Firm must agree to act as a fiduciary to ACERA.
2. The Firm must be registered as an investment adviser under the Investment Advisers Act of 1940, a bank (as defined in that Act) or an insurance company qualified to perform investment management services under state law in more than one state, including the State of California.
3. Separate account for the active emerging markets equity mandate is acceptable; however, commingled account is preferred as long as other terms are equal.
4. The Firm should have $1.5 billion or more in total AUM firm wide as of 9/30/21.
5. ACERA's investment portfolio (or account) should not comprise more than 25% of the Firm's total assets under management at any time in accordance with the General Investment Guidelines, Policies and Procedures.
6. The proposed strategy should have $900 million or more in AUM as of 9/30/21.
7. ACERA will only consider Emerging Investment Managers that meet all of the Minimum Qualifications for Proposal.
8. The Firm must be directly responsible for the management of the account, and all personnel responsible for the account must be employees of the Firm or a legal joint venture partner.
9. The Firm must have a minimum three-year, continuous performance history managing the international emerging markets equity fund product for institutional investors by the existing portfolio manager or portfolio manager team. The manager's performance history must be documented, and real time (i.e. not simulated or back-tested) and in compliance with CFA Institute (CFAI) Global Investment Performance Standards (GIPS).
10. The product must currently be benchmarked against the MSCI Emerging Markets Index (either standard or IMI, and either gross or net of dividends).
11. If hired, the firm must agree to accept the MSCI Emerging Markets Index (ND) as the ACERA mandate benchmark for the firm's proposed international emerging markets equity product.
12. The Firm must be able to provide monthly GIPS-compliant performance reports to ACERA, its General Consultant, and its Custodian Bank.
13. The Firm must be able to provide a minimum of monthly liquidity.
14. The Firm should carry the following minimum insurance coverage or should apply for it by contract execution[1]:
    a. Commercial General Liability – $4,000,000
    b. Crime Coverage
        i. Employee Dishonesty Coverage - $10,000,000
        ii. Computer Theft Coverage - $1,000,000
    c. Error and Omissions (Professional Liability) - $10,000,000
    d. Fiduciary Liability - $25,000,000, or 10% of the total assets managed in the ACERA account, whichever is higher, unless the proposed contract specifies otherwise
    e. Workers' Compensation and Employer's Liability - $1,000,000
15. The Firm must provide a description of its E.S.G. policies and objectives and Diversity & Inclusion efforts and objectives.
16. Attend ACERA's Investment Committee Meetings as needed.

[1] Subject to change upon final contract negotiation.

17. The Firm must be willing to allow ACERA to review the latest 3-5 years of the firm's audited financial statements. In-office reviews are acceptable.
18. Once selected by ACERA as the recommended Firm, the Firm must consent to a background investigation of the investment management entity and key individuals.

# ACERA –EMERGING MARKETS EQUITY

# MANAGER SEARCH

## Evaluation Matrix

The following is the proposed evaluation matrix for an international emerging markets equity fund manager search to be included in the RFI:

**A. Organization** **30 Points**

1. History
2. Ownership, Organization, and Staffing
3. Compliance
4. Client Service
5. ESG

**B. Investment Team** **30 Points**

1. Strategy
   i. Philosophy
   ii. Process
   iii. ESG considerations/integration
2. Experience
3. Research Capabilities
4. Other Resources
5. Trading/Operations

**C. Performance and Risk** **30 Points**

1. Consistency Beating Benchmark
2. Peer Group Ranking
3. Risk (to benchmark/tracking error, upside/downside)
4. Risk-Adjusted Returns
5. Risk Management and ESG

**D. Proposed Fee Schedule/Structure** **10 Points**

# Emerging Markets Scoring Summary

**Attachment #3**

| | | A. Organization/Firm | | B. Investment Team/Aproach | | C. Performance and Risk | | D. Proposed Fee Schedule/Structure | | TOTALS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ACERA | VERUS | ACERA | VERUS | ACERA | VERUS | ACERA | VERUS | ACERA | VERUS | AVERAGE | |
| 1 | Aberdeen - Emerging Markets Equity | 18.0 | 19.0 | 25.0 | 21.5 | 16.8 | 16.8 | 3.0 | 3.0 | 62.8 | 60.3 | 61.6 | |
| 2 | ABS Investment Management LLC - ABS Emerging Markets Strategic Portfolio | 19.7 | 22.0 | 20.0 | 26.0 | 20.8 | 20.8 | 3.0 | 3.0 | 63.5 | 71.8 | 67.6 | |
| 3 | Amundi Asset Management - Emerging Markets Focus | 16.0 | 16.5 | 23.5 | 21.5 | 15.1 | 15.1 | 10.0 | 10.0 | 64.6 | 63.1 | 63.8 | |
| 4 | Axiom Investors - Axiom Emerging Markets Equity Strategy | 20.0 | 22.5 | 25.5 | 24.5 | 19.7 | 19.7 | 3.0 | 3.0 | 68.2 | 69.7 | 68.9 | |
| 5 | Baillie Gifford & Co - Emerging Markets Leading Companies | 26.5 | 29.0 | 26.5 | 29.0 | 19.1 | 20.1 | 5.0 | 5.0 | 77.1 | 83.1 | 80.1 | 2 |
| 6 | Candriam Group - Global Emerging Markets Equities Strategy | 19.5 | 22.0 | 25.0 | 23.0 | 17.8 | 18.3 | 7.0 | 7.0 | 69.3 | 70.3 | 69.8 | |
| 7 | Columbia Threadneedle Investments N. America - Columbia Emerging Markets Opportunity | 19.8 | 20.5 | 27.0 | 22.5 | 20.5 | 20.5 | 7.0 | 7.0 | 74.3 | 70.5 | 72.4 | |
| 8 | Federated Hermes, Inc. - Federated Hermes Int'l Global Emerging Markets Equity | 14.0 | 15.0 | 19.0 | 16.0 | 19.2 | 19.2 | 5.0 | 5.0 | 57.2 | 55.2 | 56.2 | |
| 9 | Fidelity Institutional Asset Management - Concentrated Emerging Markets | 22.5 | 22.0 | 25.5 | 25.0 | 19.8 | 21.8 | 10.0 | 10.0 | 77.8 | 78.8 | 78.3 | 3 |
| 10 | Goldman Sachs Asset Management - Global Emerging Markets Equity | 18.0 | 16.0 | 21.0 | 22.0 | 19.4 | 19.4 | 10.0 | 10.0 | 68.4 | 67.4 | 67.9 | |
| 11 | J.P. Morgan Investment Management Inc. - JPM GEM Analyst | 19.5 | 18.5 | 18.5 | 15.0 | 17.5 | 17.5 | 5.0 | 5.0 | 60.5 | 56.0 | 58.3 | |
| 12 | Jennison Associates LLC - Emerging Markets Equity | 20.3 | 17.5 | 24.5 | 23.5 | 25.8 | 21.8 | 5.0 | 5.0 | 75.6 | 67.8 | 71.7 | |
| 13 | Lazard Asset Management LLC - Emerging Markets Discounted Assets | 18.7 | 19.0 | 20.5 | 18.5 | 12.6 | 12.6 | 10.0 | 10.0 | 61.8 | 60.1 | 60.9 | |
| 14 | Manulife Investment Management - Emerging Markets Equity | 18.0 | 19.5 | 17.5 | 17.0 | 18.7 | 18.7 | 10.0 | 10.0 | 64.2 | 65.2 | 64.7 | |
| 15 | Morgan Stanley Investment Management - Emerging Markets Leaders | 18.5 | 15.0 | 20.5 | 16.0 | 24.3 | 24.3 | 7.0 | 7.0 | 70.3 | 62.3 | 66.3 | |
| 16 | NS Partners Ltd - NS Partners Global Emerging Markets Equity | 17.5 | 18.5 | 16.5 | 16.0 | 15.7 | 15.7 | 7.0 | 7.0 | 56.7 | 57.2 | 56.9 | |
| 17 | Thornburg Investment Management, Inc. - Thornburg Emerging Markets Equity Strategy | 13.9 | 12.0 | 12.0 | 11.5 | 16.5 | 16.5 | 3.0 | 3.0 | 45.4 | 43.0 | 44.2 | |
| 18 | Wasatch Global Investors - Emerging Markets Select | 19.5 | 19.5 | 22.5 | 22.0 | 27.7 | 25.2 | 3.0 | 3.0 | 72.7 | 69.7 | 71.2 | |
| 19 | WCM Investment Management - Emerging Markets | 16.4 | 15.9 | 26.5 | 28.0 | 23.8 | 22.8 | 5.0 | 5.0 | 71.7 | 71.7 | 71.7 | |
| 20 | Wellington Management Company LLP - Emerging Market Development | 22.0 | 24.5 | 23.5 | 19.5 | 27.1 | 26.1 | 7.0 | 7.0 | 79.6 | 77.1 | 78.3 | 3 |
| 21 | William Blair Investment Management, LLC - Emerging Markets Growth | 26.2 | 28.5 | 29.5 | 29.5 | 23.7 | 22.7 | 7.0 | 7.0 | 86.4 | 87.7 | 87.0 | 1 |

Attachment #4

# Memorandum

**To:** ACERA Investment Committee

**From:** Verus

**Date:** April 13, 2022

**RE:** **Emerging Markets Equity Manager Search**

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**Background**

At the August 2021 Investment Committee meeting, ACERA staff and Verus reviewed Newton, ACERA's current emerging markets manager. Concerns were brought to the attention of the Investment Committee about significant changes in the investment team. Due to these concerns, the Investment Committee directed staff and Verus to conduct a replacement search. In November 2021, Verus and staff recommended search and evaluation criteria and minimum qualifications to the Investment Committee which were approved, and an RFI was issued. In this memo, we will discuss the results of the RFI scoring and discuss our recommendation to conduct on-site visits with the four top scoring managers.

**Initial replacement search process**

An objective manager screening process was initiated in order to identify a list of candidates with demonstrated value-adding skill and experience in managing emerging markets equities. The universe[1] of emerging markets managers is very large (599 products). Thus, Verus and staff developed several objective screening criteria that would effectively assist in the identification of skillful managers within this large universe as well as be reflective of ACERA's unique requirements per its policies. The emerging markets manager candidate universe screening criteria:

1) **Firm size** – Min $1.5 billion
2) **Strategy size** - $900 million[2]
3) **Strategy status** – Active (open to new business)
4) **Primary Benchmark** – MSCI Emerging Markets Index/ MSCI Emerging Markets IMI index
5) **5-year Information Ratio** – Greater than 0.2
6) **Rolling 3 and 5 year excess return** – Exceeds MSCI EM Index by at least 0.8% over rolling 3 and 5 year periods
7) **5-year excess return** – Exceeds the benchmark by 0.8% over 5-years

[1] eVestment served as the candidate universe. This is the industry best standards public markets manager universe and is widely employed by consultants and large public plan sponsors.
[2] In fulfilment of ACERA IPS requirement that ACERA mandate may not comprise more than 25% of a firm's assets under management ("AUM").

8) **R Squared** – Greater than 0.8

Using the criteria above, Verus and staff created a quartile distribution of the results and removed the bottom 50% based on the information ratio (standard risk-adjusted excess return metric) so that only the top two quartiles of resulting products remained for further consideration. This process produced a feasible candidate list of 26 emerging markets equity managers. The RFI was issued in December 2021 with a due date of January 31, 2022. There were 21 manager responses as of the RFI deadline. Verus and staff read the RFI responses and scored managers independently via the proposed scoring approved by the Investment Committee in November.

**Scores for the RFI are below:**

| | Staff | Verus | Average |
|---|---|---|---|
| Baillie Gifford & Company | 77.08 (4) | 83.08 (2) | 80.08 (2) |
| Fidelity Institutional Asset Management | 77.83 (3) | 78.83 (3) | 78.33 (3) |
| Wellington Management Company | 77.58 (2) | 77.08 (4) | 78.33 (3) |
| William Blair Investment Management | 86.36 (1) | 87.67 (1) | 87.02 (1) |

**Top four managers:**

Based on the approved evaluation criteria, four managers scored noticeably higher than the rest and comprise our short list for further due diligence. We have provided a brief description of the remaining candidates.

*Baillie Gifford:*

Baillie Gifford & Co was founded in Edinburgh, Scotland in 1908. It is an independent investment management firm 100% owned by its 47 partners. The firm's sole business is investment management. Baillie Gifford Overseas Limited was established in 1983 and provides investment management and advisory services to non-UK clients. Baillie Gifford manages $454 billion in assets with $17.4 billion in emerging markets strategies.

Their investment process is all about research and debate, founded on a clear idea of the market inefficiencies they can exploit for their clients. Their research framework asks investors to think creatively, beyond the constraints of traditional information sources, in order to find the best growth companies for long-term investment. Their investment period is longer than most investment managers at 5-7 years. Their philosophy has been consistently applied over the years, across multiple market conditions and since the inception of the emerging markets strategy. They invest in companies that they believe have the best long-term growth prospects, regardless of their size, domicile, or weight in any given index. They look for businesses that enjoy sustainable competitive advantages and they believe will grow their earnings faster than the market average. The bottom-up approach seeks to generate alpha by identifying these companies via rigorous research and debate and then holding those investments for a sufficiently long time to allow them to prove their worth.

*Fidelity:*

Fidelity Institutional Asset Management (FIAM) was established in October 2015. FIAM brings together the distribution and client service teams from Pyramis (established in 2005 as an organization with a focus on bringing its investment, distribution and client servicing platform to the institutional marketplace) and FFAS (established in 1979 with a focus on distributing Fidelity-managed investment products to broker/dealers, banks, trust companies, registered investment advisors (RIAs) and insurance companies) to create a single, integrated distribution and service organization. FIAM manages $324 billion of which $9 billion is in the FIAM Concentrated Emerging Markets strategy.

FIAM Concentrated Emerging Markets is a high conviction strategy that seeks to outperform the MSCI Emerging Markets Index over a full market cycle using a growth-at-a-reasonable-price (GARP) approach. The strategy uses bottom-up fundamental analysis, combining the portfolio manager's deep emerging markets experience with the breadth of Fidelity's global investment resources to identify and uncover divergences between market expectations and what they believe is the true underlying growth potential of a company. The portfolio typically holds 50 or fewer stocks. They seek to diversify the portfolio by country and sector and attempt to minimize exposures to any single factor through risk management.

*Wellington:*

Wellington Management Company was incorporated in 1933. Wellington is headquartered in Boston, Massachusetts, with additional offices in Chicago, Illinois; Radnor, Pennsylvania; San Francisco, California; Frankfurt; Hong Kong; London; Luxembourg; Singapore; Shanghai; Sydney; Tokyo; Toronto; and Zurich. Wellington is a private partnership with 195 partners, and has assets under management of $1,426 billion, with just over $1 billion in the Emerging Markets Development product.

Wellington Emerging Markets Development is built upon two core beliefs. First, they believe that economic development's emergence as a policy priority is underappreciated and the political, economic and social commitments from governments will continue to provide meaningful and enduring tailwinds for well-positioned sectors, industries and companies. Second, they believe traditional market indices are skewed toward past winners. Divergences between the beneficiaries of economic development and current market capitalization have grown substantially over time and represent a unique opportunity for investors willing to take an unconstrained approach to building their Emerging Market equity exposure. Unconstrained by traditional benchmarks, the strategy builds focused exposures to structural themes, typically 5-10 at any time. Each theme targets companies facilitating or benefiting from long term economic development in Emerging Markets. Although the approach is benchmark-agnostic, the MSCI Emerging Market Index is used as a performance reference.

*William Blair:*

William Blair was founded in 1935 and is fully employee-owned. The firm has 201 partners and over 1,800 employees. William Blair is based in Chicago with resources in New York, London, Baltimore, Zurich, Sydney, Stockholm, The Hague, and Singapore, and Canada. The firm has over $77 billion in AUM, with $6.6 billion in emerging markets equity strategies.

The William Blair Emerging Markets Growth strategy is focused on finding the best quality growth companies within emerging markets regardless of size. The team focuses on finding companies with a strong management team with a proven track record, competitive advantages that drive the duration and size of the companies' growth trajectory, and strong/improving margins, consistent earnings growth, and low financial leverage.

William Blair believes that strong corporate performance is the foundation of superior long-term investment returns. And that corporate success lies in building intrinsic strengths in the management of human capital, financial resources, and stakeholder relationships, and delivering quality, innovation, service and value to customers. Companies that lead in these critical areas have produced better returns on capital, over a longer time horizon, with greater consistency and less risk.

Based on the combined scoring, and discussions between staff and Verus on the top managers. Verus and staff identified the top manager William Blair had a score of 87.0, the second ranked manager (Baillie Gifford) scored 80.1, and there was a tie for third at 78.3%. The manager ranked 5th scored 72.4, and there is a sizable gap between both 3rd place managers and the 5th managers. Verus and staff recommend conducting on-site due diligence visits with the top four managers. Following the on-site visits, Verus and staff will re-score based on the additional information gained during the meetings and present the top managers to the ICM in July.

ACERA

*Office of the Chief Counsel*

To: Members of the Board of Retirement

From: Jeff Rieger, Chief Counsel

Meeting: April 13, 2022

Subject: **Board Action Item For Continued Videoconference Meetings**

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During the state of emergency, Gov't Code § 54953(e) gives the Board authority to hold meetings by videoconference, without complying with certain requirements that would otherwise apply. In order to continue holding such videoconference meetings, section 54953(e)(3) specifies that, every 30 days, the Board must make one or both of the recommended findings that appear on the Investment Committee/Board Meeting Agenda:

> (1) the state of emergency continues to directly impact the ability of the members to meet safely in person, and (2) state or local officials continue to impose or recommend measures to promote social distancing.

Since the passage of section 54953(e), all Board meeting agendas have had those findings on the Consent Calendar. Staff recommends that the Board make those findings at the Investment Committee/Board meeting on April 13, 2022, because the Board meeting on April 21, 2022 will be 35 days after the Board's last meeting on March 17, 2022, when the Board last made the findings.

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

TO: Members of the Investment Committee

FROM: Betty Tse, Chief Investment Officer Betty Tse

DATE: April 13, 2022

SUBJECT: Discussion of Proposed Amendments to ACERA's General Investment Guidelines, Policies and Procedures

**Recommendation:**

Not applicable. This is an Information Item.

**Background / Discussion:**

The last update to ACERA's General Guidelines, Policies and Procedures (Policy) was on September 20, 2018, and certain Policy Sections and Schedules have been amended by Board actions since then but have not yet been reflected in the Policy. Additionally, certain guidelines and procedures of the Policy may have been obsolete in today's investment/market environment.

Accordingly, Staff proposes to update the Policy to reflect the following items:

1. The current conditions/procedures of the portfolio (Please see attached red-line of the Policy for reference);
2. The decisions that the Board has made since its last review of the Policy (Please see attached red-line of the Policy for reference);
3. Improvement of the style and language of the Policy for consistency and clarity (Please see attached red-line of the Policy for reference);
4. Proposed amendments to some of the guidelines and procedures currently in the Policy (Please see some examples of the proposed amendments on page 2 of this memo).

Regarding the items listed as 1, 2, and 3 above, please see below example of policy updates:

1. **Sections VII-IX (p. 9-14) and XIV (p.16):** Staff proposes to conform the Policy's language to reflect the following:
   i) A new Private Credit Policy adopted 7/8/2019;
   ii) A new Environmental, Social, and Governance Policy adopted 3/18/2021.

2. **Schedules IA and IB (p. 25-27):** Updated Schedules IA/IB to show the latest Asset Allocation Targets and Manager Structure Targets, respectively.

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

3. **Schedule III (p. 31-32):** Updated Schedule III to reflect revised Policy Index for the Total Fund and Benchmarks for Asset Classes/Investment Managers.

Regarding item 4 listed on page 1 of this memo, please see below examples of proposed amendments for your considerations:

**Asset Allocation and Rebalancing**
**(Section V, p. 7)**

1. Specifying an annual review of ACERA's Asset Allocation Policy Targets as part of the Board's and Staff's monitoring responsibilities.

**Program Investment Goals**
**(Section VI, p. 8)**

2. Align ACERA's Program Investment Goals with the Board's Enterprise Risk Survey results by incorporating the top objective from the Survey into this Section. For example, add "Prevent deterioration in the funded status, and preserve long-term sustainability, of the Fund" as one of the Program Investment Goals.

**Manager Monitoring Procedure – Performance**
**(Section XX (A), p. 20)**

3. Specify the contents and the frequency of the Investment Performance reports that the Investment Committee may expect from Staff and Consultants to further clarify ACERA's manager monitoring procedures.

**Policy Language and Other Ideas**

4. Evaluate the appropriateness of the goals and objectives of the Total Fund and insure that other relevant investment policies are reflected consistently and clearly within the General Investment Policy.

**Attachment:**

1) ACERA General Investment Guidelines, Policies and Procedures (redline copy reflecting all proposed amendments including all Board-approved actions through March 17, 2022)

**Alameda County Employees' Retirement Association**

# ACERA

## GENERAL INVESTMENT GUIDELINES, POLICIES AND PROCEDURES

**AMENDED ~~September 20, 2018~~May 19, 2022**

# ACERA
## GENERAL INVESTMENT GUIDELINES, POLICIES AND PROCEDURES
## ~~2018~~2022

## TABLE OF CONTENTS

[1] Prepared for ACERA by Cortex Consulting; adopted by the Board of ACERA on March 8, 2000; revised in May~~,~~ 2013. Amended by ACERA in May 2022.

**ACERA**

GENERAL INVESTMENT GUIDELINES, POLICIES AND PROCEDURES



## SECTION I: MISSION AND PURPOSE

The Alameda County Employees' Retirement Association (ACERA) exists for the purposes of providing accurate, timely benefits to its members and their beneficiaries and defraying reasonable expenses of administration.

The Board of Retirement (the Board), having exclusive authority and exclusive fiduciary responsibility for the investment and administration of the Trust Fund (the Fund), hereby establishes the following "General Investment Guidelines, Policies and Procedures" (the Policy) for the investment of ACERA's assets. The Board reserves the right to amend, supplement, or rescind this Policy at any time.

The Board is directed by law and given discretion to prudently invest the Fund's assets. The purpose of this statement of Policy is to assist ACERA in effectively supervising the Fund and to encourage effective communication between ACERA and its investment managers (Manager(s)) and investment consultants (Consultant(s)).

## SECTION II: CONSTITUTIONAL REQUIREMENTS

Article 16 §17 of the California State Constitution provides in pertinent part as follows:

"Notwithstanding any other provisions of law or this Constitution to the contrary, the retirement board of a public pension or retirement system shall have plenary authority and fiduciary responsibility for investment of moneys and administration of the system, subject to all of the following:

a. The retirement board of a public pension or retirement system shall have the sole and exclusive fiduciary responsibility over the assets of the public pension or retirement system. The retirement board shall also have sole and exclusive responsibility to administer the system in a manner that will assure prompt delivery of benefits and related services to the participants and their beneficiaries. The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system.

b. The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits~~,~~ to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty.

c. The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

d. The members of the retirement board of a public pension or retirement system shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.

e. The retirement board of a public pension or retirement system, consistent with the exclusive fiduciary responsibilities vested in it, shall have the sole and exclusive power to provide for actuarial services in order to assure the competency of the assets of the public pension or retirement system.

f. With regard to the retirement board of a public pension or retirement system which includes in its composition elected employee members, the number, terms, and method of selection or removal of members of the retirement board which were required by law or otherwise in effect on July 1, 1991, shall not be changed, amended, or modified by the Legislature unless the change, amendment, or modification enacted by the Legislature is ratified by a majority vote of the electors of the jurisdiction in which the participants of the system are or were, prior to retirement, employed.

g. The Legislature may by statute continue to prohibit certain investments by a retirement board where it is in the public interest to do so, and provided that the prohibition satisfies the standards of fiduciary care and loyalty required of a retirement board pursuant to this section.

h. As used in this section, the term “retirement board” shall mean the board of administration, board of trustees, board of directors, or other governing body or board of a public employees’ pension or retirement system; provided, however, that the term “retirement board” shall not be interpreted to mean or include a governing body or board created after July 1, 1991 which does not administer pension or retirement benefits, or the elected legislative body of a jurisdiction which employs participants in a public employees’ pension or retirement system.”

**SECTION III: ROLES AND PRINCIPAL DUTIES**

The Fund investments shall be prudently planned, implemented, managed, monitored and guarded. The Board, Investment Committee (Committee), Investment Staff (Staff), Consultant, Custodian Bank (Custodian), and Manager shall coordinate this process. See the defined roles and principal duties of the above-mentioned parties below:

A. THE BOARD shall review and approve Committee recommendations. The Board also reviews, adopts and monitors all investment policies, guidelines and procedures required to prudently administer the Fund and to effectively mitigate risk to the Fund.

B. THE COMMITTEE shall identify issues pertinent to the effective investment and administration of the Fund and initiate analysis of such issues by Staff, Consultant or Managers. It also reviews Staff's and Consultant's recommendations regarding ~~all~~ investment policies and investment Fund management. The Committee provides recommendations to the Board for adoption, oversees implementation, and monitors the investment programs in accordance with all applicable laws and Board-established policies, guidelines and procedures. Refer to Schedule VII – Charter of ACERA's Investment Committee of the Board for detailed Committee responsibilities.

C. STAFF shall oversee the Fund's investment program activities, implement the Board/Committee's decisions, make recommendations to the Committee regarding Fund management, and recommend investment-related policies and procedures to the Committee. Additionally, Staff monitors the performance and compliance of Managers in accordance with all applicable laws, Board-established policies, guidelines and procedures, as well as "Specific Investment Guidelines"[2] set out in the investment agreement between ACERA and each Manager (Agreement or Contract). Staff also facilitates the Committee meetings and completes activity as directed by the Board/Committee.

D. CONSULTANT shall review, analyze and evaluate the Fund's effectiveness and efficiency and make fund management related recommendations. Consultant assists Staff in implementing the Board/Committee's decisions and developing all investment-related policies. Consultant's responsibilities are detailed in the contract~~service agreement~~ between ACERA and Consultant.

E. CUSTODIAN shall provide custody of ACERA's investment assets. Custodian's responsibilities are detailed in the ~~service agreement~~Custody Contract between ACERA and Custodian.

F. MANAGER shall prudently manage its Managed Account (defined in Section VII – Eligible Asset Categories) in accordance with all applicable laws, Board-established policies, guidelines and procedures, as well as Specific Investment Guidelines. Manager's responsibilities are detailed in the Agreement.

## SECTION IV: INVESTMENT PHILOSOPHY

The following is a summary of ACERA's investment philosophy. For the complete statement, please refer to Schedule VI of this document, "ACERA Investment Philosophy."

[2] This ~~I~~includes the specific investment guidelines set forth in the Investment Management Agreements for separately managed accounts, as well as the Objectives/Guidelines of ~~all~~ commingled funds.

The Board believes that its investment policies, in aggregate, are the most important determinants of its investment success. Compliance with investment policies should, therefore, be monitored rigorously. The Board also believes that performance of the total portfolio, individual asset classes, and Managers should be monitored and compared to appropriate, predetermined benchmarks.

The Board believes that prudent management of risk is a central element of the investment function and that diversification among asset classes will reduce risk and enhance returns of the overall investment portfolio in the long term. Further, the Board believes that strategic asset allocation has the greatest impact on long-term investment returns and volatility.

The Board believes that market efficiency and opportunities vary among asset classes and may change over extended periods of time; therefore, the Board believes that ACERA's portfolio management strategies should adapt over time to reflect the changing nature of capital markets.

The Board's primary goals in managing the Fund are:

1. To ensure that sufficient funds are available to pay vested benefits and maintain supplemental benefits;
2. To comply with all applicable fiduciary standards; and
3. To add marginal value that will help reduce the costs of the plan and/or to increase benefits for the beneficiaries.

The Board believes that, to achieve its goals, ACERA must invest the necessary resources to build and maintain an appropriate organizational infrastructure.

**SECTION V: ASSET ALLOCATION AND REBALANCING**

~~Asset allocation targets, a function of the returns and risks from various asset classes and the nature of the plan's liabilities, are set forth in Schedule I. A~~The goal of asset allocation is balancing asset growth versus liability growth considering time horizons, liabilities and risk tolerance. ACERA's objective is to conduct an asset/liability study once every five (5) years which includes an asset allocation study. However, as part of the Board and Staff's monitoring responsibilities, an annual review of the asset allocation policy will be conducted, including an update of the policy's long term expected returns and risk using the ACERA Consultants' current capital market assumptions to assess whether market conditions warrant a re-examination of the asset allocation policy.~~and an asset allocation study once every three (3) years or more often if necessary.~~ Asset allocation targets, a function of the returns and risks from various asset classes and the nature of the plan's liabilities, are set forth in Schedule I.

The objective of rebalancing is to enhance the risk-adjusted performance of the asset allocation structure. Rebalancing is the process of returning an allocation (asset class or a traditional manager) back to the desired target level after having drifted away from its targeted position. ACERA will maintain a disciplined methodology to rebalance back to its asset allocation targets as set forth in Schedule IA. ~~The objective of rebalancing is to enhance the risk-adjusted performance of the asset allocation structure.~~

Staff shall be responsible for maintaining the relative weights of asset classes and allocations within the predefined and acceptable rebalancing ranges. Should an asset class ~~or~~ allocation or a traditional manager fall outside its target range, Staff shall rebalance the asset class or allocation back to the target weights as specified in the asset allocation targets in Schedule IA and IC.

Staff shall:

1. Monitor the Fund's managed accounts, manager structure and asset allocation;
2. Determine whether or not any account or asset category is out of balance with its target asset allocation in excess of the specified tolerance range;
3. Determine whether or not any Manager within each asset category is out of balance with its target allocation in excess of the specified tolerance range;
4. And, if this is determined, either
    - ~~(a)~~a. instruct the relevant Managers to redirect cash income (interest coupon and dividends) in concert with an evaluation of pending commitments and other cash flows (employer and employee contributions), in order to bring the allocation(s) back to the adopted strategic target; and/or
    - ~~(b)~~b. instruct the relevant Managers to liquidate or acquire the appropriate dollar value of securities to reach the target and reallocate the cash thus generated or required to the other category(s) or Manager(s), as necessary.

5. Staff shall report to the Board on a regular basis the status of the Fund with respect to how categories are tracking relative to their allowable ranges, as well as any actions taken to rebalance the portfolio.

## SECTION VI: PROGRAM INVESTMENT GOALS

The goal of ACERA's investment program is to seek to provide alpha to the Fund in a risk aware framework such that ACERA's benefit costs do not become a burden upon future generations of members, participating employers, and taxpayers. Other goals include:

1. ~~1.~~ Diversify the Fund's assets as its main defense against large market drawdowns, while maintaining reasonable risk exposure to meet return requirements~~.~~,
2. ~~2.~~Prevent deterioration in the funded status, and preserve long-term sustainability, of the Fund,
3. Preserve a degree of liquidity ample to meet benefit payments and capital calls, without incurring substantial transaction costs of illiquid and liquid holdings~~.~~,
4. ~~3.~~Achieve net-of-fee returns in excess of policy benchmarks at the Fund and asset class levels over rolling five-year periods~~.~~ while minimizing portfolio downside risk,
5. ~~4.~~Achieve returns at or above ACERA's actuarial rate of return over complete market cycles measured over rolling five-year periods~~.~~ and,

6. ~~5.~~Achieve risk-adjusted, net-of-fee returns at the Fund level that rank in the top half of a competitive, institutional public fund peer group.

**SECTION VII: INVESTMENT STRATEGY AND MANAGER STRUCTURE**

A. U.S. EQUITY will be structured to capture exposure to the broad U.S. equity market as represented by the Russell 3000 Index. Passively managed (index) portfolios will be used in portions of the markets that are reasonably efficient and in managing Manager expenses (e.g. Domestic Large Cap Equities). These portfolios are intended to provide broadly diversified market exposure with controlled (market) risk and minimal cost.

   Actively managed portfolios will be used when the Board determines that a Manager possesses special skills or abilities that enable that Manager to capture excess returns relative to the market, adjusted for risk and fees; or to exploit specialty markets that provide enhanced return with acceptable risk.

   A great part of the Russell 3000 Index, on a market value basis, is comprised of large-cap stocks. The Board has adopted a policy of obtaining overall exposure to this segment of the market via passively managed indexed products. In addition, some active Managers have been employed to enhance overall portfolio return on a risk- and fee-adjusted basis.

   The remainder of the Russell 3000 Index is comprised of small to mid-cap companies. Some opportunities for active management enhancement exist in these securities due to market inefficiencies. ACERA will attempt to capture these opportunities through a mix of Managers who have the special skills required to identify smaller companies that may be undervalued or possess substantial growth potential.

   The U.S. equity portfolio shall be allocated among the various styles and Managers. The U.S. equity asset allocation and manager structure targets are outlined in Schedules IA and IB.

B. INTERNATIONAL EQUITY represents an opportunity to diversify risk and capture enhanced returns within markets generally less efficient than the U.S. domestic equity market. Passively managed (index) portfolios will be used in portions of the markets that are reasonably efficient (e.g. Developed Markets). Actively managed portfolios will be used when the Board determines that a Manager possesses special skills or abilities that enable that Manager to capture excess returns relative to the market, adjusted for risk and fees; or to exploit specialty markets that provide enhanced return with acceptable risk.

   The international equity portfolio shall be allocated among the various styles and Managers. The international equity asset allocation and manager structure targets are outlined in Schedules IA and IB.

C. FIXED INCOME represents a means of reducing overall portfolio risk and capturing incremental returns either domestically or globally. Inefficiencies in the pricing and trading of fixed income securities create opportunities to add value through active management. As a result, 100% of the fixed income portion of the portfolio will be invested in actively managed portfolios. However, some segments of the fixed income markets, principally U.S. Treasuries and sovereign government securities, may be managed via passive index funds.

The fixed income portfolio shall be allocated among the various styles and Managers. The fixed income asset allocation and manager structure targets are outlined in Schedules IA and IB.

D. REAL ESTATE represents a means for diversifying the portfolio and lowering correlations to traditional asset classes. Owing to the illiquid nature of real estate assets, distinctions between active and passive management are not applicable. Detailed information regarding real estate investments is included in ACERA's "Real Estate Guidelines, Policies and Procedures," which is maintained as a separate document.

The real estate portfolio shall consist primarily of commingled funds and will be diversified among the various property types and categories (Core, Core-Plus, Value-Added and Opportunistic) and Investment Managers. The real estate portfolio asset allocation target is outlined in Schedules IA and IB.

E. PRIVATE EQUITY ("PE") investments represent a means of generating returns superior to those available in the public equity market to compensate the Fund for the long term, illiquid commitments. The Private Equity portfolio is intended to enhance ACERA's overall returns on a risk-adjusted basis.

The private equity portfolios shall be allocated among the various sub-categories and Managers. The private equity portfolios' asset allocation targets are outlined in Schedules IA and IB. Specific details on the strategic allocation to the private equity investment portfolios are outlined in ACERA's Private Equity Investment Policy, which is maintained as a separate document.

F. ABSOLUTE RETURN ("AR") strategies represent a means where the Fund's overall returns can be enhanced, on a risk-adjusted basis, by investing a portion of its assets in AR strategies, which have a low correlation to equity markets. The Absolute Return portfolio shall be allocated among the various sub-categories and Managers.

The absolute return portfolio's asset allocation targets are outlined in Schedules IA and IB. Specific details on the strategic allocation to the absolute return investment portfolio are outlined in ACERA's Absolute Return Policy, which is maintained as a separate document.

G. REAL ASSETS ("RA") investments consist of assets that exhibit positive correlation to inflation and positive returns over the long run.

~~The RA portfolio shall be allocated among the specific types of Managers.~~ The real assets ~~total portfolio~~asset allocation target is outlined in Schedules IA and IB. Detailed information regarding real assets investments is included in ACERA's Real Assets Policy which is maintained as a separate document.

H. PRIVATE CREDIT ("PC") investments are illiquid credit investments that are meant to generate returns superior to those available in the public markets, enhance ACERA's long-term risk-adjusted return, and provide diversification to ACERA's overall investment Fund.

The PC portfolio shall be allocated among Managers and strategies that are complementary to one another and diversified. The target allocation of PC investments within the overall investment Fund is outlined in Schedules IA and IB. Detailed information regarding PC investments is included in ACERA's Private Credit Policy, which is maintained as a separate document.

I. CASH OVERLAY: The objective of the Cash Overlay program is to increase the Plan's expected long-term performance by equitizing any non-strategic cash using derivatives (mainly futures). The equitized cash will have exposure to the public markets in proportion to the Plan's long-term Strategic Asset Allocation.

## SECTION VIII: ELIGIBLE ASSET CATEGORIES

The Fund shall hold assets in categories established by the Board. Any asset category may be held in direct form, in pooled/commingled form, or in both. Asset categories managed by one or more "Qualified Investment Managers" are called "Managed Accounts or Funds." Eligible asset categories are listed and defined below.

A. CASH AND CASH EQUIVALENT shall consist of, but not be limited to, cash, short term (12 months or less) interest bearing investments of high quality such as U.S. Treasury issues, insured certificates of deposit of U.S. banks (fixed and/or variable), commercial paper rated A-1, P-1 or both, or other instruments of equal or better quality, and money market funds available through the Custodian.

B. U.S. EQUITY shall consist of, but not be limited to, common stocks and other securities which are convertible into common stocks, and ADRs (American Depository Receipts), as well as cash (per "A" above) and fixed income (per "D" below) when used as temporary substitutes for common stocks.

C. INTERNATIONAL EQUITY shall consist of, but not be limited to, common stocks and other securities convertible into common stocks of companies domiciled outside of the U.S., GDRs (Global Depository Receipts), IDRs (International Depository Receipts) and other depository receipts as well as cash/cash equivalents (per "A" above) and fixed income (per "D" below), domestic or international, which are being used as temporary substitutes for common stock.

D. FIXED INCOME shall consist of investments in, but not be limited to, U.S. taxable and non-taxable bonds, debentures, notes and other evidences of debt. Fixed income may also include, but not be limited to, non-dollar denominated bonds issued by corporations or governments domiciled outside of the U.S. Other eligible investments shall include cash/cash equivalents (per “A” above), convertible bonds, and preferred stock.

E. REAL ESTATE shall consist of investments in equity real estate and ~~equity~~ debt real estate through the use of commingled or direct investments. Detailed information about real estate investments is included in ACERA’s “Real Estate Guidelines, Policies and Procedures,” which is maintained as a separate document.

F. PRIVATE EQUITY investments shall consist of, but not limited to ~~investments~~ fund types including venture capital, ~~corporate~~ buyouts, debt-related and special situations~~,~~. Private equity investments may be denominated in U.S. dollars or other currencies. Detailed information about private equity investments is included in ACERA’s “Private Equity Investment Policy” which is maintained as a separate document.

G. ABSOLUTE RETURN shall consist of investments which are intended to generate a return stream that has a low correlation to equity markets. Eligible Absolute Return investments include Fund of Hedge Funds (FOHF) ~~alternative premia[3] strategies, hedge fund-of-funds,~~ and other alternatives/ opportunistic strategies. These investments are privately placed investments. Absolute return investments may be denominated in U.S. dollars or other currencies. Detailed information about absolute return investments is included in ACERA’s “Absolute Return Policy” which is maintained as a separate document.

H. REAL ASSETS investments shall consist of, but not be limited to, commodities, natural resources, and infrastructure investments. In addition, the RA portfolio will invest in private limited partnerships and secondaries in sectors with inflation sensitive assets. Detailed information regarding Real Assets investments is included in ACERA’s Real Assets Policy which is maintained as a separate document.

~~H.~~I. PRIVATE CREDIT investments may include, but not be limited to, performing senior corporate loans generally, but not always, secured by first and second liens against assets of the company. Private credit investments are privately placed investments that may be denominated in U.S. dollars or other currencies, and levered to provide additional return. Detailed information about private credit investments is included in ACERA’s “Private Credit Policy”, which is maintained as a separate document.

~~[3] Alternative premia are empirically-tested, sources of return that can be systematically harvested through dynamic strategies. They can be thought of as returns that underlie “classic” hedge fund strategies (hedge fund risk premia) or the returns from “classic” styles (style premia), such as value, momentum, and carry.~~

## SECTION IX: ASSET CATEGORIES~~'~~ OBJECTIVES

The objectives of each asset category are:

A. CASH AND CASH EQUIVALENT

1. An annualized rate of return in excess of 90-Day U.S. Treasury Bills~~, and~~.
2. ~~An annualized rate of return within the upper one half of a universe of like short-term funds.~~

B. U.S. EQUITY

1. An annualized rate of return in excess of the annualized U.S. equity market returns as measured by the Russell 3000 Index.
2. An annualized rate of return within the upper 33rd percentile of the ~~InvestorForce~~ InvestmentMetrics database or similar database of the annualized returns of diversified domestic equity portfolios over the short to intermediate term which should result in a top quartile return over longer periods of time.

C. INTERNATIONAL EQUITY

1. An annualized rate of return in excess of the Morgan Stanley Capital International All Country World Investable Market Index Ex U.S. (MSCI ACWI Ex U.S. IMI).
2. An annualized rate of return within the upper 33rd percentile of the ~~InvestorForce~~ InvestmentMetrics database or similar database of the annualized returns of diversified international equity portfolios over the short to intermediate term which should result in a top quartile return over longer periods of time.

D. FIXED INCOME

1. An annualized rate of return in excess of the ~~Barclay's~~ Bloomberg U.S. Aggregate Bond Index, ~~Citigroup~~ FTSE World Government Bond Index Ex~~. -~~ .-U.S. and ~~Barclay's~~ Bloomberg U.S. High Yield Index ~~in a ratio of 75/15/10~~.
2. An annualized rate of return within the upper 33rd percentile of the ~~InvestorForce~~ InvestmentMetrics database or similar database of the annualized returns of diversified ~~international equity~~fixed income portfolios over the short to intermediate term which should result in a top quartile return over longer periods of time.

E. REAL ESTATE

1. Total Net Return – equivalent to the National Council of Real Estate Investment Fiduciaries Fund Open-End Diversified Core Equity Index (NFI ODCE) as a minimum return for the total portfolio over rolling five-year periods, and
2. Income Return – Please refer to ACERA's "Real Estate Guidelines, Policies and Procedures", which is maintained as a separate document, for detailed information.

F. PRIVATE EQUITY

1. ~~For Private Equity: An annualized rate of return in excess of the Thomson Reuters C|A~~The strategic objective of the Private Equity portfolio is to outperform the Cambridge Global All Private Equity Benchmark net of all fees ~~and expenses over a full market cycle~~. Please refer to ACERA's Private Equity Investment Policy, which is maintained as a separate document, for detailed information.

G. ABSOLUTE RETURN

1. The strategic objective of the Absolute Return portfolio is to ~~G~~generate total AR Portfolio returns at or above the HFRI Fund of Funds Composite Index (net of all fees and expenses). Please refer to ACERA's Absolute Return Policy, which is maintained as a separate document, for detailed information.

H. REAL ASSETS

1. The performance of the Real Assets portfolio will be measured against the following blended benchmark: S&P Global ~~Natural Resources~~Infrastructure Index, S&P Global ~~Infrastructure~~ LargeMidCap Commodity and Resources Index, and Bloomberg Commodity Index. ~~in the ratio of 50/35/15.~~ Please refer to ACERA's Real Assets Policy, which is maintained as a separate document, for detailed information.

I. PRIVATE CREDIT

1. The performance of the Private Credit portfolio, net of all fees and expenses, will be measured against the S&P/Long Syndications and Trading Association U.S. Leveraged Loan 100 Index. Please refer to ACERA's Private Credit Policy, which is maintained as a separate document, for detailed information.

In addition, objectives that reflect a particular investment strategy or style employed by an individual Manager shall be outlined in the Specific Investment Guidelines attached to the Manager's Contract.

## SECTION X: ALLOCATION OF CASH FLOW

Cash flow not needed for benefit payments or administrative expenses shall be allocated to Managed Accounts in a ratio that best funds the overall targeted asset allocation as reflected in Schedules IA and IB.

If cash flow is insufficient for the payment of benefits or to cover administrative expenses, then Managed Accounts shall be debited in a ratio that best satisfies the target allocation shown in Schedules IA and IB. Such debits, if necessary, will be carried out as needed and with timely notice to Managers to facilitate effective funds transitions and performance measurement.

For all planned investments which may not need to be funded immediately, a reserve may be budgeted and invested in appropriate accounts in accordance with the asset allocation targets until such moneys are required. Alternatively, Managed Accounts within "overfunded" asset classes may be called upon to provide the required moneys.

## SECTION XI: PROHIBITED INVESTMENTS

Managers shall exercise prudent person standards in defining prohibited investments. For example, prohibited investments include, but are not limited to, securities issued by the County of Alameda or any agency thereof.

## SECTION XII: DIRECTED BROKERAGE

ACERA has established an open Directed Brokerage (DB) Program designed to maximize the recapture of brokerage commissions by enforcement of the target percentages of direction. ACERA's DB Program is governed by ACERA's DB Policy, which is maintained as a separate document.

The strategic objective of the DB Program is to take advantage of the industry-accepted recapture of a portion of trade commissions paid to brokers. The primary goals of the DB Program are to 1) recapture 50% or more of commissions paid on a specific percentage of trades sent to correspondent brokers on a timely basis; 2) construct the percentage of trades subject to recapture so as to allow Managers to have access to the research they need; 3) seek "Best Execution" through third-party administration and outside consultant monitoring; and 4) encourage local and emerging broker participation through the use of an open correspondent network program managed by the program administrator.

## SECTION XIII: DERIVATIVES INVESTMENT CRITERIA

Exposure to risk by use of derivative instruments must be consistent with ACERA's overall investment policy as well as an individual Manager's Specific Investment Guidelines. The Derivatives Investment Criteria (See Schedule II) allows ACERA's separate account managers to exercise prudent professional judgement in alignment with their investment mandates, while minimizing the possibility of adverse implications for the Fund. In general, derivatives shall not be used to establish a leveraged position (i.e., offsetting Cash positions must be maintained against all delayed settlement transactions). Should there be any conflict between an individual Manager's Specific Investment Guidelines and this Policy statement regarding the use of derivative instruments, the Specific Investment Guidelines shall control.

## SECTION XIV: ENVIRONMENTAL, SOCIAL AND GOVERNANCE

The Board has established the ACERA Environmental, Social and Governance Policy (ESG Policy), which is maintained as a separate document. The purpose of the ESG Policy is to establish a framework for ACERA's ESG implementation as a risk management tool, consistent with the Board's fiduciary responsibilities in the investment of the Fund. Risk mitigation includes the prudent consideration of ESG risk factors that may materially impact the Fund's long-term financial returns. ESG considerations will be evaluated, where applicable, with the goal of mitigating risk while maintaining or improving Plan returns over the long term. The Board shall analyze and consider ESG factors in its decision to approve investments when those factors are reasonably deemed by the Board, in consultation with its consultants and staff, to be material to its financial returns. ACERA will use various procedures and implementation methods (e.g. proxy voting) specific to the ESG factors in their due diligence and monitoring and disclosures, as applicable.

## SECTION X~~I~~V: SELECTION OF MANAGERS

The Investment Committee shall direct Staff and/or a Consultant to initiate searches for Managers. Staff and/or the Consultant shall research for qualified candidates and present a list of finalists to the Investment Committee for its approval. Upon approval of the list, the finalists shall be interviewed by Staff and the Consultant (if applicable). Staff and the Consultant (if applicable) shall evaluate the interviews, rank the finalists, and make a recommendation to the Investment Committee to hire one or more firms attaining the highest rankings in a publicly noticed meeting at which no less than five (5) Investment Committee members shall be present. It is possible that none of the firms will be recommended for hire.

The above-mentioned procedures are developed for the convenience and benefit of ACERA, and shall not bind ACERA or invalidate the selection of a Manager, if different processes are used subsequent to the promulgation of this Policy. ACERA recognizes that some investments by their nature present unique opportunities and there may not be suitable competitors for a unique investment opportunity. ACERA also recognizes that due to inherent features of some investments, time constraints may require ACERA to use a different investment manager selection process.

## SECTION XVI: EMERGING INVESTMENT MANAGERS

The Board has established the ACERA Emerging Investment Manager Policy (EIM Policy), which is maintained as a separate document. The purpose of the EIM Policy is to establish a framework for the development and administration of ACERA's Emerging Investment Manager Program (EIM Program), consistent with the Board's fiduciary responsibilities in the investment of the Fund. The EIM Policy ~~states that the initial investment of the EIM Program is not to exceed~~has a stated goal of investing at least 1% of the total Fund and up to 5% with emerging managers.

The strategic objective of the EIM Program is to add incremental value to the Fund through the hiring of the most talented Emerging Investment Managers (EIMs) to manage ACERA's assets.

The primary goals of the EIM Program are to 1) identify and gain early access to the most talented investment managers in their early business stages; 2) generate superior Fund return performance through the EIM Program; 3) identify superior EIMs and/or investment opportunities in the State of California and Alameda County that are equal to or superior to comparable available investments; and 4) further diversify the Fund's overall investment program, so as to enhance risk-adjusted returns of the Fund.

## SECTION XVIII: AUTHORITY OF MANAGERS

Subject to ~~the laws of the United States and the State of California, and to~~United States and California laws, the agreed-upon terms and provisions of specific Manager contracts, and the terms and conditions of this Policy, Managers shall have full discretion under limited power of attorney to direct the purchase, exchange, sale and reinvestment of the assets of the Managed Accounts. The Board expects that Managers will recommend changes to this Policy when any part of this Policy appears to be at variance with overall market and economic conditions.

Managers shall place orders to buy and sell securities and, by notice to the Custodian, shall cause the Custodian to deliver and receive securities on behalf of the Fund. Managers shall, upon ~~Board~~ ACERA's inquiry, report placement of ACERA brokerage activities such that the Board shall be assured commissions were placed for the sole and exclusive benefit of the Fund.

~~Separate account Managers~~Separately Managed Accounts shall not vote proxies. Proxies shall be voted by ACERA, via a proxy voting service vendor agreement, in accordance with the terms of the vendor agreement and the "ACERA Proxy Voting Guidelines and Procedures" which is maintained as a separate document.

Securities ~~lending~~ Lending, shall be ~~performed~~ administered under the oversight of Staff, in accordance with Board-established procedures.

## SECTION XVIIII: INVESTMENT GUIDELINES FOR THE MANAGED ACCOUNTS

Individual Manager discretion shall be governed by the Investment Guidelines for the Managed Accounts as well as the Specific Investment Guidelines for each Manager. Should there be any conflict between the Specific Investment Guidelines of an individual Manager and the Investment Guidelines for the Managed Accounts, the Specific Investment Guidelines shall prevail.

A. GENERAL

1. All investments shall comply with all applicable laws of the U.S. and the State of California governing the investment of pension trusts.
2. All securities transactions shall be executed by reputable broker/dealers, banks, or the Custodian, and shall be on a best-price and best-execution basis, and shall be reported to ACERA as is called for elsewhere in this Policy.

~~2.~~3. All Managers shall be respectful of material ESG risk factors as set forth in ACERA's ESG policy.

~~3.~~4. All Managers shall refrain from investing in a tobacco producer investment opportunity when, in their expert opinion, an alternative non-tobacco producer investment opportunity is available that will satisfy the same ACERA portfolio guidelines, instructions and objectives for risk, return and diversification.

B. EQUITY

Managers have full discretion to invest solely in readily marketable and diversified equity securities subject to the following:

1. For Managed Accounts, no more than 10% of the value (at time of purchase) of the account shall be invested in the securities of a single issuer.
2. ACERA shall not hold more than 10% of the equity securities of any issuer.
3. Equity securities shall possess value and quality corroborated by generally accepted techniques and standards of fundamental securities analysis.
4. Assets in a Managed Account not invested in equity securities shall be kept with interest in appropriate money market instruments, including any money market fund available through the Custodian.
5. A Managed Account shall be subject to ACERA's Policy statement on the use of derivatives in Section XIII.
6. All Managers shall endeavor to be fully invested in stocks at all times unless they have received specific authorization to the contrary from the Board and/or Staff. Cash holdings, as defined in this Policy, shall generally not exceed 5% of the Fund on a market value basis.

C. FIXED INCOME

Managers have full discretion to invest solely in readily marketable and diversified securities including, but not limited to

1. Obligations of the U.S. and/or eligible foreign government treasuries.
2. Obligations guaranteed by agencies of the U.S. and/or eligible foreign governments.
3. Insured certificates of deposit and banker's acceptances of credit worthy banks.
4. Corporate and other evidences of debt. At least 80% of this debt must be rated by Moody's Investor's Services or by Standard & Poors Corporation.
5. Commercial paper and banker's acceptances of issuers rated P-1 by Moody's Investor's Service or A-1 by Standard & Poors Corporation.
6. Excepting direct obligations of the U.S. and/or eligible foreign governments, and those explicitly guaranteed by the U.S. and/or eligible governments, no account shall hold more than 5%, at cost, of the obligations of any single issuer.
7. Excepting direct obligations of the U.S. and/or eligible foreign governments, and those explicitly guaranteed by the U.S. and/or eligible governments, no security shall comprise more than 5% of the account, as determined at the time of purchase.
8. A Managed Account shall be subject to ACERA's Policy on the use of derivatives as stated in Section XIII.

## SECTION ~~XVIII~~XIX: MANAGER SPECIFICATIONS

A. Managers must be registered as investment advisers under the Investment Adviser's Act of 1940, a bank (as defined in that Act) or an insurance company qualified to perform investment management services under state law in more than one state, including the State of California. Unless an exception is granted by the Board, by accepting appointment as ACERA's Managers, Managers shall acknowledge that they are "Plan Fiduciaries" and "Qualified Investment Managers" as defined by the Employees' Retirement Income Security Act (ERISA) of 1974 (see or reference United States Code Title 29 Section 1001 et. seq.).

B. Managers shall maintain fiduciary insurance in the amount of 10% of the total assets managed in the ACERA account or $25 million, whichever is higher, or unless the Contract specifies otherwise.

C. Managers shall promptly notify ACERA of changes that occur in any of the following:

   1. The investment strategy used in managing the subject product.
   2. The key personnel involved in managing ACERA's account.
   3. The ownership, key personnel, or organizational structure of the Manager's company.
   4. The Manager company's financial condition changes significantly.
   5. The number of clients invested in the subject product and firm wide changes significantly.
   6. The market value of the total assets managed in the subject product and firm-wide changes significantly.

D. Managers shall promptly notify ACERA if they are subject to censure or disciplinary action by a regulatory agency.

E. Managers shall provide to ACERA all required documents and reports as set forth in Schedule V – ACERA's Compliance Schedule.

F. Managers shall not make contributions or provide gifts, reimbursements or personal benefits exceeding $~~470~~520.00[4] in the aggregate within any 12-month period to any Trustee, fiduciary, employee or Consultant of ACERA. Invitations to educational conferences and similar events(including offers of travel, meals and/or accommodations) shall be made to ACERA and not directed to individuals. The Board will determine whether to accept such invitations and will be solely responsible for selection of the Trustee, Staff, or other individual, who will attend or otherwise participate on behalf of ACERA.

## SECTION X~~I~~X: MANAGER MONITORING PROCEDURE

The Board has contracted with a number of external Managers to invest ACERA assets in the capital markets. As part of the Board's fiduciary duties to prudently select, monitor and supervise these Managers, the Board has adopted this Procedure. The intent of this Procedure is to notify

[4] Updated annually by the California Fair Political Practices Commission.

Managers of the standards by which they will be evaluated and to establish a structure which the Investment Committee and the Board can use to monitor the performance of the Managers.

Managers will be monitored to:

1. Evaluate how well they achieve their investment objectives.
2. Ensure that they adhere to their established investment approach/style and do not attempt to index returns to preserve stellar performance or take extraordinary risk to overcome poor performance.
3. Identify issues or trends that have the potential to result in intermediate and long-term capital losses to the Fund.
4. Alert the Board when Managers are not performing to expectations so that appropriate remedial action can be taken.

Managers will be evaluated based on ~~the basis of~~ the following: performance, style integrity, organizational stability, compliance, client service, and fees described in greater detail below.

A. PERFORMANCE

On a monthly basis Staff will monitor Manager holdings, activity, and performance.

~~On a semi-annual basis Staff and/or a Consultant will furnish the Investment Committee and/or Board with an in-depth evaluation of each Manager which will include a comparison of the Manager to its Contract benchmark and a peer universe of Managers using a similar investment style. This report shall include an analysis of the sources of Managers' returns and risks and provideattribution for both, identifying which decisions enhanced or diminished performance.~~On a quarterly basis (i.e. for the quarter ending in March and in September, respectively) Staff and/or Consultant will furnish to the Investment Committee and/or Board a report of the Total Fund which will include a comparison of the Fund to its Policy benchmark and a peer universe of similar size public funds. This report shall include a comparison of the actual asset allocation versus the policy and an analysis of the sources of the Fund's returns and risks and provide attribution for both, identifying which strategic and implementation decisions enhanced or diminished Fund performance.

In addition, on a semi-annual basis (i.e. for the six months ending in June and in December, respectively) Staff and/or Consultant will present to the Investment Committee and/or Board a report which will include an investment structure and strategy review and a comparison of ACERA's Managers to their contract benchmarks and a peer universe of managers using a similar style, where available. This report shall include an analysis of the sources of managers' returns and risks and provide attribution for both, identifying which decisions enhanced or diminished performance. Additionally, any strategies which meet the Board's Watch List criteria (articulated in Section XXI of this investment policy statement) will be incorporated into this report.

On a semi-annual basis, trading costs will be evaluated in terms of commissions paid and execution of trades. Staff and/or Consultants shall furnish a report to the Investment Committee and/or Board regarding trading costs on an annual basis.

B. STYLE INTEGRITY

Each Manager will be analyzed every ~~two~~ three years to ensure that the Manager is continuing to invest the portfolio in the style for which it was originally hired. Style integrity is essential to maintain the Board's individual asset ~~allocation policy~~class structure objective. Any significant deviation in style will result in the overall ~~Fund~~ asset class having a different characteristic, in some measure, from the broad market and underlying indexes that comprise ACERA's policy index. Significant variations in the portfolio characteristics from the style anticipated in the management Contract may indicate a change in its investment style.

This review also provides the Investment Committee and/or Board an opportunity to evaluate the Manager's continuing "fit" with the goals of the overall Fund. By monitoring the Manager style integrity, the Investment Committee and/or Board can assure that its Manager mix takes advantage of opportunities to increase diversification through lower correlation of returns and differentiated approaches among individual Managers.

C. ORGANIZATIONAL STABILITY

Managers' organizations will be monitored to ensure continuity of the intellectual and philosophical processes that went into developing the particular investment approach contracted for by ACERA. In addition, Managers will be monitored for business risk, quality of staff, departures of key investment personnel, change in ownership or acquisition, and potential conflicts of interest.

It is ACERA's intent that its portfolio comprises no more than 25% of the Manager's total assets under management (AUM)[5] at any time. Therefore, ACERA will monitor the Managers' assets, firm-wide, as well as in the subject product.

D. COMPLIANCE

Managers will be monitored to ensure they are adhering to federal and state laws regarding securities and the management of investment portfolios, trading, and pension investments; ethical practices of the investment professions; the Contract governing their relationship with ACERA; this Policy; and any other written directives issued by ACERA.

Each ACERA Contract will specify which investment vehicles a Manager is authorized to use, which markets the Manager is authorized to transact business in and any limitations within a market (small or large capitalization, value or growth orientation). The assets in each Manager's portfolio shall be reviewed monthly to ensure compliance with Contract guidelines.

[5] ACERA defines total AUM as the total market value of assets a Manager manages on behalf of investors under discretionary management where the client delegates responsibility to the Manager.

All required documents and reports, set forth in Schedule V, must be submitted in a timely manner and in the format specified by ACERA, unless otherwise agreed to.

Managers must provide Staff with prior notification and justification for failure to comply with rules, regulations, Contract provisions, deadlines or other directives. Managers must provide a time frame for curing any deficiencies. Staff shall evaluate each incident on a case-by-case basis and determine whether an exception may be granted.

E. CLIENT SERVICE

Managers are required to comply with routine portfolio investment guidelines and reporting deadlines and are also expected to cooperate with special requests for information. ACERA will establish reasonable time frames for all requests and reporting and will provide feedback to all external Managers regarding the perceived quality of their client service.

F. FEES

Managers are expected to charge ACERA investment management fees no greater than the fees charged for other clients with a similar investment style, investment objective, and account type, size and services. Should a Manager enter into a more favorable fee schedule with a similar client, the manager is expected to modify ACERA's fee schedule to reflect the more favorable terms.

ACERA Staff will endeavor to meet with each Manager at least twice a year by telephone or in person to review performance and other issues.

## SECTION XXI: MANAGER WATCHLIST PROCESS

A. PLACEMENT ON WATCHLIST

ACERA recognizes that Managers may be reviewed for the Manager Watchlist Process and/or removed from the Fund from time to time for a variety of reasons. ACERA has established a Watchlist Process through which managers with deficiencies, as determined by Staff and Consultant, will be placed. Short term under-performance alone will not necessarily result in an initiation of the Manager Watchlist Process. Typical examples of reasons leading to placement on the Watchlist may include:

1) Insufficient net of fee, longer-term returns (i.e. greater than 5-years) versus the benchmark and/or peer group,
2) Changes to style and/or the risk profile of the portfolio as evidenced by changes in metrics such as tracking error and information ratio,
3) Organizational instability as evidenced by (but not limited to) mergers/acquisitions or IPO/SPAC activity or higher than industry personnel turnover,
4) The loss of key investment professionals responsible for implementation of the ACERA mandate,
5) Significant asset loss at the firm and/or strategy levels,
6) Violations of the Manager's Investment Management Agreements with ACERA.

7) Poor client service.

Investment Staff and Consultants determine whether to subject a Manager to a Manager Watchlist Process. Decisions to add or remove an investment manager to/from the Watchlist will be less rules-based and more a function of analyzing both quantitative and qualitative factors related to the investment manager. Investment manager additions and removals from the Watchlist will be communicated to ACERA's Investment Committee and Board semi-annually as part of the Total Fund report.

Managers on the Watchlist will be subject to enhanced scrutiny and are subject to termination upon Board approval of ~~Staff/Consultant's~~Investment Committee's recommendation after assessing Staff/Consultant's analysis and recommendation. Enhanced Scrutiny on a Manager on Watchlist may include conducting a Service Review by the Investment Committee, and may include site visits as part of the due diligence.

The Manager Watchlist process may result in one or more of the following:

1. Reduction of Assets Under Management
2. Revision of investment Contract guidelines for that Manager
3. Re-negotiation of fees
4. Termination of a Manager's Contract
5. Any other actions deemed appropriate by the Board

Each situation is unique. Action by the Board will vary depending on the type of Manager, the style/strategy, and the deficiency involved.

ACERA reserves the right to terminate an investment manager at any time, with or without thirty (30) calendar days' notice, for any reason, and without the manager being placed on Watchlist.

B. REMOVAL FROM WATCHLIST

A manager may be removed from the Watchlist with satisfaction by and recommendation from the Staff and Consultant.

C. TERMINATION

Upon determining that the Manager has not made adequate improvement in the areas outlined in the Manager Watchlist Process (Reference Section XX), Staff may recommend to the Investment Committee and/or Board that the Manager be terminated. Prior to making the final decision to terminate the Manager, the Investment Committee may invite the Manager to make a presentation at the meeting in which the Termination recommendation is to be discussed. Staff will have analyzed the liquidity of the Manager's portfolio and will have a recommendation and plan for disposition of the assets.

Upon the Investment Committee's decision to terminate, Staff will notify the relevant ACERA Manager regarding this decision (See Schedule IV). All outstanding issues between the Manager and ACERA's Master Custodian, brokers, Consultant, or other parties shall be resolved prior to closing out the Contract. The Manager Termination checklist is attached as Schedule IV.

The Manager Watchlist Process described in this Policy does not provide any additional rights or protections to Managers, beyond what is provided in the contract. The Board reserves the right to terminate an investment management contract without resort to the Manager Watchlist Process, at any time, with or without thirty (30) calendar days' notice, for any reason or no reason.

In the event of an emergency or crisis, such as an imminent, foreseeable threat to a Managed Account within the Fund, the following procedure shall be followed to protect the portfolio (with the advice and assistance of the appropriate ACERA consultant(s):

(a) Staff shall make a concerted attempt to arrange a special meeting (in person and/or by telephone) of the Board to consider and to resolve the matter.
(b) If (a) is not practicable within the time necessary to protect the portfolio, the Board delegates temporary authority to the Board Chair (and/or Vice Chair) and the Committee Chair (and/or Vice Chair) to consider and to resolve the matter.

The temporary authority delegated under subsection (b) shall be strictly limited to the matter itself and any related actions that may be necessary and appropriate. Under subsection (b), at least two (2) persons of the four persons identified would be required to consider and resolve the matter. The temporary delegated authority shall be as full and complete as the Board's authority which means that Managed Accounts and funds may be terminated and/or redeemed.

Staff and the consultants shall prepare and submit a full report on any and all actions taken under this section for presentation at the next scheduled Investment Committee meeting.

## SCHEDULE IA

## ACERA

## ASSET ALLOCATION TARGETS[6]



| **Asset Class** | **Target Allocation %** |
|---|---|
| U.S. Equity | ~~28~~24 |
| International Equity | ~~26~~24 |
| Fixed Income | ~~15~~14 |
| Real Estate | ~~8~~9 |
| Private Equity | ~~9~~11 |
| Absolute Return | ~~9~~8 |
| Real Assets | ~~5~~6 |
| Private Credit | 4 |
| Cash | 0 |
| TOTAL | 100 |

[6] ~~The target asset allocation to each asset class was adopted by the Board in September 2012.~~Approved by ACERA Board at July 2021 Board meeting.

## SCHEDULE IB

## ACERA
## MANAGER STRUCTURE TARGETS

| **Managers** | | **Target Allocation % Within** Asset Class | **Target Allocation % Within** Total Fund |
|---|---|---|---|
| U.S. Equity | | | |
| Large Cap (Core Index) | BlackRock | 80.0 | ~~22.4~~19.2 |
| Large Cap (Growth) | Trust Company of the West | 5.0 | ~~1.4~~1.2 |
| Large Cap (Value) | ~~Pzena~~Aristotle | 5.0 | ~~1.4~~1.2 |
| Small Cap (Growth) | ~~TBD~~William Blair~~[7]~~ | 5.0 | ~~1.4~~1.2 |
| Small Cap (Value) | Kennedy Capital | 5.0 | ~~1.4~~1.2 |
| International Equity | | | |
| MSCI All World | BlackRock | ~~20.0~~25.0 | ~~5.2~~6.0 |
| Large Cap (Growth)~~[7]~~ | Capital Group | ~~18.8~~25.0 | ~~4.9~~6.0 |
| Large Cap (Value)~~[7]~~ | Mondrian | ~~18.8~~25.0 | ~~4.9~~6.0 |
| ~~Large Cap (Quantitative)[7]~~ | ~~AQR~~ | ~~18.8~~ | ~~4.9~~ |
| Non-U.S. Equity (Small Cap) | Franklin Templeton | 10.0 | ~~2.6~~2.4 |
| Non-U.S. Equity (Emerging Markets Manager) | ~~Legal DD in process~~ | 10.0 | ~~2.6~~2.4 |
| International Equities EIM Mandate | ~~(~~Newton~~)~~ | ~~3.6~~5.0 | ~~1.0~~1.2 |
| | Bivium | | |
| Fixed Income | | | |
| Enhanced Index | Baird | ~~50.0~~75.0 | ~~7.5~~10.5 |
| Aggressive Core Plus | Loomis Sayles | ~~25.0~~10.7 | ~~3.8~~1.5 |
| Global Bond | Brandywine | ~~25.0~~14.3 | ~~3.8~~2.0 |
| Real Estate[8] | | | ~~8.0~~9.0 |
| Private Equity[8] | | | ~~9.0~~11.0 |
| Absolute Return[8] | | | ~~9.0~~8.0 |
| Real Assets[8] | | | ~~5.0~~6.0 |
| Private Credit[8] | | | |

~~[7] Small Cap (Growth) RFP Search in process.~~

[8] ACERA's real estate, private equity, absolute return, and real assets manager structure targets are specified in ACERA's "Real Estate Guidelines, Policies and Procedures, Private Equity Investment Policy, Absolute Return Policy, ~~and~~ Real Assets Policy, and Private Credit Investment Policy" respectively.

| | |
|---|---|
| | 4.0 |
| Cash | 0.0 |

## SCHEDULE IC

## ACERA

## ASSET ALLOCATION PORTFOLIO REBALANCING

The objective of rebalancing is to control risk and enhance the risk-adjusted return of the asset allocation strategy. For purposes of enhancing the risk-adjusted return of the asset allocation structure, the relative deviation of any liquid sub asset class away from its target weight (or liquidity-adjusted target weight) shall be no more than plus or minus 2.20 standard deviation factors of each allocation's expected volatility, relative to the other allocations in the asset mix. This standard deviation factor shall be used to define the range of allowable deviation from Policy target asset allocations. If any sub asset class reaches its allowable deviation from its target allocation, all sub asset classes will be evaluated.

The actual reallocation will be at the discretion of Staff (with oversight by the rebalancing Consultant) after reviewing the following: the relative magnitude of deviation from target for all other sub asset classes; the available cash liquidity of sub asset classes that could be used to fund rebalancing; pending cash flows (employer and employee contributions, or proceeds from a terminated Manager's portfolio); pending liquidity windows with commingled investment pools; pending investment commitments (real estate transactions and/or new funding commitments); and pending interest coupon and dividend cash flows.

Asset allocation and rebalancing status reports, and any rebalancing activity taken toward attaining the objective of the rebalancing program will be reported to the Board quarterly.

Significant modifications to the asset allocation strategy shall be cause to review the appropriateness of maintaining this rebalancing parameter or revising it to a parameter more suitable to the revised asset allocation structure.

## SCHEDULE II

### Derivatives Investment Criteria

**1) Introduction**

There is a need to allow ACERA's separate account managers to evaluate new securities and introduce them into their portfolios, for both risk and return purposes, and as relevant to their respective investment mandates. These criteria allow ACERA's separate account managers to exercise reasonable investment freedom, while minimizing the possibility of adverse implications for the Fund.

**2) Derivative Definition**

A 'derivative' commonly is defined as a financial instrument whose performance is derived, at least in part, from the performance of one or more underlying assets (such as a security, index of securities, or currency).

**3) Types of Securities Included or Excluded**

Since the derivative sector of the market is likely to experience change over time, provisions must be made for the general characteristics of a derivative security, its evaluation and monitoring. Therefore, it is appropriate not to attempt to list all of the derivative securities that are covered by this Policy. Instead, what will be explicitly stated is the investment process that governs derivative investments and the evaluation and monitoring requirements required by this Policy.

**4) Approach to Policy**

Derivative instruments must be evaluated in accordance with the following section entitled Derivative Investment Process. If the instrument meets these provisions and the spirit of this Policy, the manager may establish a prudent position in the instrument. However, the manager must be able to demonstrate the appropriateness of such an investment in light of the Policy and the manager's specific mandate.

**5) Counter-Party Evaluation**

When entering into a non-exchange traded derivative investment, the manager must fully evaluate the other side of the derivative transaction—the counter-parties to the trade. Owing to the possibility of counter-party default, managers must evaluate the risks associated with the counter-party as if an investment were being made in the traditional securities issued by the counter-party.

Furthermore, the manager must monitor individual investment and total portfolio exposure to counter-parties. Individual counter-party exposures must be diversified and not overly concentrated such that there is undue counter-party risk in the Fund.

## 6) Purposes for Derivatives

Acceptable investment purposes for the use of derivatives follow:

a. Futures, options, and forward currency contracts (over-the-counter or exchange-traded) to assist investment managers in mitigating and/or extending portfolio risks.
b. Substitute for an existing, traditional investment. In certain circumstances it may be cheaper, quicker, or easier to invest in a derivative instrument rather than transacting in the cash or traditional security market (e.g., a single stock futures contract or a total return swap).
c. Provide investment value to the portfolio, while being consistent with ACERA's asset class investment policies.
d. Obtain investment exposures that fit with the manager's investment strategy and the governing Investment Management Guidelines, but could not be made through traditional investment securities (e.g., credit default swaps).

Given that one or more of these investment purposes are achieved, it is the responsibility of the manager to explain and demonstrate how derivative investments impact specific strategy/account risk and the overall Fund.

If a manager develops an investment purpose other than those listed above which he/she feels is legitimate and consistent with the spirit of the governing Investment Management Guidelines, this purpose must be explained in writing to Staff and communicated to the Investment Committee/Board.

## 7) Risk Analyses and Monitoring of Derivatives

The investment managers are required to test and measure derivative investment sensitivities to changes in key risk factors. These risk factors include extreme changes in interest rates, price volatility, liquidity, and credit quality. These risk factors will be assessed prior to initial investment and on an ongoing basis while in the Fund.

## 8) Derivative Investment Process

Investment managers are expected to consider the following issues before purchasing any derivative instrument:

a. Determine if the purpose for investing in a derivative security is consistent with one or more of the purposes in the previous section entitled Purposes for Derivatives.
b. Evaluate, at a minimum, the counter-party risk and the risks stated in the Risk Analysis and Monitoring section of the derivatives criteria.
c. Evaluate the derivative in a comparably thorough manner as the firm would any other traditional investment opportunity.

## 9) Reporting Requirements

It is the responsibility of ACERA's investment managers to certify and demonstrate that their portfolios/accounts comply with the Policy, the applicable asset class policy, and the criteria that apply specifically to derivative instruments. ACERA's investment managers will provide the following minimum monitoring information on all derivative instruments:

a. A general statement from the investment manager that its portfolio/account is in compliance with this Derivatives Investment Criteria.
b. When stating the market value of the derivative(s) exposure, the manager will specify the security pricing sources used. The pricing source must be an exchange-listed price.
c. A statement of the risks (credit risk—an evaluation of potential counter-party default on obligations, market risk—percent of portfolio invested in derivatives, and any other relevant risks) associated with the derivative instruments.
d. Potential adverse impact on market values if extreme adverse market movements occur.
e. A statement regarding the liquidity of the derivative instruments.
f. Summary comments and the manager's list of approved counter-parties, ratings, and a statement regarding any changes to this list.

An overall statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

## SCHEDULE III

## ACERA

## POLICY INDEX FOR TOTAL FUND AND BENCHMARKS FOR ASSET CLASSES AND MANAGERS

POLICY INDEX FOR TOTAL FUND

24% Russell 3000/ 24% MSCI All Country World Index Ex U.S. IMI/ 10.50% Bloomberg U.S. Aggregate Bond Index/ 2.00% FTSE World Government Bond Index Ex. U.S./ 1.5% Bloomberg U.S. High Yield Index/ 9% NCREIF ODCE/ 11% Cambridge Global All Private Equity Benchmark/ 8% HFRI FOF Composite Index/ 3.60% S&P Global Infrastructure Index/2.10% S&P LargeMidCap Commodity and Resources Index/0.30% Bloomberg Commodity Index /4% S&P/LSTA U.S. Leveraged Loan 100 Index + 175 basis points
~~28% Russell 3000/ 26% MSCI All Country World Index Ex U.S. IMI/ 11.25% Bloomberg Barclay's Aggregate/ 2.25% Citigroup World Government Bond Ex. U.S./ 1.5% Bloomberg Barclay's High Yield/ 8% NCREIF ODCE/ 9% Thomson Reuters C|A Global All Private Equity Benchmark/ 9% HFRI FOF Composite Index/ 2.5% of S&P Global Natural Resources/ 1.75% of S&P Global Infrastructure Index/ 0.75% Bloomberg Commodities Index~~

BENCHMARKS FOR ASSET CLASSES*

<table>
<tr><th>Asset Class</th><th>Benchmark</th></tr>
<tr><td>U.S. Equity</td><td>Russell 3000</td></tr>
<tr><td>International Equity</td><td>MSCI ACWI Ex. U.S. IMI</td></tr>
<tr><td>Fixed Income</td><td>Bloomberg ~~Barclay's~~ U.S. Aggregate /~~Citigroup~~ FTSE World Government Bond Ex U.S./Bloomberg ~~Barclay's~~ U.S. High Yield ~~in the ratio of 75/15/10~~</td></tr>
<tr><td>Real Estate</td><td>NCREIF ODCE</td></tr>
<tr><td>Private Equity</td><td>Cambridge Global All Private Equity Benchmark</td></tr>
<tr><td>~~Private Equity~~</td><td>~~Thompson Reuters C|A Global All Private Equity Benchmark~~</td></tr>
<tr><td>Absolute Return</td><td>HFRI Fund of Funds Composite Index</td></tr>
<tr><td>Real Assets</td><td>S&P Global Infrastructure Index/S&P Global LargeMidCap Commodity and Resources Index/Bloomberg Commodity Index ~~S&P Global Natural Resources Index/S&P Global Infrastructure Index/Bloomberg~~</td></tr>
</table>

| | |
|---|---|
| | ~~Commodities Index in the ratio of 50/35/15~~ |
| Private Credit | S&P/Long Syndications and Trading Association U.S. Leveraged Loan 100 Index |

*Benchmarks are net of all Fees

## SCHEDULE III (cont.)

## ACERA

## POLICY INDEX FOR TOTAL FUND AND BENCHMARKS FOR ASSET CLASSES AND MANAGERS

BENCHMARKS FOR MANAGERS[9]

| **Manager** | **Benchmark** |
|---|---|
| U.S. Equity | |
| BlackRock | Russell 1000 |
| Kennedy Capital | Russell 2000 Value |
| ~~TBD[10](small growth)~~William Blair | Russell 2000 Growth |
| ~~Pzena~~Aristotle | Russell 1000 Value |
| Trust Company of the West | Russell 1000 Growth |
| International Equity | |
| ~~AQR~~ | ~~MSCI ACWI Ex U.S.~~ |
| BlackRock | MSCI World Ex U.S. |
| Capital Group | MSCI ACWI Ex U.S. |
| Franklin Templeton | MSCI ACWI Ex U.S. Small Cap |
| Mondrian | MSCI ACWI Ex U.S. |
| ~~RFP in Process (Newton)~~Newton | MSCI Emerging Markets |
| Bivium[11] | MSCI ACWI Ex U.S |
| Fixed Income | |
| Baird | Bloomberg ~~Barclay's~~ U.S. Aggregate ~~Index~~ |
| Brandywine ~~(Global Bond)~~ | ~~Citigroup~~ FTSE World Gov. Bond Index |
| Loomis Sayles ~~(Boston)~~ | Bloomberg ~~Barclay's~~ Baa Credit Index |
| Real Estate[12] | NFI ODCE |
| Private Equity ~~[19]~~[2] | ~~Thomson Reuters C\|A~~ Cambridge Global All Private Equity Benchmark |
| Absolute Return ~~[19]~~[2] | HFRI Fund of Funds Composite Index |



[9] Individual Manager's Contract contains more specific information about each Manager's benchmark.
~~[10] Small Cap (Growth) Search RFP in process.~~
[11] Bivium's ~~would have a~~ 1% allocation to the Total Fund counts toward ~~per~~ the Emerging Investment Manager Policy (EIM).
[12] ACERA's real estate, private equity, absolute return, and real assets benchmarks are specified in ACERA's "Real Estate Guidelines, Policies and Procedures, Private Equity Investment Policy, Absolute Return Policy, Private Credit Investment Policy and Real Assets Policy," respectively.

| | |
|---|---|
| Real Assets[~~1~~9~~2~~] | S&P Global Infrastructure Index/S&P Global Commodity and Resources Index/Bloomberg Commodity Index ~~S&P Global Natural Resources Index/S&P Global Infra-structure Index/Bloomberg Commodity Index in the ratio of 50/35/15~~ |
| Private Credit | S&P/Long Syndications and Trading Association U.S. Leveraged Loan 100 Index |

## SCHEDULE IV

## ACERA

## MANAGER TERMINATION CHECKLIST

This checklist is used to ensure that all details are covered when terminating investment management services.

1) Officially notify the Manager in question of the Board's decision to terminate.

2) Establish a plan of action for reallocating assets from the terminated portfolio; transfer assets to other portfolios or prepare for liquidation.

3) Review department files and logs to identify any outstanding issues.

4) Notify ACERA Administration, Fiscal Services Department, Legal Counsel, Consultant, Custodian and any other vendors of the termination. Identify and resolve all outstanding issues with these parties.

5) Have Manager and Custodian review and sign off on monthly market values and performance figures produced during the Contract period.

6) Hold payment of last invoice until all issues are resolved.

7) Retain terminated Manager files in the ACERA office for a minimum of one year; then send to ACERA archives.

8) Hold terminated Manager files in ACERA archives in accordance with the ACERA Record Retention Policy and Schedule or applicable securities laws and accounting practice.

## SCHEDULE V[12]

## ACERA

## COMPLIANCE SCHEDULE

| **REQUEST** | **DUE DATE** |
|---|---|
| **MONTHLY** | |
| Soft Dollar Commission Report (if applicable) (Submit each month regardless of activity.) | By the 20th calendar day of the month following the reported month |
| Broker Commission Report (Submit each month regardless of activity.) | By the 20th calendar day of the month following the reported month |
| Accounting Report/Portfolio Valuation (Provide transaction data – buys/sells, a portfolio listing including cost and market values, and performance returns.) | By the 20th calendar day of the month following the reported month |
| Derivative Report (if applicable) (Submit each month regardless of whether any derivative instruments were used.) | By the 20th calendar day of the month following the reported month |
| Confirmation that monthly reconciliation with Custodian is performed. (Reconciliation should include market values, transactions, and performance.) | By the 20th calendar day of the month following the reported month |
| ACERA overall compliance checklist | By the 20th calendar day of the month following the reported month |

[12] This schedule is designed for all investment Managers of ACERA. However, Managers may be required to provide additional compliance reports based on their individual Investment Agreements with ACERA. Should there be any conflict between individual Investment Agreements with ACERA and ACERA's "General Guidelines, Policies and Procedures," the individual Investment Management Agreements shall prevail.

| REQUEST | DUE DATE |
|---|---|
| **QUARTERLY** | |
| Fee Billings<br>(Provide all pertinent backup documentation for fee calculations) | Within 30 calendar days following the end of the quarter |
| Confirmation of compliance with limitations on investment vehicles and investment markets[13] | Within 30 calendar days following the end of the quarter |
| Confirmation of compliance with % limitations on cash holdings, on equity investment and on fixed-income investment[13] | Within 30 calendar days following the end of the quarter |
| Confirmation that ACERA's assets under management do not exceed 25% of the Total assets under management firm-wide | Within 30 calendar days following the end of the quarter |
| Market and Portfolio Analyses and Commentaries | Within 45 calendar days following the end of the quarter |
| **Additional requirements applicable to Real Estate Program** | |
| Operations Report/Financial Statements | Within 60 calendar days following the end of the quarter |
| Preliminary Investment Packages<br>(Applicable to Individually Managed Account) | Within 30 calendar days following the completion of the report, if applicable |
| Valuation Adjustments Memo<br>(Applicable to Individually Managed Account) | Within 90 calendar days following the anniversary date of asset acquisition |
| Property Valuation Report<br>(Applicable to Individually Managed Account) | Within 90 calendar days following the anniversary date of asset acquisition |

[13] Detailed information can be found in "Specific Investment Guideline" section of each Manager's Investment Contract.

| REQUEST | DUE DATE |
|---|---|
| **ANNUAL** | |
| Annual Performance Fee Billing (if applicable) (Provide all backup documentation/ reconciliation sign-offs.) | Within 30 calendar days following the end of the performance fee period |
| Organization Chart | Within 30 calendar days following the end of the year or as soon as updated, whichever is earlier |
| Fidelity Bond/ Errors and Omissions Insurance (Submit an original certificate.) | Within 30 calendar days of renewal |
| Audited Financial Statements | Within 90 calendar days following the end of the year |
| Form ADV, Parts 1 and 2A and 2B (Brochures) (as applicable) | Within 30 calendar days of filing |
| Statement or Summary of Code of Ethics | Within 30 calendar days of any change |
| SEC Examination Reports | Within 30 calendar days of receipt |
| Fair Political Policies Commission Form 700 | On or before March 31st of each year |
| Placement Agent Policy Update | Within 30 calendar days, provide an update of any change to the information included in the most recently filed Placement Agent Information Disclosure Form. |
| **Additional requirements applicable to Real Estate Program** | |
| Tactical Plans/Management Investment Plans[14] (applicable to Individually Managed Account) | Within 30 calendar days of completion |
| Asset Management and Budget Plan[14] (applicable to Individually Managed Account) | Within 30 calendar days prior to fiscal year end |
| Audited Financial Statement for ACERA's Fund (applicable to Individually Managed Account) | Within 90 calendar days following the end of the year |

[14] Seven copies of this report shall be submitted to Staff.

**SCHEDULE VI**

**ACERA**

**INVESTMENT PHILOSOPHY (REVISED MAY ~~2013~~ 2022)**

This document describes the investment philosophy of the Alameda County Employees' Retirement Association (ACERA). Its purpose is to enunciate the basic principles and beliefs that underlie ACERA's investment policy and impact the overall management of the pension Fund. The Investment Philosophy (Philosophy) is designed to complement rather than replace the specific investment policies of ACERA. It is expected that ACERA's approach to investments, as reflected in its policies and strategies, will be consistent with the Philosophy over time. Though the Philosophy allows significant flexibility, it also raises some constraints or implications. Where these were deemed to be significant, they have been explicitly identified and labeled as *Implications*.

Future Boards may choose to amend the investment Philosophy, as their experiences and circumstances will almost certainly differ. The initial document and any subsequent changes will provide staff, advisors and future trustees with a frame of reference to help them understand how the investment program has evolved as well as the rationale behind its design. Future Boards may modify the Philosophy as their experiences and circumstances suggest is prudent.

The major sections of the Philosophy are:

1. Mission
2. Risk Management
3. Diversification
4. Market Efficiency
5. Organizational Infrastructure and Communications
6. Performance Monitoring and Time Horizon

**1. MISSION**

a) The Board's primary goals in managing the Fund are:

i) To ensure that sufficient funds are available to pay vested benefits and maintain supplemental benefits;

ii) To comply with all applicable fiduciary standards; and

iii) To add value, where feasible, that will help reduce the costs of the plan, increase benefits, or both.

## 2. RISK MANAGEMENT

a) The Board believes that prudent management of risk is a central element of the investment function.

b) Though there are numerous risks involved in the management of a pension investment program, ACERA believes that the following warrant particular attention:

i) ***Funding-related Risk*** **-** The risk that the funds available in the Plan will be insufficient to pay the promised benefits, both vested and supplemental, or that contribution volatility will be unacceptably high. The primary methods for managing funding risk include regularly conducting integrated asset/liability studies~~,~~ and establishing appropriate and prudent investment and funding policies.

0.1 In managing the relationship between assets and liabilities, the approved asset allocation of the Fund should provide an adequate level of certainty of meeting the projected liabilities of the Plan over a time period, as determined by the actuary.

ii) ***Benchmark-related Risk*** – The risk that the investment benchmarks adopted by the Fund are inappropriate, or that the aggregate of the individual Manager benchmarks within an asset class do not adequately reflect the benchmark for the asset class as a whole. The latter risk is a specific risk generally referred to as *benchmark misfit risk (i.e. style risk)*. Inappropriate benchmarks or excessive benchmark misfit risk could result in investment performance different than expected and could adversely impact decisions concerning the hiring or firing of investment managers.

0.1 The primary methods for effectively managing benchmark-related risk are
(a) regular review of the Fund's benchmarks; and
(b) regular measurement and monitoring of misfit risk using proper methodologies.

iii) ***Manager Risk*** - The risk of aberrant performance on the part of individual investment Managers, and the related active management risk for asset classes as a whole.

0.1 The primary methods for mitigating Manager risk are:

(a) Prudent processes for selecting and monitoring investment Managers;
(b) Competent internal investment Staff;
(c) Effective investment consulting support; and
(d) Clear communication to investment Managers of ACERA's objectives, expectations, and investment time horizons.

0.2 The primary method for mitigating active management risk for asset classes include:

(a) Establishment of appropriate asset class benchmarks;
(b) Careful monitoring of asset class performance relative to the benchmarks; and
(c) Prudent use of passive management.

iv) ***Fortitude Risk*** - The risk that the Board or Staff will fail to exercise the patience, judgment, or fortitude required to support long-term policies and strategies for the investment and funding program.

0.1 The keys to managing fortitude risk are believed to include:

(a) Effective orientation and education with respect to institutional investing and actuarial science; and
(b) A commitment to continually refining, confirming, and communicating the investment philosophy and funding policy of the Association.
~~(b)~~(c) Prioritization of Board and Committee time and effort on focusing on the strategic and implementation decisions that have the highest risk and return impact at the Total Fund levels (i.e., asset allocation) and asset class level (investment structure).

v) ***ESG risk*** – ACERA and its managers will consider ESG risks that are deemed material and have a high likelihood of impacting long-term financial returns.

## 3. DIVERSIFICATION

a) ACERA acknowledges the basic tenets of modern portfolio theory, which suggest that diversification, or combining assets that are not perfectly correlated with each other, will reduce the long-term volatility of the overall portfolio.

b) Additionally, ACERA acknowledges the main tenet of capital market theory, which suggests that the capital markets represent the optimal structure for those markets and adoption of market neutral asset class structures[13] (i.e., 90%/10% U.S. Large Cap/10% U.S. Small Cap in Domestic Equities) will provide the most efficient structure (i.e., highest risk-adjusted returns) for those markets.

~~a)~~

~~b)~~c) It is generally desirable however to avoid overly complex asset structures, provided the allocation selected can reasonably be expected to meet the objectives of the Plan. ACERA believes that the benefits of diversification must be weighed against the costs involved, which may include fees, liquidity, complexity, communication, internal staff resources and expertise and trustee knowledge and effort.

~~c)~~d) The following asset classes are appropriate candidates for inclusion in its portfolio:

i) Domestic equity
ii) International equity (including emerging markets)
iii) Fixed income, including high yield fixed income and international fixed income
iv) Real estate
v) Private Equity
vi) Absolute Return
vii) Real Assets
~~vii)~~viii) Private Credit

Implications

- A systematic methodology for re-balancing the investment portfolio is required to ensure proper implementation and adequate risk control concerning ACERA's asset allocation.
- Adding or deleting asset classes or investment Managers should be considered in light of the impact such decisions are likely to have on the general complexity and cost structure of the portfolio, as well as ACERA's ability to prudently achieve its investment and funding goals over the long run.

## 4. Market Efficiency

a) ACERA does not believe in the viability of active management strategies that rely on market timing.

[13] Applies only to public markets.

b) ACERA does not believe in the viability of management strategies that call for over weighting or under weighting styles (i.e. style drift)~~or sectors within an asset class; i.e., benchmark misfit risk will not generate long-term alpha~~. Accordingly, ACERA generally believes that it should maintain exposures within an asset class (~~such as~~specifically style or market capitalization weightings) that are consistent with the broad benchmark for the asset class as a whole.

c) ACERA does believe that market efficiency varies among asset classes, creating opportunities for successful active management strategies based on sector and securities selection.

d) Asset classes that can be demonstrated to be efficient should be managed passively in order to reduce active management risk and lower the costs of managing the portfolio.

e) For inefficient asset classes, ACERA believes that it has the ability and a duty to prudently exploit such inefficiencies through active securities selection strategies.

Implications

- ACERA should be conscious of any subtle forms of market timing that may arise in the course of managing the Fund, or that may be implicit in investment strategies presented to ACERA for inclusion in the investment program.

- ACERA must determine appropriate methodologies for determining whether an asset class is efficient or presents appropriate opportunities, thus providing insight to the Board on the use of particular strategies.

## 5. ORGANIZATIONAL INFRASTRUCTURE AND COMMUNICATIONS

a) ACERA believes that, in order for the investment program to achieve its goals, ACERA must invest the necessary resources to build and maintain an appropriate organizational infrastructure, key elements of which include:

   i) A competent, internal investment staff comprised of a sufficient number of investment professionals possessing appropriate leadership, technical, and administrative skills.

0.1 Attracting a competent staff. ACERA recognizes that it competes with the private sector. It must therefore continually strive to create a total work environment that is challenging, rewarding, and competitive.

ii) A strong relationship with outside general investment Consultant(s) who are able to provide ACERA with the following:

0.1 A high degree of investment expertise;
0.2 Innovative and proactive advice and counsel;
0.3 Strong research support; and
0.4 Strong reporting capabilities.

iii) A broad-based information gathering and reporting system to present well- researched, relevant and timely data in a manner that is easily understood and that supports rigorous and consistent monitoring of critical investment activities.

iv) An open channel of communication among the Board, management, and ACERA's external investment professionals.

b) By providing the Board with timely, accurate, and thorough information, the organizational infrastructure will give the Board the high level of comfort it needs to set policy, make investment decisions, oversee the performance of the investment program, and maintain the fortitude necessary to support its investment philosophy, policies, and strategies.

<u>Implications</u>

- ACERA must determine what constitutes an appropriate internal investment staff structure, given the nature of the current investment program.

- ACERA must, over time, take concrete steps toward creating a work environment that will allow the Association to attract and retain needed staff.

- ACERA must recognize that developing the organizational infrastructure it needs – staffing, consulting support, information systems, and communication channels cannot be achieved overnight, but rather will require an ongoing commitment of time and resources.

## 6. Performance Monitoring and Time Horizon

a) ACERA holds the following basic beliefs concerning performance monitoring practices and methodologies:

i) The various investment policies of the Fund, in the aggregate, are the most important determinants of investment success; compliance with investment policies should, therefore, be monitored rigorously;

ii) The performance of the total portfolio, individual asset classes, and investment Managers should be compared to appropriate, predetermined benchmarks;

iii) Peer comparisons are an additional valid tool in assessing individual Manager performance (supplementing the use of benchmarks), given that ACERA aims to select superior Managers within particular investment styles or mandates. Peer comparisons, or performance rankings, are also valid tools for measuring the performance of asset class portfolios; and

iv) Peer group comparisons may not be an appropriate means of assessing the performance of the total Fund, given that sponsors have different objectives and risk tolerance levels, and therefore may have different asset allocation policies.

v) Benchmark misfit risk, or the risk that the aggregate of individual investment Manager benchmarks in an asset class do not adequately reflect the benchmark for the asset class as a whole, should be explicitly measured on a regular basis.

vi) Investment Managers are generally hired to fulfill a specific role in a portfolio. Accordingly, ACERA believes it is important that ACERA monitor the extent to which Managers comply with their stated style and mandates.

b) ACERA believes that successful funding and investment decisions require a long-term perspective on the part of the Board and management:

i) It is the intention of the Retirement Board that commitments to asset classes and investment strategies should involve long time horizons that may include more than one business cycle (3-5 years each). Relatively illiquid asset classes may require even longer time horizons.

ii) The Board acknowledges that commitments to individual investment Managers also require a long time horizon of at least one business cycle (3-5 years).

iii) ACERA believes that proper reporting and monitoring systems; and clear communication among Consultants, management, investment Managers and the Board will enable the Board to maintain the necessary long term perspective on all investment decisions.

Implications

- Assessing the investment performance relative to appropriate, pre-determined, benchmarks is as applicable to the total portfolio and to individual asset classes as it is for individual investment Managers and, therefore, warrants a commensurate share of the Board's time and attention.

- The Board will spend relatively little time assessing the performance of the Fund relative to that of comparable pension funds.

- ACERA will need either to develop in-house capabilities to measure benchmark-related risk regularly or to purchase such capabilities from external investment Consultants.

- ACERA will monitor all investment Managers to ensure they are complying with their stated investment style, regardless of whether they are performing well or poorly. Strongly performing Managers who are found not to be following their stated styles will be carefully scrutinized and may be subject to disciplinary action.

- ACERA will monitor all investment providers to ensure compliance with ACERA's "General Investment Guidelines, Policies and Procedures."

## SCHEDULE VII

### CHARTER OF ACERA'S INVESTMENT COMMITTEE OF THE BOARD

To identify issues pertinent to the effective management of the investment portfolio, initiate analysis of such issues by management or consultants, review all policy recommendations by staff and consultants, provide recommendations to the Board for adoption, and oversee the implementation of the investment program. Specific responsibilities include:

1. The Investment Committee shall review recommendations of staff and consultants and in turn provide its own recommendations to the Board on all investment policies, including investment philosophy, requiring Board approval. Said policies shall normally be contained in, or appended to, the *ACERA General Investment Guidelines, Policies and Procedures*.

2. The Investment Committee shall review and recommend additional policies for the Board's approval as requested by the Board and in accordance with the Policy Development Process.

3. The Investment Committee shall review recommendations of staff and consultants and in turn provide its own recommendation for Board approval on the following matters:
   a) Appointment of Investment Managers;
   b) Appointment of the Investment Consultants;
   c) Appointment of the Custodian Bank.

4. The Investment Committee shall monitor the investment program of ACERA in accordance with all relevant policies of the Board. In general, the Investment Committee shall monitor:
   a) Compliance with and continued appropriateness of all ACERA investment policies;
   b) Progress towards achievement of investment goals;
   c) Progress towards implementation of the ACERA budget and Business Plan with respect to investments; and
   d) Cost effectiveness of the ACERA investment program.

5. In accordance with the provisions of the ~~Open Meeting Law~~Brown Act, the Investment Committee shall allow adequate opportunity for input from the public and shall respond to such input in a manner that reflects the Committee members' fiduciary duties as trustees of the Plan.

### Frequency of Meetings

The Investment Committee shall generally meet monthly on the second Wednesday of the month, but may meet more or less frequently as required.

### Committee Composition

The Investment Committee shall be composed of all Board members, one of whom shall serve as Committee Chair. Alternate members shall serve on the Investment Committee as provided by law.

### Staff Contact

The Chief Investment Officer shall serve as a staff contact to the Investment Committee.

**SCHEDULE VIII**

**ACERA**

**TABLE OF AMENDMENT DATES**

AMENDING RESOLUTIONS

| | | |
|---|---|---|
| Jun. | 27, | 1985 |
| Oct. | 10, | 1985 |
| Jan. | 9, | 1986 |
| Jan. | 16, | 1986 |
| Mar. | 13, | 1986 |
| May | 22, | 1986 |
| Sep. | 11, | 1986 |
| Oct. | 9, | 1986 |
| Nov. | 20, | 1986 |
| May | 14, | 1987 |
| Aug. | 13, | 1987 |
| Oct. | 8, | 1987 |
| Apr. | 21, | 1988 |
| Jul. | 28, | 1988 |
| Jan. | 29, | 1989(4) |
| Apr. | 13, | 1989(5) |
| May | 18, | 1989 |
| Jul. | 13, | 1989 |
| Aug. | 10, | 1989 |
| Nov. | 16, | 1989(2) |
| Jul. | 11, | 1991 |
| Jun. | 11, | 1992 |
| Jun. | 10, | 1993 |
| Jul. | 8, | 1993 |
| Nov. | 18, | 1993 |
| May | 14, | 1994 |
| Aug. | 18, | 1994 |
| Nov. | 20, | 1994 |
| Feb. | 16, | 1995 |
| May | 18, | 1995 |
| Jan. | 16, | 1997 |
| Aug. | 20, | 1998 |
| May | 20, | 1999 |
| Jan. | 31, | 2000~~*~~ |
| Apr. | 19, | 2001 |
| Jul. | 18, | 2002 |
| Feb. | 21, | 2003 |
| Feb. | 19, | 2004 |
| Feb. | 17, | 2005 |
| Jul. | 20, | 2006 |
| Jun. | 21, | 2007 |
| Sep. | 18, | 2008 |
| May | 20, | 2013 |
| Sep | 20, | 2018 |
| May | 19, | 2022 |

~~* Verus (fka Strategic Investment Solutions) was hired as the General Investment Consultant for ACERA in 2000.~~

Verus

PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS

PERIOD ENDING: DECEMBER 31, 2021

# Asset Allocation and Investment Strategy Review – Public Markets

## Alameda County Employees' Retirement Association

# Table of Contents

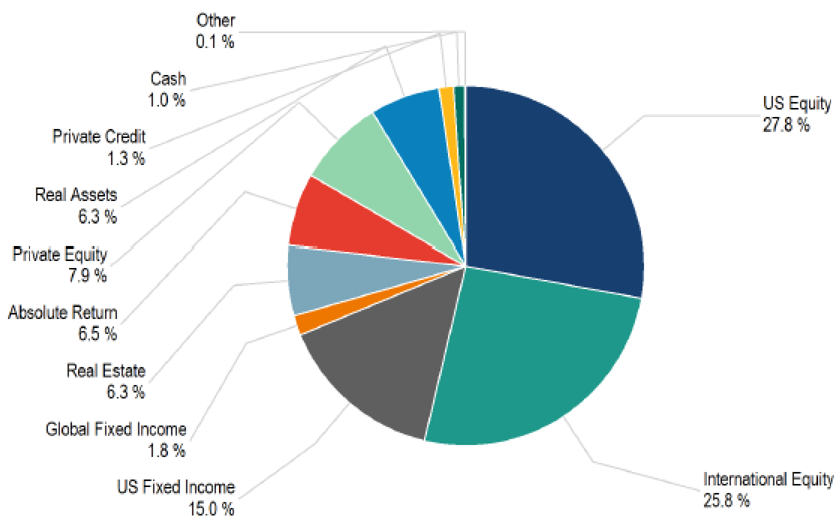
Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484
PITTSBURGH 412-784-6678

# Total Fund Review

# Asset allocation



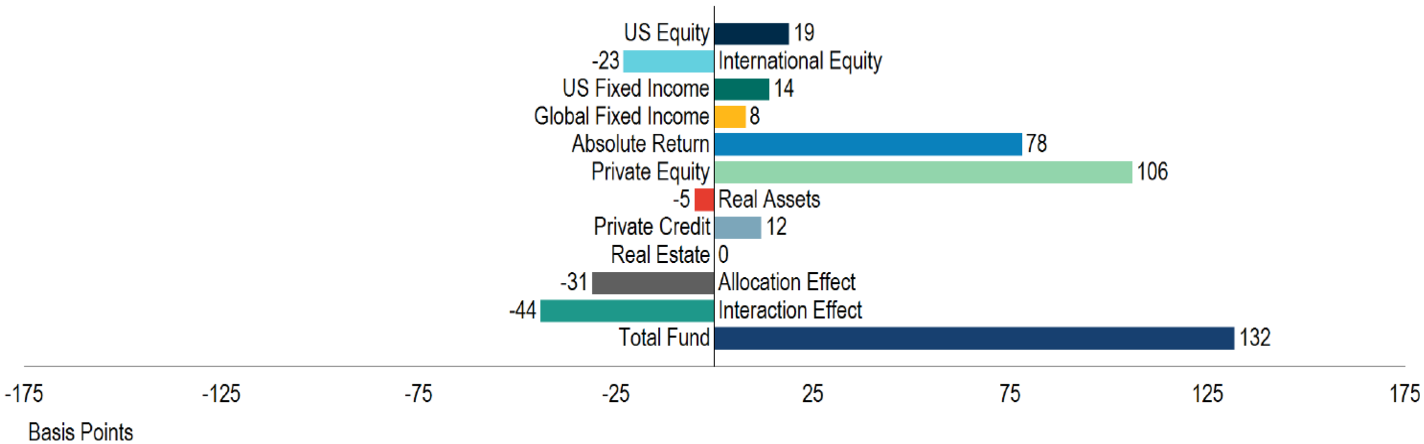

- Public markets comprise 78% of ACERA's assets
- Majority of public markets assets are invested in equities (54%)

| | Current (MV) | Current (%) | Policy Allocation | Difference* |
|---|---|---|---|---|
| US Equity | $3,306,167,527 | 27.8% | 24.0% | 3.8% |
| International Equity | $3,065,982,519 | 25.8% | 24.0% | 1.8% |
| US Fixed Income | $1,787,376,848 | 15.0% | 12.0% | 3.0% |
| Global Fixed Income | $218,078,041 | 1.8% | 2.0% | -0.2% |
| Real Estate | $748,887,358 | 6.3% | 9.0% | -2.7% |
| Absolute Return | $772,034,198 | 6.5% | 8.0% | -1.5% |
| Private Equity | $941,543,178 | 7.9% | 11.0% | -3.1% |
| Real Assets | $748,717,121 | 6.3% | 6.0% | 0.3% |
| Private Credit | $159,766,419 | 1.3% | 4.0% | -2.7% |
| Cash | $118,756,191 | 1.0% | 0.0% | 1.0% |
| Other | $11,098,189 | 0.1% | 0.0% | 0.1% |
| **Total** | **$11,878,407,588** | **100.0%** | **100.0%** | |

*Difference between Policy Allocation and Current Allocation

# Total Fund attribution

## One Year as of 12/31/21




| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction Effects | Total Effects |
|---|---|---|---|---|---|---|---|
| US Equity | 26.49% | 25.66% | 0.83% | 0.19% | 0.32% | 0.02% | 0.53% |
| International Equity | 8.05% | 8.99% | -0.94% | -0.23% | -0.19% | -0.01% | -0.44% |
| US Fixed Income | -0.62% | -1.54% | 0.92% | 0.14% | -0.25% | 0.00% | -0.11% |
| Global Fixed Income | -5.48% | -6.97% | 1.49% | 0.08% | -0.11% | -0.01% | -0.05% |
| Absolute Return | 14.95% | 6.08% | 8.87% | 0.78% | 0.15% | -0.16% | 0.77% |
| Private Equity | 51.35% | 35.86% | 15.49% | 1.06% | -0.17% | -0.21% | 0.69% |
| Real Assets | 16.71% | 17.19% | -0.49% | -0.05% | -0.02% | 0.01% | -0.05% |
| Private Credit | 9.66% | 7.04% | 2.63% | 0.12% | 0.24% | -0.08% | 0.27% |
| Real Estate | 22.32% | 22.17% | 0.14% | 0.00% | -0.29% | 0.01% | -0.29% |
| **Total** | **16.27%** | **14.95%** | **1.32%** | **2.07%** | **-0.31%** | **-0.44%** | **1.32%** |

- Main source of value-add was Private Equities
- However, this reflects benchmark “misfit” effect
- Absolute Return also source of value-added
- No large asset class detractors

# Total Fund and composite performance

| | Market Value ($) | % of Portfolio | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 7 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|---|---|
| Total Fund | 11,878,407,588 | 100.00 | 16.21 | 15.82 | 12.22 | 9.76 | 10.76 | 9.90 | Sep-85 |
| *Policy Index* | | | *14.99* | *14.82* | *11.39* | *9.40* | *10.62* | *10.09* | *Sep-85* |
| Total Fund w/o Overlay | 11,867,309,399 | 99.91 | 16.21 | 15.82 | 12.22 | 9.75 | -- | -- | |
| US Equity | 3,306,167,527 | 27.83 | 26.49 | 26.16 | 18.75 | 14.76 | 16.40 | 12.41 | Sep-85 |
| *Russell 3000* | | | *25.66* | *25.79* | *17.97* | *14.55* | *16.30* | *11.94* | *Sep-85* |
| International Equity | 3,065,982,519 | 25.81 | 8.05 | 15.71 | 12.03 | 8.58 | 9.32 | 8.54 | Dec-90 |
| *MSCI ACWI ex USA IMI Gross* | | | *8.99* | *14.13* | *10.33* | *7.35* | *8.05* | *6.65* | *Dec-90* |
| Total Fixed Income | 2,005,454,889 | 16.88 | -1.34 | 6.71 | 5.39 | 4.39 | 5.10 | 7.19 | Sep-86 |
| *Fixed Income Blend* | | | *-2.30* | *4.75* | *3.73* | *3.09* | *2.92* | *6.21* | *Sep-86* |
| US Fixed Income | 1,787,376,848 | 15.05 | -0.62 | 6.71 | 5.21 | 4.55 | 5.36 | 7.11 | Sep-86 |
| *Bloomberg US Aggregate TR* | | | *-1.54* | *4.79* | *3.57* | *3.00* | *2.90* | *5.99* | *Sep-86* |
| Global Fixed Income | 218,078,041 | 1.84 | -5.48 | 5.64 | 5.22 | 3.38 | 3.98 | 6.96 | Nov-01 |
| *FTSE WGBI TR* | | | *-6.97* | *2.75* | *2.94* | *1.80* | *0.96* | *4.15* | *Nov-01* |
| Cash | 118,756,191 | 1.00 | 0.54 | 0.97 | 1.13 | 0.88 | 0.64 | 2.99 | Sep-85 |
| *91 Day T-Bills* | | | *0.03* | *0.85* | *1.08* | *0.82* | *0.59* | *3.07* | *Sep-85* |

- ACERA has added value in all public markets with exception of Absolute Return, even in U.S. equities, which has been difficult space for active manager positive value-added

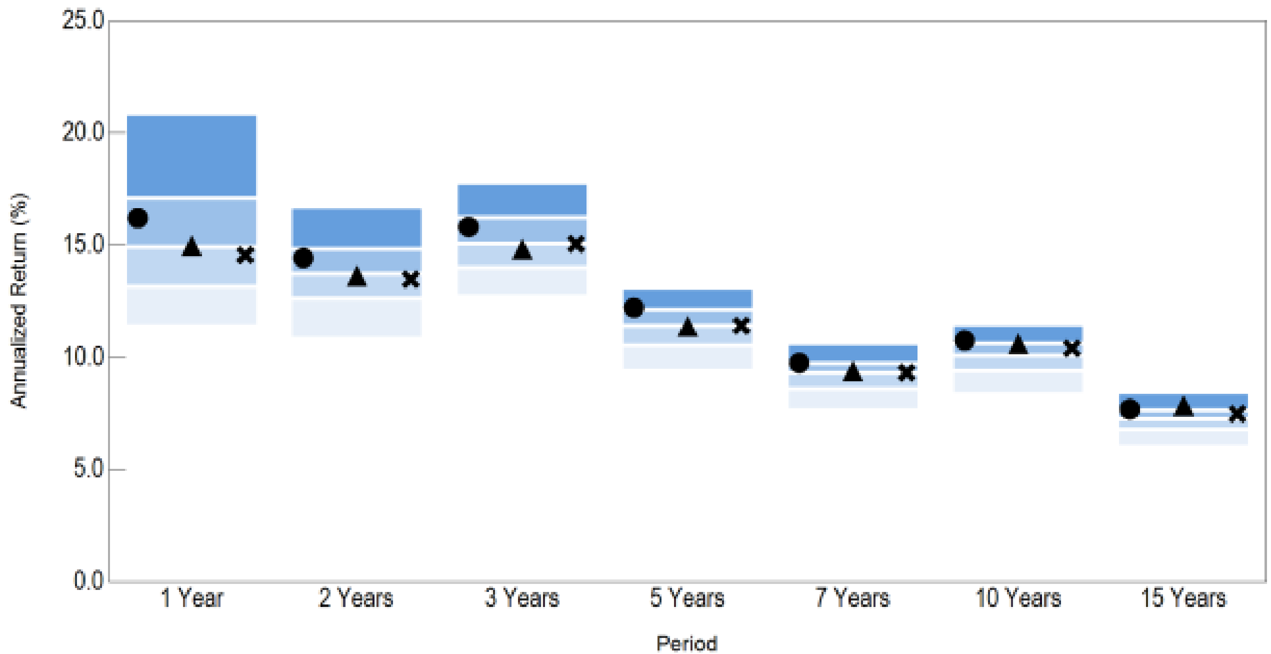
# Total Fund and composite performance

| | Market Value ($) | % of Portfolio | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 7 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|---|---|
| Absolute Return | 772,034,198 | 6.50 | 14.95 | 5.17 | 3.26 | 3.19 | 4.65 | 3.81 | Sep-11 |
| *HFRI Fund of Funds Composite Index* | | | *6.16* | *8.46* | *5.71* | *4.08* | *4.56* | *4.39* | *Sep-11* |
| Private Equity | 941,543,178 | 7.93 | 51.35 | 22.86 | 19.93 | 18.18 | 17.57 | 7.70 | Nov-08 |
| *Thomson Reuters C\|A Global All PE 1 Qtr Lag* | | | *35.86* | *15.02* | *14.26* | *11.69* | *12.06* | *9.69* | *Nov-08* |
| Real Assets | 748,717,121 | 6.30 | 16.71 | 6.92 | 2.52 | 0.23 | -2.27 | -1.98 | Sep-11 |
| *Real Asset Blend* | | | *17.19* | *11.10* | *7.62* | *7.00* | *6.32* | *6.25* | *Sep-11* |
| Private Credit | 159,766,419 | 1.35 | 10.20 | -- | -- | -- | -- | 6.14 | Oct-19 |
| *S&P/LSTA Leveraged Loan Index +1.75%* | | | *7.04* | *7.47* | *6.09* | *6.18* | *6.52* | *6.71* | *Oct-19* |
| Real Estate | 748,887,358 | 6.30 | 22.32 | 9.86 | 9.30 | 10.38 | 11.10 | 7.34 | Mar-86 |
| *NCREIF-ODCE* | | | *22.17* | *9.20* | *8.71* | *9.60* | *10.45* | *7.49* | *Mar-86* |
| Overlay | 11,098,189 | 0.09 | -- | -- | -- | -- | -- | 2.85 | Jul-21 |

- ACERA has added value in all private markets and Absolute return over last 10 years and in shorter term periods as well.

# Peer universe comparison

InvMetrics Public DB > $1B Gross Return Comparison

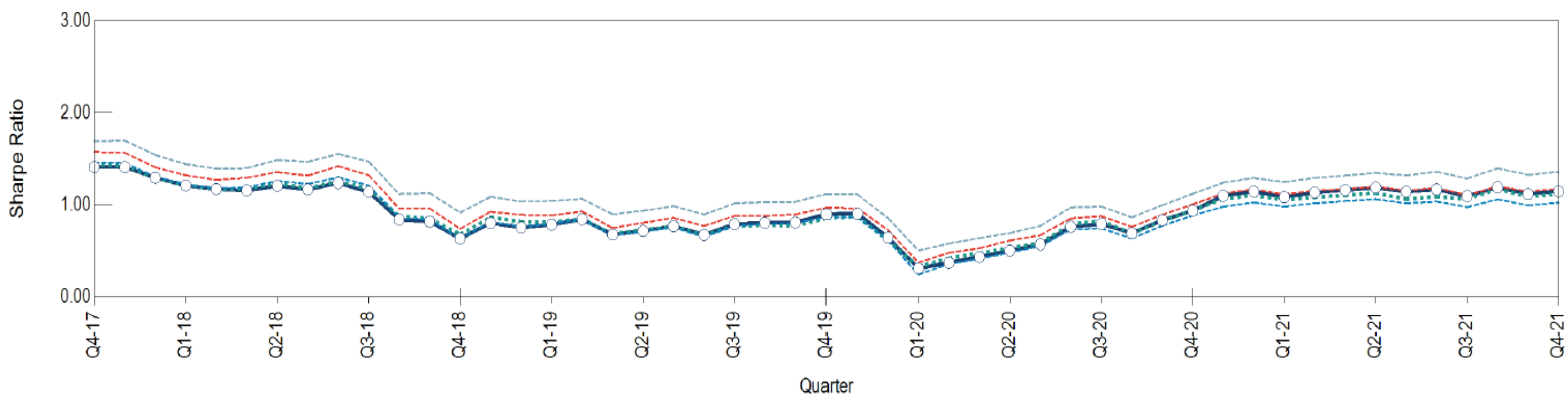



In most periods, ACERA compares well vs. peers (i.e., above median)

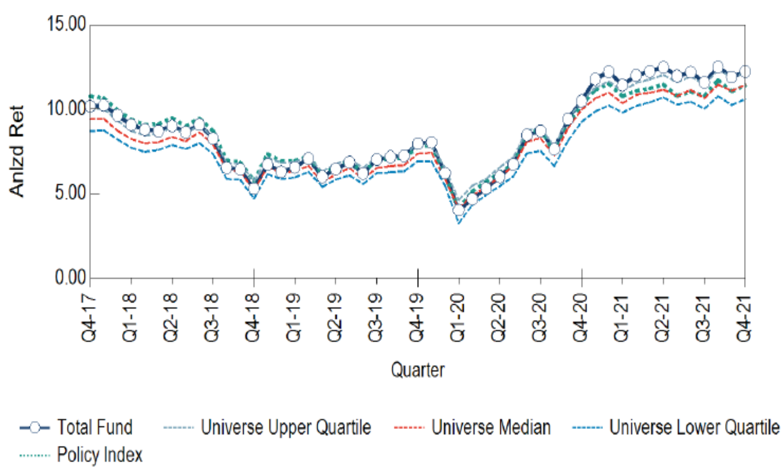
| | Return (Rank) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 20.86 | | 16.71 | | 17.78 | | 13.10 | | 10.63 | | 11.46 | | 8.45 | |
| 25th Percentile | 17.11 | | 14.85 | | 16.26 | | 12.14 | | 9.76 | | 10.64 | | 7.66 | |
| Median | 14.94 | | 13.75 | | 15.09 | | 11.44 | | 9.34 | | 10.10 | | 7.27 | |
| 75th Percentile | 13.18 | | 12.66 | | 14.01 | | 10.58 | | 8.63 | | 9.43 | | 6.79 | |
| 95th Percentile | 11.41 | | 10.85 | | 12.72 | | 9.43 | | 7.68 | | 8.40 | | 6.02 | |
| # of Portfolios | 84 | | 84 | | 84 | | 84 | | 83 | | 80 | | 77 | |
| ● Total Fund | 16.21 | (38) | 14.43 | (37) | 15.82 | (34) | 12.22 | (19) | 9.76 | (25) | 10.76 | (22) | 7.70 | (21) |
| ▲ Policy Index | 14.99 | (49) | 13.64 | (53) | 14.82 | (58) | 11.39 | (53) | 9.40 | (47) | 10.62 | (28) | 7.86 | (14) |
| ✕ Allocation Index | 14.57 | (56) | 13.49 | (57) | 15.06 | (52) | 11.42 | (52) | 9.33 | (51) | 10.41 | (33) | 7.49 | (36) |

# Risk-adjusted trend vs. peers

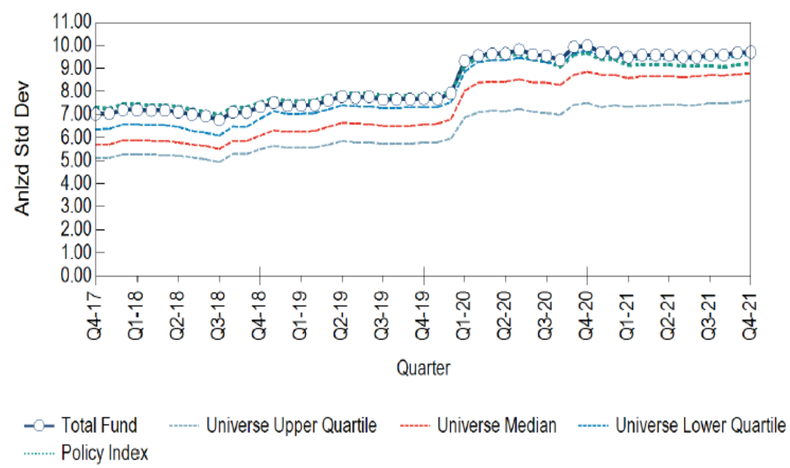
Rolling 5 Year Sharpe Ratio




Rolling 5 Year Annualized Return (%)




Rolling 5 Year Annualized Standard Deviation

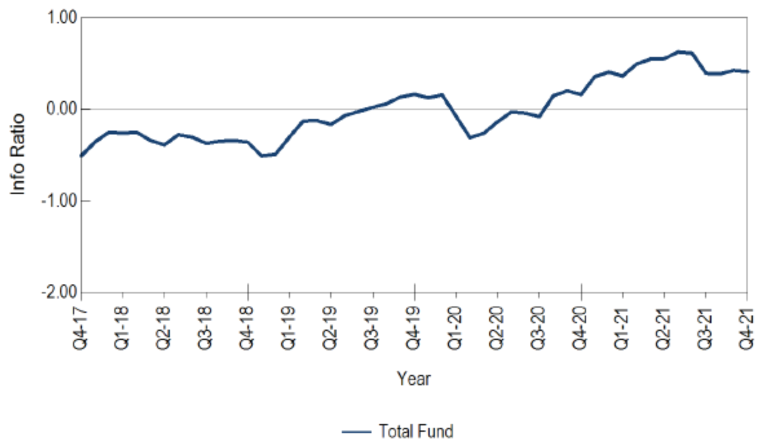



- ACERA's risk-adjusted return ratio (Sharpe) has been consistently at peer median.
- ACERA long-term returns have consistently been top quartile

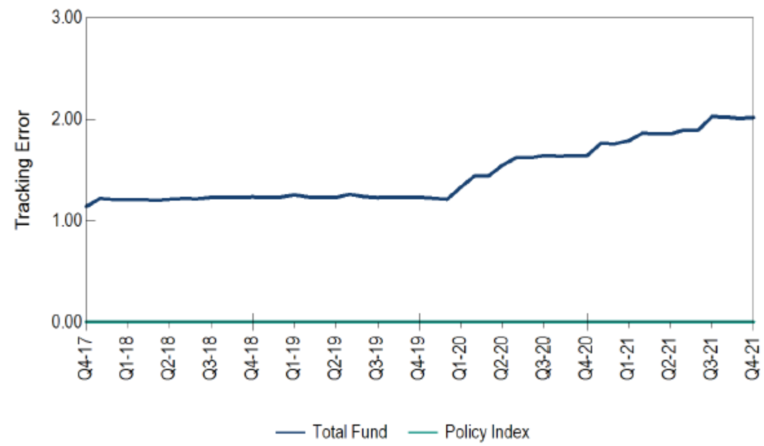
ACERA fund volatility has also been higher vs. peers

# Trend in risk-adjusted metrics

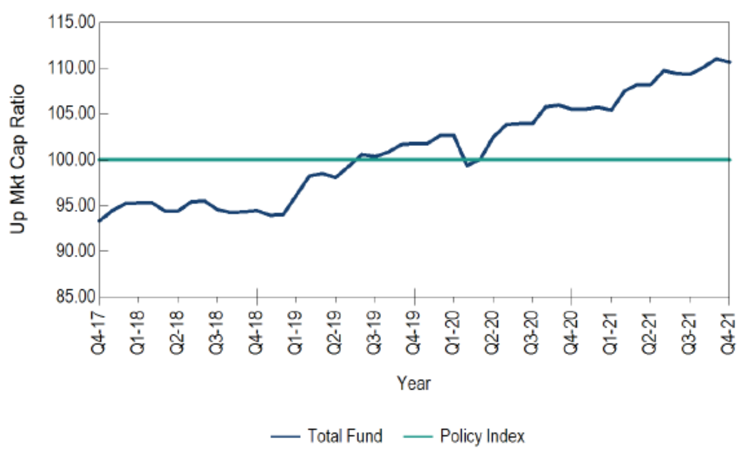
Rolling 5 Year Information Ratio



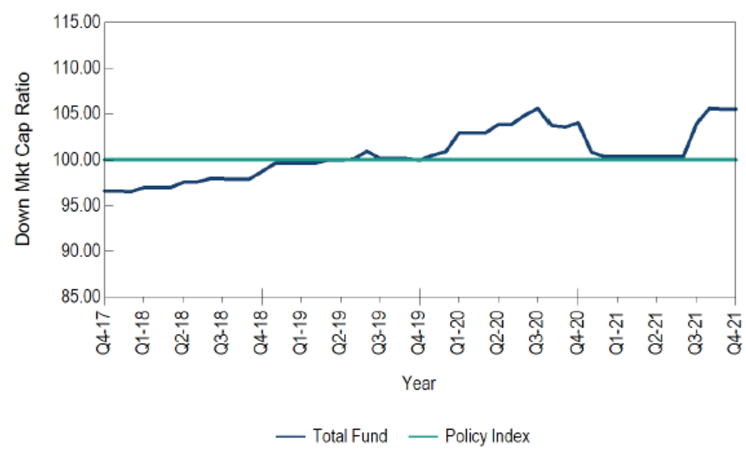

Rolling 5 Year Tracking Error




Rolling 5 Year Up Market Capture Ratio (%)



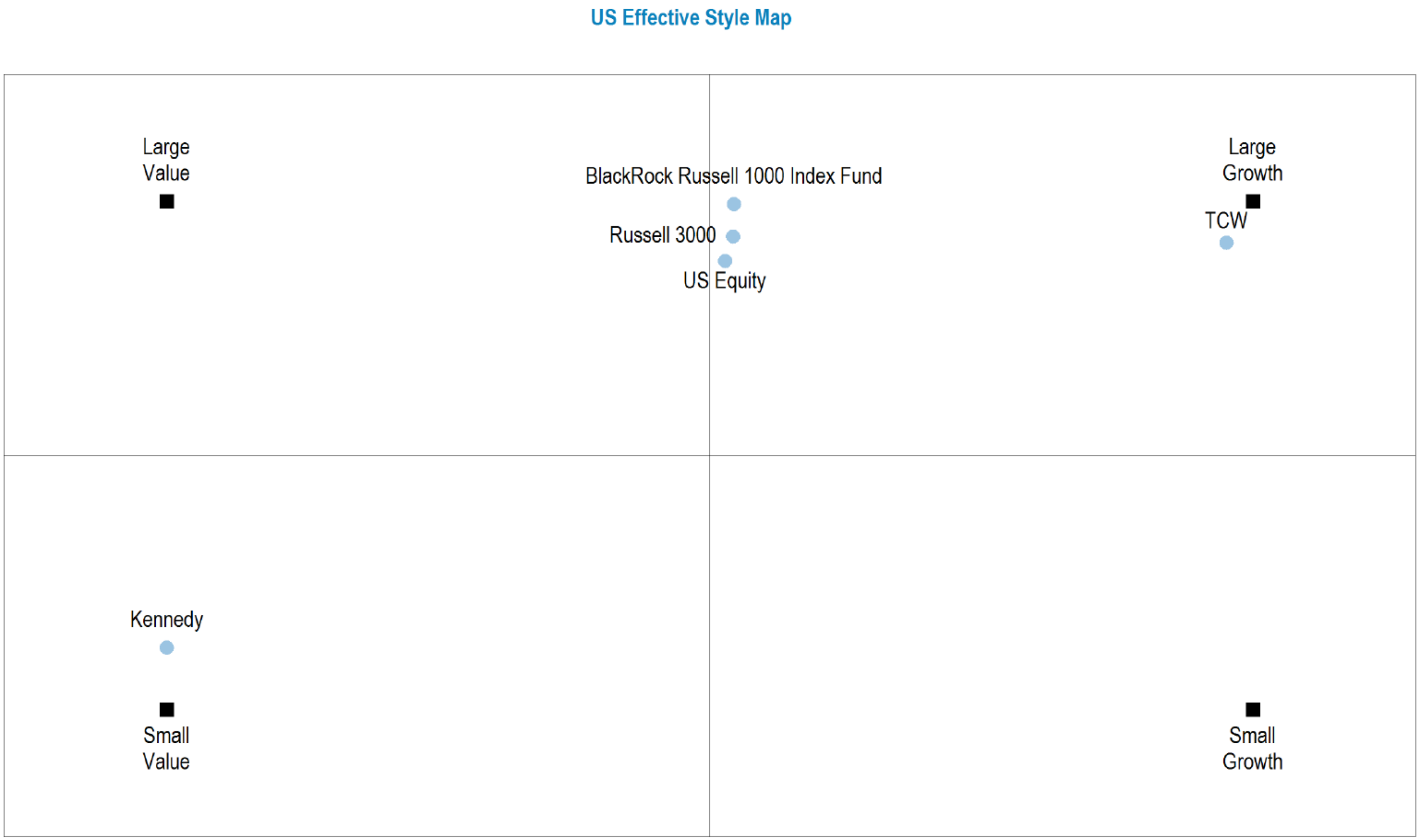

Rolling 5 Year Down Market Capture Ratio (%)




- ACERA active managers have exhibited rising risk-adjusted excess returns over last several years at only modestly higher levels of active risk.
- Up market capture has been consistently higher than down market capture.

# Public equities

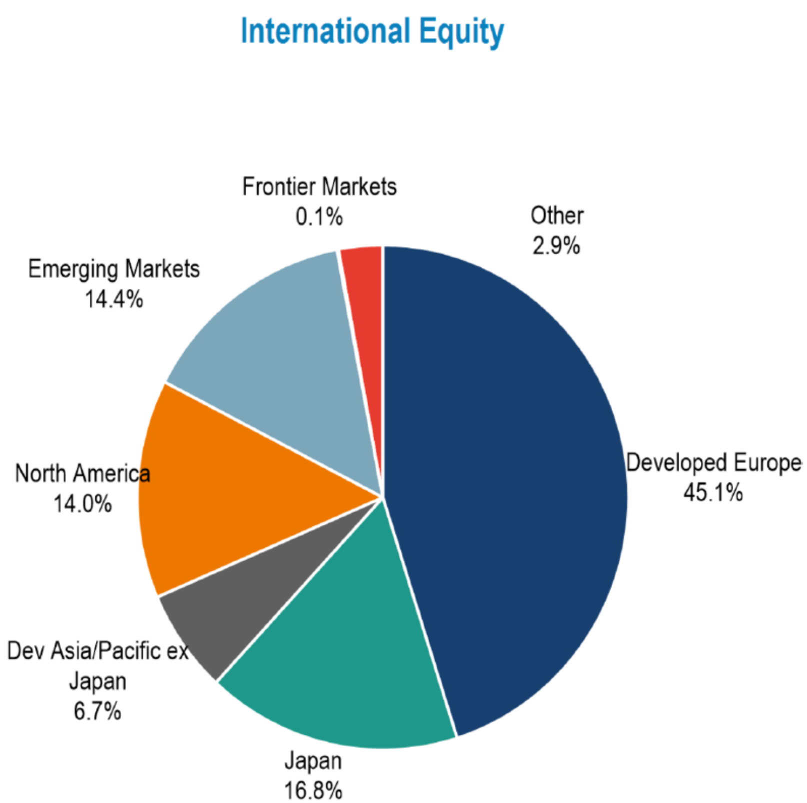
# Public equities structure – U.S.

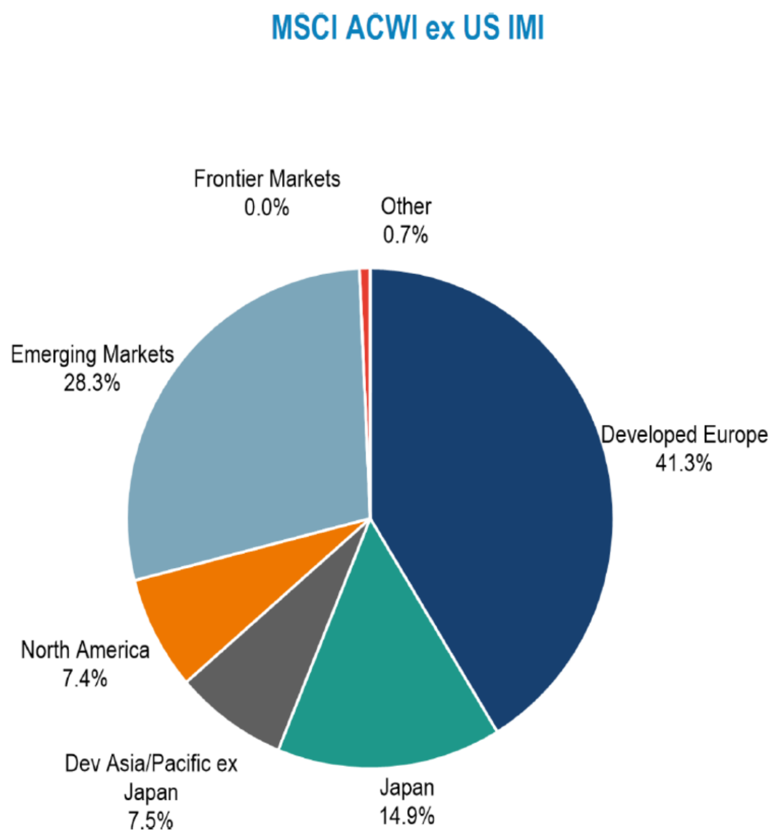



- Assets mostly passively managed
- Result is style neutral portfolio with very modest small cap bias
- Prudent approach to highly efficient asset class
- Also, low fee structure

*Results are returns-based and encompass 36-months.*

# Public equities structure – Non-U.S.




- ACERA portfolio is underweight Emerging Markets vs. benchmark and overweight North America, exposures which have both been positive contributors to results

# Public equities historical returns

| | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 7 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|
| **US Equity** | **26.49** | **26.16** | **18.75** | **14.76** | **16.40** | **12.41** | **Sep-85** |
| *Russell 3000* | *25.66* | *25.79* | *17.97* | *14.55* | *16.30* | *11.94* | *Sep-85* |
| BlackRock Russell 1000 Index Fund | 26.49 | 26.25 | -- | -- | -- | 19.53 | Apr-18 |
| *Russell 1000* | *26.45* | *26.21* | *18.43* | *14.84* | *16.54* | *19.49* | *Apr-18* |
| **Large Cap Active Equity** | **26.30** | **23.03** | **16.62** | **13.21** | **15.27** | **9.12** | **Mar-00** |
| *Russell 1000* | *26.45* | *26.21* | *18.43* | *14.84* | *16.54* | *7.65* | *Mar-00* |
| Aristotle | 26.23 | -- | -- | -- | -- | 38.53 | Oct-20 |
| *Russell 1000 Value* | *25.16* | *17.64* | *11.16* | *9.73* | *12.97* | *39.48* | *Oct-20* |
| TCW | 26.38 | 33.90 | 26.84 | 19.23 | 18.85 | 9.93 | Jun-99 |
| *Russell 1000 Growth* | *27.60* | *34.07* | *25.32* | *19.58* | *19.79* | *8.17* | *Jun-99* |
| **Small Cap Equity** | **26.37** | **28.10** | **18.34** | **14.22** | **15.93** | **14.12** | **Jul-85** |
| *Russell 2000* | *14.82* | *20.02* | *12.02* | *10.76* | *13.23* | *9.95* | *Jul-85* |
| Kennedy | 39.90 | 23.36 | 11.76 | 11.11 | 14.78 | 13.79 | Sep-10 |
| *Russell 2000 Value* | *28.27* | *17.99* | *9.07* | *9.45* | *12.03* | *11.48* | *Sep-10* |
| William Blair Small Cap Growth | 14.53 | -- | -- | -- | -- | 28.09 | Oct-19 |
| *Russell 2000 Growth* | *2.83* | *21.16* | *14.53* | *11.66* | *14.14* | *20.56* | *Oct-19* |

- Both long term managers and both newer managers have been adding value relative to respective benchmarks since inception

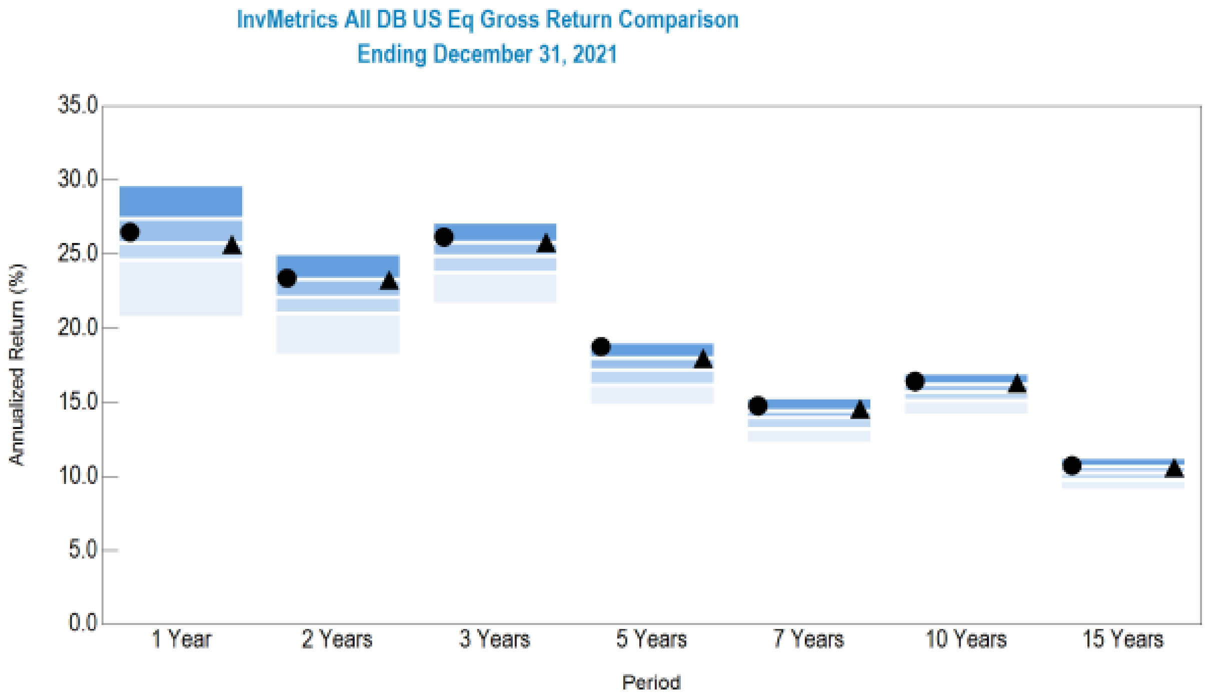
# Public equities return and risk metrics

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|---|---|---|---|---|---|
| US Equity | 26.16% | 18.59% | 1.36 | 0.40 | 0.94% |
| Russell 3000 | 25.79% | 18.19% | 1.37 | -- | 0.00% |
| BlackRock Russell 1000 Index Fund | 26.25% | 17.96% | 1.41 | 2.43 | 0.02% |
| Russell 1000 | 26.21% | 17.96% | 1.41 | -- | 0.00% |
| Aristotle | -- | -- | -- | -- | -- |
| Russell 1000 Value | 17.64% | 19.33% | 0.87 | -- | 0.00% |
| TCW | 33.90% | 18.33% | 1.80 | -0.03 | 5.13% |
| Russell 1000 Growth | 34.07% | 18.42% | 1.80 | -- | 0.00% |
| Kennedy | 23.36% | 25.34% | 0.89 | 1.33 | 4.03% |
| Russell 2000 Value | 17.99% | 25.35% | 0.68 | -- | 0.00% |
| William Blair Small Cap Growth | -- | -- | -- | -- | -- |
| Russell 2000 Growth | 21.16% | 23.40% | 0.87 | -- | 0.00% |

- TCW and Kennedy exhibit somewhat high levels of active risk
- However, due to utilization of passive and complementary strategies, total ACERA U.S. equities exhibit modest level of active risk

*Trailing 3 Years*

# Public equities peer comparison – U.S.




| Return (Rank) | 1 Year | | 2 Years | | 3 Years | | 5 Years | | 7 Years | | 10 Years | | 15 Years | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 29.68 | | 25.02 | | 27.18 | | 19.08 | | 15.28 | | 16.93 | | 11.28 | |
| 25th Percentile | 27.44 | | 23.31 | | 25.81 | | 18.01 | | 14.47 | | 16.25 | | 10.65 | |
| Median | 25.77 | | 22.11 | | 24.90 | | 17.20 | | 13.97 | | 15.73 | | 10.24 | |
| 75th Percentile | 24.62 | | 21.04 | | 23.77 | | 16.17 | | 13.22 | | 15.12 | | 9.80 | |
| 95th Percentile | 20.71 | | 18.17 | | 21.60 | | 14.80 | | 12.25 | | 14.14 | | 9.08 | |
| # of Portfolios | 391 | | 387 | | 384 | | 366 | | 345 | | 304 | | 219 | |
| ● US Equity | 26.49 | (37) | 23.38 | (22) | 26.16 | (16) | 18.75 | (9) | 14.76 | (15) | 16.40 | (18) | 10.72 | (22) |
| ▲ Russell 3000 | 25.66 | (60) | 23.25 | (29) | 25.79 | (27) | 17.97 | (28) | 14.55 | (22) | 16.30 | (24) | 10.59 | (29) |

- ACERA U.S. equities compare favorably versus peers and rank in the top quartile over most periods

# Public equities historical returns– Non-U.S.

| | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 7 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|
| **International Equity** | **8.05** | **15.71** | **12.03** | **8.58** | **9.32** | **8.54** | **Dec-90** |
| *MSCI ACWI ex USA IMI Gross* | *8.99* | *14.13* | *10.33* | *7.35* | *8.05* | *6.65* | *Dec-90* |
| Bivium Intl Equity | 11.00 | 16.91 | -- | -- | -- | 14.00 | Oct-18 |
| *MSCI ACWI ex USA Gross* | *8.29* | *13.70* | *10.12* | *7.05* | *7.78* | *11.64* | *Oct-18* |
| BlackRock MSCI World ex-US Index Fd A | 13.09 | -- | -- | -- | -- | 13.43 | May-19 |
| *MSCI World ex US Gross* | *13.17* | *14.64* | *10.18* | *7.26* | *8.37* | *13.51* | *May-19* |
| Capital Group | 5.70 | 19.47 | 15.77 | 10.93 | 11.05 | 9.15 | Dec-90 |
| *MSCI ACWI ex USA Gross* | *8.29* | *13.70* | *10.12* | *7.05* | *7.78* | *6.61* | *Dec-90* |
| *MSCI ACWI ex USA Growth Gross* | *5.37* | *18.19* | *13.44* | *9.36* | *9.51* | *--* | *Dec-90* |
| Mondrian | 7.60 | 8.99 | 7.14 | 5.10 | 6.23 | 6.95 | Nov-03 |
| *MSCI ACWI ex USA Gross* | *8.29* | *13.70* | *10.12* | *7.05* | *7.78* | *7.38* | *Nov-03* |
| *MSCI ACWI ex USA Value Gross* | *11.13* | *8.90* | *6.63* | *4.56* | *5.90* | *6.54* | *Nov-03* |
| Newton Emerging Mkt | -2.41 | -- | -- | -- | -- | 26.04 | May-19 |
| *MSCI Emerging Markets Gross* | *-2.22* | *11.33* | *10.26* | *6.49* | *5.87* | *11.49* | *May-19* |
| Templeton | 11.38 | 15.30 | 11.20 | 8.40 | 10.11 | 7.50 | Apr-11 |
| *MSCI ACWI ex US Small Cap Gross* | *13.36* | *16.91* | *11.63* | *9.28* | *9.86* | *6.51* | *Apr-11* |
| *MSCI ACWI ex US Small Cap Value GD* | *14.72* | *13.46* | *9.39* | *7.78* | *9.05* | *5.67* | *Apr-11* |

- All active managers are adding value since inception
- Templeton has been challenged in recent years due value-bias in mostly growth environment

# Public equities historical returns– Non-U.S.

| | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 7 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|
| Bivium Intl Equity | 9.67 | 15.53 | -- | -- | -- | 12.68 | Oct-18 |
| *MSCI ACWI ex USA Gross* | *8.29* | *13.70* | *10.12* | *7.05* | *7.78* | *11.64* | *Oct-18* |
| Applied Research Investments | 9.68 | 22.10 | -- | -- | -- | 18.13 | Oct-18 |
| Arga Investment Management | 12.29 | 18.77 | -- | -- | -- | 14.60 | Oct-18 |
| Denali Advisors | 10.05 | 7.47 | -- | -- | -- | 6.34 | Oct-18 |
| Dundas Partners | 20.38 | 23.23 | -- | -- | -- | 20.72 | Oct-18 |
| *MSCI ACWI ex USA Gross* | *8.29* | *13.70* | *10.12* | *7.05* | *7.78* | *11.64* | *Oct-18* |
| Global Alpha Capital Management | 14.31 | 16.71 | -- | -- | -- | 12.99 | Oct-18 |
| Radin Capital Partners | 0.15 | 6.52 | -- | -- | -- | 4.45 | Oct-18 |
| *MSCI ACWI ex US Small Cap Gross* | *13.36* | *16.91* | *11.63* | *9.28* | *9.86* | *14.03* | *Oct-18* |
| Redwood | -- | -- | -- | -- | -- | -7.64 | Jul-21 |
| *MSCI Emerging Markets Gross* | *-2.22* | *11.33* | *10.26* | *6.49* | *5.87* | *-2.62* | *Jul-21* |
| RVX Asset Management | -6.03 | -- | -- | -- | -- | 8.48 | May-19 |
| *MSCI Emerging Markets Gross* | *-2.22* | *11.33* | *10.26* | *6.49* | *5.87* | *11.49* | *May-19* |

- In Bivium fund, 5 of 8 managers are adding value
- Applied Research is being terminated and replaced by Promethos

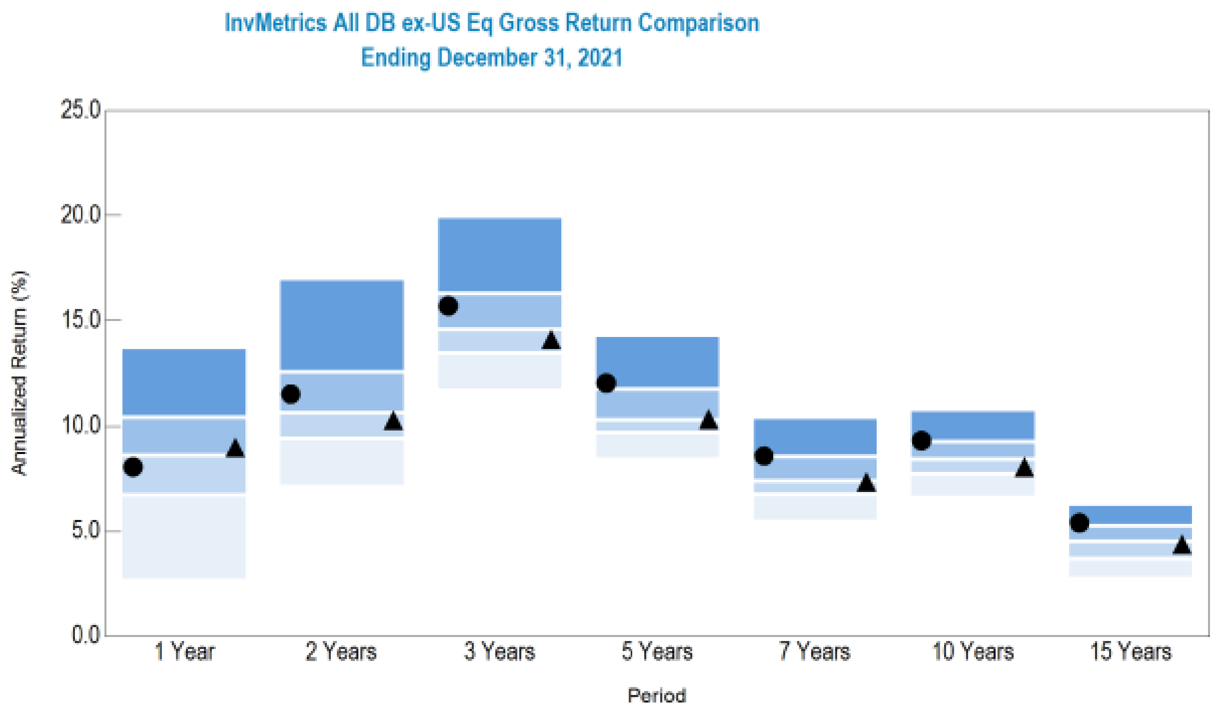
# Public equities return and risk metrics– Non-U.S.

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|---|---|---|---|---|---|
| International Equity | 15.71% | 17.77% | 0.84 | 1.06 | 1.49% |
| MSCI ACWI ex USA IMI Gross | 14.13% | 17.36% | 0.77 | -- | 0.00% |
| Bivium Intl Equity | 16.91% | 17.85% | 0.90 | 1.50 | 2.15% |
| MSCI ACWI ex USA Gross | 13.70% | 17.01% | 0.76 | -- | 0.00% |
| BlackRock MSCI World ex-US Index Fd A | -- | -- | -- | -- | -- |
| MSCI World ex US Gross | 14.64% | 17.40% | 0.79 | -- | 0.00% |
| Capital Group | 19.47% | 17.43% | 1.07 | 1.45 | 3.99% |
| MSCI ACWI ex USA Gross | 13.70% | 17.01% | 0.76 | -- | 0.00% |
| Mondrian | 8.99% | 18.91% | 0.43 | -1.22 | 3.85% |
| MSCI ACWI ex USA Gross | 13.70% | 17.01% | 0.76 | -- | 0.00% |
| Newton Emerging Mkt | -- | -- | -- | -- | -- |
| MSCI Emerging Markets Gross | 11.33% | 18.61% | 0.56 | -- | 0.00% |
| Templeton | 15.30% | 20.37% | 0.71 | -0.39 | 4.13% |
| MSCI ACWI ex US Small Cap Gross | 16.91% | 20.13% | 0.80 | -- | 0.00% |

- Non-U.S. equities exhibit tracking error (i.e., active risk) in with expectations given amount of active management exposures
- IR is high, which is desirable

*Trailing 3 Years*

# Public equities peer comparison – Non-U.S.

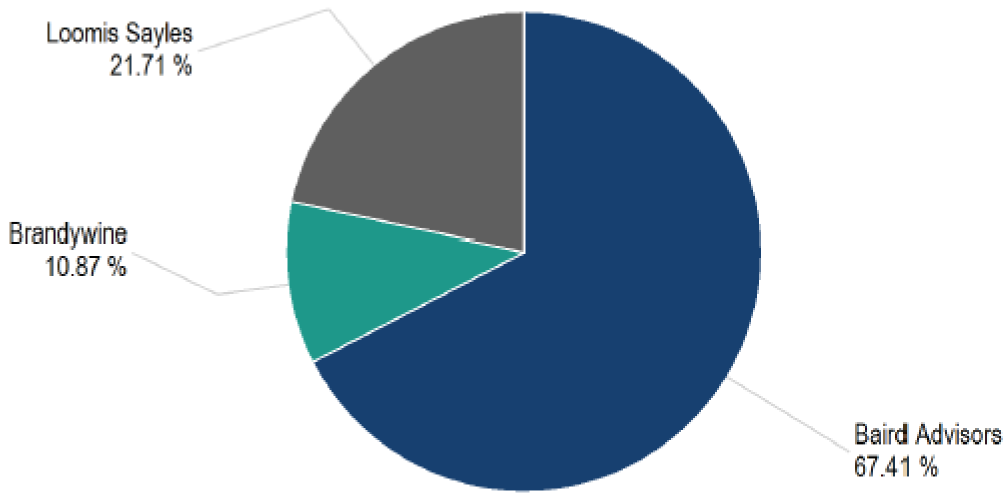



- ACERA's non-U.S. equities compare favorably versus peers in most time periods and rank in the top quartile

| | Return (Rank) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 13.75 | | 17.00 | | 19.95 | | 14.32 | | 10.39 | | 10.77 | | 6.30 | |
| 25th Percentile | 10.45 | | 12.58 | | 16.31 | | 11.76 | | 8.57 | | 9.29 | | 5.29 | |
| Median | 8.63 | | 10.66 | | 14.61 | | 10.32 | | 7.40 | | 8.44 | | 4.52 | |
| 75th Percentile | 6.74 | | 9.45 | | 13.51 | | 9.72 | | 6.77 | | 7.74 | | 3.71 | |
| 95th Percentile | 2.69 | | 7.13 | | 11.70 | | 8.44 | | 5.51 | | 6.63 | | 2.78 | |
| # of Portfolios | 272 | | 267 | | 265 | | 246 | | 230 | | 199 | | 119 | |
| ● International Equity | 8.05 | (60) | 11.52 | (38) | 15.71 | (35) | 12.03 | (21) | 8.58 | (25) | 9.32 | (25) | 5.41 | (22) |
| ▲ MSCI ACWI ex USA IMI Gross | 8.99 | (41) | 10.28 | (57) | 14.13 | (56) | 10.33 | (49) | 7.35 | (53) | 8.05 | (65) | 4.38 | (56) |

# Fixed income

# Fixed income structure




| | Actual | Actual | Target |
|---|---|---|---|
| Baird Advisors | $1,351,910,844 | 67.41% | 75.0% |
| Loomis Sayles | $435,466,004 | 21.71% | 10.7% |
| Brandywine | $218,078,041 | 10.87% | 14.3% |

- ACERA has diversified fixed income structure
- Overweight to mostly below investment grade bonds (Loomis) has likely been a key source of value-added in recent years
- Global bonds have lagged so underweight also likely benefitted ACERA

# Fixed income historical returns

| | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 7 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|
| **Total Fixed Income** | **-1.34** | **6.71** | **5.39** | **4.39** | **5.10** | **7.19** | **Sep-86** |
| *Fixed Income Blend* | *-2.30* | *4.75* | *3.73* | *3.09* | *2.92* | *6.21* | *Sep-86* |
| **US Fixed Income** | **-0.62** | **6.71** | **5.21** | **4.55** | **5.36** | **7.11** | **Sep-86** |
| *Bloomberg US Aggregate TR* | *-1.54* | *4.79* | *3.57* | *3.00* | *2.90* | *5.99* | *Sep-86* |
| Baird Advisors | -1.24 | 5.69 | 4.38 | 3.90 | 4.25 | 5.05 | Oct-01 |
| *Bloomberg US Aggregate TR* | *-1.54* | *4.79* | *3.57* | *3.00* | *2.90* | *4.19* | *Oct-01* |
| Loomis Sayles | 0.70 | 8.85 | 6.90 | 5.83 | 7.49 | 8.18 | Dec-00 |
| *Bloomberg US Credit BAA TR* | *-0.40* | *8.27* | *5.77* | *4.81* | *5.08* | *6.32* | *Dec-00* |
| **Global Fixed Income** | **-5.48** | **5.64** | **5.22** | **3.38** | **3.98** | **6.96** | **Nov-01** |
| *FTSE WGBI TR* | *-6.97* | *2.75* | *2.94* | *1.80* | *0.96* | *4.15* | *Nov-01* |
| Brandywine | -5.48 | 5.64 | 5.22 | 3.38 | 3.98 | 6.96 | Nov-01 |
| *Bloomberg Global Aggregate TR* | *-4.71* | *3.59* | *3.36* | *2.22* | *1.77* | *4.30* | *Nov-01* |
| *FTSE WGBI TR* | *-6.97* | *2.75* | *2.94* | *1.80* | *0.96* | *4.15* | *Nov-01* |

- All managers exceed their respective benchmarks since inception

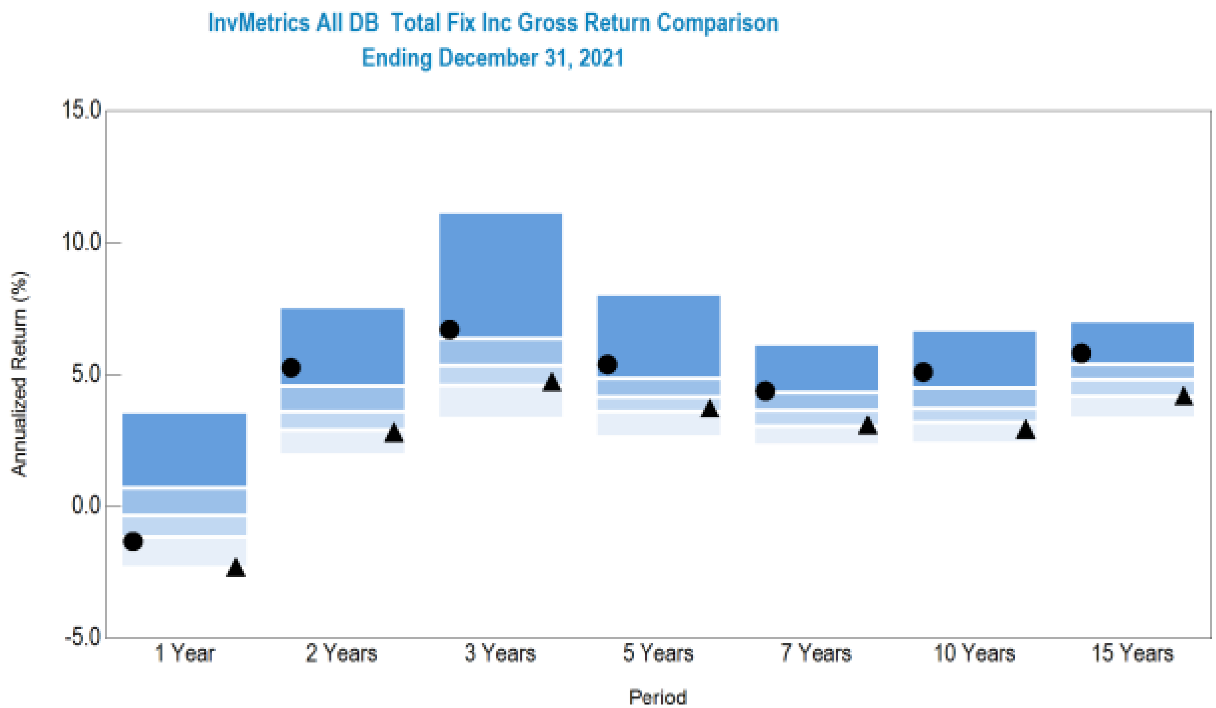
# Fixed income return and risk metrics

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|---|---|---|---|---|---|
| Total Fixed Income | 6.7% | 5.2% | 1.1 | 0.8 | 2.6% |
| Fixed Income Blend | 4.7% | 3.8% | 1.0 | -- | 0.0% |
| Baird Advisors | 5.7% | 3.9% | 1.2 | 0.7 | 1.2% |
| Bloomberg US Aggregate TR | 4.8% | 3.4% | 1.2 | -- | 0.0% |
| Loomis Sayles | 8.8% | 6.3% | 1.3 | 0.2 | 3.2% |
| Bloomberg US Credit BAA TR | 8.3% | 8.6% | 0.9 | -- | 0.0% |
| Brandywine | 5.6% | 10.3% | 0.5 | 0.3 | 7.9% |
| Bloomberg Global Aggregate TR | 3.6% | 4.4% | 0.6 | -- | 0.0% |

- Composite active risk is on higher side likely due to overweight to lower grade credits
- IR is strong, however, so ACERA being rewarded for this higher active risk exposure

*Trailing 3 Years*

# Fixed income peer comparison

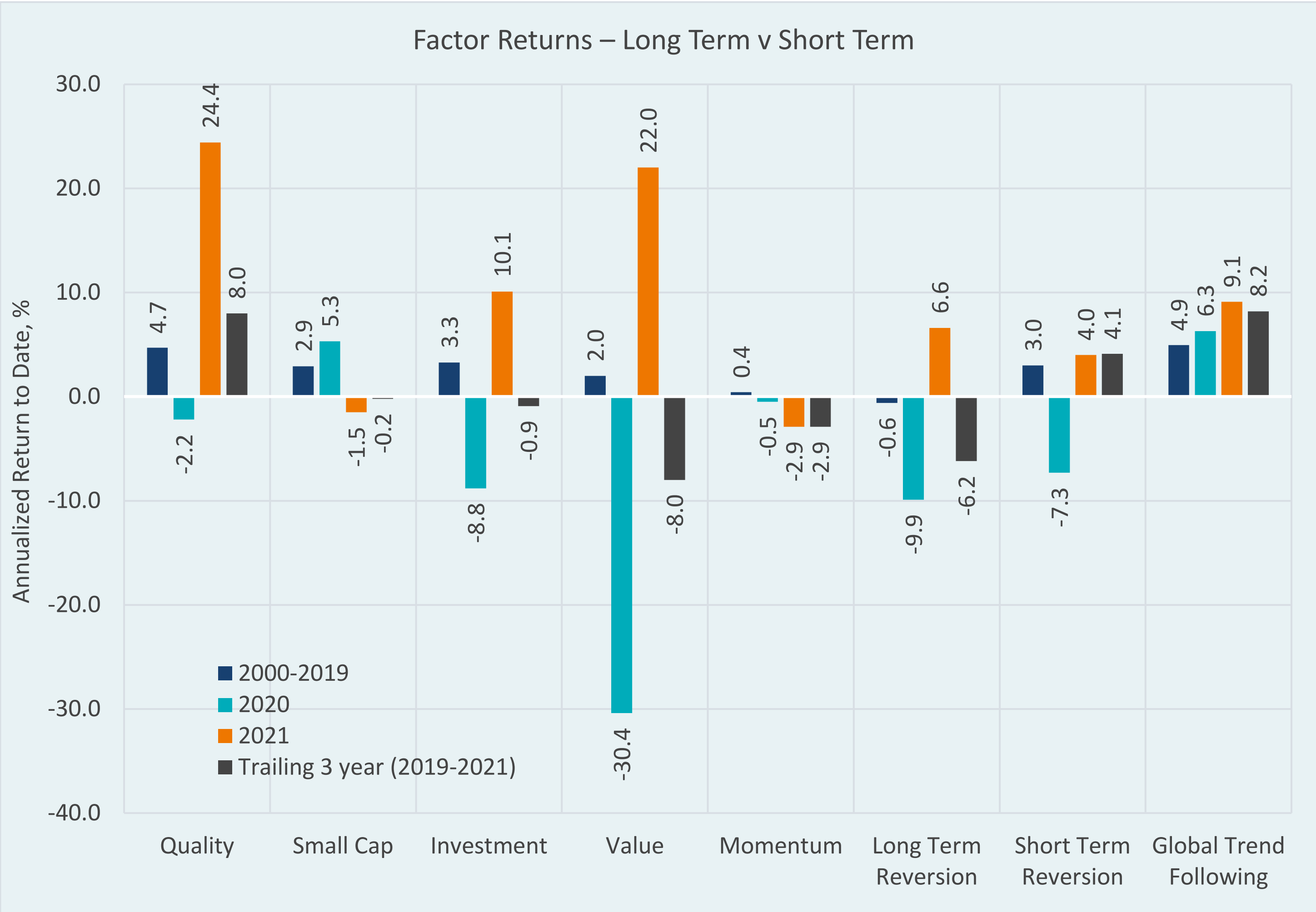



| | Return (Rank) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th Percentile | 3.59 | | 7.58 | | 11.17 | | 8.06 | | 6.17 | | 6.70 | | 7.02 | |
| 25th Percentile | 0.70 | | 4.59 | | 6.38 | | 4.87 | | 4.33 | | 4.52 | | 5.42 | |
| Median | -0.32 | | 3.63 | | 5.35 | | 4.17 | | 3.68 | | 3.75 | | 4.84 | |
| 75th Percentile | -1.16 | | 2.88 | | 4.62 | | 3.62 | | 3.03 | | 3.18 | | 4.21 | |
| 95th Percentile | -2.33 | | 1.95 | | 3.33 | | 2.63 | | 2.30 | | 2.38 | | 3.36 | |
| # of Portfolios | 202 | | 200 | | 198 | | 191 | | 175 | | 158 | | 119 | |
| ● Total Fixed Income | -1.34 | (80) | 5.27 | (18) | 6.71 | (20) | 5.39 | (16) | 4.39 | (21) | 5.10 | (16) | 5.81 | (16) |
| ▲ Fixed Income Blend | -2.30 | (95) | 2.81 | (79) | 4.75 | (72) | 3.73 | (69) | 3.09 | (73) | 2.92 | (86) | 4.22 | (75) |

- Similar to ACERA equities, ACERA fixed income ranks in the top quartile relative to universe of peers over most time periods

# Appendix

# 2021 Factor themes - Value and Quality rebound, Trend continues to do well




Factor returns have shifted tremendously since October 2020, with Value and Trend rebounding after poor returns during COVID onset.

Value and Trend continued their strong performance throughout 2021 and were joined by Quality, which had a very strong 4Q (+14%).

Trend (CTA's) was the only factor with strong returns in both years and trailing 3-year return are its highest since mid-2010.

*Factor detail: Quality = Fama French Robust Minus Weak, Small Cap = FF Small Minus Big, Investment = FF Conservative Minus Aggressive, Value = FF High Minus Low, Momentum = FF-Carrhart Momentum, LT Reversion = FF Long Term Reversal, ST Reversion = FF Short Term Reversal, Global Trend Following = SocGen Trend Index (representing momentum in equity + non equity assets)*

# Treasury yields and value

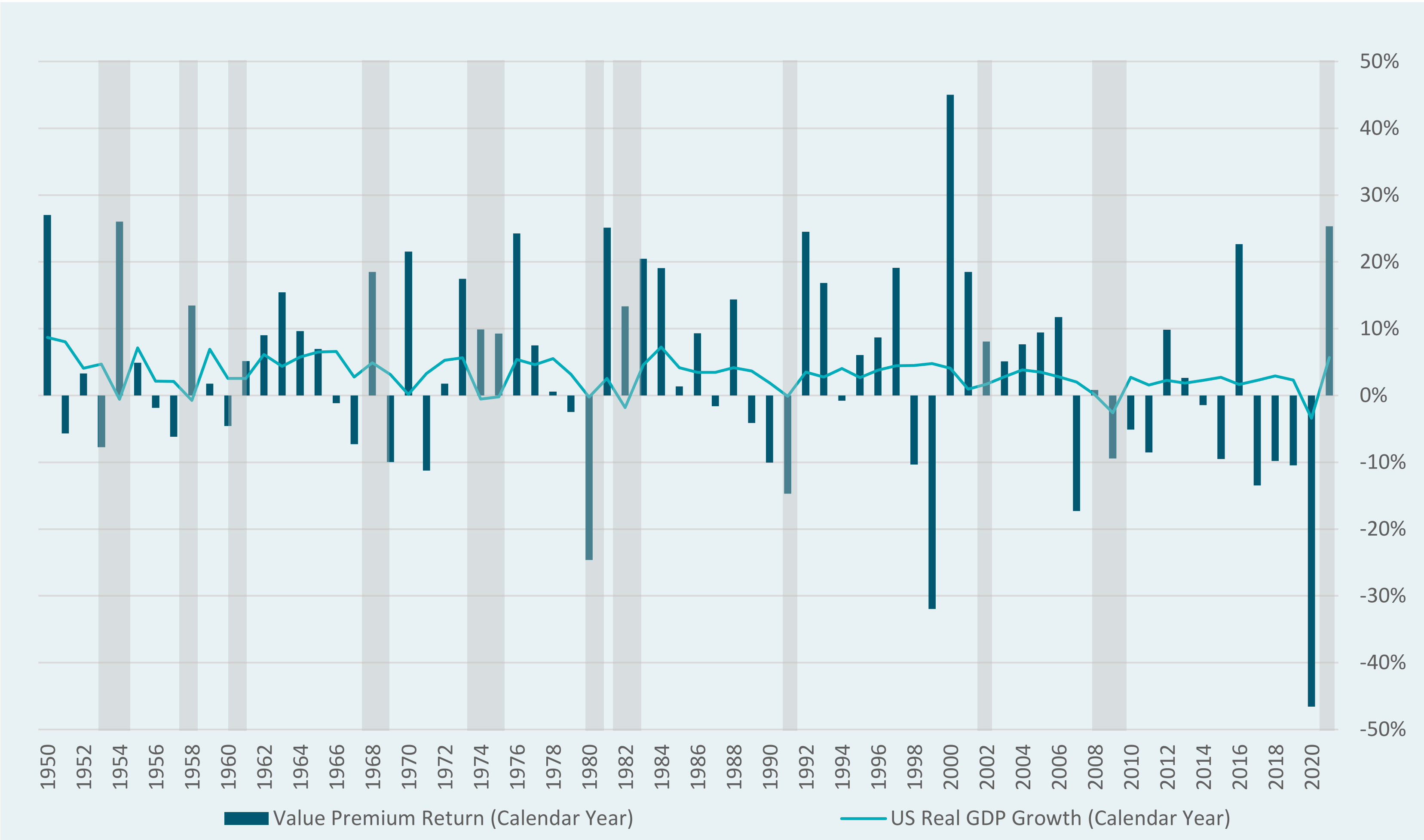
UST YIELDS AND CUMULATIVE RETURNS FROM LARGE CAP VALUE RELATIVE TO GROWTH, INDEXED TO 100



The recent period of value outperformance corresponds with rising rates

*Source: Bloomberg. The Russell 1000 Value/Growth Index is designed to provide a benchmark to measure the relative performance of a value compared with growth investment theme. The index represents a positive weighting on the Russell 1000 Value Index and a negative weighting on the Russell 1000 Growth Index. The weights for both component indexes are reset to (+/-) 100% on a daily basis.*

# Value & the economic cycle

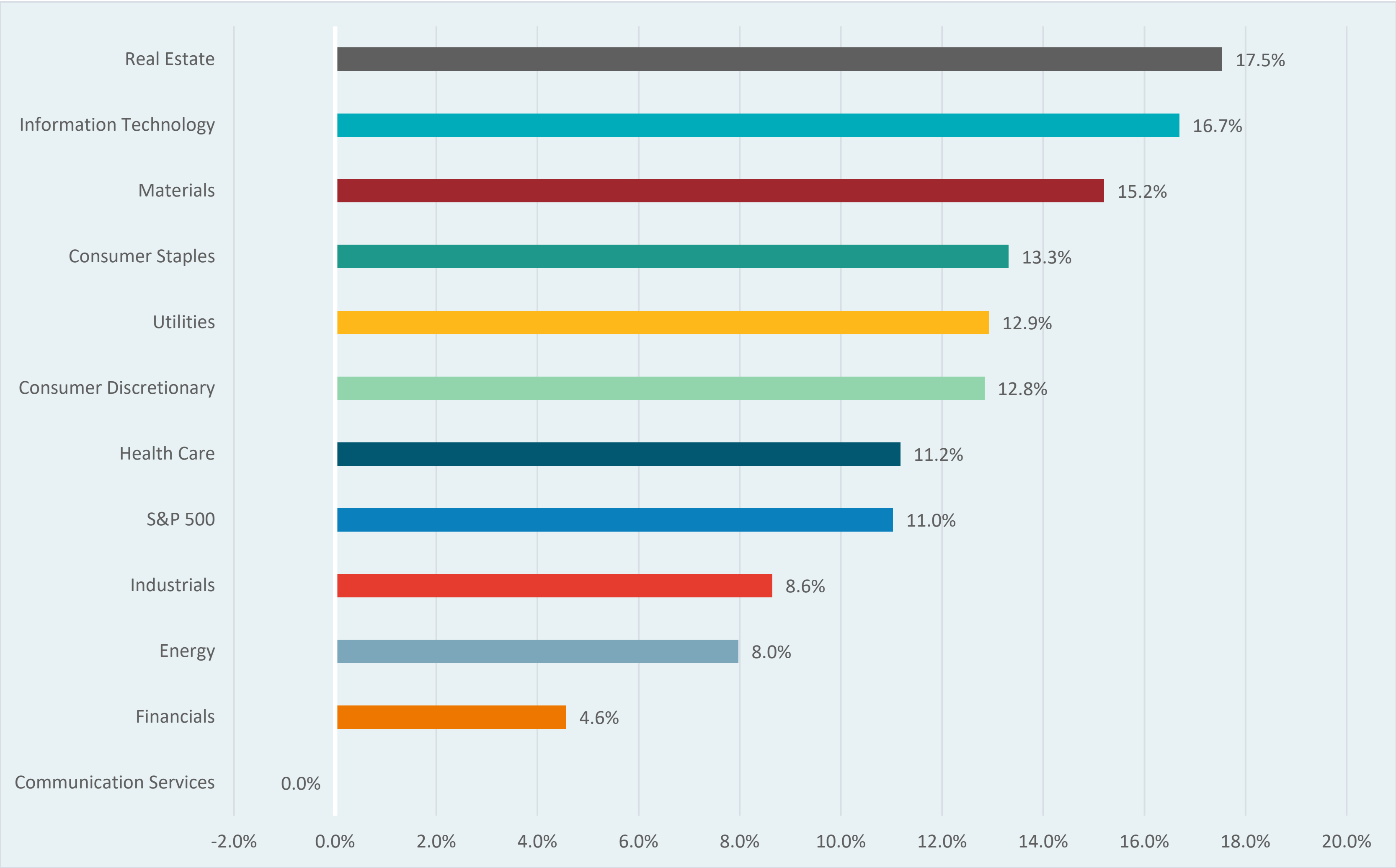



Value often outperforms during economic recession & during the early stages of recovery

Though this relationship has only held some of the time

*Source: Kenneth French Data Library, Standard & Poor's – value defined using book-to-market value (the classic Fama & French definition). For more information regarding the classic value premium definition see Fama and French, 1993, "Common Risk Factors in the Returns on Stocks and Bonds," Journal of Financial Economics*

# Value is exposed to sector swings (Q4 2021)




*Source: Bloomberg, as of 12/31/21*

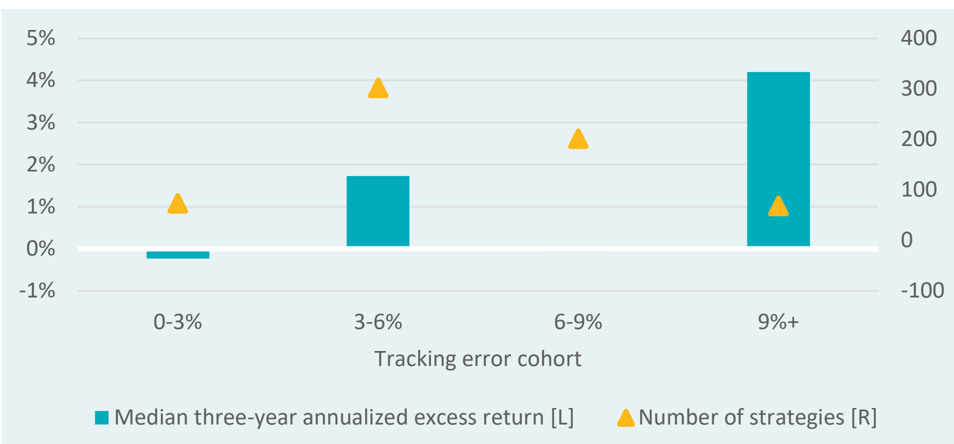
# Emerging markets managers tracking error

— Over the trailing 3-year period, there was a wide non-normal distribution of emerging markets equity strategy returns, with the majority of managers outperforming the index. A smaller but significant cohort of the distribution outperformed the index materially (+5-10%) over this period, thanks in large part to the particularly volatile year of 2020 that saw high dispersion and strong equity returns.

— The bottom right chart demonstrates that in all trailing periods, most managers in the universe took more risk than the MSCI Emerging Markets Index. The increased volatility of returns has not hampered return generation over the 3- and 5-years periods, which reflect a slightly positive relationship between volatility and return. Over longer periods, however, there appears to be a weaker relationship, during which excess volatility was not compensated.

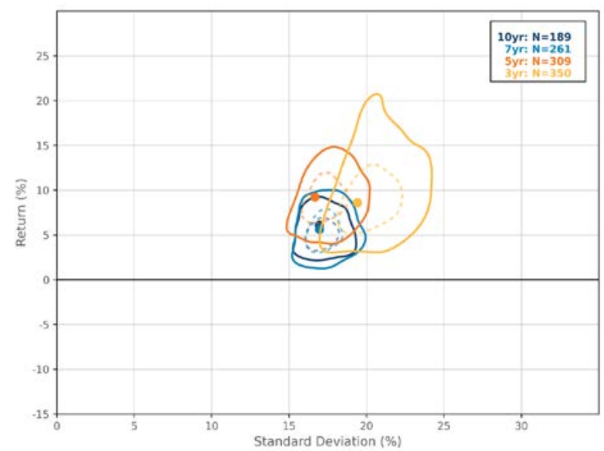
— Over the last three years, emerging market equity managers taking on 3-6% tracking error have in general outperformed those taking on a little (0-3%), or a lot (6-9%) of tracking error. Interestingly, of the 68 strategies in the 9% or more tracking error cohort in the chart on the bottom-right, the median excess annualized return came out to 4.2%, and only 13 strategies delivered negative annualized excess returns. It is worth noting that in this subset of the universe, strategies were extremely concentrated, and therefore taking much higher levels of risk.

**MEDIAN THREE-YEAR ANNUALIZED EXCESS RETURN BY TRACKING ERROR**




*Source: eVestment as of 9/30/21*

**EMERGING MARKETS**




*Source: eVestment, as of 9/30/21. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI Emerging Markets Index*

# Glossary

**Beta -** A measure of systematic (undiversifiable) or market risk, the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Correlation –** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help optimize the benefits of diversification when constructing an investment portfolio.

**Internal Rate of Return (IRR) –** the interest rate which is the net present value of all the cash flows (both positive and negative) of an investment.

**Maximum Drawdown –** the maximum loss from a peak to a trough of a portfolio before a new peak attained. Maximum drawdown measures the downside risk over a specified time period.

**Standard Deviation -** A measure of volatility, or risk. Measures risk by indicating how far from the average, or mean, return one is likely to fall in any given time period. The rules of statistics dictate that you will fall within 1 standard deviation of the mean 2/3 of the time and within 2 standard deviations 95% of the time. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Sharpe Ratio -** A measure of that explains the return of an investment compared to its risk. The Sharpe Ratio indicates excess portfolio return for each unit of risk over the risk free rate (usually short-term Treasuries or LIBOR) per unit of volatility. The higher the Sharpe Ratio, the greater its risk-adjusted return.

**Time Weighted Return –** A measure of the compound rate of growth in a portfolio, which eliminates the distorting effects of growth rates created by inflows and outflows of money.

# Glossary (cont.)

**Active Return (aka Excess Return) –** The difference between the active manager's return and the return on the manager's benchmark index.

**Active Risk (aka Tracking Error) –** the volatility (standard deviation) of active return.

**Information Ratio –** the ratio of active return to active risk, i.e., how much excess return an active manager delivers per unit of tracking error. A common basis of comparison in manager searches.

$$Active\ Return = (R_P - R_B)$$

The return difference between the portfolio return and the benchmark return

$$Active\ Risk = \sigma(R_P - R_B)$$

The volatility of the Active Return

$$Information\ Ratio = \frac{Active\ Return}{Active\ Risk}$$

**Rearranging the formula…**

$$(Information\ Ratio)\ x\ (Active\ Risk) = Active\ Return$$