

All persons wishing to address the Board must complete a speaker's card, stating their name and the agenda item (including "Open Forum") they wish to address. The Committee may take action on items not on the agenda only if findings pursuant to the Sunshine Ordinance and Brown Act are made that the matter is urgent or an emergency.

Oakland Police and Fire Retirement Board and committee meetings are held in wheelchair accessible facilities. Contact the Retirement Unit, 150 Frank Ogawa Plaza, Suite 3349 or call (510) 238-7295 for additional information.



Retirement Unit
150 Frank H. Ogawa Plaza
Oakland, California 94612

AGENDA

AUDIT COMMITTEE MEMBERS

John C. Speakman
Chairman

Katano Kasaine
Member

Robert J. Muszar
Member

**In the event a quorum of the Board participates in the Committee meeting, the meeting is noticed as a Special Meeting of the Board; however, no final Board action can be taken. In the event that the Audit Committee does not reach quorum, this meeting is noticed as an informational meeting between staff and the Chair of the Audit Committee.*

REGULAR MEETING of the AUDIT / OPERATIONS COMMITTEE of the OAKLAND POLICE AND FIRE RETIREMENT SYSTEM ("PFRS")

Wednesday, May 29, 2019 – 9:00 am
One Frank H. Ogawa Plaza, Hearing Room 1
Oakland, California 94612

- - - ORDER OF BUSINESS - - -

1. **Subject:** **PFRS Audit Committee Meeting Minutes**
From: **Staff of the PFRS Board**

Recommendation: **APPROVE** April 24, 2019 Audit Committee meeting minutes.
2. **Subject:** **Administrative Expenses Report**
From: **Staff of the PFRS Board**

Recommendation: **ACCEPT** an informational report regarding PFRS administrative expenses from July 1, 2018 through March 31, 2019.
3. **Subject:** **Informational report regarding 2006 Management Audit of the PFRS System**
From: **Staff of the PFRS Board**

Recommendation: **ACCEPT** an informational report regarding the scope, cost and System changes made based on the findings of the 2006 Management Audit of the PFRS System for a future management audit.
4. **REVIEW OF PENDING AUDIT AGENDA ITEMS**
5. **Future Scheduling**
6. **Open Forum**
7. **Adjournment of Meeting**

AN AUDIT/OPERATIONS COMMITTEE MEETING of the Oakland Police and Fire Retirement System ("PFRS") was held on Wednesday, April 24, 2019 in Hearing Room 1, One Frank Ogawa Plaza, Oakland, California.

Committee Members Present:

- John C. Speakman, Chairman
- Katano Kasaine, Member
- Robert J. Muszar, Member

Additional Attendees:

- David Jones, Plan Administrator
- Teir Jenkins & David Low, Staff Member
- Jennifer Logue, PFRS Legal Counsel

The Meeting was called to order at 9:07 a.m.

1. **PFRS Audit Committee Meeting Minutes** – Member Kasaine made a motion to approve the March 27, 2019 Audit Committee meeting minutes, second by member Muszar. Motion passed.

[SPEAKMAN – Y / MUSZAR – Y/ KASAIN –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

2. **Administrative Expenses Report** – Teir Jenkins presented the status of the administrative expenditures of the PFRS plan through February 28, 2019. Following his review and some committee and staff discussion, Member Muszar made a motion to accept the informational report from staff, second by member Kasaine. Motion passed.

[SPEAKMAN – Y / MUSZAR – Y/ KASAIN –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

3. **Policy Governing the Overpayment or Underpayment of Member Benefits** – Plan Administrator David Jones reported the status of the development of the Policy Governing the Overpayment and Underpayment of Member Retirement Allowances ("Policy"), stating that staff met with Member Muszar following the February 2019 Board meeting to discuss development of the Policy. Member Muszar reported that staff and he agreed that the policy could be divided into two principle sections, each addressing overpayment of member retirement allowances or underpayment of retirement allowances. Mr. Jones also reported that each principle section would contain notice instructions for their respective sections. He recommended the committee plan to accept the version of the Policy submitted by staff edited to be fair and equitable for the Board, Staff and Members.

Member Muszar explained his preference to have a written version of the draft policy in front of the Committee for discussion and development prior to any action for Board adoption or approval. The Audit Committee and staff discussed these concerns. **MOTION:** Member Kasaine made a motion for staff to submit a draft Policy Governing the Overpayment and Underpayment of Member Retirement Allowances to the Audit Committee for its recommendation for Board Approval, second by Chairman Speakman. Discussion Continued.

Member Muszar asked if the version cited in the motion reflects attachment 1 in the agenda package. Member Kasaine confirmed attachment 1 would be the version for submission. **AMENDED MOTION:** During discussion, the committee agreed that, in attachment 1, section III.(10.)(A.)(iii.)(2)), would state: *“Option 2 – reduction from monthly retirement allowances in the amount equal to ten percent (10%) of the total overpayment, but not to exceed 10% of the monthly retirement allowance, until paid back in full”*. Member Kasaine amended her motion to include this amendment to the Draft Policy submission, second by Chairman Speakman. Discussion continued.

The Committee discussed viewpoints about noticing of members for overpayment or underpayment of retirement allowances and how the current draft policy addresses or does not address this matter. Member Muszar explained his view about the necessity of noticing members of any overpayment or underpayment prior to any staff action at refunding any member overpayment, or collecting any member underpayment, of retirement allowances. Member Kasaine explained the mechanisms in place which effect overpayment refunding and underpayment collection while stating her concerns about delays in effecting staff actions to collect or refund members while waiting for agreement to such action from the member. Following additional discussion, a vote on the amended motion was taken. The amended Motion passed.

[SPEAKMAN – Y / MUSZAR – N/ KASAINÉ –Y]
(AYES: 2 / NOES: 1 / ABSTAIN: 0)

4. **2006 Management Audit of the PFRS System** – David Jones reported that this matter was tabled to the Spring 2019 Audit Committee by the PFRS Board at its August 29, 2018 meeting. The committee discussed its direction to staff at the previous meeting. Member Muszar said staff was directed to develop a proposal for the contracting of services for a management audit of limited scope focused on non-financial related functions (such as oversight of investment managers) before this matter was tabled to the Spring 2019 PFRS meeting. Member Kasaine said the direction to conduct a limited scope management audit was very unclear and any such process would likely be a burden on the time and work of staff in their duties to the PFRS system. Chairman Speakman said a regular audit of different functionalities of any system is always good practice.

Investment Officer Teir Jenkins said the annual audit conducted by the outside financial auditing firm reviews the practices of the staff for the PFRS fund and is comprehensive. Member Muszar said he thinks a financial audit and a management audit are two different kinds of audit that cannot be compared. Member Muszar said his goal is for the audit to limit the scope to reexamining the operational issues of the 2006 audit and confirm that the recommendations adopted by the Board and enacted by staff continue to be in place and effective. He said the option of including investment elements was left to the decision of the Investment Committee chairperson. Member Muszar said the next step should be present this matter for Board consideration so it can either provide Board authorization to begin the limited-scope management audit and address the details of the scope of the audit following board approval, or decide the matter does not merit any further consideration.

MOTION: Member Kasaine made the motion to move this matter to the Board for its instruction whether to continue discussion at a future meeting, second by member Speakman. Motion passed.

[SPEAKMAN – Y / MUSZAR – Y/ KASAINÉ –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

5. **Annual Report for the Fiscal Year ending June 30, 2019** – Member Muszar and the committee praised staff for its work on the 2018 PFRS Annual Report and said he would like to have staff work with the ROPOA and Local 55 on getting retired member participation to be quoted and included in the upcoming June 30, 2019 PFRS Annual Report.
6. **Resolution No. 7056 – Travel authorization for PFRS board member Jaime Godfrey** – Member Kasaine made a motion to recommend Board approval of resolution no. 7056 - Travel authorization for PFRS board member Jaime Godfrey to travel and attend the 2019 IMN Global Indexing and ETF Conference (“2019 IMN Conference”) from June 19, 2019 to June 21, 2019 in Dana Point, CA with an estimated budget of One Thousand Eight Hundred Sixty Dollars (\$1,860.00), second by member Muszar. Motion passed.

[SPEAKMAN – Y / MUSZAR – Y/ KASAINÉ –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

7. **Resolution No. 7057 – Travel authorization for PFRS board member R. Steven Wilkinson** – Member Kasaine made a motion to recommend Board approval of Resolution No. 7057 - Travel authorization for PFRS board member R. Steven Wilkinson to travel and attend the 2019 National Association of Securities Professionals Pension and Finance Conference (“2019 NASP Conference”) from June 24, 2019 to June 26, 2019 in Baltimore, MD with an estimated budget of Two Thousand One Hundred Dollars (\$2,100.00), second by Member Muszar. Motion passed.

[SPEAKMAN – Y / MUSZAR – Y/ KASAINÉ –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

8. **Resolution No. 7058 – Travel Authorization for PFRS Staff Member David Low** – Member Kasaine made a motion to recommend Board approval of Resolution No. 7058 – Travel Authorization for PFRS Staff Member David Low to travel and attend the 2019 California Association of Public Retirement Systems Administrative Assistant Roundtable Conference (“2019 CALAPRS Admin Roundtable Conference”) on April 26, 2019 in San Jose, CA with an estimated budget of One Hundred Eighty-Nine Dollars (\$189.00), second by Member Muszar. Motion passed.

[SPEAKMAN – Y / MUSZAR – Y/ KASAINÉ –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

9. **Resolution No. 7059 – Travel Authorization for PFRS Plan Administrator David Jones** – Member Kasaine made a motion to recommend Board approval of Resolution No. 7059 – Travel Authorization for PFRS Plan Administrator David Jones to travel and attend the 2019 California Association of Public Retirement Systems Administrators' Roundtable Conference ("2019 CALAPRS Administrators' Roundtable Conference") on June 21, 2019 in San Jose, CA with an estimated budget of One Hundred Ninety-Four Dollars (\$194.00), second by Member Muszar. Motion passed.

[SPEAKMAN – Y / MUSZAR – Y/ KASAINE –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

10. **Pending Audit Agenda List** – Plan Administrator David Jones reported the status of agenda items on the current pending audit agenda list. Member Muszar noted that the pending list matter addressing hearing procedures is not complete. He explained his recollection of the agenda matter. Following some Committee discussion, Member Kasaine said procedures related to 2603 hearings are not the purview of the PFRS Legal Counsel but rather the City Attorney's office and, therefore, should be directed to the Plan Administrator for processing with the City Attorney's office.

[SPEAKMAN – Y / MUSZAR – Y/ KASAINE –Y]
(AYES: 3 / NOES: 0 / ABSTAIN: 0)

11. **Future Scheduling** – The next Audit Committee meeting was scheduled for May 29, 2019. The committee discussed their recollection of the Draft hearing procedures matter on the current pending list. Member Muszar stated the importance of clear and correct review of the instructions on this matter is necessary and, following committee discussion, said he would provide the necessary historical documents for staff so they can create a proper agenda package for this matter for the next meeting.

12. **Open Forum** – No Report.

13. **Meeting Adjournment** – Meeting adjourned at 10:15 a.m.

JOHN C. SPEAKMAN, COMMITTEE CHAIRMAN

DATE

Table 1

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Administrative Budget Spent to Date (Preliminary)

As of March 31, 2019

	Approved Budget		March 2019		FYTD		Remaining		Percent Remaining
Internal Administrative Costs									
PFRS Staff Salaries	\$	1,084,000	\$	72,556	\$	681,627	\$	402,373	37.1%
Board Travel Expenditures		52,500		1,976		8,108		44,392	84.6%
Staff Training		20,000		525		1,233		18,767	93.8%
Staff Training - Tuition Reimbursement		7,500				1,640		5,860	78.1%
Annual Report & Duplicating Services		4,000		-		-		4,000	100.0%
Board Hospitality		3,600		-		1,710		1,890	52.5%
Payroll Processing Fees		35,000		-		-		35,000	100.0%
Miscellaneous Expenditures		46,700		794		9,217		37,483	80.3%
Internal Service Fees (ISF)		65,400		3,870		48,730		16,670	25.5%
Contract Services Contingency		50,000		-		1,200		48,800	97.6%
Office Construction Costs*		75,227		1,079		59,516		15,711	20.9%
Internal Administrative Costs Subtotal :	\$	1,443,927	\$	80,799	\$	812,983	\$	630,944	43.7%
Actuary and Accounting Services									
Audit	\$	45,000	\$	-	\$	44,300	\$	700	1.6%
Actuary		45,000		13,929		36,454		8,546	19.0%
Actuary and Accounting Subtotal:	\$	90,000	\$	13,929	\$	80,754	\$	9,246	10.3%
Legal Services									
City Attorney Salaries	\$	188,000	\$	-	\$	100,593	\$	87,407	46.5%
Legal Contingency		150,000		2,700		10,145		139,855	93.2%
Legal Services Subtotal:	\$	338,000	\$	2,700	\$	110,738	\$	227,262	67.2%
Investment Services									
Money Manager Fees	\$	1,301,900	\$	-	\$	558,150	\$	743,750	57.1%
Custodial Fee		124,000		-		58,250		65,750	53.0%
Investment Consultant (PCA)		100,000		25,000		75,000		25,000	25.0%
Investment Subtotal:	\$	1,525,900	\$	25,000	\$	691,400	\$	834,500	54.7%
Total Operating Budget	\$	3,397,827	\$	122,428	\$	1,695,874	\$	1,701,953	50.09%

*Carry Forward from FY 2017-2018

Table 2

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Cash in Treasury (Fund 7100) - Preliminary

As of March 31, 2019

	March 2019
Beginning Cash as of 2/28/2019	\$ 7,542,815
Additions:	
City Pension Contribution - March	\$ 3,735,083
Investment Draw (Incoming Wire) - 3/1/2019	1,000,000
Misc. Receipts	13,332
Total Additions:	<u>\$ 4,748,416</u>
Deductions:	
Pension Payment (February Pension Paid on 3/1/2019)	(4,472,471)
Expenditures Paid	(87,753)
Total Deductions	<u>\$ (4,560,224)</u>
Ending Cash Balance as of 3/31/2019*	<u><u>\$ 7,731,007</u></u>

* On 4/1/2019, March pension payment of appx \$4,607,000 will be made leaving a cash balance of \$3,124,000

Table 3
CITY OF OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Census
As of March 31, 2019

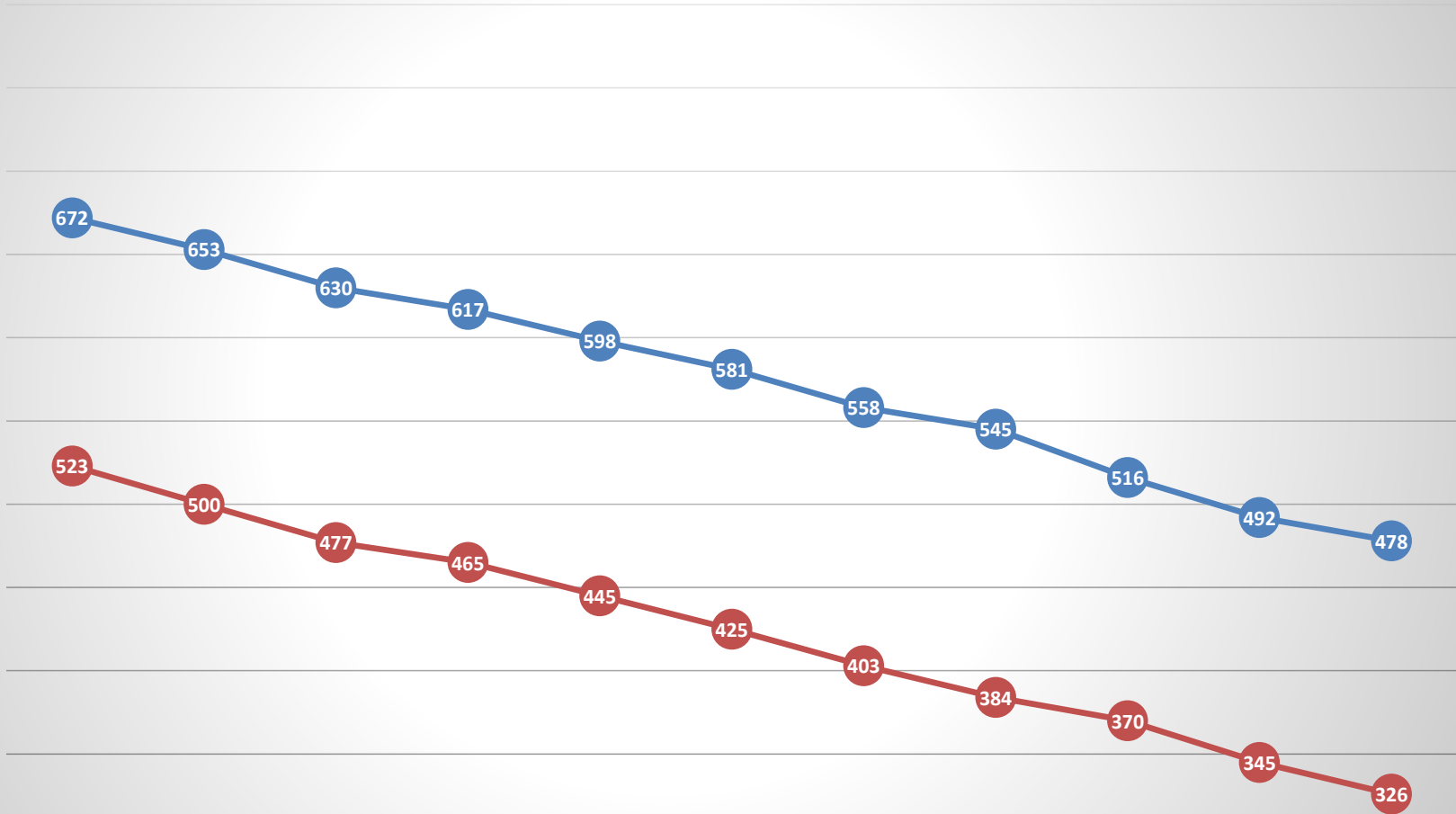
COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Retiree	350	200	550
Beneficiary	128	126	254
<i>Total Retired Members</i>	478	326	804
<i>Total Membership:</i>	478	326	804

COMPOSITION	POLICE	FIRE	TOTAL
Retired Member:			
Service Retirement	317	169	486
Disability Retirement	147	143	290
Death Allowance	14	14	28
<i>Total Retired Members:</i>	478	326	804
<i>Total Membership as of March 31, 2019:</i>	478	326	804
<i>Total Membership as of June 30, 2018:</i>	492	345	837
<i>Annual Difference:</i>	-14	-19	-33

Oakland Police and Fire Retirement System

Pension Plan Membership Count

As of March 31, 2019 (FY 2009 - FY 2019)



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 FYTD
Police	672	653	630	617	598	581	558	545	516	492	478
Fire	523	500	477	465	445	425	403	384	370	345	326
Total	1195	1153	1107	1082	1043	1006	961	929	886	837	804



A G E N D A R E P O R T

TO: Oakland Police and Fire
Retirement Board

FROM: David Jones

SUBJECT: Discussion of 2006 Management Audit of
the PFRS administration

DATE: May 20, 2019

BACKGROUND

At the April 24, 2019 Audit Committee meeting, the Audit Committee continued a discussion about conducting a modified Management Audit of the PFRS system previously conducted by Independent Fiduciary Services, Inc. ("IFS") in 2006. The Audit Committee discussed whether to conduct a new management audit and forwarded the discussion to the full Board. Following Board discussion at the April 24, 2019 meeting of the PFRS Full Board, President Johnson directed this matter be returned to the Audit Committee for continued discussion. President Johnson recommend PFRS staff and the Audit Committee work together to the following information before returning the matter to the Board:

1. provide the scope of the previous management audit;
2. provide a cost of the previous management audit; and
3. provide the findings of the previous management audit.

SUMMARY

Staff has included an excerpt from the original 2004 Request for Information for Management/Governance audit services which previously defined the scope of work/services for this service (**ATTACHMENT 1**). Staff also included the 2005 memorandum from IFS, indicating the rationale for its final cost of services of \$157,500 (**ATTACHMENT 2**).

In 2010 through 2011, the PFRS Board had directed staff to present a completion review of the work recommended by IFS in its 2006 management audit. Following its review, staff presented its completion reports for Operational management (**ATTACHMENT 3**) and Investment/Financial management (**ATTACHMENT 4**), reporting that all itemized work was satisfactorily completed at the time of each reporting to the PFRS Board.

PFRS Board Meeting
May 29, 2019

RECOMMENDATION

Staff recommends the PFRS Board accept the Informational Report regarding the 2006 Management Audit.

Respectfully submitted,



David Jones, Plan Administrator
Oakland Police and Fire Retirement System

Attachments (2):

1. *Excerpt from Request for Information, Management/Governance Audit Services from December 1, 2004 showing scope of work/services.*
2. *Independent Fiduciary Services, Inc. Memo (September 15, 2005) showing revised cost of Management/Governance Audit Services.*
3. *Completion Reports of Administrative Audit Task Matrix Submitted to the PFRS Board by the Audit Committee on May 26, 2010.*
4. *Completion Reports of Administrative Audit Task Matrix Submitted to the Investment Committee on May 18, 2011.*

ATTACHMENT 1

City of Oakland

Police and Fire Retirement System

Request for Information

Management/Governance Audit Services

(excerpt: Scope of Services)

December 1, 2004

SCOPE OF WORK

1. Identification of Responsibilities

- Are the responsibilities for the governing body (PFRS Board), administrative staff, and the plan sponsor clearly identified?
- Is there a clear identification and assignment of operation and oversight responsibilities (Board, internal staff and external experts)?
- Is the structure adequate to meet the needs of the system for carrying out its mission in the following areas: collection of contribution, record keeping, benefit payments, asset-liability management, asset management, and reporting?

2. Governing Body

- What is the role of the governing body (PFRS Board) in the administration of PFRS?
- Does the governing body have complete authority over the administration of all operations and oversight responsibilities of the PFRS pension fund?
- Does the governing body select and compensate internal staff with operational responsibilities and external service providers (money managers, actuaries, custodians, auditors, etc)?
- Is it in compliance with the charter and other regulating policies (California Pension Protection Act)?

3. Accountability

- Does the governing body hold regular meetings and keep records of such?
- Does the PFRS Board utilize established criteria in its decision making process?
- Is there appropriate disclosure of the decisions reached in the meeting of the governing body to plan members and beneficiaries?
- Are the actions/decisions of the PFRS Board reported?
- Is the selection process for members of governing body transparent? Does this process meet the requirements of the Charter and other associated regulations?
- Is there an appropriate succession planning process?

4. Expert Advice

- Does the governing body seek and employ the use of independent experts in the following areas: Investment Consultant, Actuary, Custodian, Auditor, and Legal Representation?

5. Suitability

- Are the members of the governing body suitable to serve on the PFRS board? (Specifically, they have not been convicted of fraud, or other criminal offences, gross mismanagement of a pension fund or personal bankruptcy).
- Develop a list of comparable pension funds base on number of members and total amount of fund assets. Survey the selected pension funds to determine pertinent policies and procedure, performance characteristics and other such relevant information.

- Review the administrative costs of operating the pension system including internal administrative costs and City overhead charges levied against the pension fund. Compare these costs to comparable pension funds. Evaluate the cost effectiveness of existing administrative structure, policies, and procedures.

6. Internal Controls

- Are appropriate internal controls in place?
- Regular assessment of the performance of the persons and entities involved in the operation and oversight of the pension fund.
- Regular review of compensation mechanisms, in order to ensure that they provide the correct incentives for those responsible for the operation and oversight of the pension fund.
- Regular review of information processes, operational software systems, and accounting and financial reporting systems.
- Identification, monitoring and where necessary, correction of conflicts of interest situations.
- Mechanisms to sanction the improper use of privileged information
- Implementation of an adequate risk measurement and management system including effective internal audit.
- Regular assessment of regulatory compliance systems.
- The establishment of objective performance measures for all persons and entities involved in the administration of the PFRS fund.

7. Reporting

- Are reporting channels established between all persons and entities involved in the administration of the PFRS fund in order to ensure the effective and timely transmission of relevant and accurate information?
- Does the PFRS fund comply with federal and state reporting requirement?
- Are audit, actuary, and financial reports completed annually or as required?

8. Disclosure

- Does the governing body disclose relevant information to all parties in a clear, accurate, and timely manner?

9. Investment Analysis

- Review investment policies, procedures, and periodic reporting to the PFRS Board. Determine if the investment portfolio complies with the City Charter and Board investment policy. Compare investment performance with other California city and county public pension funds. Calculate annual investment cost as a percent of annual investment purchases and compare to other funds. (Note: Staff suggests that our Investment Consultant has the ability and resources to complete this task).

ATTACHMENT 2



INDEPENDENT FIDUCIARY SERVICES, INC.

744 Broad Street ~ Suite 1120 ~ Newark, NJ 07102 ~ phone: 973-424-6400 ~ fax: 973-424-6419

September 15, 2005

By E-mail

Ms. Yvonne Hudson
City of Oakland Police & Fire Retirement System
150 Frank Ogawa Plaza, Suite 3341
Oakland, CA 94612

Dear Yvonne,

This revised letter sets forth a description of the proposed addition of three inter-related investment performance task areas and the revised fee adjustment as requested by the Board. We believe that the inclusion of these areas will greatly enhance the value of the review.

When we first priced this engagement we took into account several characteristics of the fund and the original fee quote is lower than we typically charge. Some of the factors we considered included the nature of the plan, being closed; the size of the fund and its operations; and the fact that we have known members of the Board for some time. We also brought in an experienced sub-contractor for some of the benefit areas and its fee will come out of the amount we receive. We recently (September 2) bid on a large fund operational review and our average discounted hourly rate was \$375. That rate is significantly more than we have proposed for Oakland PFRS. That said, we have reduced the additional fee by \$12,000 (29%) but we cannot go lower than that.

❖ ***Investment Performance Measurement and Evaluation***

The review of this task area will include the evaluation of:

- 1) Total portfolio performance, as well as each asset class, from numerous perspectives, including absolute and risk-adjusted returns, returns compared to the benchmarks adopted by the Board and peer universe comparisons.
- 2) Processes used to determine and measure investment performance, including
 - ☑ The methods used for collecting, verifying, and reporting performance data,
 - ☑ An assessment of the degree to which the calculation and reporting is consistent with industry standards, and
 - ☑ The appropriateness of the level of detail, timeliness and frequency of reporting.

- ❖ **Investment Benchmarks** – This task area is interconnected with the investment performance measurement area, above, and the monitoring and reporting area, below. Performance benchmarking is a critical element in performance evaluation and many published benchmarks exist within every major asset class.

Our review will analyze --

- 1) The reasonableness of the performance benchmarks used to evaluate the Fund's investment returns. This assessment typically includes:
 - ☑ A review of the process used to select the benchmarks and the reasons for their selection,
 - ☑ A determination of the benchmarks' suitability for measuring the financial characteristics of each asset class of the portfolio being evaluated, and
 - ☑ If another benchmark is deemed more suitable, how the returns achieved compare using the benchmarks adopted by the Fund versus the more suitable benchmark.

Benchmarks at different levels of monitoring, e.g. at the strategic level and at the "policy" level. Evaluation at the policy level is more general and broad, e.g., the whole portfolio compared to a long-term target mix of assets, while the strategic level is narrower and tied to a more specific standard, e.g. small cap stocks compared to the Russell 2000 Index. The "policy index" is a combination of applicable market indices, weighted according to the composition of the Fund's portfolio. IFS will compare the returns of the policy index against those of the actual portfolio to help evaluate the portfolio's performance results and possible causes for such results. For example, assuming for simplicity's sake that the Fund's portfolio consisted of 60% in large company domestic stocks and 40% in domestic bonds, then a suitable "policy index" might consist of a 60% weighting in the S&P 500 Index and 40% in the Lehman Aggregate Bond Index. The Fund's actual applicable policy index will be a function of its actual asset classes and sub classes. In all instances where raw return data is required, we will rely on the accuracy historically reported information. (Note: Recalculation of returns from raw data would be cost-prohibitive.)

❖ **Investment Reporting and Monitoring**

The review of this task area will include the evaluation of:

- 1) Whether the nature and scope of the Fund's performance reports are technically sound and practically useful, as well as the utility of the current reporting method(s) and formats.
- 2) Whether investment managers have been provided with written investment guidelines?

- 3) Whether appropriate criteria were used to develop the guidelines for each type of manager? (For this task we will sample the guidelines.)
- 4) Whether processes are in place to monitor adherence to stated investment guidelines, and if so, whether the monitoring processes are documented in writing and adhered to as written? Whether the processes are sufficient and effective?
- 5) Whether the Fund monitors the investment managers' for investment risk?

All of the above areas will be analyzed in the context of current industry standards and "best practices". We will also suggest reasonable alternatives when we consider them practical to implement.

As the Board requested, this list of added tasks and procedures will provide a more thorough and comprehensive look at the investment program of the City of Oakland Police and Fire Retirement System than we originally discussed in our proposal. The addition of these task areas will increase our previously proposed fee by \$30,000. Our total revised fee for the entire review, including these added areas, is \$150,000 plus \$7,500 for reasonable out-of-pocket expenses (primarily related to travel), assuming the revised scope of work and an acceptable contract. I have discussed this fee proposal carefully with Jeanna Cullins and we are in agreement on it. I hope that the Board finds the added amount to be reasonable and of value considering the additional work described above.

We would like to discuss this letter with the investment committee at its convenience. Please call me at 973-424-6410 to answer any questions you may have or to clarify any of the above. Also, if for any reason I am not available, please contact Jeanna Cullins in our Washington office at 202-898-2270.

Very truly yours,



Steven M. Harding
Senior Vice President
Independent Fiduciary Services, Inc.

Cc: Jeanna Cullins
Marc Becker

ATTACHMENT 3

The following table summarizes the recommendations by Independent Fiduciary Services, Inc (IFS) to Oakland PFRS originally presented May 22, 2006. The comments provided reflect the staff review of these recommendations as of May 26, 2010.

Number	Recommendation(s)	Page
A. Identification and Assignment of Responsibilities		
1	<p><i>The Board should seek amendments to the Charter to delete the “legal list” restrictions on its authority to invest the System’s assets and to grant to PFRS authority to select the custodian of the System’s assets.</i></p> <p>Staff Comment: <u>Implemented</u>. In November 2006, City voters passed Measure M granting the Board significantly more flexibility when investing the System’s assets. Specifically, the Measure amended the City Charter to allow the System’s Board to invest in non-dividend paying stocks and to change the asset allocation structure from 50% equities and 50% fixed income to the Prudent Person Standard as defined by the California Constitution.</p>	16
2	<p><i>The Board should continue to consider and approve the System’s administrative budget, and staff should provide to the Board all the data necessary for the Board to make prudent budget decisions.</i></p> <p>Staff Comment: <u>Implemented</u>. Staff now provides monthly Administrative report. The report provides a monthly update on the System’s expenditures, Cash held in Treasury, Retiree census and Investment Fund Balances.</p>	16
3	<p><i>The Board should participate in the process by which the staff assigned to PFRS are selected, evaluated and compensated, and should obtain a commitment from OPRM and FMA that no staff assigned to PFRS shall be employed without input from the Board.</i></p> <p>Staff Comment: <u>Partially Implemented</u>. The PFRS Board currently participates in the interview process and selection of staff. The Board also approves a Budget that includes the allocation of staff and the appropriate salaries.</p>	17
4	<p><i>The Board should seek the assignment to PFRS of staff with investment expertise to assist the Board in setting investment policy and monitoring the performance of the System’s investment managers and consultant.</i></p> <p>Staff Comment: Not implemented. This recommendation has been raised with the Audit Committee for consideration. The Investment Consultant (PCA) monitors performance and recommends investment policy. In addition, the Retirement System Accountant works internally on investment related items.</p>	17 (Weight = 9)
5	<i>Pensioner records filing should be made a priority project. All pensioners’ filing information</i>	19

Number	Recommendation(s)	Page
	received in the future should be filed in a timely manner – i.e., within one week of receipt.	
	Staff Comment: Implemented. All backlogged filing has been completed and a system established for ongoing filing to avoid future backlogs. Filing is done on a regular basis.	
6	<i>Pensioner record file drawers should be locked at all times when unattended by the Benefits Representative.</i>	19
	Staff Comment: Partially Implemented. New file cabinets with locks have been ordered and files are in the process of being transferred.	
7	<i>Use of a scanner for document storage is also recommended. Certain paper documents could then be shredded for security purposes.</i>	19
	Staff Comment: Partially Implemented. Steps have been taken to begin implementation of this recommendation. All of the money manager contracts have been scanned and are stored. No timeframe has been established at this point for scanning and storing other types of documents.	
8	<i>It should be required that all address changes are to be made in writing and signed by the pensioner only.</i>	20
	Staff Comment: Implemented. All Address changes are now required to be made in writing and signed by the pensioner.	
9	<i>It should be required that a notary's stamp and signature appear on all beneficiary forms verifying the signature is that of the pensioner.</i>	20
	Staff Comment: Implemented. PFRS Retirees currently have beneficiary forms on file. The form was originally completed when the employee retired and were updated based on this recommendation. All significant changes requested by the Retiree require a notary when the Retiree is not able to come to the office.	
	In August 2008, Staff sent out information to all Retirees to update their existing Beneficiary information. All changes to Beneficiary information require a notary.	
10	<i>OPRM should develop a written record retention policy that incorporates City requirements but addresses the special needs of a retirement system. While this will aid in preventing the untimely destruction of plan materials, with the limited availability of storage space, it may allow for the disposition of unnecessary materials.</i>	23 (Weight = 1)

Number	Recommendation(s)	Page
	Staff Comment: <u>Not Implemented.</u> The City of Oakland already has a record retention policy. It includes the requirement to retain active retirement payment records for seven years.	
11	<i>The Board meeting cassettes should be located for the past four years so that the System is in compliance with the Brown and Sunshine requirements to maintain meeting minutes for a minimum period of four years.¹</i> Staff Comment: Implemented. The Board meeting cassettes are available for the past four years.	23
12	<i>Should the practice of recording meetings be maintained, new technology, such as a CD recorder, should be utilized to avoid loss due to deterioration of cassettes over time.</i> Staff Comment: Implemented. Board meetings are now recorded using a digital recorder.	23
13	<i>Written minutes should provide more detail, especially in areas where the Board provides direction. For example, if the Board approves transfer of assets from one investment manager to another, or makes a policy decision, the minutes should reflect the effective date of the transfer or policy. It is also recommended that the meeting minutes reflect the signature of the President of the Board to attest to the approval of the minutes as drafted.</i> Staff Comment: Implemented. Written minutes are now being prepared with more detail as recommended and the Board president and Committee Chairs are now required to sign them.	23
14	<i>Use of a scanner for document storage is also recommended. Scanning of meeting materials would reduce the need for use of the limited storage space. It would also protect against the loss of older records due to natural disaster.</i> Staff Comment: <u>Partially implemented.</u> All of the money manager contracts and additional historical information has been scanned and stored. No timeframe has been established at this point for scanning and storing Retiree files.	23
15	<i>Establish a written procedure, for inclusion in the Standard Operations Manual (SOM), for expense payments.</i> Staff Comment: Implemented. The expense payments process described in the Audit Report is now documented in a desk operations manual. Each staff person has a desk operations manual specific to the tasks performed. Manuals were completed in July 2006. Copies of the manuals	24

¹ Staff reports that this recommendation has been completed.
ATTACHMENT 3

Number	Recommendation(s)	Page
	are on the respective staff desk, on the shared drive accessible by appropriate staff and maintained on 3.5 floppy disks.	
16	<i>The Board seat of Insurance Representative should be filled as soon as possible.</i> Staff Comment: Implemented. The Board seat of Insurance Representative was filled.	25
17	<i>The pension payment spreadsheet should be password protected by Accountant 1. Any proposed changes to the file by the Benefits Representative should be provided to and entered by Accountant 1, prior to submission to the accounting department for final payment.</i> Staff Comment: Implemented. Passwords have been assigned to pension payments files. It was recently discovered that all Pension Payments are considered public information and are not required to be password protected. SSN information is not included in the files. The process has been modified as recommended to require calculations to a member file be made by the Retirement Systems Accountant and verified by the Accountant.	26
18	<i>All changes to the banking information for direct deposits should be verified and confirmed for accuracy. Changes to bank routing information should be approved by a second staff member.</i> Staff Comment: Implemented. All Banking information is verified monthly by the City of Oakland. Bank and staff are notified when there is incorrect information. All members who make Bank changes are required to submit a voided check with the member's name and banking information.	26
19	<i>An administrative management report providing the following information should be provided to the Board on a monthly or quarterly basis: (1) the number of pensioners receiving benefits, (2) benefit payment totals, (3) the number of active participants and their contributions, (4) beginning and ending investment and cash balances, (5) death benefit payments and (6) operating expenses.</i> Staff Comment: Implemented. Staff now presents a Monthly Administrative report that includes the information requested.	27
20	<i>The administrative budget reports should continue to be shared with the Board.</i> Staff Comment: Implemented. Administrative budget reports continue to be shared with the Board.	27
21	<i>It is recommended that the completion of an Annual Report (AR) for the Plan Year 2005 be made a priority. The completed AR could be put online to reduce staff time and costs related to photocopying the report. An internet site could also be established for the PFRS and all pertinent information</i>	27

Number	Recommendation(s)	Page
	could be maintained there including the AR.	
	Staff Comment: Implemented. An annual report was prepared and continues to be prepared annually.	
B. Governing Body		
22	<i>The Board should retain independent fiduciary legal counsel.</i>	32
	Staff Comment: Implemented. On April 28, 2010, the PFRS Board reached an agreement with the City Attorney's office regarding Legal Council and approved a corresponding Resolution. The Board has interviewed and selected Legal Council. Completion of contract for Legal Council is in progress.	
23	<i>The Board should utilize independent fiduciary legal counsel to assist it in objectively harmonizing the provisions of Proposition 162 and the City Charter and then to update its rules and regulations to specifically delineate the extent of the Board's authority and control regarding the administration of the pension fund, including PFRS' authority to (a) establish its budget; (b) select outside counsel; (c) select and evaluate the PFRS Secretary and additional staff; (d) select and evaluate the actuary; and (e) select and evaluate the custodial bank.</i>	32 (Weight = ?)
	Staff Comment: Board input required	
24	<i>The Board should develop a memorandum of understanding with the City which would facilitate the Board's ability to exercise the authority granted to it by Proposition 162 and the City Charter by agreeing how the two documents will be harmonized and make plain the authority of the Board to set forth and establish, at a minimum, the authority of the Board to select and evaluate a Secretary to the board, additional staff (e.g., a staff member with investment experience), to retain outside legal counsel, to retain the actuary, and to establish its budget.</i>	32 (Weight = ?)
	Staff Comment: Board input required	
25	<i>The Board should explore the cost/benefit of once again becoming a distinct entity within the Oakland City Government rather than being a part of the Office of Personnel.</i>	32 (Weight = ?)
	Staff Comment: Board input required	
26	<i>The Board should become more cognizant of the full extent of its fiduciary responsibility, authority and control regarding the pension fund by periodically holding compulsory educational sessions (for current and new trustees) for the purpose of becoming more knowledgeable about the governing documents applicable to the administration of the pension fund and the investment of pension fund</i>	32 (Weight = ?)

Number	Recommendation(s)	Page
	assets, including but not limited to the provisions of Proposition 162, the City Charter, as amended, the Board's Rules and Regulations, the Brown Act, the Board's Investment Policy Statement, and any reporting and disclosure requirement applicable to the Board (e.g., Form 700).	
	Staff Comment: Board input required	
27	<i>In consultation with the investment consultant and the equity investment managers, the Board should develop and implement a process for considering and acting upon proposed investments in equity securities which have not satisfied the five year dividend history set forth in the Charter.</i>	36
	Staff Comment: Implemented. City voters passed Measure M which amended the City Charter to allow the System's Board to invest in non-dividend paying stocks.	
C. Accountability		
28	<i>We recommend that the Board seek a legal opinion regarding whether or not it has the legal authority, through rulemaking, to remove a trustee. If it is determined that the Board has such authority, then we recommend that the Board amend its rules and regulations to require that a member who misses more than four meetings in a 12 month period must either resign from the Board or obtain the approval of the Board, evidenced by a majority vote, to continue on the Board.</i>	39 (Weight = ?)
	Staff Comment: Board input required	
29	<i>We recommend that the Board's Rules and Regulations be updated.</i>	40
	Staff Comment: Not Implemented	(Weight = 7)
30	<i>In addition to the meeting agenda, the Board should also publish the minutes of each meeting on its website.</i>	42
	Staff Comment: Implemented. Board meeting material is now available on the City of Oakland website.	
31	<i>The Board should issue a current annual report as soon as possible.</i>	42
	Staff Comment: Implemented.	
32	<i>The Board should amend its Rules and Regulations to require that the notice of election, petition, election criteria, etc., be posted on the PFRS website.</i>	44 (Weight = 7)
	Staff Comment: Not Implemented Board input required.	
33	<i>The Board should go on record and request the City Council to fill the current vacancy on the Board.</i>	44

Number	Recommendation(s)	Page
	<i>If it is determined that the vacancy can not be filled then we recommend that the City Charter be amended to change the experience requirement from an individual with life insurance experience to one that has experience in benefits administration or investment management experience.</i>	
	Staff Comment: The vacancy has been filled.	
34	<i>The Board should develop a succession plan and implementation protocol.</i>	46
	Staff Comment: Not Implemented	(Weight = 6)
35	<i>The Board should develop a governance statement which sets forth the roles and responsibilities of the key parties involved in the management of the PFRS.</i>	46
	Staff Comment: Not Implemented	(Weight = 8)
36	<i>The Board should instruct staff to develop a standard operating procedures manual made up of a compilation of existing policies, procedures, and operative practices of PFRS staff, including functional position descriptions for every PFRS position.</i>	46
	Staff Comment: Partially Implemented. Each staff person has a desk operations manual specific to the tasks performed. Manuals were completed in July 2006. Copies of the manuals are on the respective staff desk, on the shared drive accessible by appropriate staff and maintained on 3.5 floppy disks.	
D. Expert Advice		
37	<i>If the Audit Committee persists in the view that the attorney identified by the Board to serve as outside legal counsel should serve as the Board's outside counsel, the Audit Committee and the City Attorney should agree to submit the issue of eligibility to a mutually acceptable, qualified attorney to issue a definitive opinion on the point. If that attorney determines that the attorney identified by the Board to serve as outside legal counsel should not be selected, the Audit Committee should promptly select another candidate from the panel, and the City Attorney should not unreasonably withhold his consent to that selection.</i>	49
	Staff Comment: <u>Implemented</u>. The PFRS Board has selected an Attorney.	
38	<i>The Board should continue to employ an investment consultant to provide a comprehensive range of consulting services.</i>	56
	PCA Comment: PCA is willing to discuss adjusting our services where appropriate. IFS apparently did not have a complete record of services provided by PCA. For example, PCA	

Number	Recommendation(s)	Page
	(through its affiliate LDZ) calculates investment rates of return for the total fund and numerous composites, reconciles return calculations with external managers, and monitors organizational and business issues at PFRS's external managers.	
39	<i>PFRS Board should consider expansion of PCA's contract to include advice on other collateral and secondary services about which the current agreement is silent. (Refer to report Table D1.)</i> PCA Comment: Specific areas qualifying for current consideration include securities lending and custody. PCA has provided PFRS a preliminary review of its securities lending program. PCA expects to work with Staff to review its custody relationship in the near future.	56 (Weight = ?)
40	<i>Should PFRS elect to retain third party vendors to provide additional investment related services, PCA should provide PFRS with a periodic review of the work of these vendors.</i> PCA Comment: Upon retention of third party vendors, PCA would work with Staff to provide PFRS with a periodic review of the work of these vendors.	56
41	<i>While we have no reason to question the validity of the actuarial work performed currently, PFRS should consider obtaining a periodic 'second opinion' on the work of its actuary. Some funds do this every five years. Short of going to bid for the actuarial services, the Board's monitoring process of its actuary could consist of hiring another reputable actuary to perform a one-time review.</i> Staff Comment: The PFRS Board selected a new Actuary in 2007.	57
42	<i>PFRS should seek competitive proposals for a new custody arrangement. The Board's legal counsel should be closely involved in negotiating the custody agreement.</i> PCA Comment: PCA expects to work with Staff to review its custody relationship in the near future.	60
43	<i>Simultaneously, PFRS should seek competitive bids on its securities lending program. (See next section and recommendation.)</i> PCA Comment: PCA has provided PFRS a preliminary review of its securities lending program. PCA expects to work with Staff to review its securities lending relationship in the near future.	60
44	<i>The Board (and staff) should refrain from approval of borrowers. Staff or the investment consultant should periodically review the list of borrowers approved by MetWest and only bring to the Board's attention any that may be questionable.</i>	62

Number	Recommendation(s)	Page
	Staff Comment: Not Implemented	
45	<i>PFRS should request and obtain contractual assurances from MetWest that its securities are loaned equitably. MetWest should also provide a description and explanation of the queuing mechanism that allocates loans among lenders..</i>	62
	Staff Comment: Not Implemented	
46	<p><i>Since the agreement for Securities Lending Services has been assigned at least three times, we suggest that it be renegotiated to incorporate certain key provisions of the Securities Lending Agreement such as requirement for maintenance of collateral, and to reflect the current agency and more favorable terms concerning, e.g.:</i></p> <ul style="list-style-type: none"> • <i>Indemnification against borrower default;</i> • <i>Liability on the part of agent for failing to act in accordance with PFRS instructions; and</i> • <i>Restrictions on borrowing activities of parent/affiliate of agent.</i> 	62
	Staff Comment: The PFRS Board selected and signed a new SecLending contract in 2007.	
47	<i>PFRS should seek to restrict the terms and conditions under which MetWest can lend PFRS securities to its parent and affiliates, i.e., Wachovia.</i>	63
	Staff Comment: No Longer Applicable	
48	<i>MetWest should provide explanations in their report when loan transactions fall outside general loan program guidelines.</i>	63
	Staff Comment: Not Implemented	
49	<i>The footnote on securities lending should be corrected as appropriate.</i>	63
	Staff Comment: No Longer Applicable	
E. Suitability		
50	<p><i>We recommend that the Board amend its travel policy to (a) clarify that travel must be approved in advance, (b) require that all international travel be approved by the full board in advance of such travel, (c) expand the policy to cover staff assigned to PFRS, (d) include a list of approved conferences, (e) limit the total number of trips that may be taken in any one year, and (f) require that members and staff that attend an educational conference provide a written overview of the conference to the board and make the conference materials available to others upon request.</i></p> <p>Staff Comment: The travel policy has been updated and adopted by the Board to include some,</p>	66

Number	Recommendation(s)	Page
	but not all, of the recommendations made by the auditing consultant.	
F. Internal Controls		
51	<p><i>While it is only possible to revise the method of distribution for annual pay increases through the collective bargaining process, providing clear, well-defined, and obtainable staff objectives for acceptable job performance and future career growth at each annual evaluation may increase employee performance and productivity.</i></p> <p>Staff Comment: Not Implemented</p>	71
52	<p><i>In addition to the SOM, an Administrative Manual should be completed that describes each position and the related job responsibilities. The Manual should also describe the primary and secondary responsibilities for each job title so that a clear back-up is designated in the absence of the primary personnel.</i></p> <p>Staff Comment: An administrative manual has not yet been developed, however, staff have been cross trained to fill in for colleagues in their absence to the extent possible. The operating procedures developed for each desk are on the shared drive and accessible by all members of the Retirement Section staff.</p>	71
53	<p><i>The percentages used for allocation purposes should be changed as follows:</i></p> <ul style="list-style-type: none"> ▪ <i>Reduce the percentage for the Executive Assistant to the Director of Personnel from 15% to 8%;</i> ▪ <i>Reduce the percentage for Human Resources Technician from 80 to 65%;</i> ▪ <i>Increase the percentage for Retirement Systems Accountant and Accountant I from 70% to 80%; and</i> ▪ <i>All other reviewed percentages appear appropriate.</i> <p><i>(Note: The revised recommended percentages are based solely on our judgment based on the interviews conducted.)</i></p> <p>Staff Comment: The PFRS Retirement System no longer pays for the salaries of the Director of Human Resource Management or the Executive Assistant. Other allocations have not been changed.</p>	72
54	<p><i>The Board should develop contractual language for inclusion in each service provider's agreement requiring extensive, prompt, written disclosure from the investment consultant (including filing of Form 700 if required) and each service provider regarding the amounts of all revenues the investment consultant receives from any incumbent or proposed service provider.</i></p>	74

Number	Recommendation(s)	Page
	Staff Comment: Not Implemented	
55	<i>The Board should designate a specific individual (e.g., legal counsel), in addition to the City Clerk, to review and monitor conflicts of interest, actual and potential, including Form 700 reports as allowed by law.</i>	74
	Staff Comment: Not Implemented	
56	<i>A HIPAA compliance study should be performed, and steps should be taken to remedy any deficiencies in PFRS' HIPAA compliance.</i>	74
	Staff Comment: Not Implemented	
57	<i>PFRS should continue the annual external audit of benefit calculations.</i>	75
	Staff Comment: Implemented. PFRS continues to go through annual external Audits	
58	<i>PFRS should hire an external actuarial firm to review the work of its current actuary.</i>	75
	Staff Comment: Partially Implemented: PFRS hired a new Actuary in 2007, who reviewed the work of the previous Actuary. If Bartel is retained for a long period of time then a third-party review may be appropriate.	
59	<i>PFRS should discuss a program of regular internal auditing of PFRS' activities with the City Auditor. The internal auditing activity should be performed in accordance with generally accepted standards for the practice of internal auditing and should include compliance auditing. We suggest that PFRS' external auditor be consulted on the design of such a program before it is implemented.</i>	76
	Staff Comment: Not Implemented	
60	<i>Observations and recommendations from this Operational Review should be tracked and monitored by staff and the Board should be updated regularly on the progress of recommendations that it chooses to implement.</i>	76
	Staff Comment: Implemented. Board members have been asked to identify their priorities relative to the recommendations made so that staff resources can be steered toward meeting their priorities.	
61	<i>The Board should undertake a periodic management audit such as the one performed to develop this report.</i>	76
	Staff Comment: Under Consideration	

Number	Recommendation(s)	Page
62	<i>Staff's performance measurement criteria should identify goals and objectives specifically related to the management and administration of PFRS. The criteria should be designed to align the interest of the board and staff and facilitate PFRS' ability to accomplish its mission and strategic objectives.</i> Staff Comment: Not Implemented	77
63	<i>Board members should provide input in the establishment of the performance measurement criteria for the staff assigned to carry out PFRS' day to day administration, as well as the input in such staffs' annual performance review.</i> Staff Comment: Not Implemented	77
G. Reporting		
64	<i>Should the current method of communicating governing body decisions effecting retirees and beneficiaries, via the local union channels, remain in place, a formal process of communicating these decisions should be developed. Staff Comment: Not Implemented</i>	79
65	<i>Establishment and maintenance of a PFRS webpage within the City's portal would allow another means of communicating Board decisions. Staff Comment: Not Implemented</i>	79
66	<i>PFRS should resume the practice of publishing its own annual report on a timely basis. Reports for 2004 and 2005 should be prepared.</i> Staff Comment: This recommendation has been implemented.	81
H. Disclosure		
67	<i>All actions taken by the governing body at the monthly meeting should be recorded in detail in the meeting minutes.</i> Staff Comment: Currently being done.	82
68	<i>Draft meeting minutes should be produced within five days of the meeting and circulated to the appropriate parties for review and action. The minutes should be reviewed prior to the next meeting to assure all actions requiring follow-up are complete.</i> Staff Comment: Minutes are completed 10 business days following the Board meeting. The minutes are reviewed prior to the next meeting to assure all actions requiring follow-up are addressed.	82
69	<i>Establishment and maintenance of a PFRS webpage within the City's portal would allow another means of communicating Board decisions. (PFRS should bear the direct cost of creating and maintaining the web pages.)</i>	82

Number	Recommendation(s)	Page
	Staff Comment: Not Implemented	
70	<i>Same recommendation as G. 64.</i>	82
71	<i>Same as H. 69</i>	82
I. Investment Analysis		
72	<p><i>The Board should revise the performance objectives section of the IPS to include additional investment objectives and benchmarks for the total Pension Fund (including a Total Fund Policy Index and Total Fund Asset Allocation Index) and each asset class or composite.</i></p> <p>PCA Comment: PCA will modify the IPS over time to meet this recommendation. Currently, investment objectives and benchmarks for the total Pension Fund and each asset class (or composite) are included in the quarterly statement of performance.</p>	88
73	<p><i>The IPS should include a distinct section on roles and responsibilities that covers all of the major investment related tasks.</i></p> <p>PCA Comment: The current IPS includes a section on roles and responsibilities of the Board, Investment Consultant, Investment Manager, and Investment Counsel. If not already covered in this section, PCA will modify the IPS over time to meet this recommendation.</p>	90
74	<p><i>The IPS should specify the frequency with which the asset allocation and/or asset liability studies should be conducted, e.g., at least every three to five years and by whom it should be done.</i></p> <p>PCA Comment: PCA and EFI Actuaries conducted an asset-liability review for PFRS in 2005. PCA suggests that PFRS conduct a review every three to five years. PCA will work with Staff to document a schedule in the IPS.</p>	91
75	<p><i>We recommend that the rebalancing ranges be tightened and modified</i></p> <p>PCA Comment: In November 2006, revisions to current asset allocation restrictions are to be voted on as part of amendment to the City Charter. If the maximum of 50% equity (at cost) restriction is amended, the rebalancing ranges will be modified as appropriate.</p>	93
76	<p><i>We recommend that the IPS be expanded to include a more detailed discussion on the manager selection process or, alternatively, reference a separate manager search policy document.</i></p> <p>PCA Comment: The manager selection process is detailed in memorandums specific to each search. If further detail is required, PCA will work with Staff to include language in the IPS that provides an overview of the search process.</p>	94

Number	Recommendation(s)	Page
77	<p><i>We recommend that the Board include only broad asset class level guidelines in the IPS.</i></p> <p>PCA Comment: The current investment policy includes broad asset class level guidelines. PCA suggests that current PFRS asset class level guideline policies are appropriate and are within generally accepted standards.</p>	96
78	<p><i>The Board should consider revising and expanding the policy on securities lending as described in our report.</i></p> <p>PCA Comment: Policy on securities lending is included in the manager guidelines section of the IPS. If further detail is required, PCA will work with Staff to revise and expand the policy on security lending.</p>	98
79	<p><i>Add policy on brokerage practices to the total fund section of the IPS, which acknowledges that commissions are a plan asset and, as such, the Board will monitor commission and other trading expenses.</i></p> <p>PCA Comment: PCA will work with Staff to add policy on brokerage practices.</p>	99
80	<p><i>The Board should work with the Investment Consultant, custodian bank and investment managers to develop monthly reports that contain sufficient data to determine whether the individual portfolios and Total Fund are in compliance with the City Charter.</i></p> <p>PCA Comment: For an additional charge, PFRS could receive monthly information from its custodian.</p>	104
J. Performance Benchmarks		
81	<p><i>In order to evaluate the International Equity portion of the portfolio more consistently, PFRS should consider measuring its international equity segment against the MSCI EAFE Index. If the Board concludes that the MSCI ACWI ex US Index is an appropriate benchmark, it should consider measuring its international equity managers against the MSCI ACWI ex US Index.</i></p> <p>PCA Comment: Resolved. PCA has recommended and the Board adopted the MSCI ACWI ex US Index as its asset class benchmark. In addition, PCA recommended that two PFRS international equity managers be measured against the MSCI ACWI ex US index.</p>	110
82	<p><i>PFRS should consider measuring the fixed income portfolio against the Lehman Brothers Universal Index.</i></p> <p>PCA Comment: Resolved. PCA has recommended and the Board adopted the Lehman</p>	111

Number	Recommendation(s)	Page
	Universal Index as its asset class benchmark and its fixed income managers' benchmark.	
L. Investment Reporting and Monitoring		
83	<p><i>PFRS should measure the performance of the Total Fund against an Asset Allocation index to allow the Board to determine how much of return was generated due to the investment managers' skill, as opposed to tactical asset allocation decisions chosen by the Board.</i></p> <p>PCA Comment: Resolved. The PFRS performance report does measure the Total Fund against an Asset Allocation (Policy) Index. In the Portfolio Performance Overview section, PCA discusses sources of return including investment managers' skill (e.g., stock selection) and asset allocation decisions.</p>	125
84	<p><i>The PFRS Board should request an exhibit that displays the performance for each asset class and investment manager, along with their respective benchmarks on a consecutive time period.</i></p> <p>PCA Comment: Resolved. The PFRS performance report contains tables that provide asset class performance and those of each asset class's investment manager performance, along with their respective benchmarks for the latest quarter, one year, three year, and five year periods.</p>	126
85	<p><i>PFRS should request from their consultant universe comparisons for the Total Fund, each Asset Class Composite, and underlying investment managers on a cumulative and consecutive time period.</i></p> <p>PCA Comment: The PFRS performance reports currently provide universe comparisons for the Total Fund. PCA will work with Staff to develop appropriate documentation for the PFRS performance reports.</p>	127
86	<p><i>PFRS should request that its consultant provide holdings and/or returns based style analysis for its domestic equity portfolio.</i></p> <p>PCA Comment: PCA will work with Staff to develop appropriate documentation for the PFRS performance reports.</p>	127
87	<p><i>PFRS should discuss with its consultant what equity characteristics it would like to see on a quarterly basis.</i></p> <p>PCA Comment: PCA will work with Staff to develop appropriate documentation for the PFRS performance reports. Equity characteristics could be provided by PFRS' custodian at an extra cost.</p>	128
88	<p><i>PFRS should discuss with its consultant what fixed income characteristics it would like to see on a quarterly basis.</i></p>	128

Number	Recommendation(s)	Page
	PCA Comment: PCA will work with Staff to develop appropriate documentation for the PFRS performance reports. Fixed income characteristics could be provided by PFRS' custodian at an extra cost.	
89	<i>PFRS should request that its consultant provide risk/return exhibits for the Total Fund and each Asset Class.</i> PCA Comment: The PFRS performance report currently provides a risk/return exhibit for the Total Fund. PCA will work with Staff to develop appropriate documentation for each asset class.	129
90	<i>We recommend that the individual manager guidelines be expanded to include the specific guideline elements that are included in the other sections of the IPS (including those specific to the City Charter requirements), tailored to their strategy, as well as additional investment risk elements, as appropriate for the manager.</i> PCA Comment: PCA will work with Staff to modify individual manager guidelines.	133
91	<i>Staff should work with its investment consultant to develop a monthly manager report format, which includes all the necessary elements that would allow staff to monitor compliance more effectively.</i> PCA Comment: PCA currently provides PFRS with a quarterly statement of performance. Monthly performance could be obtained from PFRS' custodian at an extra cost.	136
92	<i>The Board should either ask its investment consultant for assistance with monitoring its investment managers' compliance with their investment guidelines or work with staff and the custodian to enroll in an automated guideline compliance system. In any case, monitoring procedures should be documented in writing.</i> PCA Comment: PCA will work with Staff to determine appropriate compliance monitoring procedures. Likely, an automated guideline compliance system could be obtained from PFRS custodian at an extra cost.	136

ATTACHMENT 4

The following table summarizes the recommendations by Independent Fiduciary Services, Inc (IFS) to Oakland PFRS originally presented May 22, 2006. The comments provided reflect the staff review of these recommendations as of May 26, 2010.

Investment Related Recommendations as of 05-18-2011

Number	Recommendation(s)	Page
A. Identification and Assignment of Responsibilities		
1	<i>The Board should seek amendments to the Charter to delete the “legal list” restrictions on its authority to invest the System’s assets and to grant to PFRS authority to select the custodian of the System’s assets.</i> Staff Comment: <u>Implemented</u>. In November 2006, City voters passed Measure M. Measure M amended the City Charter to allow the System’s Board to invest in non-dividend paying stocks and to change the asset allocation structure from 50% equities and 50% fixed income to the Prudent Person Standard as defined by the California Constitution.	16
4	<i>The Board should seek the assignment to PFRS of staff with investment expertise to assist the Board in setting investment policy and monitoring the performance of the System’s investment managers and consultant.</i> Staff Comment: The Investment Consultant (PCA) monitors performance and recommends investment policy. In addition, the Retirement System Accountant works internally on all investment related items. Given current funded status, the PFRS Board has elected not to hire additional full-time investment staff.	17
D. Expert Advice		
38	<i>The Board should continue to employ an investment consultant to provide a comprehensive range of consulting services.</i> Comment: Implemented. PFRS currently has and will continue to retain an external investment consultant.	56

39	<p><i>PFRS Board should consider expansion of PCA's contract to include advice on other collateral and secondary services about which the current agreement is silent. (Refer to report Table D1.)</i></p> <p>PCA Comment: PCA currently has a full retainer relationship with OPFRS. Part of this relationship is the review and advice on collateral and secondary services as they are needed. PCA provides reviews of both securities lending and OPFRS custody relationship every three to five years or as market conditions warrant.</p>	56
40	<p><i>Should PFRS elect to retain third party vendors to provide additional investment related services, PCA should provide PFRS with a periodic review of the work of these vendors.</i></p> <p>Implemented: PCA provides periodic review of Third Party Vendors when applicable. PCA provides reviews of both securities lending and OPFRS custody relationship every three to five years or as market conditions warrant.</p>	56
42	<p><i>PFRS should seek competitive proposals for a new custody arrangement. The Board's legal counsel should be closely involved in negotiating the custody agreement.</i></p> <p>Implemented: PFRS Board seeks competitive bids at minimum upon contract renewal or as more frequently as needed to ensure best custody arrangements possible.</p>	60
43	<p><i>Simultaneously, PFRS should seek competitive bids on its securities lending program. (See next section and recommendation.)</i></p> <p>Implemented: PFRS SecLending program is currently managed by the Custodian. PFRS Board will review Security Lending program every three to five years or at the same time of the Custodial Review or as market conditions warrant.</p>	60
44	<p><i>The Board (and staff) should refrain from approval of borrowers. Staff or the investment consultant should periodically review the list of borrowers approved by MetWest and only bring to the Board's attention any that may be questionable.</i></p> <p>Implemented: PCA will annually review list of Borrowers and inform Board as needed.</p>	62
45	<p><i>PFRS should request and obtain contractual assurances from MetWest that its securities are loaned equitably. MetWest should also provide a description and explanation of the queuing mechanism that allocates loans among lenders..</i></p> <p>Implemented: Security Lending Loans are periodically reviewed by Staff and reported annually to the Board as part of the Annual Financial Audit.</p>	62

46	<p><i>Since the agreement for Securities Lending Services has been assigned at least three times, we suggest that it be renegotiated to incorporate certain key provisions of the Securities Lending Agreement such as requirement for maintenance of collateral, and to reflect the current agency and more favorable terms concerning, e.g.:</i></p> <ul style="list-style-type: none"> • <i>Indemnification against borrower default;</i> • <i>Liability on the part of agent for failing to act in accordance with PFRS instructions; and</i> • <i>Restrictions on borrowing activities of parent/affiliate of agent.</i> <p>Implemented: The PFRS Board selected a new vendor and signed a new SecLending contract in 2007.</p>	62
47	<p><i>PFRS should seek to restrict the terms and conditions under which MetWest can lend PFRS securities to its parent and affiliates, i.e., Wachovia.</i></p> <p>Implemented: PCA and Staff review annually, however more frequent oversight is conducted on an ongoing basis .</p>	63
48	<p><i>MetWest should provide explanations in their report when loan transactions fall outside general loan program guidelines.</i></p> <p>Implemented: SecLending Loans are periodically reviewed by Staff and as part of the PFRS Annual Financial Audit.</p>	63
49	<p><i>The footnote on securities lending should be corrected as appropriate.</i></p> <p>Staff Comment: No Longer Applicable. The PFRS Board selected a new Security Lending Manager in 2007</p>	63
I. Investment Analysis		
72	<p><i>The Board should revise the performance objectives section of the IPS to include additional investment objectives and benchmarks for the total Pension Fund (including a Total Fund Policy Index and Total Fund Asset Allocation Index) and each asset class or composite.</i></p> <p>Implemented: Currently, investment objectives and benchmarks for the total Pension Fund and each asset class (or composite) are included in the quarterly statement of performance. These items are reviewed continually and or at a minimum during annual IPS reviews.</p>	88

73	<p><i>The IPS should include a distinct section on roles and responsibilities that covers all of the major investment related tasks.</i></p> <p>Comment: The current IPS includes a section on roles and responsibilities of the Board, Investment Consultant, Investment Manager, and Investment Counsel. Language regarding the role of PFRS staff will be added and updated to the IPS as warranted</p>	90
74	<p><i>The IPS should specify the frequency with which the asset allocation and/or asset liability studies should be conducted, e.g., at least every three to five years and by whom it should be done.</i></p> <p>Implemented: The Investment Policy currently states the targeted dates of the asset/ liability study. These dates and reviewed and updated as needed.</p>	91
75	<p><i>We recommend that the rebalancing ranges be tightened and modified</i></p> <p>Implemented: The Investment Policy currently specifies a smaller range for asset rebalancing. However, these ranges are reviewed at minimum monthly through the use of the cash flow report. or as needed</p>	93
76	<p><i>We recommend that the IPS be expanded to include a more detailed discussion on the manager selection process or, alternatively, reference a separate manager search policy document.</i></p> <p>Comment: The manager selection process is detailed in Board memorandums specific to each search are presented to the PFRS Board. The IPS is reviewed on a continual basis but at a minimum annual review are conducted by staff and consultant to help ensure best practices</p>	94
77	<p><i>We recommend that the Board include only broad asset class level guidelines in the IPS.</i></p> <p>Implemented: The PFRS Investment Policy has been updated accordingly.</p>	96
78	<p><i>The Board should consider revising and expanding the policy on securities lending as described in our report.</i></p> <p>Implemented: The PFRS Investment Policy has been updated to expand on the security lending program.</p>	98
79	<p><i>Add policy on brokerage practices to the total fund section of the IPS, which acknowledges that commissions are a plan asset and, as such, the Board will monitor commission and other trading expenses.</i></p> <p>Implemented and currently in the PFRS Investment Policy</p>	99

80	<p><i>The Board should work with the Investment Consultant, custodian bank and investment managers to develop monthly reports that contain sufficient data to determine whether the individual portfolios and Total Fund are in compliance with the City Charter.</i></p> <p>Implemented: Staff and PCA currently receive a monthly report that details Managers compliance with the Investment Policy.</p>	104
J. Performance Benchmarks		
81	<p><i>In order to evaluate the International Equity portion of the portfolio more consistently, PFRS should consider measuring its international equity segment against the MSCI EAFE Index. If the Board concludes that the MSCI ACWI ex US Index is an appropriate benchmark, it should consider measuring its international equity managers against the MSCI ACWI ex US Index.</i></p> <p>Implemented: The PFRS International Equity Benchmark was changed to the MSCI ACWI ex US Index.</p>	110
82	<p><i>PFRS should consider measuring the fixed income portfolio against the Lehman Brothers Universal Index.</i></p> <p>Implemented: The PFRS Fixed Income Benchmark was changed to the Lehman Brothers Universal Index.</p>	111
L. Investment Reporting and Monitoring		
83	<p><i>PFRS should measure the performance of the Total Fund against an Asset Allocation index to allow the Board to determine how much of return was generated due to the investment managers' skill, as opposed to tactical asset allocation decisions chosen by the Board.</i></p> <p>Implemented PCA provides this information quarterly or as project specific requests warrant</p>	125
84	<p><i>The PFRS Board should request an exhibit that displays the performance for each asset class and investment manager, along with their respective benchmarks on a consecutive time period.</i></p> <p>Implemented PCA provides this information quarterly or as project specific requests warrant</p>	126
85	<p><i>PFRS should request from their consultant universe comparisons for the Total Fund, each Asset Class Composite, and underlying investment managers on a cumulative and consecutive time period.</i></p> <p>Implemented PCA provides this information quarterly or as project specific requests warrant</p>	127

86	<i>PFRS should request that its consultant provide holdings and/or returns based style analysis for its domestic equity portfolio.</i>	127
	Implemented PCA provides this information quarterly or as market conditions warrant	
87	<i>PFRS should discuss with its consultant what equity characteristics it would like to see on a quarterly basis.</i>	128
	Comment: Ongoing. PCA and Staff are continually reviewing this asset class to better meet the boards needs PCA and Staff will discuss with PFRS Board and seek Board direction. Staff hopes to have this issue resolved by 3 rd Quarter 2011.	
88	<i>PFRS should discuss with its consultant what fixed income characteristics it would like to see on a quarterly basis.</i>	128
	Comment: Ongoing. PCA and Staff are continually reviewing this asset class to better meet the boards needs PCA and Staff will discuss with PFRS Board and seek Board direction. Staff hopes to have this issue resolved by 3 rd Quarter 2011.	
89	<i>PFRS should request that its consultant provide risk/return exhibits for the Total Fund and each Asset Class.</i>	129
	Implemented PCA provides risk/return exhibits quarterly and during each asset class structure review on an ongoing basis	
90	<i>We recommend that the individual manager guidelines be expanded to include the specific guideline elements that are included in the other sections of the IPS (including those specific to the City Charter requirements), tailored to their strategy, as well as additional investment risk elements, as appropriate for the manager.</i>	133
	No Longer Applicable: PFRS no longer utilizes Individual Manager Guidelines. All Investment Managers receive a copy of the overall Investment Policy to ensure consistency and accuracy.	
91	<i>Staff should work with its investment consultant to develop a monthly manager report format, which includes all the necessary elements that would allow staff to monitor compliance more effectively.</i>	136
	Implemented: Custodian currently provides a monthly compliance report.	
92	<i>The Board should either ask its investment consultant for assistance with monitoring its investment</i>	136

managers' compliance with their investment guidelines or work with staff and the custodian to enroll in an automated guideline compliance system. In any case, monitoring procedures should be documented in writing.

Implemented: PCA and Staff currently works together to monitor the investment managers' compliance with the investment guidelines based on a monthly report provided by the Custodian.



AGENDA REPORT

TO: Oakland Police and Fire
Retirement Board

FROM: David Jones
Plan Administrator

SUBJECT: Audit Committee Agenda Pending List

DATE: May 20, 2019

	SUBJECT	TENTATIVE SCHEDULED MTG DATE	STATUS
1	Status Report of the Ad Hoc Committee regarding Actuarial Funding date of July 1, 2026	TBD	
2	Proposals addressing (1) a Board review process, and (2) a Hearing Officer review process to address the handling of confidential membership files when presenting member cases before the PFRS Board.	July 31, 2019	Additional Research needed by PFRS Legal Counsel

Respectfully submitted,

David Jones, Plan Administrator
Oakland Police and Fire Retirement System

PFRS Audit Committee Meeting
May 29, 2019

All persons wishing to address the Committee must complete a speaker's card, stating their name and the agenda item (including "Open Forum") they wish to address. The Committee may take action on items not on the agenda only if findings pursuant to the Sunshine Ordinance and Brown Act are made that the matter is urgent or an emergency.

Oakland Police and Fire Retirement Committee meetings are held in wheelchair accessible facilities. Contact the Retirement Unit, 150 Frank Ogawa Plaza, Suite 3349 or call (510) 238-7295 for additional information.



Retirement Unit
150 Frank H. Ogawa Plaza
Oakland, California 94612

AGENDA

INVESTMENT COMMITTEE MEMBERS

Jaime T. Godfrey
Chairman

R. Steve Wilkinson
Member

Martin J. Melia
Member

**In the event a quorum of the Board participates in the Committee meeting, the meeting is noticed as a Special Meeting of the Board; however, no final Board action can be taken. In the event that the Investment Committee does not reach quorum, this meeting is noticed as an informational meeting between staff and the Chair of the Investment Committee.*

REGULAR MEETING of the INVESTMENT AND FINANCIAL MATTERS COMMITTEE of the OAKLAND POLICE AND FIRE RETIREMENT SYSTEM ("PFRS")

Wednesday, May 29, 2019 – 10:00 am
One Frank H. Ogawa Plaza, Hearing Room 1
Oakland, California 94612

- - - ORDER OF BUSINESS - - -

- 1. Subject: PFRS Investment Committee Meeting Minutes**
From: Staff of the PFRS Board

Recommendation: APPROVE March 27, 2019 Investment Committee meeting minutes.
- 2. Subject: Investment Manager Performance Review – Rice Hall James and Associates, LLC**
From: Rice Hall James and Associates, LLC

Recommendation: ACCEPT an Informational Report regarding review of Rice Hall James and Associates, LLC, a PFRS Small Cap Growth Domestic Equities Investment Manager.
- 3. Subject: Investment Manager Overview – Rice Hall James and Associates, LLC, a small cap Growth Domestic Equities Investment Manager**
From: Meketa Investment Group

Recommendation: RECOMMEND BOARD APPROVAL of evaluation, review and possible watch status placement of Rice Hall James and Associates, LLC, a PFRS Small Cap Growth Domestic Equities Investment Manager.

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
REGULAR INVESTMENT COMMITTEE MEETING
MAY 29, 2019

ORDER OF BUSINESS, continued

4. **Subject:** Investment Manager Overview – DDJ Capital Management, LLC
From: Meketa Investment Group
-
- Recommendation:** **RECOMMEND BOARD APPROVAL** of evaluation, review and possible watch status placement of DDJ Capital Management, LLC, a PFRS High Yield and Bank Loan Fixed Income Investment Manager.
5. **Subject:** Investment Market Overview
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** an informational report on the global investment markets through April 2019.
6. **Subject:** Investment Fund Performance for the Quarter Ending March 31, 2019
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** informational report on the Investment Fund Performance for the Quarter Ending March 31, 2019.
7. **Subject:** Informational Report on the status of the Request for Proposal (RFP) for the new PFRS Active International Equity Asset Class Investment Manager
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** an Informational Report on the status of the Request for Proposal (RFP) for the new PFRS Active International Equity Asset Class Investment Manager.
8. **Subject:** Informational Report on the diversity of the Board of Directors for each Investment Manager of the PFRS Investment Fund
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** an informational report on the diversity of the Board of Directors for each Investment Manager of the PFRS Investment Fund.

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
REGULAR INVESTMENT COMMITTEE MEETING
MAY 29, 2019

ORDER OF BUSINESS, continued

9. **Subject:** Consideration of: 1) professional services agreement with State Street Global Advisors (SSgA) to serve as investment manager of the long duration treasury plan component of the crisis risk offset investment strategy for the Oakland Police and Fire Retirement System (PFRS); and 2) Temporary alternative investment options (i.e. Exchange-Traded Fund)

From: Staff of the PFRS Board

Recommendation: **RECOMMEND BOARD APPROVAL of Resolution No. 7052** – Resolution authorizing a professional service agreement with State Street Global Advisors (SSgA), to serve as investment manager of the long duration treasury plan component of the crisis risk offset investment strategy for the Oakland Police and Fire Retirement System at a fee rate not to exceed 4 basis points (4 bp or 0.04 percent) of the portfolio's assets value each year", **or RECOMMEND BOARD APPROVAL** of Temporary Alternative Investment options (i.e. Exchange-Traded Fund).

10. **Schedule of Pending Investment Committee Meeting Agenda Items**
11. **Future Scheduling**
12. **Open Forum**
13. **Adjournment of Meeting**

AN INVESTMENT AND FINANCIAL MATTERS COMMITTEE MEETING of the Oakland Police and Fire Retirement System (“PFRS”) was held March 27, 2019 in Hearing Room 1, One Frank Ogawa Plaza, Oakland, California.

Committee Members Present: • R. Steven Wilkinson, Member
• Martin J. Melia, Member

Committee Members Absent: • Jaime T. Godfrey, Chairman

Additional Attendees: • David Jones, Plan Administrator
• Jennifer Logue, PFRS Legal Counsel
• David Low & Teir Jenkins, Staff Members
• David Sancewich, Meketa Investment Group
• Sean Copus, Meketa Investment Group

The meeting was called to order at 10:15 am. Member Wilkinson served as Chairman Pro Tem in Chairman Godfrey’s absence from today’s meeting.

1. **Approval of Investment Committee meeting minutes** – Member Melia made a motion to approve the February 27, 2019 Investment Committee meeting minutes, second by Chairman Pro Tem Wilkinson. Motion passed.

[GODFREY – ABSENT / MELIA – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0)

2. **Investment Manager Performance Review – State Street Global Advisors (SSgA)**
– Andrew Yurkewych from SSgA presented a review of the Investment Performance of PFRS investment funds which are invested in its passive international equity account. Chairman Pro Tem Wilkinson asked Mr. Yurkewych about the diversity of the staff and the Board of SSgA. Mr. Yurkewych said he would contact his staff with the answer to Chairman Pro Tem Wilkinson’s questions and deliver it to the PFRS staff. Following additional Committee and investment manager discussion, member Melia made a motion to accept the informational report from SSgA, second by Chairman Pro Tem Wilkinson. Motion passed.

[GODFREY – ABSENT / MELIA – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0)

3. **Investment Manager Overview – State Street Global Advisors** – Sean Copus presented an update report on the organization of SSgA and investment performance of the PFRS funds managed by SSgA. Mr. Copus said Meketa does not have any recommendation for the Investment Committee regarding this manager. Chairman Pro Tem Wilkinson instructed Mr. Copus to research and report the diversity of the Boards of Directors for each PFRS Investment manager at a future meeting. Member Melia made a motion to approve the informational report by Meketa, second by Chairman Pro Tem Wilkinson. Motion passed.

[GODFREY – ABSENT / MELIA – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0)

4. **Resolution No. 7052** – Chairman Pro Tem Wilkinson said discussion and approval of resolution no. 7052 would be tabled to the April 2019 Investment Committee meeting when Meketa replied to his question about the diversity of SSgA's staff and Board of Directors.

5. **Investment Market Overview** – Sean Copus reported on the global economic factors affecting the PFRS Fund. Member Melia made a motion accept the Informational Report from PCA, second by Chairman Pro Tem Wilkinson. Motion passed.

[GODFREY – ABSENT / MELIA – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0)

6. **Review of 2019 10-year Capital Market Assumptions** – David Sancewich reported the PFRS portfolio long-term performance expectations to the Investment Committee. Following Mr. Sancewich's report and some additional discussion, member Melia made a motion to recommend PFRS Board approval of the 10-year capital market assumptions report, second by Chairman Pro Tem Wilkinson. Motion passed.

[GODFREY – ABSENT / MELIA – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0)

7. **\$14.2 million 2nd Quarter 2019 Member Benefits Drawdown** – Mr. Copus presented Meketa's recommendation on drawdowns to be made to pay for April 2019 through June 2019 member retirement benefits. Mr. Copus reported that Meketa recommended withdrawing \$3.0 million from funds managed by Parametric Portfolio Advisors (Covered Calls) and \$11.2 million from Cash from the City of Oakland. Investment Officer Teir Jenkins reported that staff is currently calculating the retroactive payments to be made to PFRS Fire members and beneficiaries as a result of a new Local 55 Memorandum of Understanding and said that the final calculation may require staff to amend the 2nd Quarter 2019 member benefits drawdown amount at a future date. Following Committee discussion, Member Melia made a motion to recommend Board Approval of a \$14.2 million drawdown, which includes an \$11.2 million contribution from the City of Oakland and a \$3.0 million contribution from the PFRS Investment Fund, to be used to pay for April 2019 through June 2019 member retirement benefits, second by Chairman Pro Tem Wilkinson. Motion passed.

[GODFREY – ABSENT / MELIA – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0)

8. **Status Report of the request for information for the new PFRS Active International Equity Asset Class Investment Manager** – Mr. Sancewich reported that the Request for Proposal for the new PFRS Active International Equity Asset Class Investment Manager would be posted on the Meketa website shortly. He said Meketa would report on the status of the RFP at each future Investment Committee meeting. Following committee discussion, member Melia made a motion to recommend board approval of the informational report from Meketa, second by Chairman Pro Tem Wilkinson. Motion passed.

[GODFREY – ABSENT / MELIA – Y / WILKINSON – Y]
(AYES: 2 / NOES: 0 / ABSTAIN: 0)

9. **Investment Committee Pending Agenda Items** – The investment committee and PCA discussed the upcoming agenda items scheduled on PCA's future meeting's agenda.
10. **Future Scheduling** – The next Investment Committee meeting was scheduled for April 24, 2019.
11. **Open Forum** – No Report.
12. **Adjournment of Meeting** – The meeting adjourned at 10:51 am.

JAIME T. GODFREY, COMMITTEE CHAIRMAN

DATE

Oakland Police & Fire Retirement System

RHJ Small Cap
Opportunities Strategy

May 29, 2019



RICE HALL JAMES
& ASSOCIATES, LLC

Rice Hall James & Associates, LLC
600 West Broadway, Suite 1000
San Diego, California 92101-3383

Telephone: (619) 239-4855
E-mail: info@ricehall.com
Website: www.ricehalljames.com

Firm Profile

As of March 31, 2019

- ▶ Investment-led firm, founded in 1974
- ▶ Firm assets under management: \$3.5 billion
- ▶ Ownership
 - Independent and 100% employee-owned. RHJ is focused solely on investment management with no other lines of business
- ▶ Personnel
 - 32 employees, including 11 owners averaging 26 years of industry experience and 19 years with Rice Hall James
- ▶ Time-Tested Investment Strategies
 - RHJ's professionals have been managing micro-, small-, and SMID-cap portfolios for more than three decades
- ▶ Established Client Base
 - 63 institutional clients, representing 83% of assets



Partial Client List

Airconditioning & Refrigeration Retirement Trust Fund

California Western School of Law

City of Erie Officers & Employees Pension Fund

City of Key West Police Officers' and Firefighters' Retirement System

County of Los Angeles Deferred Compensation & Thrift Plan

Golden LEAF Foundation

I.A.M. National Pension Fund

Laborers' District Council and Contractors Pension Fund of Ohio

Louisiana State Employees' Retirement Systems

New England Carpenters Benefit Funds

Masonic Home of Virginia

Minnesota State Board of Investment

North Collier Fire Control and Rescue District Firefighter Pension Plan

Portsmouth Fire and Police and Supplemental Retirement System

Producer – Writers Pension Plan

Regal Beloit Corporation

Santa Barbara County Employees' Retirement System

Shell Oil Company

SKF Employees' Pension Plan

State of Michigan Legislative Retirement System

The Archdiocese of New Orleans

The Papal Foundation

The Pennsylvania State University



RICE HALL JAMES
& ASSOCIATES, LLC

The above information is a sample list of current Rice Hall James & Associates, LLC (RHJ) clients, which were randomly selected institutional clients to represent a cross section of our diverse client base. The list is neither representative nor should be considered an endorsement by any above-listed client of either RHJ or RHJ's investment advisory services. It is not known whether the listed clients approve or disapprove of RHJ or the services the clients receive from RHJ.

Value Proposition

Long-Term Oriented

- Portfolio Manager/Analysts have an investment horizon that is longer than other micro and small cap growth managers, typically 3 to 5 years.
- Long-term focus allows us to develop an **informational edge** on companies and their management teams relative to our peer group universe.

Experienced & Stable

- Portfolio Manager/Analysts average 26 years of investment experience and 18 years working together.
- Knowledge base that includes a **deep understanding** of the companies' management teams, competitors, and customers.

Quality-Focused

- Portfolio is comprised of companies that generate high returns on invested capital or have the potential to do so in the near future.
- We invest in those companies that we believe have a **sustainable competitive advantage** compared to rivals.

Risk-Controlled

- Structure portfolio weightings in **most compelling ideas** on a risk-adjusted basis.
- Carefully monitor guideposts which are established at the time of initial investment.



Investment Philosophy

We believe that superior, long-term, risk-adjusted returns are generated by building a portfolio of companies with three primary characteristics – **high earnings growth, high or improving returns on invested capital and better sustainability characteristics** than that of the index.



Why Earnings Growth & ROIC ?

The probability of alpha generation increases when high earnings growth is coupled with high returns on invested capital.

		EARNINGS GROWTH ¹				
		Less than 0%	0%-10%	10-20%	20%-25%	More than 25%
PERFORMANCE OF RUSSELL 2000 COMPANIES RELATIVE TO OVERALL INDEX						
5-YEAR AVG ROIC ²	More than 15%	(70%)	20%	57%	150%	552%
	10% - 15%	(66%)	19%	55%	89%	104%
	5% - 10%	(43%)	(2%)	21%	49%	65%
	Less than 5%	(82%)	(37%)	(25%)	(73%)	(15%)

Historical performance does not guarantee future results

¹ 5-year Earnings Per Share (EPS) growth, compounded annually.

Sources: FactSet & Russell Investments

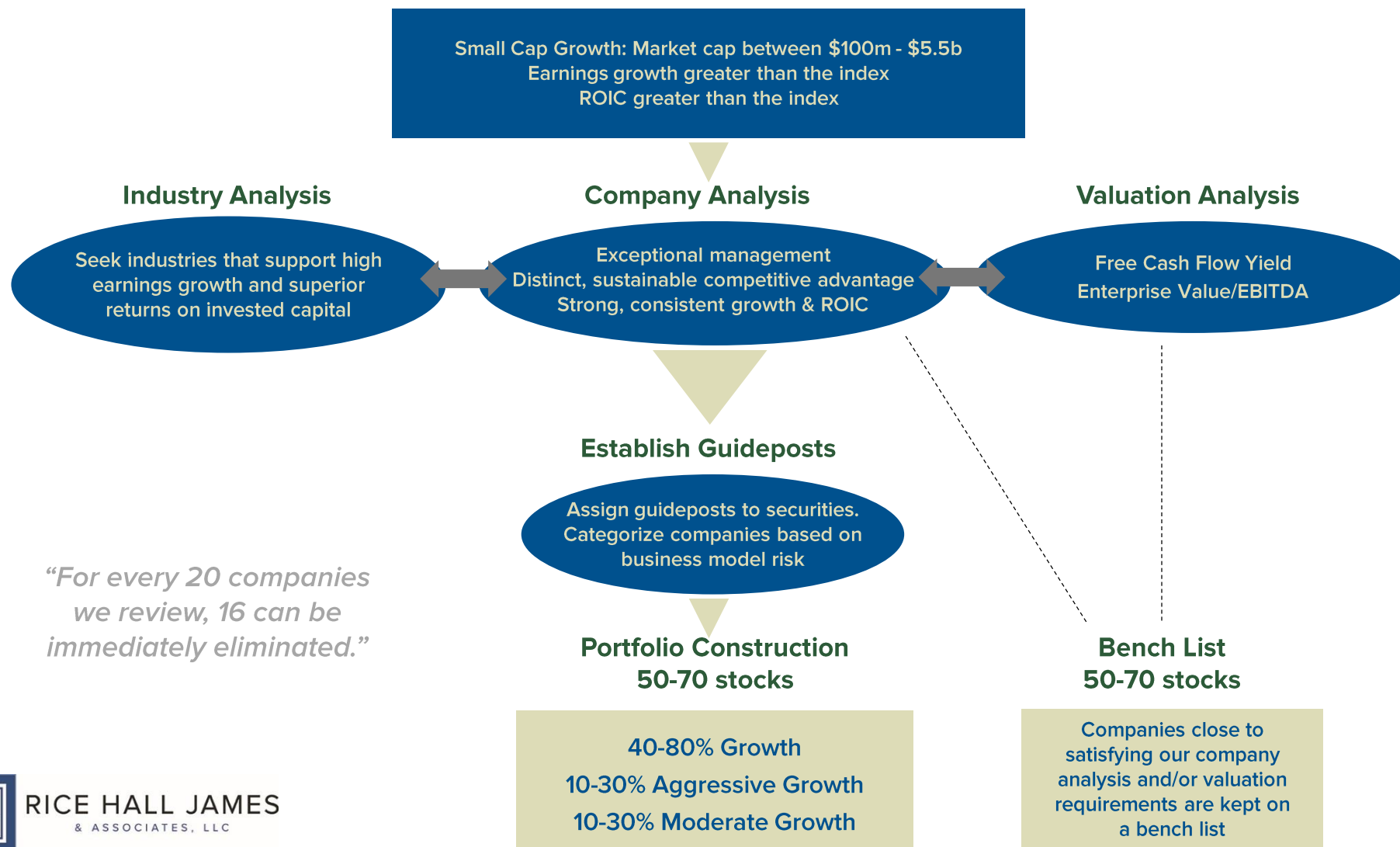
² ROIC = Return on Invested Capital.

Relative performance compares individual Russell® 2000 constituent performance vs. an equal-weighted index (Russell 2000) return. Only the Russell 2000 constituents (as of 12/31/2017) with 5 years of measurable history (EPS, ROIC and Performance) were used in the study. The index return is calculated using the combined equal-weighted 5 year return of these Russell 2000 constituents as of 12/31/2017. The Russell® 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000® Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership. The Russell 2000 is constructed to provide a comprehensive and unbiased small-cap barometer and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small-cap opportunity set. The index is calculated on a total-return basis with dividends reinvested.



Portfolio Construction

Investable universe is significantly reduced by adhering to this discipline.



RICE HALL JAMES
& ASSOCIATES, LLC

Industry Analysis

A large initial universe allows us the freedom to identify and implement our investment strategy within traditional, non-traditional, and emerging growth industries.

- ▶ Industries which have been **historically identified** by companies with high earnings growth and superior returns on invested capital:
 - Technology
 - Health Care
 - Consumer Discretionary
- ▶ Industries exhibiting **changing dynamics**, supporting high growth and superior returns on invested capital:
 - Natural Gas
- ▶ New and **emerging industries** that can support companies with high earnings growth and superior returns on invested capital:
 - Internet



Investment Process - Company Analysis

We perform in-depth research to identify:

▶ **Companies that generate strong and consistent ROIC and earnings growth**

- Large or growing addressable markets
- Stability of existing revenue stream
- Ability to maintain or increase pricing
- High probability of retaining or widening margins

▶ **Capable management teams**

- Experience and integrity
- Track record of success
- Clear goals and viable long-term business model

▶ **Unique, sustainable competitive advantages**

- Proprietary products, services, distribution/manufacturing advantages
- Strategy for defending against competition
- High barriers to entry
- High or improving market share
- Brand name recognition

We maintain contact with management teams of companies we own and all those considered for investment (our bench list)



Investment Process - Valuation Analysis

- ▶ Valuation analysis is a key component of our determination in how we assess a company's absolute & relative attractiveness

Valuation Analysis

- Cash flow analysis that incorporates ROIC & the duration of earnings growth
- Analyze companies across industries and sectors, using common valuation techniques
- Analyze companies relative to valuation of securities in existing portfolio

Other valuation methods:

- P/E to Growth Rate (PEG Ratio)
- Free Cash Flow Yield
- Price to earnings (P/E Ratio)
- Enterprise Value/EBITDA



Investment Process – Establishing Guideposts

- ▶ As part of our research process, we create guideposts for each security:
 - Specific factors unique to each company used to monitor company progress
 - Examples: new drug filings in Health Care, or new store sales productivity in Retail
 - Through this ongoing monitoring process, position sizes are increased or decreased
 - Guideposts help to identify deteriorating or improving fundamentals before they are reflected in the stock price



Investment Process – Portfolio Construction

- ▶ Portfolio Construction is a function of our bottom-up selection process – each holding is grouped into one of the three categories below:

Growth

40-80% of portfolio

- Industry leader and/or gaining market share
- ROIC greater than 10%
- Earnings growth higher than the relative index
- Sustainable competitive advantage
- Proven successful operating history
- High confidence in management

Aggressive Growth

10-30% of portfolio

- Emerging high growth companies with improving ROIC
- Companies in a unique/turnaround situation
- Higher volatility, but higher potential return candidates

Moderate Growth

10-30% of portfolio

- Dominant position in their industry
- Moderate, consistent earnings growth and stable ROIC
- Self-funding and generating strong cash flow



Sell Discipline

Sell discipline is a function of a review and violation of one or more of the following:

- ▶ Change in fundamentals or competitive advantages
- ▶ Missing Guideposts
- ▶ Change in management team
- ▶ Relative Valuation



Summary

- ▶ Disciplined research process with focus on high growth, high return on invested capital companies with good sustainability characteristics
- ▶ Experienced Portfolio Manager/Analysts average 26 years of investment experience and 18 years working together.
- ▶ Proven long-term results with success through a variety of economic environments



Appendix



RICE HALL JAMES
& ASSOCIATES, LLC

Small Cap Opportunities Portfolio

As of March 31, 2019

Consumer Discretionary	21.8%	Health Care	26.9%	Information Technology	27.1%
BJ's Restaurants, Inc.	0.2%	Aclaris Therapeutics, Inc.	0.2%	ACI Worldwide, Inc.	1.4%
Century Casinos, Inc.	0.5%	Aerie Pharmaceuticals, Inc.	1.1%	CalAmp Corp.	0.6%
Cheesecake Factory, Inc.	1.4%	Aimmune Therapeutics, Inc.	0.5%	Carbonite, Inc.	0.2%
Dave and Buster's Entertainment, Inc.	3.2%	Akebia Therapeutics, Inc.	0.5%	CEVA, Inc.	2.1%
Grand Canyon Education, Inc.	0.7%	BioSpecifics Technologies Corp.	0.8%	Cypress Semiconductor Corp.	2.8%
LCI Industries	2.2%	Clovis Oncology, Inc.	0.3%	Euronet Worldwide, Inc.	0.9%
Oxford Industries, Inc.	0.4%	Collegium Pharmaceutical, Inc.	0.6%	Ituran Location and Control Ltd.	0.4%
Points International Ltd.	0.4%	Emergent BioSolutions, Inc.	2.6%	j2 Global, Inc.	2.5%
Pool Corp.	3.1%	Immunomedics, Inc.	0.6%	MAXIMUS, Inc.	1.9%
Shutterfly, Inc.	2.0%	Insmed, Inc.	0.6%	MiX Telematics Ltd. ADR	0.6%
Shutterstock, Inc.	2.1%	Ligand Pharmaceuticals, Inc.	2.3%	ON Semiconductor Corp.	1.1%
Six Flags Entertainment Corp.	0.4%	Medidata Solutions, Inc.	1.7%	Semtech Corp.	3.2%
Stamps.com, Inc.	0.4%	Myriad Genetics, Inc.	1.6%	Trade Desk, Inc.	3.4%
Strategic Education, Inc.	2.9%	Nektar Therapeutics	1.2%	Wix.com Ltd.	3.3%
Vail Resorts, Inc.	1.8%	OptiNose, Inc.	0.6%	WNS Holdings Ltd. ADR	2.7%
Industrials	9.2%	Pacira Pharmaceuticals, Inc.	0.9%	Consumer Staples	1.2%
Cimpress N.V.	1.3%	Premier, Inc.	3.1%	Medifast, Inc.	1.0%
Echo Global Logistics, Inc.	1.5%	Prestige Consumer Healthcare, Inc.	1.1%	Natural Grocers by Vitamin Cottage, Inc.	0.1%
Franklin Covey Co.	0.4%	Progenics Pharmaceuticals, Inc.	0.5%	Communication Services	3.4%
Masonite International Corp.	1.9%	Puma Biotechnology, Inc.	0.9%	Boingo Wireless, Inc.	1.8%
MSC Industrial Direct Co., Inc.	1.0%	Reata Pharmaceuticals, Inc.	0.5%	Criteo S.A. ADR	1.6%
PGT Innovations, Inc.	0.2%	Supernus Pharmaceuticals, Inc.	1.7%	Financials	3.9%
Tetra Tech, Inc.	1.9%	Teleflex, Inc.	2.8%	Axos Financial, Inc.	2.0%
Willdan Group, Inc.	0.7%	Materials	2.0%	Bank OZK	1.2%
XPO Logistics, Inc.	0.3%	Ingevity Corp.	2.0%	Federal Agricultural Mortgage Corp.	0.7%

Total Equity	95.5%
Total Cash	4.5%

Sources: FactSet & GICS Sector Classification



RICE HALL JAMES
& ASSOCIATES, LLC

This information is supplemental to the RHJ Small Cap Opportunities Composite presentation. Past performance is no guarantee of future results. Holdings are subject to change and are based on a representative account. Sector weightings may not add up to 100% due to rounding. A complete list of portfolio holdings and specific securities transactions for the preceding 12 months is available upon request. It should not be assumed that recommendations made in the future will be profitable or will equal the performance of securities in this article. Rice Hall James & Associates, LLC, or one or more of its officers, may have a position in the securities discussed herein and may purchase or sell such securities from time to time.

Portfolio Guidelines

Position Limit Parameters

Position size is scaled up or down based on evolving reward to risk profile

Position Limit at Market	6%
Portfolio Holdings	50-70
Cash Weight	Typically less than 5%

Market Cap Range

Between \$100 million and \$5.5 billion market capitalization at time of purchase

Sector Weight Parameters

Sector weights are +/-1000 basis points of the benchmark weights of the major economic sectors

Allocations as of March 31, 2019

Capitalization	RHJ Small Cap Opportunities	Russell 2000 Growth Index
>\$5 billion	22.4%	8.7%
\$2 billion - 5 billion	40.0%	50.1%
\$750 million - 2 billion	27.2%	31.8%
\$400 million - 750 million	7.8%	5.8%
<\$400 million	2.8%	3.6%
	RHJ Small Cap Opportunities	Russell 2000 Growth Index
Communication Services	3.4%	3.3%
Consumer Discretionary	21.8%	14.6%
Consumer Staples	1.2%	2.9%
Energy	0.0%	1.9%
Financials	3.9%	6.9%
Health Care	26.9%	26.6%
Industrials	9.2%	17.3%
Information Technology	27.1%	19.3%
Materials	2.0%	3.4%
Real Estate	0.0%	3.2%
Utilities	0.0%	0.5%
Cash	4.5%	0.0%

Sources: FactSet & GICS Sector Classification



RICE HALL JAMES
& ASSOCIATES, LLC

This information is supplemental to the RHJ Small Cap Opportunities Composite presentation. The information above is based on a representative account. Sector and market capitalization weightings may not add up to 100% due to rounding. Please see important disclosure information at the end of this presentation regarding the indices and sector classification shown above.

Small Cap Opportunities

Portfolio Characteristics as of March 31, 2019

	RHJ Small Cap Opportunities	Russell 2000 Growth Index
Long Term Earnings Growth Forecast	15.1%	15.7%
P/E Ratio - 1 Year Forecast ¹	17.2	17.9
Weighted Median Market Cap	\$2.59 billion	\$2.34 billion
Weighted Average Market Cap	\$3.49 billion	\$2.67 billion
Alpha (5 Years)	2.3%	-
Beta (5 Years)	0.9	-
Information Ratio (5 Years)	0.3	-
Standard Deviation (5 Years)	16.1%	17.1%
Active Share	92.2%	-
Number of Holdings	70	1,239

Sources: FactSet & eVestment Analytics

¹P/E Ratio calculation excludes companies with negative earnings.

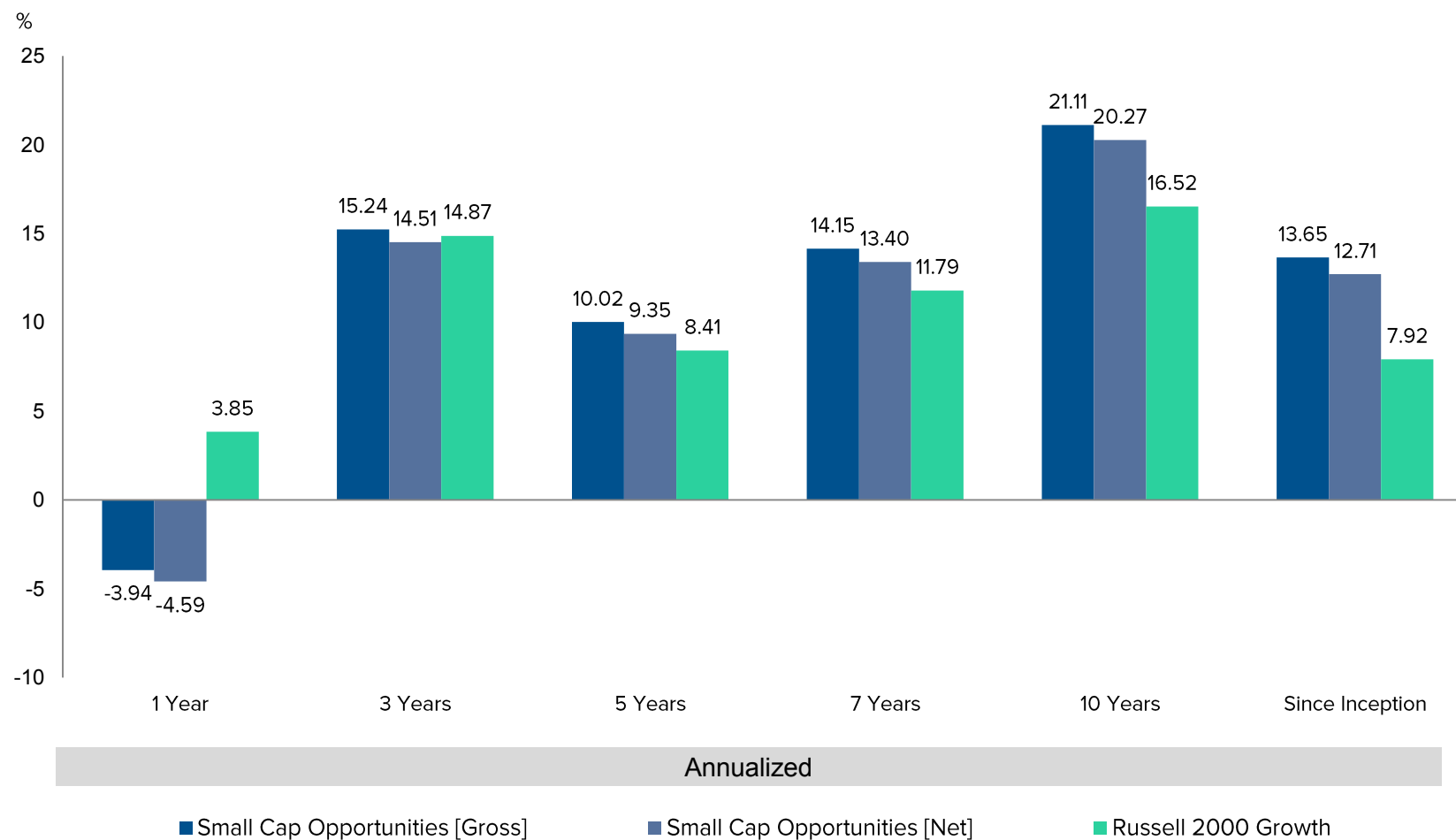
This information is supplemental to the RHJ Small Cap Opportunities Composite presentation. The information above is based on a representative account. Please see important disclosure information at the end of this presentation regarding the indices shown above.



RICE HALL JAMES
& ASSOCIATES, LLC

Small Cap Opportunities

Returns for Periods Ending March 31, 2019



Source: Russell Investments



RICE HALL JAMES
& ASSOCIATES, LLC

Past performance does not guarantee future results. Composite returns are shown both gross and net of fees in U.S. dollars. Rice Hall James & Associates, LLC's compliance with the GIPS standards has been verified for the period January 1, 1993 through December 31, 2018. For performance calculation purposes, the Small Cap Opportunities composite's inception dates is October 10, 1994. RHJ's Annual Disclosure Presentation is located at the end of this presentation as well as other important disclosure information regarding the returns and indices shown above.

Small Cap Opportunities

	RHJ Small Cap Opportunities Composite Gross of Fees	RHJ Small Cap Opportunities Composite Net of Fees	Russell 2000 Growth Index
YTD March 2019	10.10%	9.90%	17.14%
2018	-6.49%	-7.11%	-9.31%
2017	28.71%	27.93%	22.17%
2016	11.93%	11.28%	11.32%
2015	-0.06%	-0.60%	-1.38%
2014	8.41%	7.69%	5.60%
2013	56.34%	55.12%	43.30%
2012	14.56%	13.62%	14.59%
2011	9.55%	8.68%	-2.91%
2010	38.73%	37.65%	29.09%
2009	48.47%	47.27%	34.47%
2008	-43.34%	-43.71%	-38.54%
2007	10.48%	9.50%	7.05%
2006	7.10%	6.11%	13.35%
2005	11.46%	10.42%	4.15%
2004	10.03%	9.04%	14.31%
2003	50.70%	49.31%	48.54%
2002	-29.41%	-30.07%	-30.26%
2001	-28.87%	-29.52%	-9.23%
2000	-13.23%	-14.01%	-22.43%
1999	87.81%	86.06%	43.09%
1998	16.33%	15.20%	1.23%
1997	28.67%	27.41%	12.95%
1996	53.30%	51.78%	11.26%
1995	25.69%	24.45%	31.04%
1994*	20.70%	20.39%	0.43%



RICE HALL JAMES
& ASSOCIATES, LLC

Source: Russell Investments

*Performance represents a non-annualized partial period return beginning on October 10, 1994.

Past performance does not guarantee future results. Composite returns are shown both gross and net of fees in U.S. dollars. Rice Hall James & Associates, LLC's compliance with the GIPS standards has been verified for the period January 1, 1993 through December 31, 2018. For performance calculation purposes, the Small Cap Opportunities composite's inception date is October 10, 1994. RHJ's Annual Disclosure Presentation is located at the end of this presentation as well as other important disclosure information regarding the returns and indices shown above.

Biographies

Portfolio Management & Analysis Team

Lou Holtz, CFA

Chief Investment Officer & Portfolio Manager/Analyst

Lou joined RHJ in October 2008 and has 27 years of investment experience. Prior to joining the firm he was a Managing Director and Portfolio Manager at Engemann Asset Management. Prior to that, Lou was a business valuation analyst at a national independent appraisal firm and an analyst for a regional real estate appraisal firm. Lou holds a Bachelor of Arts degree in business economics with honors from the University of California, Santa Barbara and an M.B.A. with an emphasis in finance from the University of Southern California, where he was on the Dean's List. Lou is a CFA® charterholder. He is a member of CFA Society Los Angeles. He is also an instructor of Institutional Portfolio Management for CFALA's CFA Review Program.

Yossi Lipsker, CFA

Portfolio Manager/Analyst

Yossi joined RHJ in October 2008 and has 24 years of investment experience. Prior to joining the firm he was a Managing Director and Portfolio Manager at Engemann Asset Management. He received an M.B.A. with an emphasis in finance from Columbia Business School. While at Columbia he excelled academically, gaining membership in both the Beta Gamma Sigma Honor Society and the Dean's List. Additionally, Yossi holds a B.R.S. degree in religious studies from the Rabbinical College of America. Yossi is a CFA® charterholder. He is a member of CFA Society Los Angeles.

Anthony S. Yamarone, CFA

Analyst

Tony joined RHJ in September 2016. Prior to joining the firm, he worked at Ameriprise Financial as a member of their financial planning team. He received a B.S. in Business Administration from San Francisco State University and an M.S. in Financial Analysis and Investment Management from Saint Mary's College of California. Tony is a CFA® charterholder. He is a member of CFA Society Los Angeles.

Dakota Safford

Analyst

Dakota joined RHJ in August 2017. Prior to joining the firm, he worked at Advanced Financial Strategies as a financial analyst. He received a B.A. in Business Economics from the University of California, Irvine. While at UCI, he was involved in the Student Managed Investment Fund, where he performed equity research and evaluated portfolio structures. Dakota is a CFA® Level II candidate.

Alec R. Harrell, CFA

Analyst

Alec joined RHJ in December 2017 and has 16 years of investment experience. Prior to joining the firm he was a Senior Portfolio Manager/Analyst at Northern Trust Asset Management. Prior to that, Alec worked as a Portfolio Manager/Analyst for Convergent Fund Management and an Analyst for Needelman Asset Management. His experience includes fundamental research on U.S. and international securities as well as the development of quantitative equity strategies. He received a B.A. in politics, philosophy and economics from Claremont McKenna College and a J.D. and M.B.A. from the University of Southern California [USC]. Alec is a CFA® charterholder. He is a member of CFA Society Los Angeles.



Biographies

Trading

DJ Devin

Head Securities Trader

DJ joined the firm in June 1981 and served in several administrative and trade-related positions. In 1986, she assumed responsibility for the execution of all trades and management of soft dollars and commissions. She received a Certificate in Personal Financial Planning from San Diego State University and is a member of the Security Traders Association of Los Angeles.

Jorji-Ann McAllister

Trader

Jorji-Ann joined RHJ in May 1987 and has served in several administrative and trade related positions. Jorji-Ann completes all trading functions, including placement and execution of orders. She received a B.S. from Kearney State College, Kearney, Nebraska.

Brandon Toney

Trader

Brandon joined RHJ in March 2017. Prior to joining the firm, he worked at Wall Street Associates for two years as a trader. Brandon received a B.S. in Finance from San Diego State University and is a CFA® Level III candidate.

Marketing & Client Service

Thao N. Buuhoan

President & Chief Operating Officer

Thao joined the firm in June 2000 and was responsible for Institutional Marketing and Client Service. In June 2009, Thao was promoted to President and Chief Operating Officer and oversees Operations and Trading in addition to her Marketing and Client Service responsibilities. Prior to joining RHJ, she was a Marketing Manager at State Street Global Advisors in Hong Kong, responsible for sales and marketing to Asian institutions. She holds a B.A. from the University of Pennsylvania.

Michael C. Meoli

Director of Client Service & Marketing

Mike joined RHJ in March 2011 and is responsible for Institutional Marketing and Consultant Relations. Prior to joining the firm, he worked at Everest Capital where he focused on consultant relations and business development. Other previous work experience includes business development at Pathway Capital Management and conducting research on investment managers at an institutional investment consulting firm. Mike holds a B.A. from Concordia University and an M.B.A. from the University of California, Irvine.

Jordyn M. Warrington

Assistant Vice President

Jordyn joined RHJ in October 2013 and is responsible for Institutional Marketing, Consultant Relations, and Client Service. She received a B.S. in Accounting from San Diego State University.



Biographies

Administration

Carl M. Obeck *Chief Financial Officer*

Carl joined RHJ as Marketing Manager in 2003 and was promoted to Chief Administrative Officer in 2004 and Chief Financial Officer in 2009. Prior to joining the firm, Carl was responsible for Institutional Consulting Relationships and Marketing at Freeman Associates Investment Management. He also served as Director of Marketing at Messner & Smith. Previous experience includes Corporate Vice President at Montgomery Asset Management and Product Manager for Citibank London NA. Carl has a B.A. from the University of Delaware and an M.A. from Webster University in Vienna, Austria.

Janine Marquez, IACCP® *Chief Compliance Officer*

Janine joined RHJ in July 2002. Janine was appointed Chief Compliance Officer (CCO) for RHJ in June 2009. As CCO, she is responsible for oversight and implementation of the compliance program and regulatory requirements for the firm. Throughout her tenure with RHJ, Janine has held various roles within Marketing, Trading and Compliance. Previously, she was a Senior Investment Analyst at Callan Associates Inc. She was responsible for researching and analyzing money management firms for pension fund plan sponsors. She holds a B.S. degree from California Polytechnic State University, San Luis Obispo, California. Additionally, Janine holds the designation of Investment Adviser Certified Compliance Professional® (IACCP®).

Shelley Hamilton *Senior Compliance Manager*

Shelley joined RHJ in February 1997, and has 30 years of industry experience. Shelley was promoted to Senior Compliance Manager for RHJ in November 2018. Throughout her tenure with RHJ, Shelley has held various roles within the Operations Department, including Operations Manager, Project Manager and Operations Administrator.

Tony Shaw, CFA *Operations Manager*

Tony joined the firm in August 2010 and has 25 years of experience in the financial services industry. Prior to joining RHJ, he served as Vice President at LPL Financial overseeing areas in operations and client services as well as issue resolution. Tony holds a B.A. degree from San Diego State University. Tony is a CFA® charterholder. He is a member of CFA Society San Diego.

Brett Knight *Director of Information Technology*

Brett joined RHJ in April 2015 as Director of Information Technology and the acting Information Security Officer. He has 19 years of industry experience. Prior to joining the firm, Brett was a founding partner at Bravura Networks Inc., a managed service provider in the IT industry. Brett has a B.S. in Business Administration with an emphasis in Management Information Systems from San Diego State University; additionally, Brett holds a Microsoft Certified Systems Engineer (MCSE) certification.



Investment Statistics: Definitions & Formulas

Active Share - This is a measure of the percentage of stock holdings in the portfolio that differs from the benchmark index. Active Share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the portfolio versus the weight of each holding in the benchmark index and dividing by two.

Alpha - The incremental return of a manager when the market is stationary. In other words, it is the extra return due to nonmarket factors. This risk-adjusted factor takes into account both the performance of the market as a whole and the volatility of the manager. A positive alpha indicates that a manager has produced returns above the expected level at that risk level, and vice versa for a negative alpha. Alpha is the Y intercept of the regression line.

$$\text{Alpha } (\alpha) = X - [\text{Beta} * Y]$$

X = the mean return for the manager

Y = the mean return for the index

Information Ratio - This statistic is computed by subtracting the return of the market from the return of the manager to determine the excess return. The excess return is then divided by the standard deviation of the excess returns (or Tracking Error) to produce the information ratio. This ratio is a measure of the value added per unit of active risk by a manager over an index. Managers taking on higher levels of risk are expected to then generate higher levels of return, so a positive IR would indicate “efficient” use of risk by a manager. This is similar to the Sharpe Ratio, except this calculation is based on excess rates of return versus a benchmark instead of a risk-free rate.

$$\text{IR} = \frac{\text{Excess Return}}{\text{Tracking Error}}$$

Long-Term Earnings Growth Forecast - Long Term Growth [LTG] is the annual EPS growth that the company can sustain over the next 3 or 5 years.

P/E Ratio - 1 Year Forecast - A forward-looking valuation measure of a **company's** common stock, excluding negative earnings. It encapsulates the amount of earnings estimated for next year per dollar of current share price. For the portfolio, the individual P/E stock ratios are then weighted by their respective portfolio market values in order to calculate a weighted average representative of the portfolio as a whole.

Sources: eVestment Analytics & FactSet



RICE HALL JAMES
& ASSOCIATES, LLC

Important Disclosures

Rice Hall James, LLC ("RHJ") obtained some of the information provided herein from third party sources believed to be reliable but it is not guaranteed. Data contained herein is for informational purposes only and should not be considered a recommendation to buy or sell any securities. Nothing presented herein is or is intended to constitute investment advice, and no investment decision should be made based solely on any information provided herein. RHJ has not taken into account the investment objectives, financial situation or particular needs of any individual investor who may view this report. There is a risk of loss from an investment in securities, including the risk of loss of principal. Different types of investments involve varying degrees of risk, and there can be no assurance that any specific investment will be profitable or suitable for a particular investor's financial situation or risk tolerance. Asset allocation and portfolio diversification cannot assure or guarantee better performance and cannot eliminate the risk of investment losses.

GICS Sector Classification

The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property and a service mark of MSCI Inc. ("MSCI") and Standard & Poor's Financial Services LLC ("S&P") and is licensed for use by Rice Hall James & Associates, LLC. Neither MSCI, S&P, nor any other party involved in making or compiling the GICS or any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability and fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling the GICS or any GICS classification have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

Indices Disclosure

Indices are provided for comparative purposes only. An investor cannot invest directly in an index. Comparisons have limitations because indices may have volatility, investment and other characteristics that may differ from an investment account strategy to which it is compared. Indices are unmanaged, include the reinvestment of dividends and do not reflect transaction costs, management or other fees. See below for a description of each index used in this presentation.

Russell 2000® Growth Index

The Russell 2000 Growth Index measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-value ratios and higher forecasted growth values. The Russell 2000 Growth Index is constructed to provide a comprehensive and unbiased barometer for the small-cap growth segment. The Index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small-cap opportunity set and that the represented companies continue to reflect growth characteristics.



Annual Disclosure Presentation

RHJ Small Cap Opportunities Composite

Year End	Total Firm Assets (mil.)	Composite Assets		Annual Performance Results				3-Year Annualized Standard Deviation	
		USD (mil.)	Number of Accounts	Composite Gross	Composite Net	Russell 2000 Growth	Composite Dispersion	Composite	Russell 2000 Growth
2018	3,051	991	20	-6.49%	-7.11%	-9.31%	0.28%	16.34	16.46
2017	3,607	1,121	19	28.71%	27.93%	22.17%	0.14%	14.14	14.59
2016	2,843	813	20	11.93%	11.28%	11.32%	0.13%	15.57	16.67
2015	2,258	557	17	-0.06%	-0.60%	-1.38%	0.41%	14.26	14.95
2014	1,955	255	10	8.41%	7.69%	5.60%	N/A ¹	13.02	13.82
2013	1,514	54	Five or fewer	56.34%	55.12%	43.30%	N/A ¹	14.91	17.27
2012	1,087	30	Five or fewer	14.56%	13.62%	14.59%	N/A ¹	18.25	20.72
2011	1,144	35	Five or fewer	9.55%	8.68%	-2.91%	N/A ¹	22.77	24.31
2010	1,312	50	Five or fewer	38.73%	37.65%	29.09%	N/A ¹	28.56	27.70
2009	1,203	40	Five or fewer	48.47%	47.27%	34.47%	N/A ¹	26.27	24.85
2008	1,030	27	Five or fewer	-43.34%	-43.71%	-38.54%	N/A ¹	21.32	21.26
2007	1,784	187	Five or fewer	10.48%	9.50%	7.05%	N/A ¹	13.87	14.23
2006	2,215	211	Five or fewer	7.10%	6.11%	13.35%	N/A ¹	15.82	15.57
2005	2,346	254	Five or fewer	11.46%	10.42%	4.15%	N/A ¹	17.92	16.51
2004	2,382	369	Five or fewer	10.03%	9.04%	14.31%	N/A ¹	23.95	21.40
2003	2,349	360	Five or fewer	50.70%	49.31%	48.54%	N/A ¹	34.03	27.00
2002	1,655	259	Five or fewer	-29.41%	-30.07%	-30.26%	N/A ¹	43.88	33.33
2001	1,533	463	Five or fewer	-28.87%	-29.52%	-9.23%	N/A ¹	46.49	33.58
2000	1,344	407	Five or fewer	-13.23%	-14.01%	-22.43%	N/A ¹	42.60	33.28
1999	1,182	244	Five or fewer	87.81%	86.06%	43.09%	N/A ¹	32.26	26.31
1998	1,262	101	Five or fewer	16.33%	15.20%	1.23%	N/A ¹	28.77	25.03
1997	1,149	53	Five or fewer	28.67%	27.41%	12.95%	N/A ¹	21.20	18.27
1996	1,048	9	Five or fewer	53.30%	51.78%	11.26%	N/A ¹	N/A ²	N/A ²
1995	922	2	Five or fewer	25.69%	24.45%	31.04%	N/A ¹	N/A ²	N/A ²
1994 [*]	731	0	Five or fewer	20.70%	20.39%	1.40%	N/A ¹	N/A ²	N/A ²



RICE HALL JAMES
& ASSOCIATES, LLC

N/A¹ - Information is not statistically meaningful due to an insufficient number of portfolios in the composite for the entire calendar year (five or fewer).

N/A² - Three-year standard deviation is only shown where 3 years of data are available.

*Results shown for the year 1994 represent partial period performance from October 10 through December 31, 1994.

Annual Disclosure Presentation

Small Cap Opportunities Composite was created on April 1, 1999, by Engemann Asset Management and ported over to Rice Hall James & Associates, LLC effective October 1, 2008. The composite contains all fully discretionary, tax-exempt institutional and high net worth portfolios invested in the Small Cap Opportunities strategy. The strategy employs a fundamental, bottom-up analytical process to find companies that have three primary characteristics: high earnings growth, high or improving return-on-invested capital, and sustainable competitive advantages. The minimum account size for this composite is \$1 million. From January 1, 1996 to March 31, 2004, the minimum account size was \$5 million. Prior to January 1, 1996, there was no minimum. For comparison purposes the composite is measured against the Russell 2000 Growth index. An investor cannot invest directly in an index.

Performance presented prior to September 30, 2008, occurred while the portfolio management team was affiliated with Engemann Asset Management, and was known as the Small Cap Growth Institutional Composite. The portfolio management team members were the only individuals responsible for selecting securities to buy and sell.

Founded in 1974, Rice Hall James & Associates, LLC is a SEC registered investment adviser. The firm is 100% employee owned.

Results are based on fully discretionary accounts under management, including those accounts no longer with the firm. As of October 1, 2008, accounts enter and exit the composite monthly. As of January 1, 2005, composite policy requires the temporary removal of any portfolios incurring a client initiated significant cash inflow or outflow of 50% or greater of portfolio assets. The temporary removal of such an account occurs at the beginning of the month in which the significant cash flow occurs and the account re-enters the composite the month after the cash flow is fully invested. From January 1, 2005 to June 30, 2006, the temporary removal of such an account occurred at the beginning of the month in which the significant cash flow occurred and the account is re-entered into the composite the month after the cash flow. From July 1, 2006 to September 30, 2008, the temporary removal of such an account occurs at the beginning of the quarter in which the significant cash flow occurs and the account re-enters the composite the second calendar quarter after the cash flow. As of September 30, 2008, the temporary removal of such an account occurs at the beginning of the month in which the significant cash flow occurred and the account is re-entered into the composite the month after the cash flow. Additional information regarding the treatment of significant cash flows is available upon request. Past performance is not indicative of future results.

The U.S. Dollar is the currency used to express performance. Returns are presented gross and net of management fees and include the reinvestment of all income. Net of fee performance was calculated using actual management fees. The annual composite dispersion presented is an asset-weighted standard deviation calculated for the accounts in the composite the entire year. Additional information regarding policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. The firm maintains a complete list and description of composites, which is available upon request.

The management fee schedule is as follows: 1.0% flat rate. Actual investment advisory fees incurred by clients may vary.

Rice Hall James & Associates, LLC claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Rice Hall James & Associates, LLC has been independently verified for the periods January 1, 1993 through December 31, 2018.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the **firm's** policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Small Cap Opportunities composite has been examined for the periods October 1, 2008 through December 31, 2018. The verification and performance examination reports are available upon request.





MEMORANDUM

To: Oakland Police and Fire Retirement System (OPFRS)
From: Meketa Investment Group
Date: May 29, 2019
Re: Rice Hall James– Manager Update

Manager: Rice Hall James

Inception Date: July 1, 2017

OPFRS AUM (3/31/2019): \$12.2 million

Strategy: Small Cap Opportunities

Firm-wide AUM (3/31/2019): \$3.4 billion

Benchmark: Russell 2000 Growth

Strategy AUM (3/31/2019): \$1.5 billion

Summary & Recommendation

Rice Hall James has experienced poor relative performance over the last two quarters, which has resulted in negative relative performance over all time periods measured and particularly, since inception. Meketa has no organizational concerns with Rice Hall James at this time; however, excess performance over the most recent 12-month period was below the Investment Performance Criteria, therefore, **Meketa recommends Rich Hall James be placed on “Watch” status due to performance concerns.**

Discussion

Rice Hall James began managing OPFRS’s small cap growth portfolio at the beginning of July 2017 which is now approximately \$12.2 million or about 8% of OPFRS’s U.S. Equity allocation. The fourth quarter of 2018 was challenging as the Russell 2000 Growth Index was down (21.7%) over the period and then rebounded sharply in the subsequent quarter rising by over 17%. Over this 6-month period, Rice Hall James underperformed its benchmark by (6.4%), net of fees. Prior to the fourth quarter of 2018, Rice Hall James had provided nearly 4.0% in excess returns since inception, net of fees.

OPFRS Portfolio Annualized Returns (as of 3/31/2019)

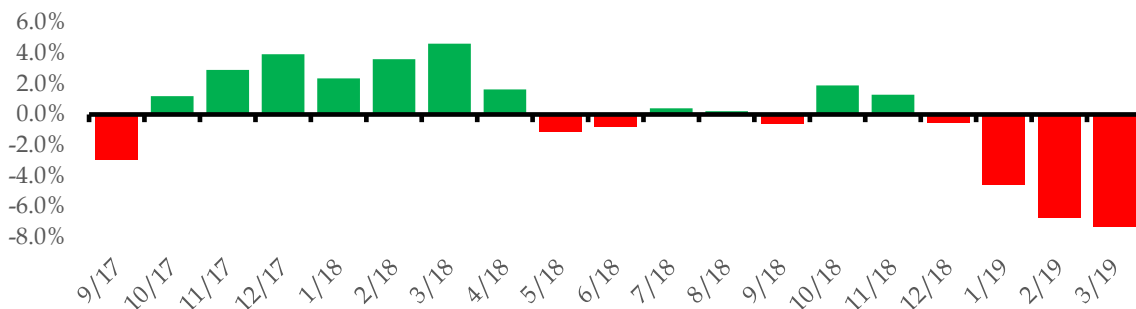
Manager	Mkt Value (\$000)	Asset Class	3 MO	1 YR	3 YR	Since Inception	Inception Date
Rice Hall James (Gross)	12,178	Small Cap Growth	10.1	-3.7	---	9.0	7/2017
Russell 2000 Growth	---	---	17.1	3.9	---	9.9	---
Excess Return	---	---	-7.0	-7.6	---	0.9	---
IM US Small Cap Growth Peer %Rank	---	---	98	98	---	80	---
Rice Hall James (Net)	12,178	Small Cap Growth	9.8	-4.7	---	7.9	7/2017
Russell 2000 Growth	---	---	17.1	3.8	---	9.9	---
Excess Return	---	---	-7.3	-8.5	---	-2.0	---
IM US Small Cap Growth Peer %Rank	---	---	98	99	---	84	---



MEMORANDUM

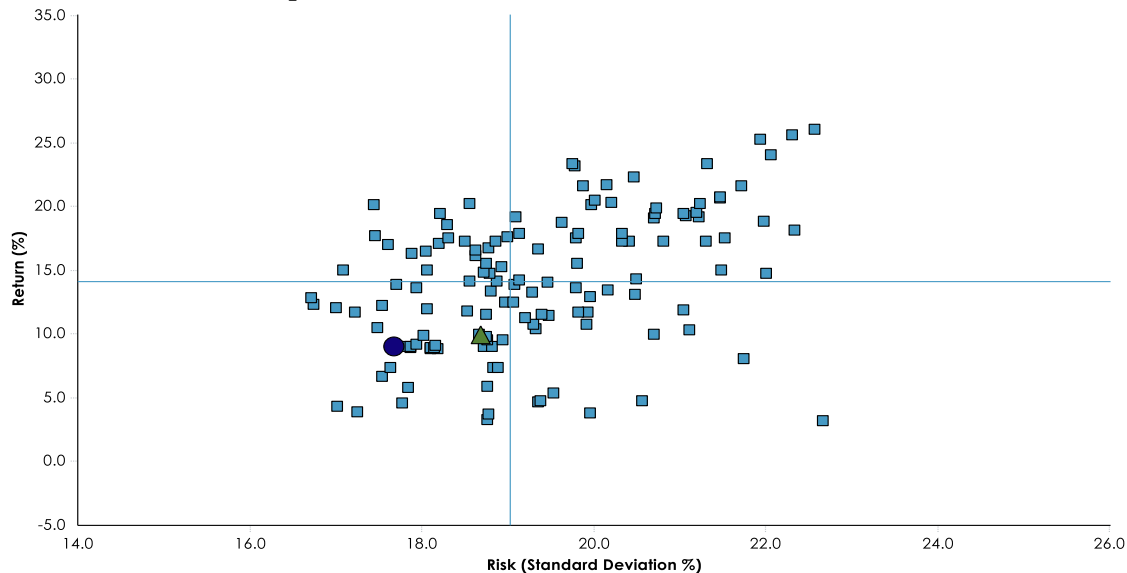
Over the first quarter of 2019, the portfolio earned a 9.8% net of fees return, underperforming its benchmark by (7.3%). Rice Hall James lagged its benchmark by (8.5%) over the latest 1-year period, and has underperformed its benchmark since inception by (2.0%).

Rolling 3-month Excess Returns since Inception- Net of Fees



The above chart displays quarterly excess returns on a rolling basis. Since inception, the portfolio has outperformed its benchmark approximately 58% of the time. Rice Hall James has had mixed results in 2018 and negative results so far in 2019.

Risk Return since Inception - Gross of Fees



	Return	Standard Deviation
● Rice Hall James	9.0	17.7
▲ Russell 2000 Growth Index	9.9	18.7
— Median	14.1	19.0

Peer Group: Investment Metrics U.S. Small Cap Growth

The chart and the table above display that Rice Hall James has underperformed its benchmark and Peer Group Median on a risk adjusted basis since inception, gross of fees.



MEMORANDUM

Product and Organization Review Summary

Rice Hall James		Areas of Potential Impact			
	Level of Concern ^	Investment process (client portfolio)	Investment Team	Performance Track Record	Team/ Firm Culture
Product					
Key people changes	None				
Changes to team structure/individuals' roles	None				
Product client gain/losses	None				
Changes to the investment process	None				
Personnel turnover	None				
Organization					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None -	Watch Status - X		Termination	

A review of Rice Hall James and the Small Cap Opportunities Strategy revealed no significant organizational issues or changes. Since Rice Hall James last manager update in 2017, there has been no turnover in the portfolio management team and there was no reported turnover among the analyst team. However, Rice Hall James's (7.6%) excess return over the most recent 12-month period is below the Investment Performance Criteria's (3.5%) excess return limit. Therefore, Rice Hall James currently qualifies for "Watch" status as of the end of the most recent quarter.

Investment Philosophy & Process, per manager

Rice Hall James' Small Cap Opportunities strategy employs a fundamental, bottom-up analytical process to identify companies that meet three primary criteria: high earnings growth, high or improving return-on-invested capital (ROIC), and sustainable competitive advantages. RHJ's philosophy is rooted in historical analysis indicating the high relative return potential of these factors in combination. They believe that superior results can be achieved by owning companies that exhibit not only high earnings growth, but also the ability to sustainably generate high ROIC over long periods of time. RHJ's investment universe consists of companies with market capitalizations between \$100 million and \$4 billion at the time of purchase.

The heart of RHJ's process is fundamental, bottom-up analysis at the company level. The portfolio managers conduct all research on every company held in the portfolio. As generalists, each with over twenty years of investment experience, both portfolio managers bring to bear extensive knowledge of the companies they own or follow, understanding of industries, and general expertise on the small cap landscape in various market environments. Cornerstones of the bottom-up fundamental investment process include:



MEMORANDUM

- Clear understanding of a firm's competitive context and advantages
- Assessment of the sustainability characteristics of the underlying business
- Emphasis on high or improving ROIC; a clear sense of the future direction of ROIC
- Estimation of ability to generate and grow free cash flow over life of the investment
- Valuation that affords a reasonable return over investment horizon
- Scrutiny of company management, ability to identify/ execute on the right plan

Idea generation begins with an analysis of companies within the FactSet universe with market caps ranging from \$100 million to \$4 billion, with an emphasis on growth-oriented industries comprised of companies that feature high earnings growth and high ROIC criteria. Health Care, Technology, and Consumer traditionally have been rich with such companies. They also look for new or emerging industries that can support high growth companies going forward. While these types of investments typically carry more risk, certain areas of the internet and biotechnology, for example, management believes they can create space for attractive long-term growth characteristics.

Finally, RHJ looks for catalysts within industries that are not typically associated with growth characteristics, seeking to capitalize on tactical growth opportunities that arise due to demographic, regulatory and supply/demand issues. Cyclical industries can provide the landscape for attractive growth opportunities to crop up due to such changes.

At the company level, RHJ focuses on businesses that can generate above-average earnings and free cash flow relative to the benchmark. Management favors companies that they believe can achieve these results in tandem with sustained high ROIC, or that can increase their returns to above-average levels over the relevant investment horizon. It is essential that a company can protect these attributes through a well-defined, competitive position, which will protect growth, margins and returns.

Since strong relative results tend to manifest over longer holding periods, RHJ focuses on long-term sustainability factors rather than short-term data points and market movements; as such, low turnover is a notable characteristic of the portfolio.

DISCLAIMER

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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

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

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



MEMORANDUM

To: Oakland Police and Fire Retirement System (OPFRS)

From: Meketa Investment Group

Date: May 29, 2019

Re: DDJ Capital – Manager Update

Manager: DDJ Capital (DDJ)

Inception Date: 1/2015 **OPFRS AUM (3/31/2019):** \$7.9 million

Investment Strategy: Opportunistic High Yield **Firm-wide AUM (3/31/19):** \$8.4 billion

Benchmark: BofAML US HY Master II **Strategy AUM (3/31/19):** \$6.6 billion

Summary & Recommendation

DDJ has experienced a dip in relative performance in 2019 after outperforming its benchmark by 2.9% in 2018. Absolute returns are currently positive over all trailing periods measured as of March 31, 2019. Meketa has no product or organizational concerns with DDJ at this time; however, DDJ's (3.8%) excess return over the most recent 12-month period qualifies the manager for "Watch" status according to the Investment Performance Criteria, therefore Meketa recommends DDJ be placed on "Watch" status due to performance concerns.

Discussion

OPFRS retained DDJ to manage assets in a High Yield/Bank Loan portfolio in January 2015. DDJ was placed on Watch status in May 2016 for organizational issues and poor performance and was removed from Watch status in April 2017 after performance stabilized and there were no further changes to firm leadership or the portfolio management team. In reviewing DDJ, Meketa considered investment performance and organizational / personnel issues.

OPFRS Portfolio Annualized Returns (as of 3/31/2019)

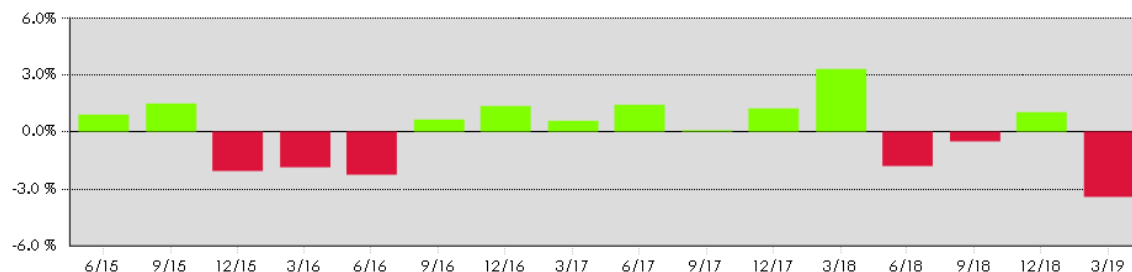
Manager	Mkt Value (\$000)	Asset Class	3 MO	1 YR	3 YR	Since Inception	Inception Date
DDJ (Gross of Fees)	7,931	Fixed Income	4.1	2.1	10.2	6.4	01/2015
ICE BofA ML High Yield Master II	---	---	7.4	5.9	8.7	5.6	---
Excess Return	---	---	-3.3	-3.8	1.5	0.8	---
IM US High Yield Bonds Peer %Rank	---	---	88	98	6	11	---
DDJ (Net of Fees)	7,931	Fixed Income	4.0	1.4	9.5	5.8	01/2015
ICE BofA ML High Yield Master II	---	---	7.4	5.9	8.7	5.6	---
Excess Return	---	---	-3.4	-4.5	0.8	0.2	---
IM US High Yield Bonds Peer %Rank	---	---	88	97	14	25	---



MEMORANDUM

Over the first quarter of 2019, the portfolio earned a 4.0% net of fees return, underperforming its benchmark by (3.4%). DDJ has now underperformed in three consecutive quarters resulting in a 12-month excess return of (4.5%), net of fees. Despite the funds recent inability to keep up with its benchmark, DDJ continues to outperform its benchmark over the longer 3-year and Since Inception time periods by 0.8% and 0.2%, respectively, on a net of fees basis while ranking in top quartile of its peer group.

Rolling Quarterly Excess Returns since Inception- Net of Fees



The above chart displays DDJ's quarterly excess returns. Since inception, the portfolio has outperformed its benchmark approximately 63% of the time. After a stretch of strong performance from late 2016 to early 2018, DDJ has had mixed results in 2018 and negative results so far in 2019.

MPT Statistics since Inception - Gross of Fees

Manager	Ann. Return (%)	Ann. S.D. (%)	Alpha (%)	Beta	Sharpe Ratio	Up Capture Ratio (%)	Down Capture Ratio (%)
DDJ Capital	6.4	4.5	2.3	0.68	1.22	90.1	65.1
ICE BofA ML High Yield Master II	5.6	5.7	---	1.00	0.84	100.0	100.0
IM US High Yield Bonds Peer %Rank	11	30	7	78	18	58	27

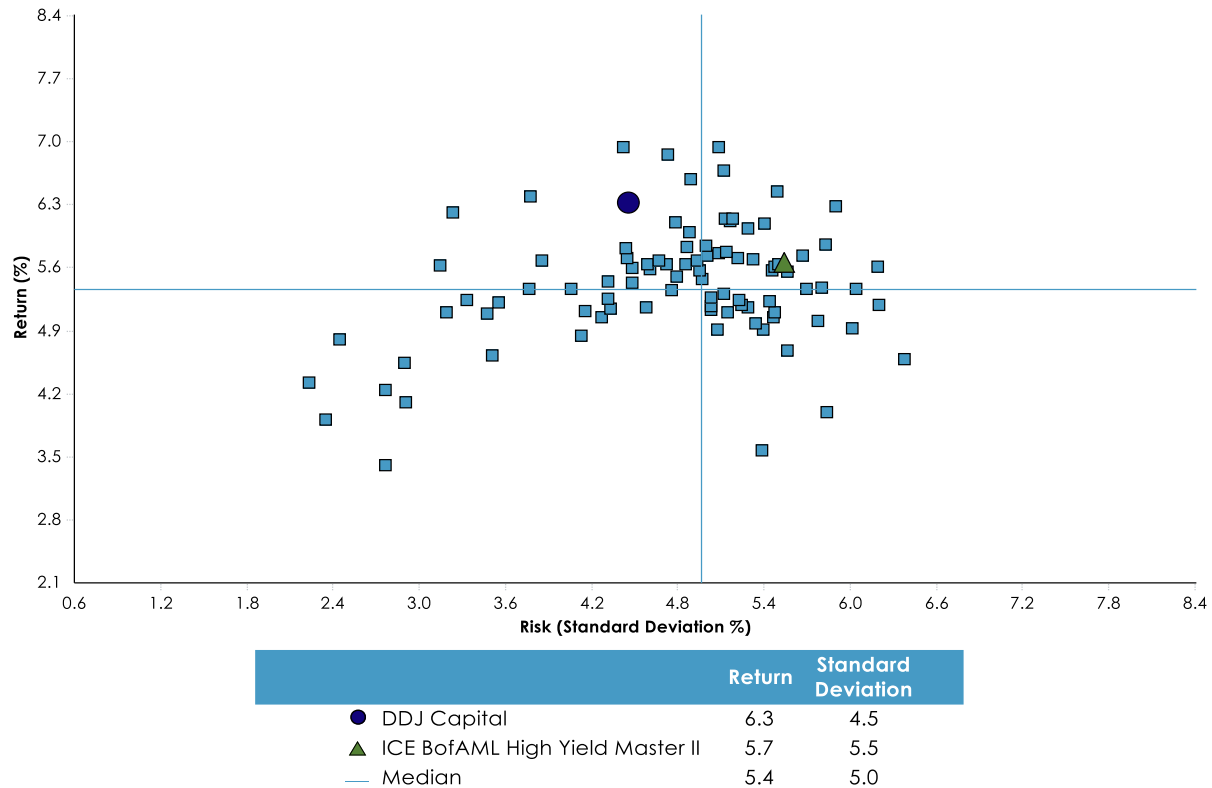
DDJ's yield-focused, buy-and-hold investment style aims to provide more consistent returns that outperform the benchmark over the long-term with lower volatility. This approach can be expected to outperform the benchmark when markets are restrained or falling, but can struggle to keep up during periods of abnormally high returns in high yield markets. This reality is best illustrated by looking at DDJ's up- and down-market capture ratios in the above table. During up markets, DDJ's 90.1% capture ratio shows that the portfolio struggles keep up with the benchmark; however, DDJ's 65.1% down-market capture ratio is evidence of the portfolio's ability to add value through its higher yield when the market is down. Although portfolio performance can lag meaningfully during shorter periods like 1Q2019 when the index returned 7.4%, its highest since the Financial Crises, over the longer-term, as the MPT statistics table above shows, DDJ has outperformed its benchmark with lower volatility since inception.



MEMORANDUM

The chart below shows that DDJ has outperformed its benchmark and peer group median on a risk adjusted basis since inception, gross of fees. DDJ's risk-adjusted performance since inception, represented by a Sharpe ratio of 1.22 was higher than its benchmark's Sharpe ratio of 0.84 and also ranked in the 18th percentile of its peer group.

Risk Return since Inception – Gross of Fees



Peer Group: Investment Metrics U.S. High Yield Bonds



MEMORANDUM

Product and Organization Review Summary

DDJ Capital		Areas of Potential Impact			
	Level of Concern^	Investment process (client portfolio)	Investment Team	Performance Track Record	Team/ Firm Culture
Product					
Key people changes	None				
Changes to team structure/individuals' roles	None				
Product client gain/losses	None				
Changes to the investment process	None				
Personnel turnover	None				
Organization					
Ownership changes	None				
Key people changes	None				
Firm wide client gain/losses	None				
Recommended Action	None	Watch Status - X		Termination	

A review of DDJ Capital Management and the U.S. Opportunistic High Yield Strategy revealed no significant issues or changes within the portfolio management team or overall organization. Since DDJ's last manager update in 2017 there has been no turnover in the portfolio management team and there was no reported turnover among the analyst team in 2018. However, the portfolio's most recent 12-month excess returns fall below the (1.5%) performance cutoff for fixed income managers as defined by the Investment Performance Criteria, therefore, Meketa recommends DDJ Capital be placed on "Watch" status due to performance issues.

Investment Philosophy & Process, per manager

The U.S. Opportunistic High Yield portfolio seeks to generate returns by actively managing a relatively concentrated portfolio of high yield bonds and leveraged loans with a bias towards small- and mid-cap issuers. DDJ Capital believes that lower-rated segments of the high yield and leveraged loan markets (rated B and below) offer the most compelling risk-adjusted investment opportunities, as these segments are often misunderstood and/or overlooked by investors. DDJ Capital attempts to derive an accurate, real time valuation of a company and targets only those fixed income investments in a company's capital structure that offer a significant margin of safety and strong return potential.

DDJ Capital uses fundamental analysis to create a comprehensive analytical overview of companies focusing on current and future business prospects. In particular, DDJ Capital's fundamental analysis focuses on issues relating to a company's cash flow, asset coverage, and legal protections for creditors. DDJ Capital generally targets issues with maturities ranging from 3 to 10 years and seeks position sizes of 1.5% to 2.5%, on average, resulting in 60 to 80 issues per portfolio. DDJ Capital typically seeks to accumulate positions by scaling over time with minimal



MEMORANDUM

disruption to market prices. DDJ Capital analysts conduct both top-down and bottom-up research on their respective sectors and devote approximately 95% of their time and resources to bottom-up fundamental analysis.

DISCLAIMER

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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

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

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

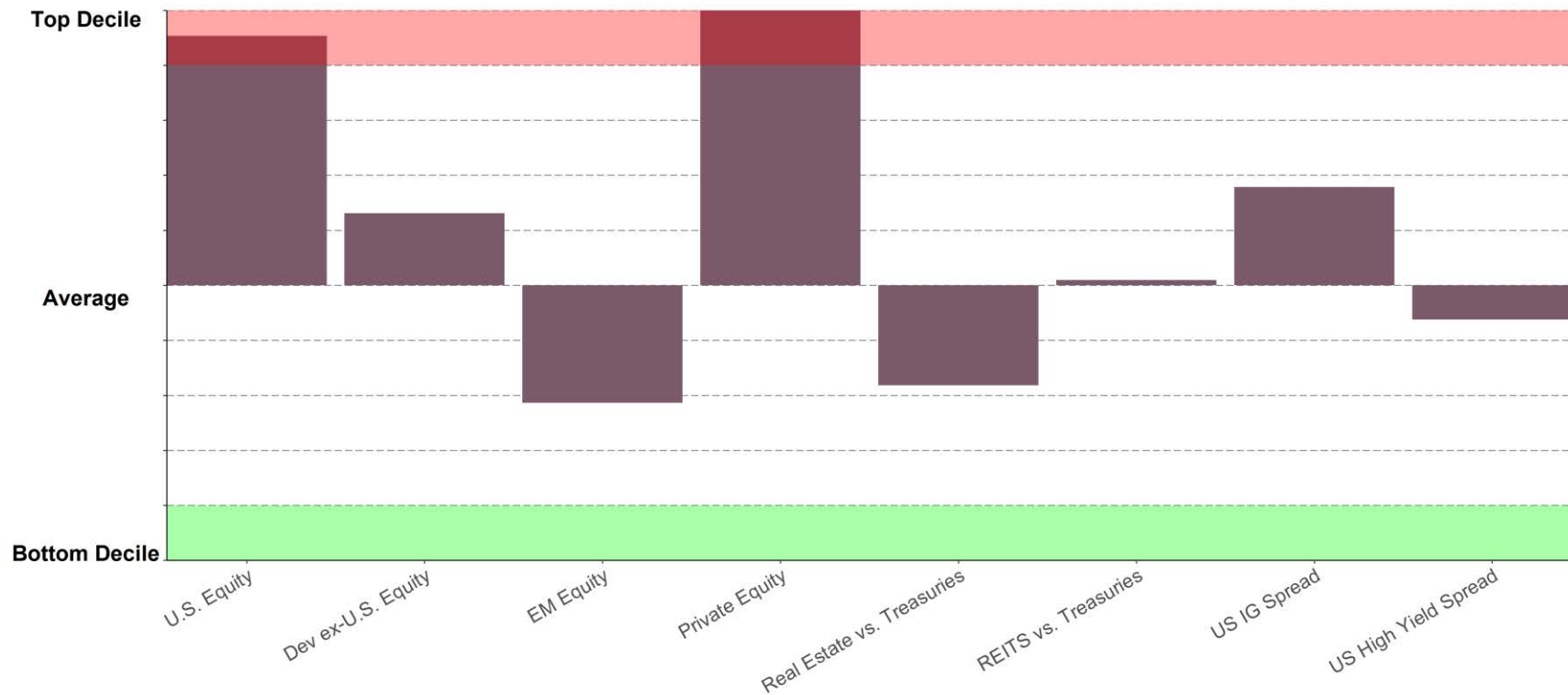
Capital Markets Outlook & Risk Metrics

Capital Market Outlook - Takeaways

- April reverted back to several capital market themes of prior years: 1) U.S. Equity outperforming Non-U.S. Equity, 2) Growth outpacing Value, and 3) tepid returns to Fixed Income. In aggregate, April generally rewarded investors who took on equity and credit (i.e., economic growth) risks across the globe.
- After only four months, year-to-date returns for most risk-based assets are multiples (e.g., 2x) of annual expectations, with the exception of Emerging Markets Equity, which has produced year-to-date returns in-line with annual expectations.
- U.S. equity markets remain expensive whereas Non-U.S. equity markets remain reasonably valued.
- The U.S. yield curve remained relatively stable over the month, with only marginal increases (≈ 10 basis points) on the long end of the curve. The yield curve remains at one of its flattest points since the Great Financial Crisis. Furthermore, because of the current low levels of long-term rates, interest rate risk remains at elevated levels for most high quality Fixed Income portfolios.
- Implied equity market volatility persisted at low levels throughout April, ranging from roughly 12.0% to 14.3% over the course of the month (end-of-day data). This range is materially below the long-term average level ($\approx 19\%$).
- The Market Sentiment Indicator¹ returned to positive (green) as a result of positive year-over-year momentum in both equity and credit markets.
- **Market uncertainty is higher than numbers might indicate.** Diverging global economic growth, nuanced monetary policies, and ongoing geopolitical turmoil has resulted in increased uncertainty in the global capital markets. Moreover, equity and credit markets continue to produce different macroeconomic signals when compared to sovereign bond markets.

¹ See Appendix for the rationale for selection and calculation methodology used for the risk metrics.

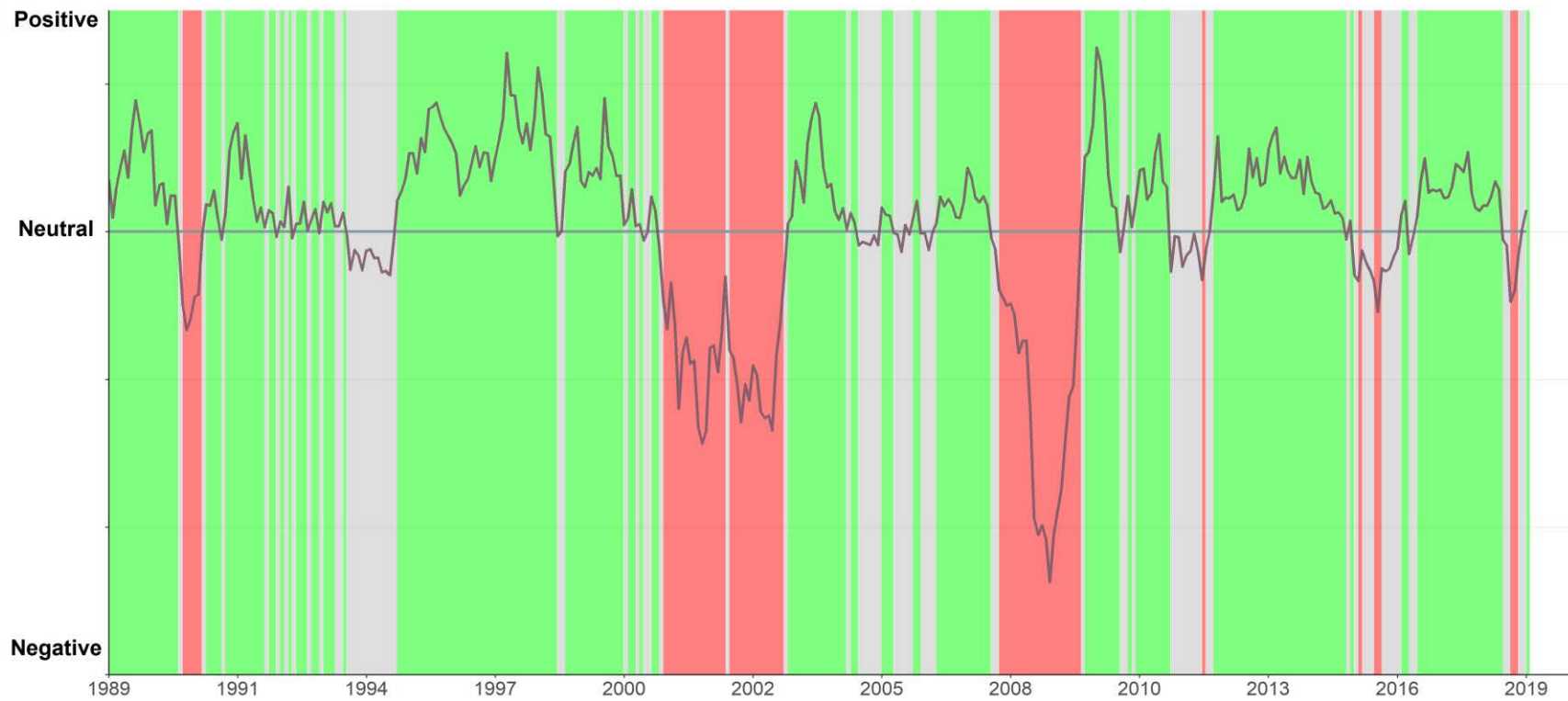
Risk Overview/Dashboard (1)



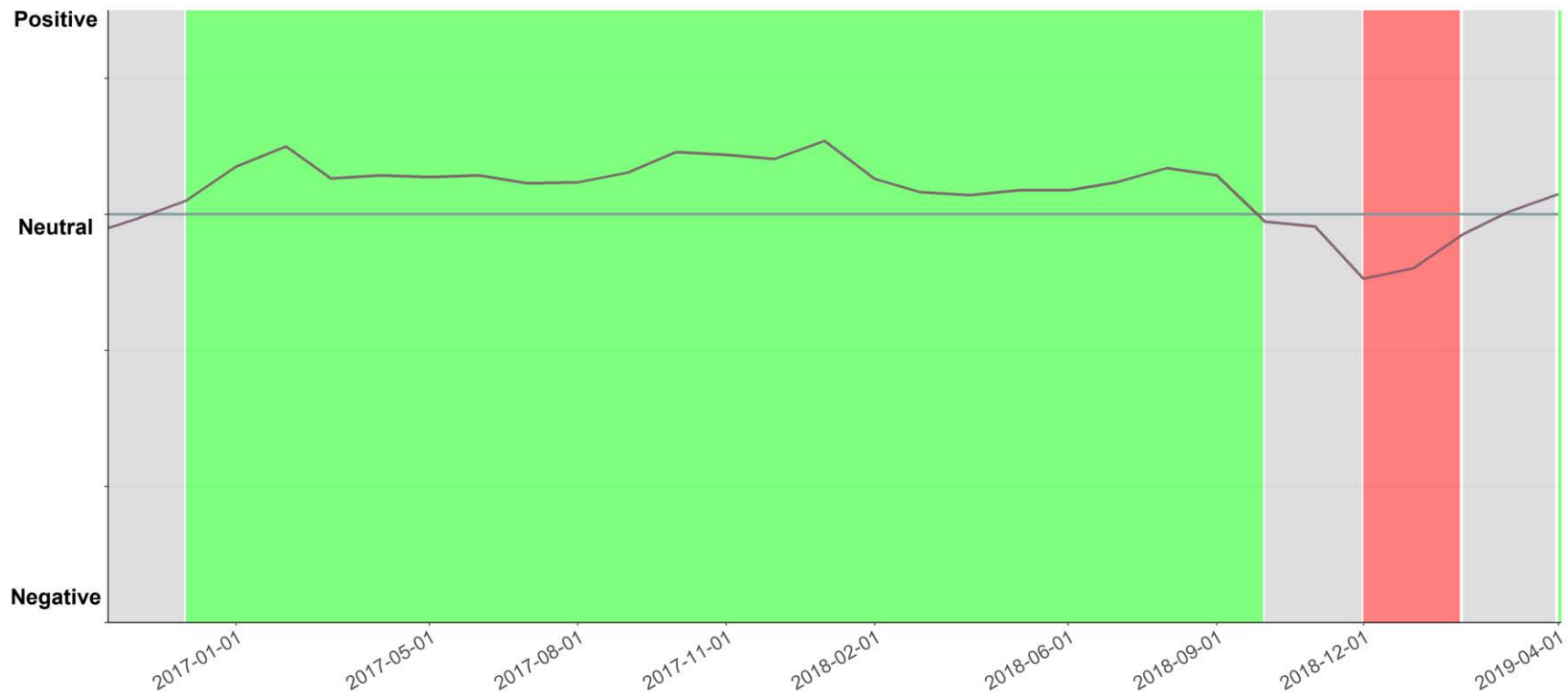
Risk Overview/Dashboard (2)



Market Sentiment Indicator (All History)



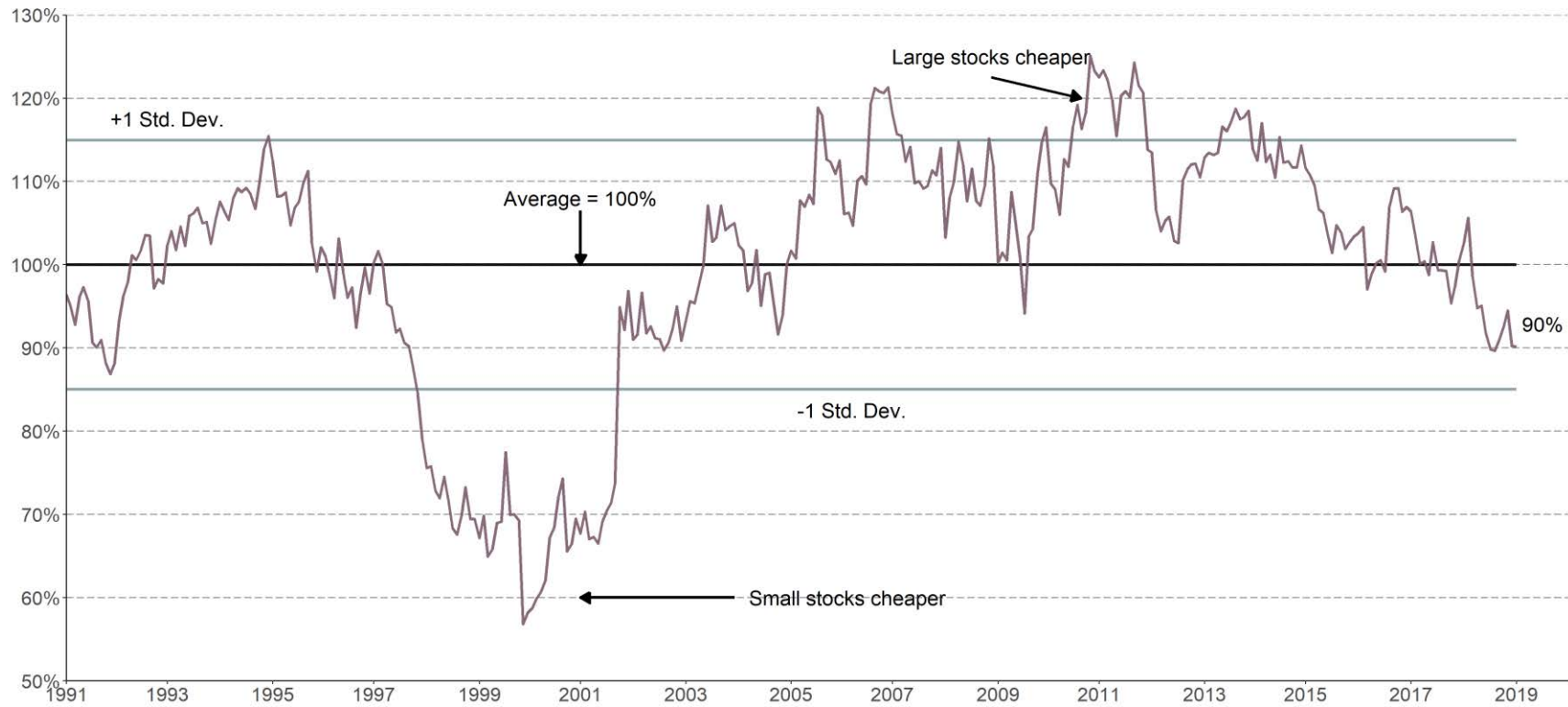
Market Sentiment Indicator (Last Three Years)



U.S. Equity Cyclically Adjusted P/E



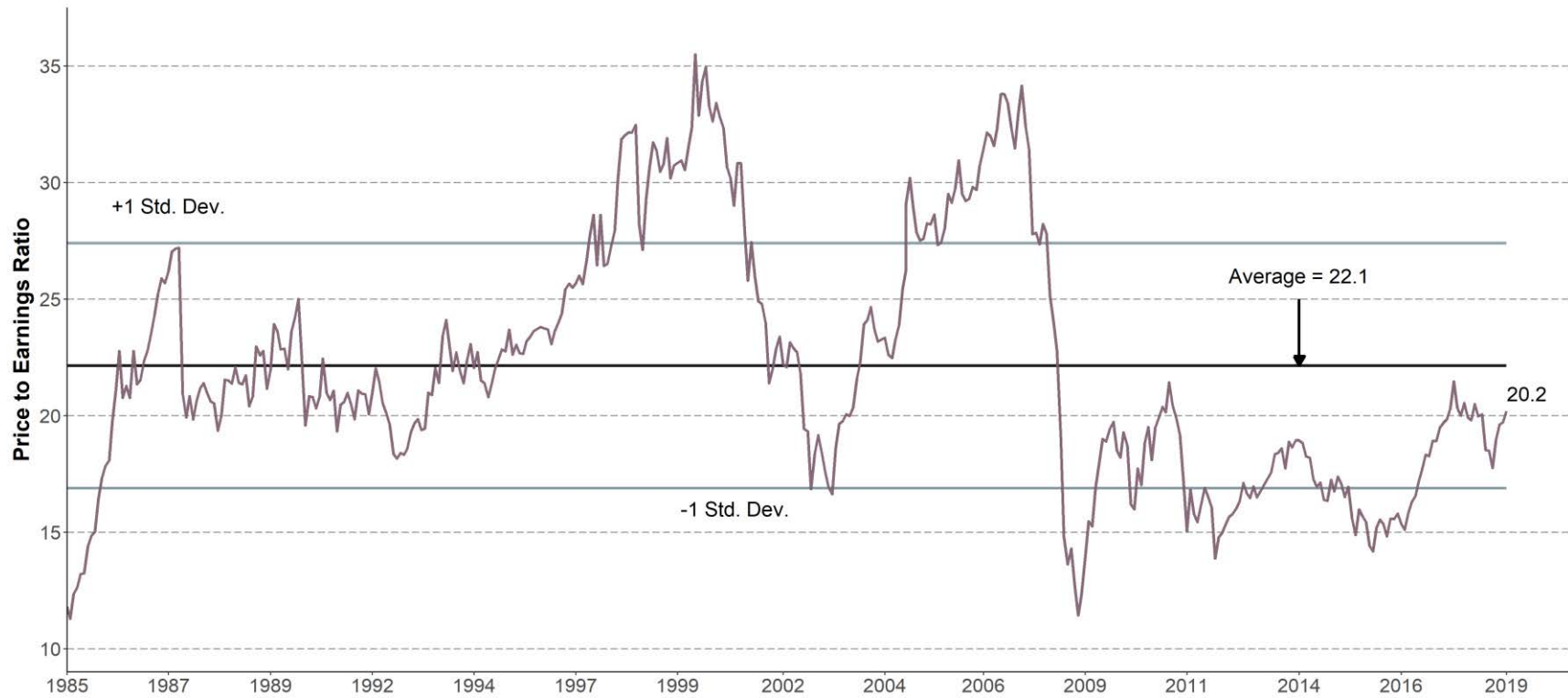
Small Cap P/E vs. Large Cap P/E



Growth P/E vs. Value P/E



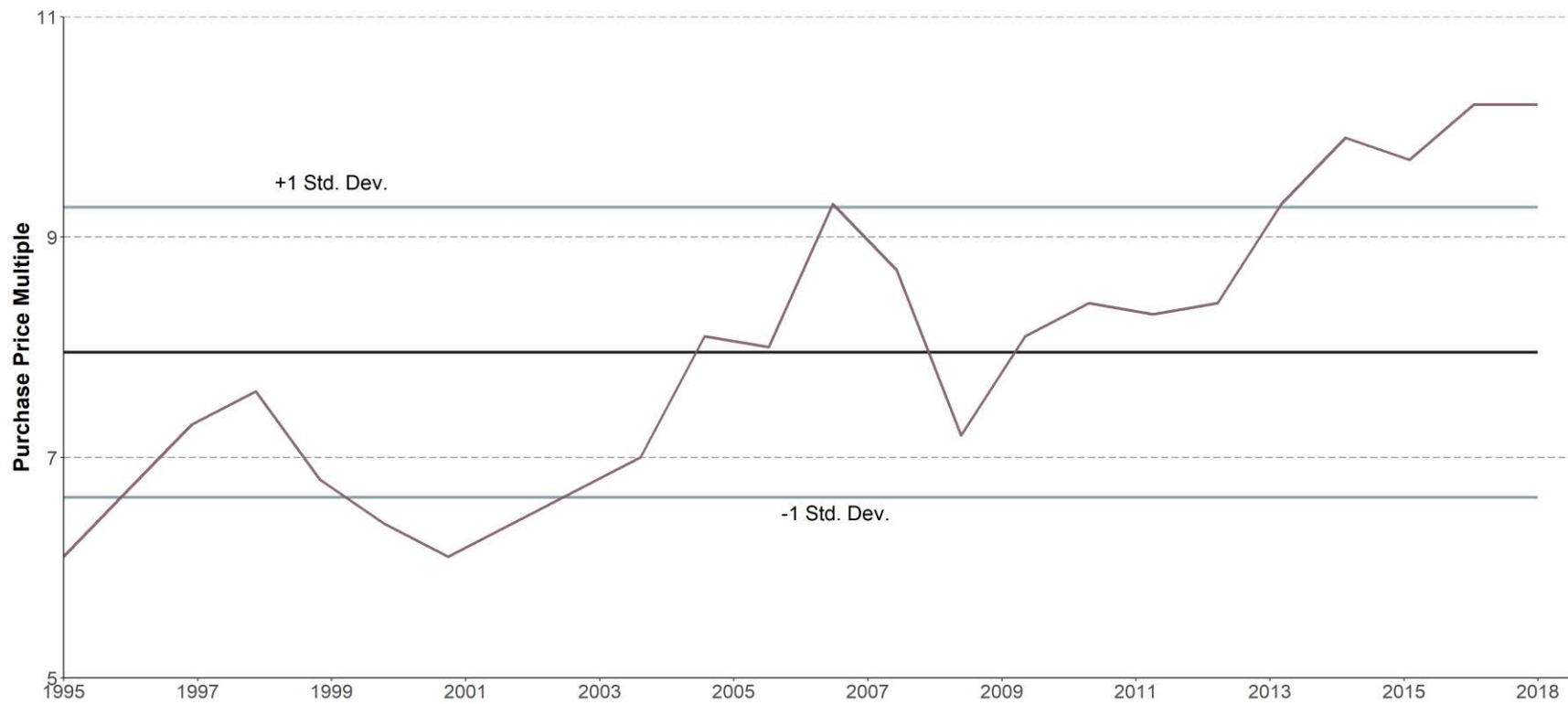
Developed International Equity Cyclically Adjusted P/E



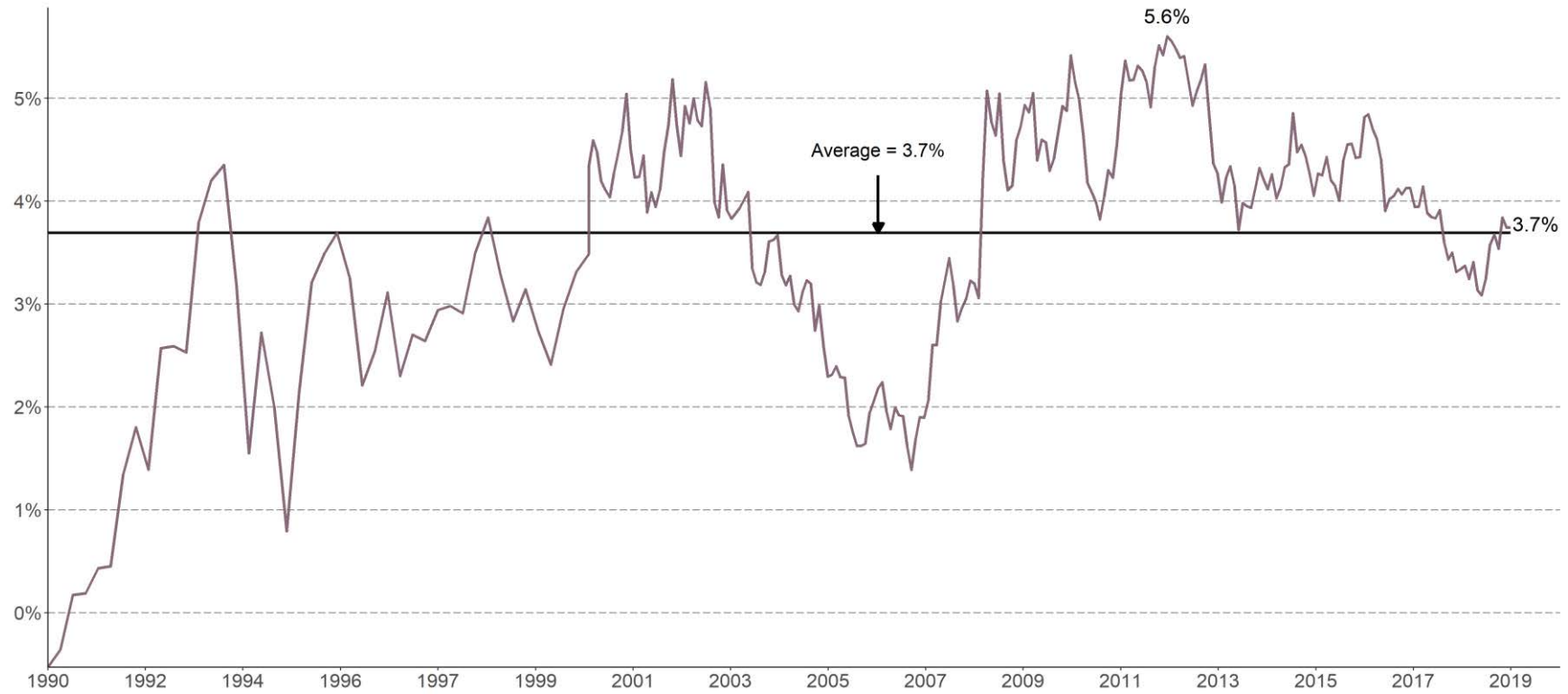
Emerging Market Equity Cyclically Adjusted P/E



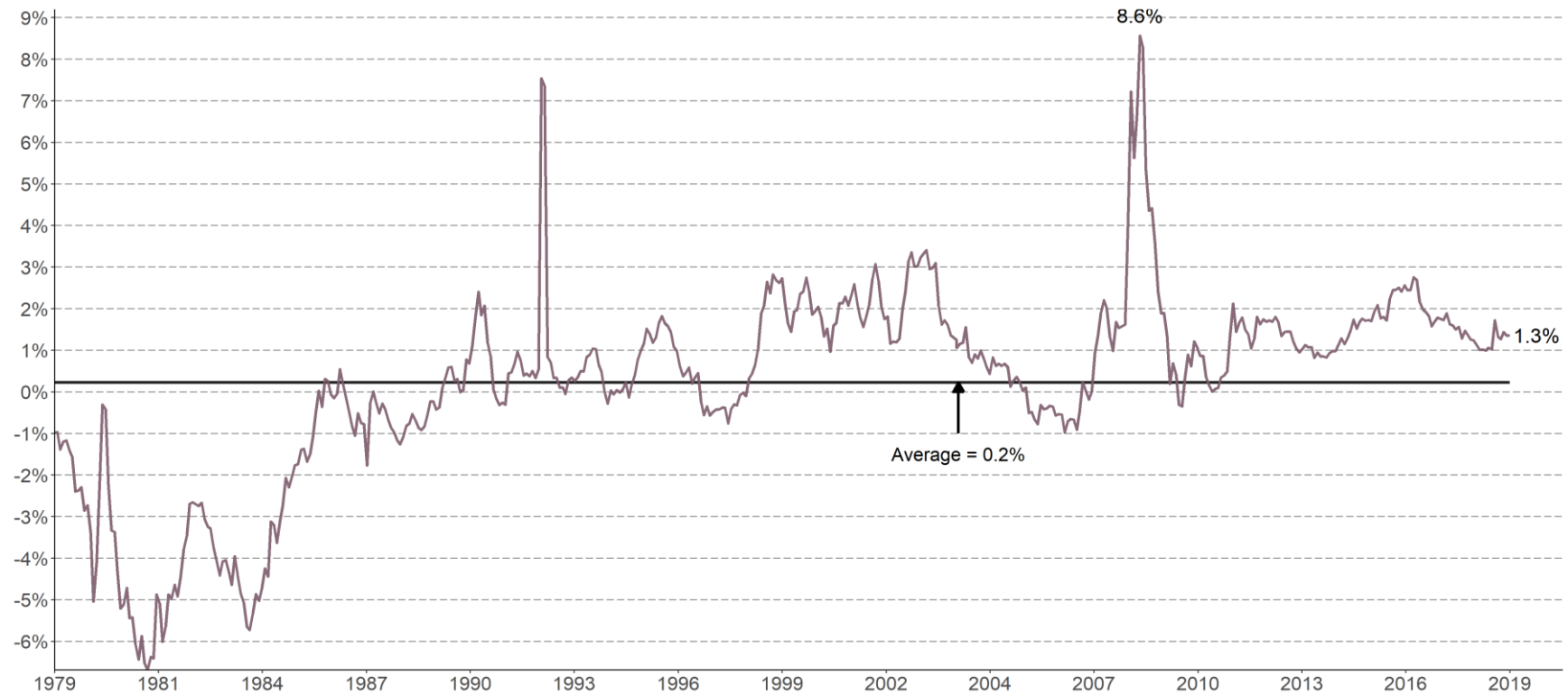
Private Equity Multiples



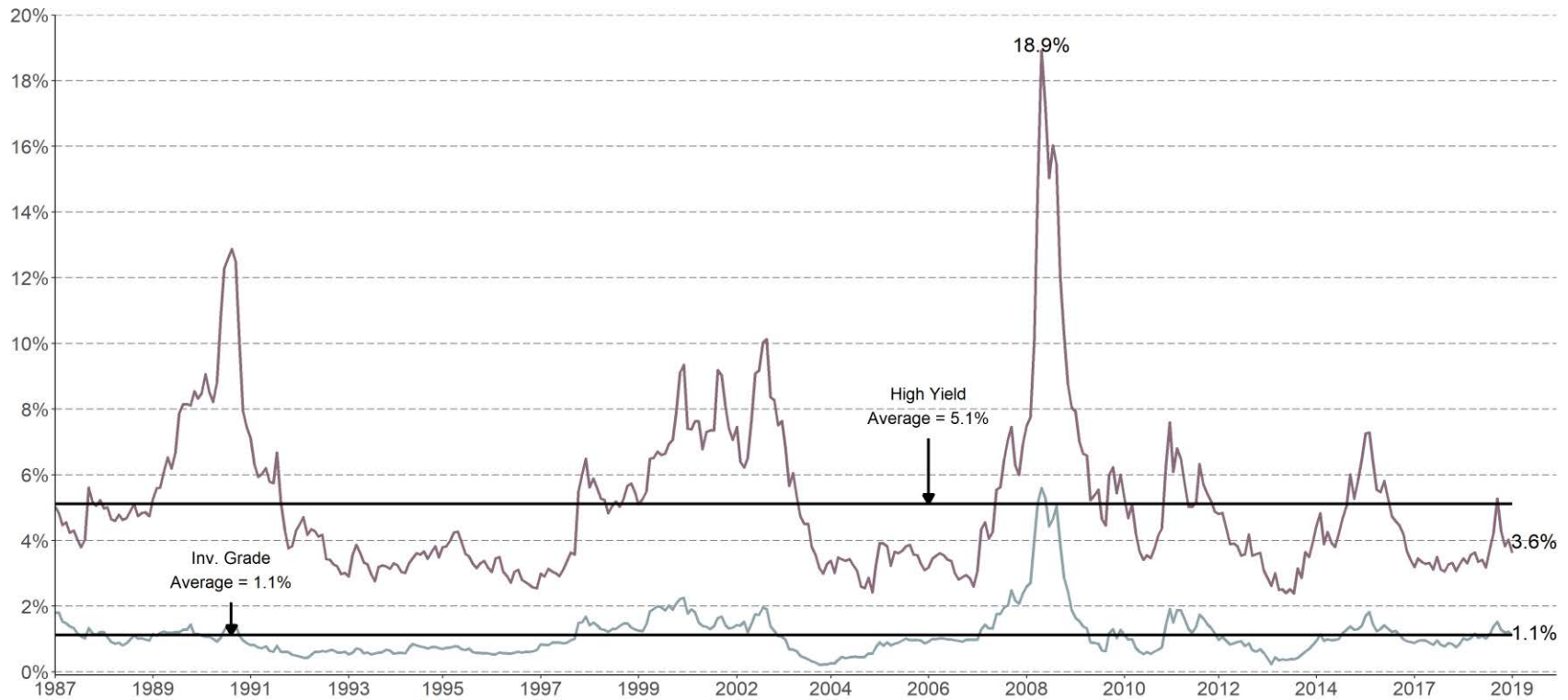
Core Real Estate Spread vs. Ten-Year Treasury



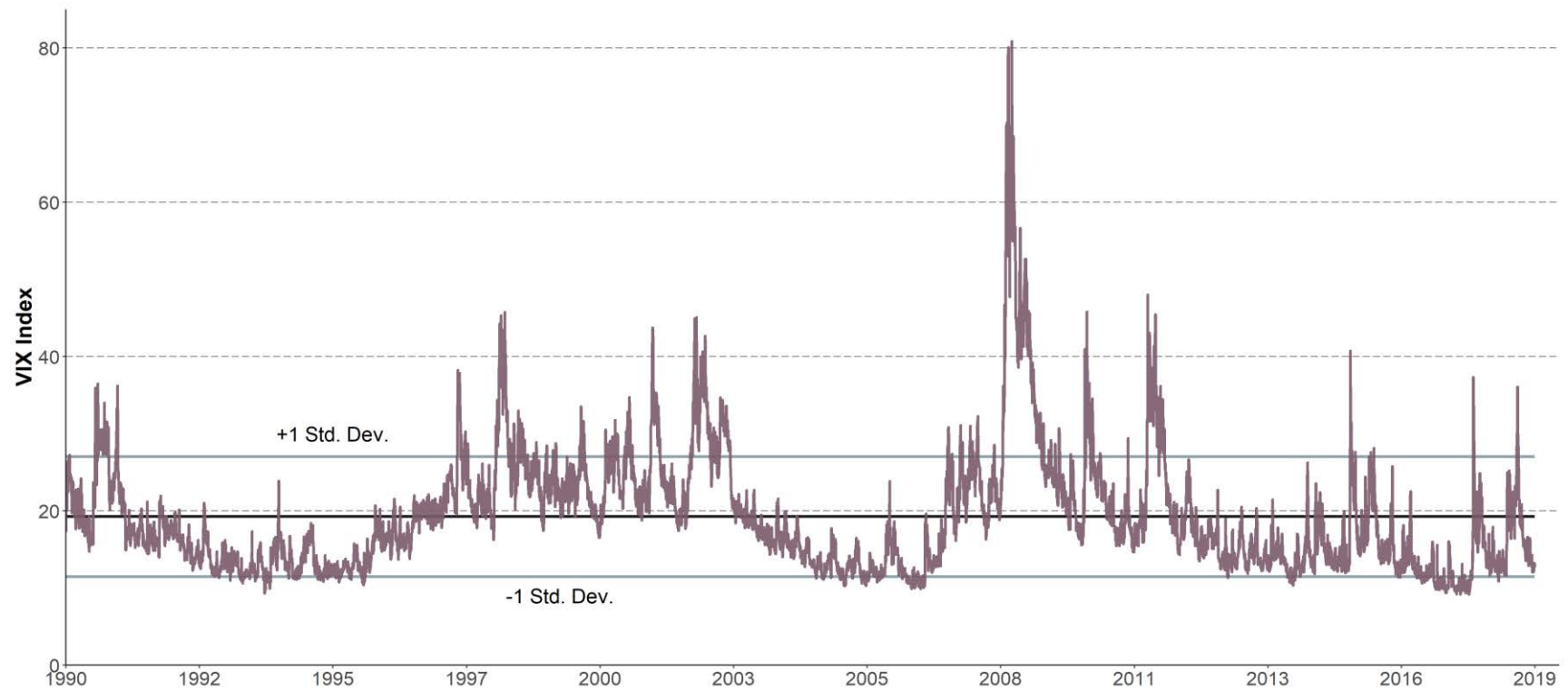
REITs Dividend Yield Spread vs. Ten-Year Treasury

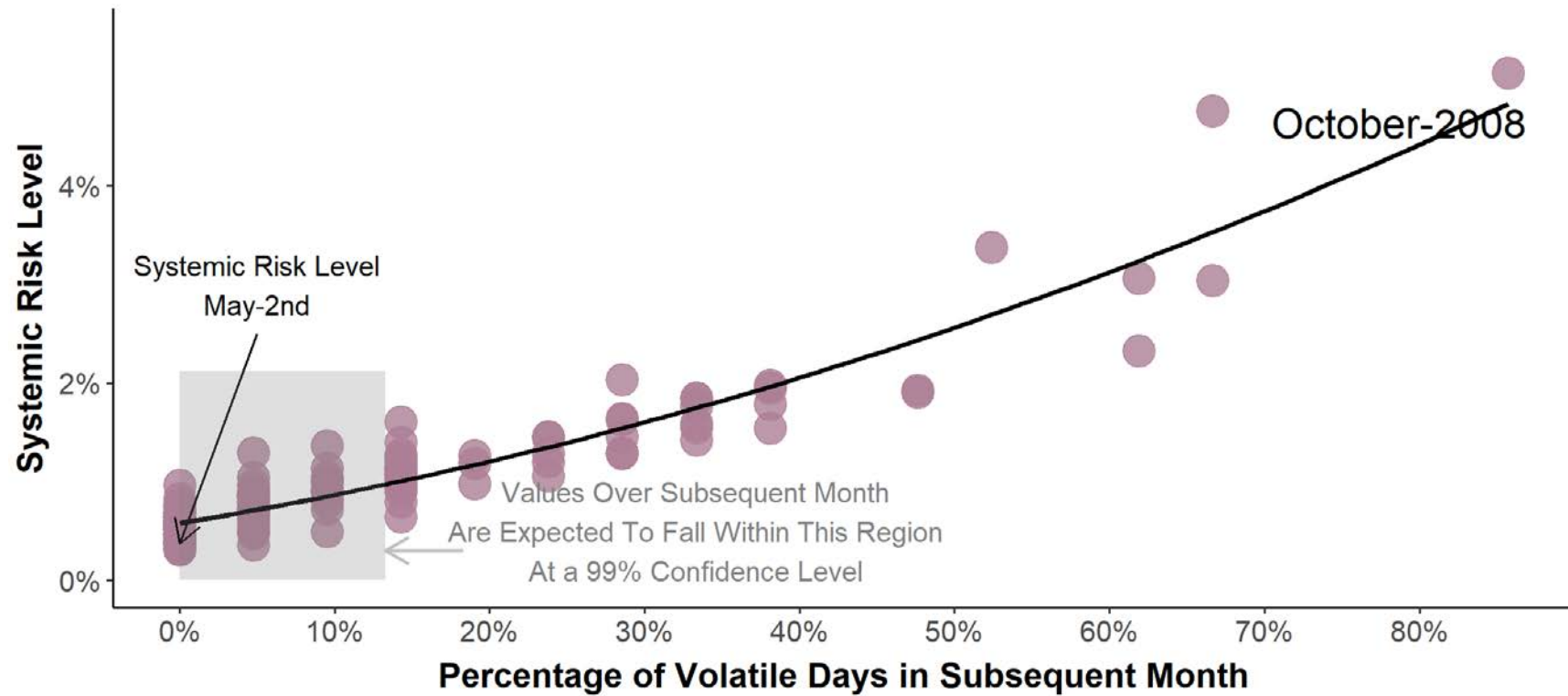


Credit Spreads



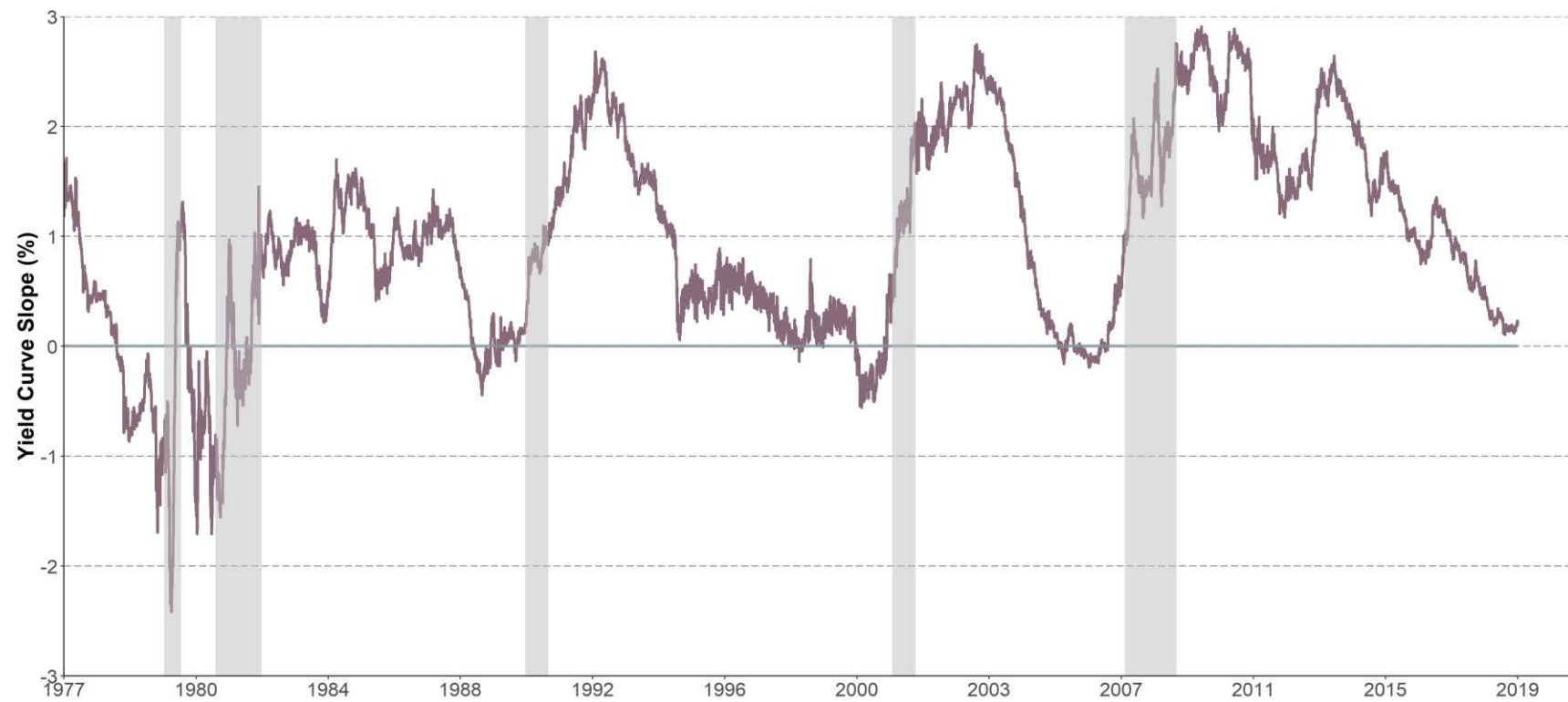
Equity Volatility



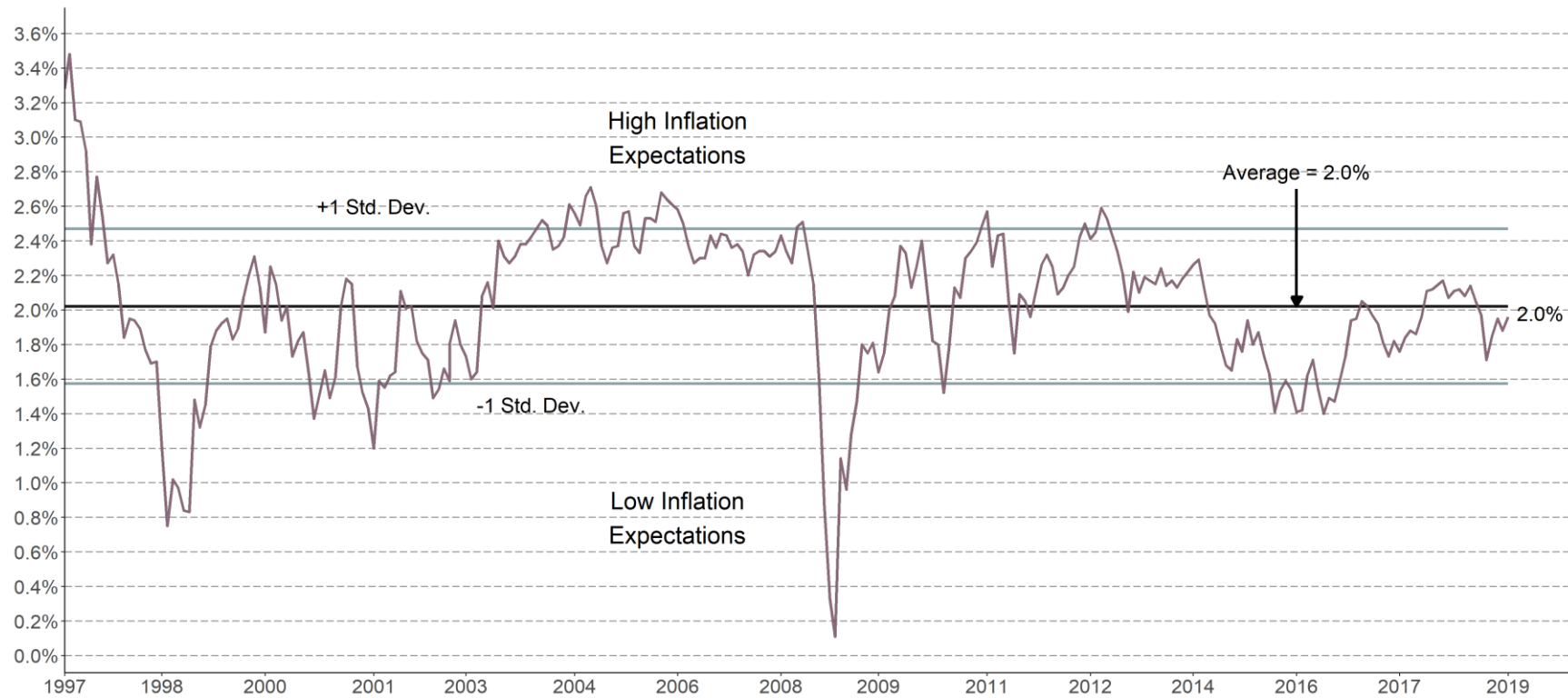
Systemic Risk and Volatile Market Days¹

¹ Source: Meketa Investment Group, as of April 30, 2019. Volatile days are defined as the top 10 percent of realized turbulence which is a multivariate distance between asset returns.

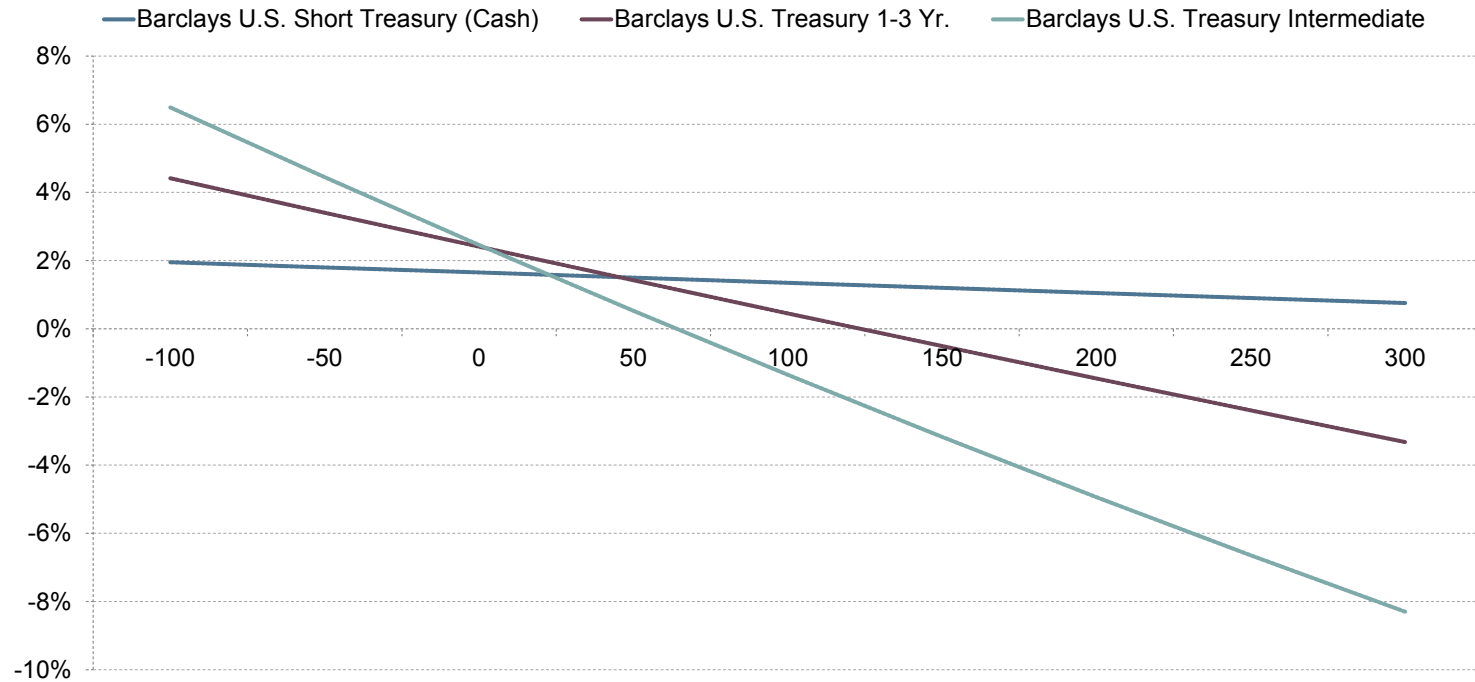
Yield Curve Slope (Ten Minus Two)



Ten-Year Breakeven Inflation



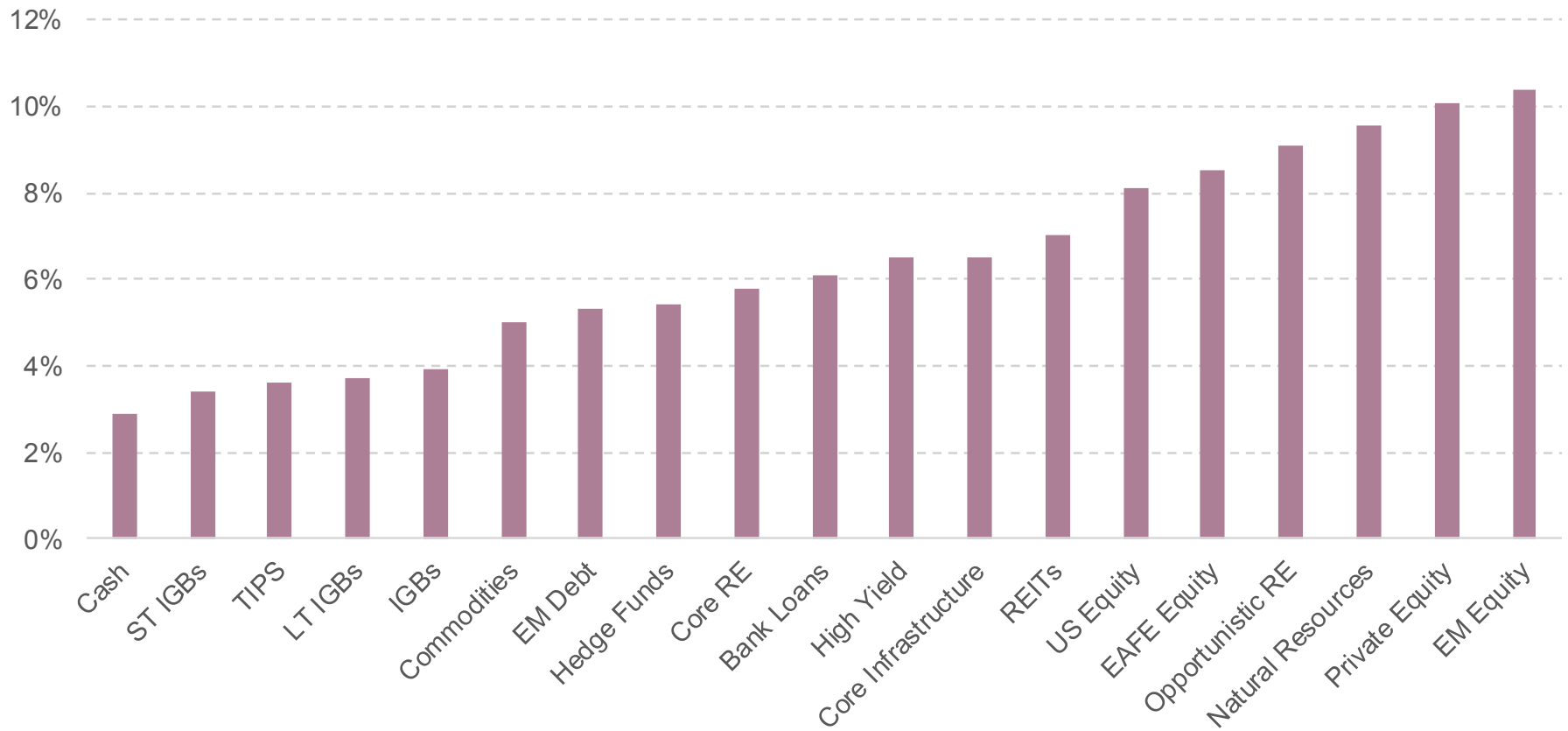
Total Return Given Changes in Interest Rates (bps)¹



	Total Return for Given Changes in Interest Rates (bps)									Statistics	
	-100	-50	0	50	100	150	200	250	300	Duration	YTW
Barclays U.S. Short Treasury (Cash)	2.7%	2.6%	2.4%	2.3%	2.1%	2.0%	1.8%	1.7%	1.5%	0.3	2.40%
Barclays U.S. Treasury 1-3 Yr.	4.4%	3.4%	2.5%	1.5%	0.5%	-0.4%	-1.4%	-2.3%	-3.2%	1.95	2.47%
Barclays U.S. Treasury Intermediate	6.3%	4.3%	2.3%	0.4%	-1.4%	-3.2%	-4.9%	-6.6%	-8.2%	3.84	2.34%
Barclays U.S. Treasury Long	22.4%	12.1%	2.9%	-5.4%	-12.6%	-18.9%	-24.2%	-28.4%	-31.7%	17.5	2.87%

¹ Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Data is as of May 1, 2019 via Barclays, Bloomberg, and Meketa Investment Group.

Long-Term Outlook¹



¹ Twenty-year expected returns based upon Meketa Investment Group's 2019 Annual Asset Study.

Appendix – Data Sources and Explanations

All Data as of April 30, 2019

- U.S. Equity Cyclically Adjusted P/E on S&P 500 Index – Source: Robert Shiller and Yale University.
- Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments. Earnings figures represent 12-month “as reported” earnings.
- Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month “as reported” earnings.
- Developed International Equity (MSCI EAFE ex Japan Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.
- Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years
- Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs
- Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, U.S. Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction based indices from Real Capital Analytics and Meketa Investment Group.
- REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, U.S. Treasury. REITs are proxied by the yield for the NAREIT Equity index.
- Credit Spreads – Source: Barclays Capital. High Yield is proxied by the Barclays High Yield index and Investment Grade Corporates are proxied by the Barclays U.S. Corporate Investment Grade index.

Appendix – Data Sources and Explanations (Continued)
All Data as of April 30, 2019

- Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for U.S. equity markets.
- Systemic Risk and Volatile Market Days – Source: Meketa Investment Group, as of April 30, 2019. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.
 - Systemic Risk, which measures risk across markets, is important because the more contagion of risk that exists between assets, the more likely it is that markets will experience volatile periods.
- Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year U.S. Treasury Yield and 2-Year U.S. Treasury Yield.
- Ten-Year Breakeven Inflation – Source: U.S. Treasury and Federal Reserve. Data is as of May 1, 2019 for TIPS and Treasuries. Inflation is measured by the Consumer Price Index (CPI-U NSA).

Meketa Market Sentiment Indicator

Explanation, Construction and Q&A

Meketa has created the MIG Market Sentiment Indicator (MIG-MSI) to complement our valuation-focused Risk Metrics. This measure of sentiment is meant to capture significant and persistent shifts in long-lived market trends of economic growth risk, either towards a risk-seeking trend or a risk-aversion trend.

This appendix explores:

- What is the Meketa Market Sentiment Indicator?
- How do I read the indicator graph?
- How is the Meketa Market Sentiment Indicator constructed?
- What do changes in the indicator mean?

Meketa has created a market sentiment indicator for monthly publication (the MIG-MSI – see below) to complement Meketa's Risk Metrics.

Meketa's Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk concerns long before a market corrections take place. The MIG-MSI helps to address this early-warning bias by measuring whether the markets are beginning to acknowledge key Risk Metrics trends, and / or indicating non-valuation based concerns. Once the MIG-MSI indicates that the market sentiment has shifted, it is our belief that investors should consider significant action, particularly if confirmed by the Risk Metrics. Importantly, Meketa believes the Risk Metrics and MIG-MSI should always be used in conjunction with one another and never in isolation. The questions and answers below highlight and discuss the basic underpinnings of the Meketa MIG-MSI:

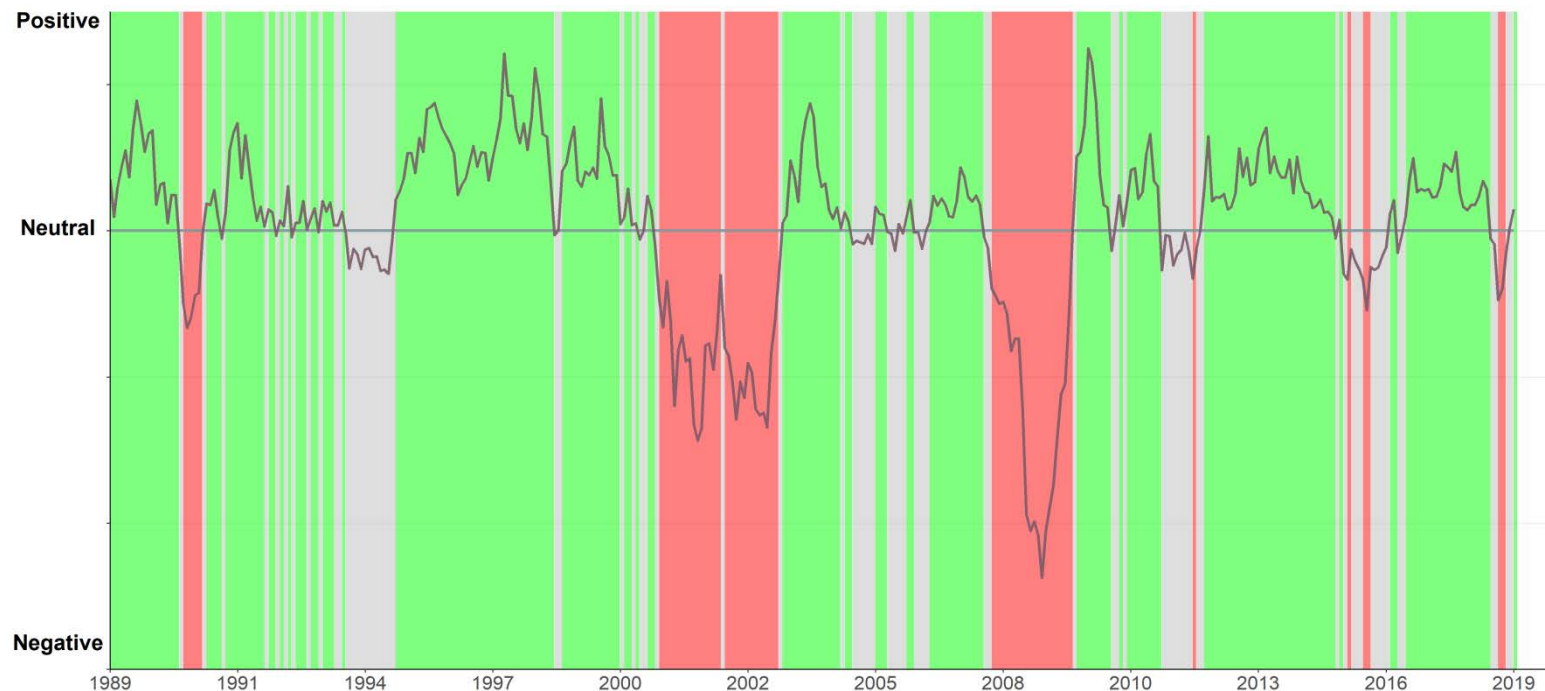
What is the Meketa Market Sentiment Indicator (MIG-MSI)?

The MIG-MSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The MIG-MSI takes into account the momentum (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

How do I read the Meketa Market Sentiment Indicator graph?

Simply put, the MIG-MSI is a color-coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the MIG-MSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the MIG-MSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.

Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.



How is the Meketa Market Sentiment Indicator (MIG-MSI) Constructed?

The MIG-MSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:

- Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)
- Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration U.S. Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight). The scale of this measure is adjusted to match that of the stock return momentum measure.

The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure.¹ The color reading on the graph is determined as follows:

- If both stock return momentum and bond spread momentum are positive = GREEN (positive)
- If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
- If both stock return momentum and bond spread momentum are negative = RED (negative)

¹ Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.
"Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010. <http://pages.stern.nyu.edu/~lpedersen/papers/TimeSeriesMomentum.pdf>

What does the Meketa Market Sentiment Indicator (MIG-MSI) mean? Why might it be useful?

There is strong evidence that time series momentum is significant and persistent. In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12-month period. The MIG-MSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

The background of the top half of the page is a photograph of a sunset over a body of water. Several dark, weathered wooden pilings are visible, some with stacks of stones on top. A large, stylized blue wave graphic curves across the bottom of the image.

Q1 2019

Oakland Police and Fire Retirement System

Quarterly Report

This report is solely for the use of client personnel. No part of it may be circulated, quoted, or reproduced for distribution outside the client organization without prior written approval from Meketa Investment Group.

Nothing herein is intended to serve as investment advice, a recommendation of any particular investment or type of investment, a suggestion of purchasing or selling securities, or an invitation or inducement to engage in investment activity.

TABLE OF CONTENTS

<u>Tab</u>	<u>Section</u>
A	TOTAL PORTFOLIO SUMMARY
B	ECONOMIC OVERVIEW
C	INVESTMENT MARKET RISK METRICS
D	TOTAL PORTFOLIO REVIEW
E	MANAGER MONITORING / PROBATION LIST
F	INDIVIDUAL MANAGER PERFORMANCE
	Appendix

TOTAL PORTFOLIO SUMMARY

As of March 31, 2019, the City of Oakland Police and Fire Retirement System (OPFRS) portfolio had an aggregate value of \$380.7 million. This represents a \$33.5 million increase in investment value and (\$2.8) million in benefit payments over the quarter. During the previous one-year period, the OPFRS Total Portfolio increased in value by \$17.4 million and withdrew (\$12.4) million for benefit payments.

Asset Allocation Trends

The asset allocation targets (see table on page 21) reflect those as of March 31, 2019. Target weightings reflect the interim phase (CRO = 10%) of the Plan's previously approved asset allocation (effective 5/31/2017).

With respect to policy targets, the portfolio ended the latest quarter *overweight Covered Calls, Cash, and Domestic Equity while underweight International Equity, Fixed Income, and Crisis Risk Offset.*

Recent Investment Performance

During the most recent quarter, the OPFRS Total Portfolio generated an absolute return of 9.6%, gross of fees, outperforming its policy benchmark by 1.0% basis points. The portfolio outperformed its benchmark by 0.6% and 1.3% basis points over the 1- and 3-year periods, respectively, while also outperforming by 20 basis points over the 5-year period.

The Total Portfolio outperformed the Median fund's return over all time periods measured. Performance differences with respect to the Median Fund continue to be attributed largely to differences in asset allocation.

	Quarter	Fiscal YTD	1 Year	3 Year	5 Year
Total Portfolio ¹	9.6	2.9	4.8	10.4	7.1
Policy Benchmark ²	8.6	2.0	4.2	9.1	6.9
Excess Return	1.0	0.9	0.6	1.3	0.2
Reference: Median Fund ³	8.8	3.1	4.2	8.3	6.0
Reference: Total Net of Fees ⁴	9.5	2.6	4.4	10.0	6.7

¹ Gross of Fees. Performance since 2005 includes securities lending.

² Evolving Policy Benchmark consists of 40% Russell 3000, 12% MSCI ACWI ex U.S., 33% Bbg BC Universal, 5% CBOE BXM, 6.7% SG Multi Asset Risk Premia, 3.3% Bbg BC Long Treasury

³ Investment Metrics < \$1 Billion Public Plan Universe.

⁴ Longer-term (>1 year) Net of fee returns are estimated based on OPFRS manager fee schedule (approximately 34 bps)



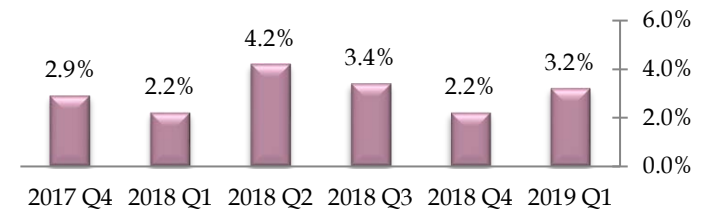
Economic & Market Overview – 1Q 2019

Overview: Real U.S. GDP increased by 3.2% in the first quarter of 2019. Growth was driven by increases in personal consumption expenditures, private inventory investment, exports, state and local government spending, and nonresidential fixed investment, while a decrease in residential fixed investment detracted from GDP growth over the quarter. At quarter-end, the unemployment rate decreased to 3.8%. The seasonally adjusted Consumer Price Index for All Urban Consumers increased by 2.3% on an annualized basis during the quarter. Commodities were up in the first quarter, but the 1-year return for a basket of commodities was negative at -5.3%. Global equity returns were strong over the quarter as the MSCI ACWI was up 12.7%. The U.S. Dollar appreciated against the Euro and Yen by 2.2% and 1.1%, respectively, but depreciated against the Pound by 2.2%.

Economic Growth

- Real GDP increased at an annualized rate of 3.2 percent in the first quarter of 2019.
- Real GDP growth was driven by increases in personal consumption expenditures, private inventory investment, exports, state and local government spending, and nonresidential fixed investments.
- GDP growth was partially offset during the quarter by a decrease in residential investment.

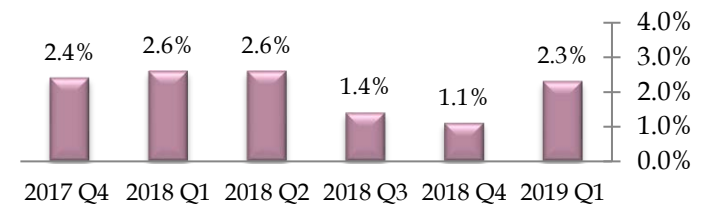
Annualized Quarterly GDP Growth



Inflation

- The Consumer Price Index for All Urban Consumers (CPI-U) increased by 2.3 percent during the first quarter on an annualized basis after seasonal adjustment.
- Quarterly percentage changes may be adjusted between data publications due to periodic updates in seasonal factors.
- Core CPI-U increased by 2.0 percent for the quarter on an annualized basis after seasonal adjustment.
- Over the last 12 months, core CPI-U increased by 2.0 percent after seasonal adjustment.

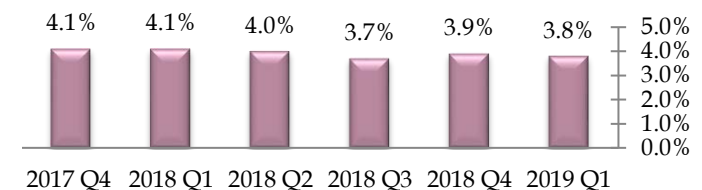
CPI-U After Seasonal Adjustment



Unemployment

- The U.S. economy gained approximately 541,000 jobs in the first quarter of 2019.
- The unemployment rate decreased to 3.8% at quarter-end.
- The majority of jobs gained occurred in education and health services, professional and business services, and leisure and hospitality. Job loss in temporary help services, retail trade, as well as manufacturing in motor vehicles and parts detracted from job growth over the quarter.

Unemployment Rate



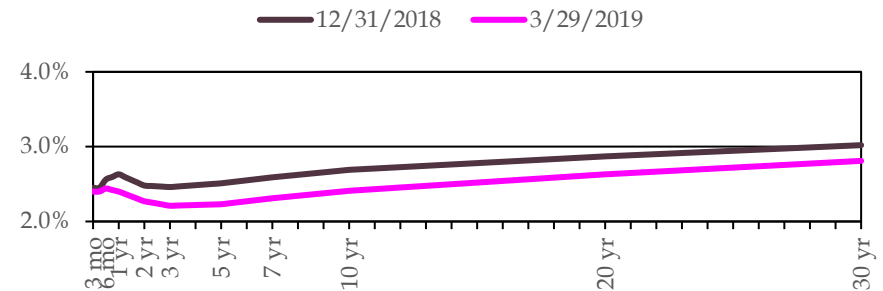


Economic & Market Overview – 1Q 2019

Interest Rates & US Dollar

- Certain parts of the yield curve remained slightly inverted over the quarter as longer term yields decreased more than shorter-term yields.
- The Federal Fund Rate was unchanged in the first quarter. The current target is between 2.25 and 2.50 percent.
- The U.S. Dollar appreciated against the Euro and Yen by 2.2% and 1.1%, respectively, but depreciated against the Pound by 2.2%.

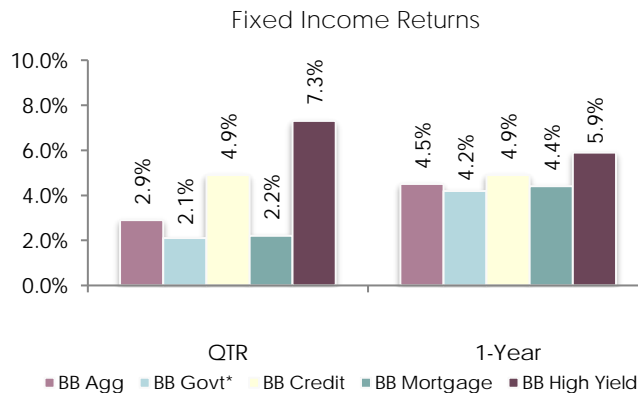
Treasury Yield Curve Changes



Source: US Treasury Department

Fixed Income

- Investment Grade bonds performed well over the quarter, generally producing returns between 2% and 5%. High Yield bonds provided the strongest performance as they were up 7.3% for the quarter.
- Over the trailing 1-year period, all bonds sectors performed favorably as they were all in excess of 4%. High Yield led all other sectors as they were up nearly 6% over the 1-year period.



*U.S. Treasuries and Agencies

US Fixed Income Sector Performance (BB Aggregate Index)			
Sector	Weight	QTR	1 Year
Governments*	42.3%	2.2%	4.2%
Agencies	2.7%	2.5%	3.8%
Inv. Grade Credit	24.7%	5.1%	4.9%
MBS	27.8%	2.2%	4.4%
ABS	0.5%	1.5%	3.7%
CMBS	2.0%	3.2%	5.4%

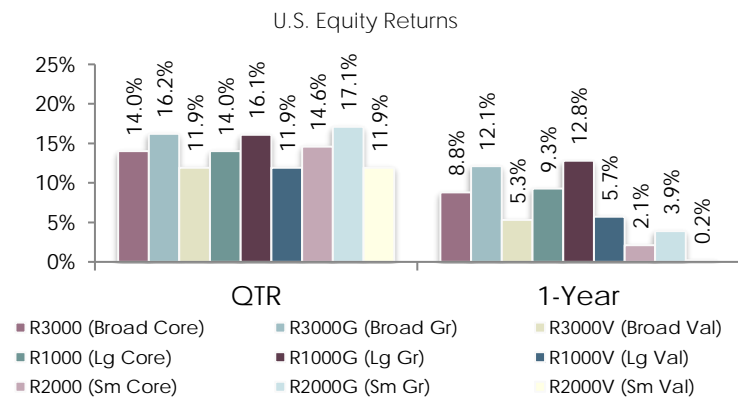
*U.S. Treasuries and Government Related



Economic & Market Overview – 1Q 2019

U.S. Equities

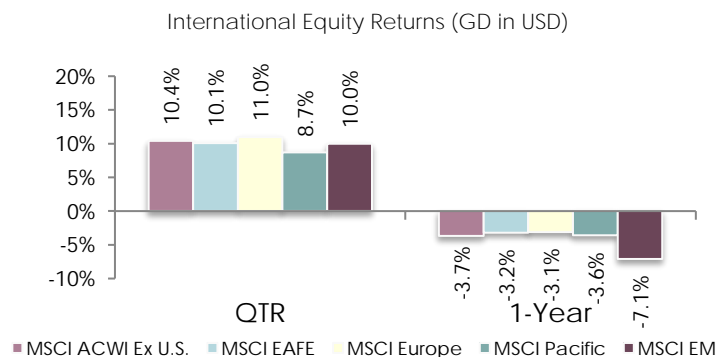
- U.S. equities experienced an exceptional first quarter as they provided double-digit returns across styles and market capitalizations. Growth stocks outperformed value stocks and small cap stocks outperformed large cap stocks. Small cap growth outperformed all other styles and capitalizations as they returned 17.3% over the quarter. Broad, large, and small cap value stocks each returned 11.9% over the quarter.
- During the trailing 1-year period, U.S. equities were mixed as large cap growth stocks performed well returning 12.8% over the time period, while small cap value stocks were essentially flat.



U.S. Equity Sector Performance (Russell 3000 Index)			
Sector	Weight	QTR	1 Year
Information Tech.	20.5%	20.8%	18.0%
Health Care	14.4%	8.2%	14.1%
Financials	13.8%	8.8%	-4.7%
Industrials	10.4%	16.7%	2.1%
Consumer Disc.	10.2%	14.7%	10.5%
Comm. Services	9.1%	14.2%	10.5%
Consumer Staples	6.4%	11.7%	9.8%
Energy	5.0%	16.6%	-0.2%
Real Estate	3.9%	17.3%	19.3%
Utilities	3.2%	11.4%	20.3%
Materials	3.0%	11.6%	-2.3%

International Equities

- International equities provided strong performance across the board during the first quarter. Europe led all major regions with a return of 11.0% while the Pacific trailed all other major regions with a return of 8.7%.
- Over the trailing 1-year period, Europe led all other major regions with a return of -3.1%, while Emerging Markets trailed all other major regions with a -7.1% return.



International Equity Region Performance (GD in USD) (MSCI ACWI ex US)			
Sector	Weight	QTR	1 Year
Europe Ex. UK	30.7%	10.7%	-4.3%
Emerging Markets	26.1%	10.0%	-7.1%
Japan	16.1%	6.9%	-7.5%
United Kingdom	11.5%	11.9%	0.0%
Pacific Ex. Japan	8.5%	12.3%	4.7%
Canada	6.8%	15.6%	3.9%



Economic & Market Overview – 1Q 2019

Market Summary – Multi-term Performance*

Indexes	Month	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Global Equity							
MSCI AC World Index	1.3%	12.3%	3.2%	11.3%	7.0%	12.6%	5.4%
Domestic Equity							
S&P 500	1.9%	13.6%	9.5%	13.5%	10.9%	15.9%	6.0%
Russell 3000	1.5%	14.0%	8.8%	13.5%	10.4%	16.0%	6.5%
Russell 3000 Growth	2.5%	16.2%	12.1%	16.4%	13.1%	17.4%	5.6%
Russell 3000 Value	0.4%	11.9%	5.3%	10.5%	7.6%	14.5%	6.9%
Russell 1000	1.7%	14.0%	9.3%	13.5%	10.6%	16.0%	6.3%
Russell 1000 Growth	2.8%	16.1%	12.7%	16.5%	13.5%	17.5%	5.5%
Russell 1000 Value	0.6%	11.9%	5.7%	10.5%	7.7%	14.5%	6.7%
Russell 2000	-2.1%	14.6%	2.0%	12.9%	7.1%	15.4%	8.4%
Russell 2000 Growth	-1.4%	17.1%	3.9%	14.9%	8.4%	16.5%	7.1%
Russell 2000 Value	-2.9%	11.9%	0.2%	10.9%	5.6%	14.1%	9.4%
Russell Microcap	-3.0%	13.1%	-2.4%	12.3%	5.0%	15.0%	---
Alerian MLP Index	3.4%	16.8%	15.1%	5.7%	-4.7%	10.1%	11.5%
CBOE BXM Index	1.8%	6.8%	3.3%	7.4%	5.9%	9.0%	5.0%
International Equity							
MSCI AC World Index ex USA	0.7%	10.4%	-3.7%	8.6%	3.0%	9.3%	5.0%
MSCI EAFE	0.7%	10.1%	-3.2%	7.8%	2.8%	9.5%	4.4%
MSCI Pacific	0.8%	8.7%	-3.6%	9.1%	5.2%	9.3%	4.4%
MSCI Europe	0.7%	11.0%	-3.1%	7.2%	1.6%	9.6%	4.4%
MSCI EM (Emerging Markets)	0.9%	10.0%	-7.1%	11.1%	4.1%	9.3%	8.7%
Fixed Income							
BB Universal	1.8%	3.3%	4.5%	2.6%	3.0%	4.4%	5.0%
Global Agg. - Hedged	1.8%	3.0%	4.9%	2.8%	3.6%	4.1%	4.7%
BB Aggregate Bond	1.9%	2.9%	4.5%	2.0%	2.7%	3.8%	4.7%
BB Government	1.9%	2.1%	4.2%	1.1%	2.1%	2.4%	4.3%
BB Credit Bond	2.4%	4.9%	4.9%	3.5%	3.6%	6.2%	5.5%
BB Mortgage Backed Securities	1.5%	2.2%	4.4%	1.8%	2.6%	3.1%	4.6%
BB High Yield	0.9%	7.3%	5.9%	8.6%	4.7%	11.3%	6.8%
BB WGIL All Maturities - Hedged	3.1%	3.9%	4.0%	4.4%	4.5%	4.8%	---
Emerging Markets Debt	1.4%	5.4%	4.4%	5.4%	4.8%	8.5%	9.1%
Real Estate							
NCREIF	0.5%	1.4%	7.5%	8.0%	10.2%	8.7%	8.5%
FTSE NAREIT All Equity Index	4.2%	16.7%	19.9%	8.1%	9.9%	18.3%	10.7%
Commodity Index							
Bloomberg Commodity Index	-0.2%	6.3%	-5.3%	2.2%	-8.9%	-2.6%	1.8%

*Performance is annualized for periods greater than one year



Economic & Market Overview – 1Q 2019

Annual Asset Class Performance

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD
Best	34.5	32.6	39.8	36.3	79.0	35.9	29.9	18.6	33.6	27.4	15.2	18.3	37.8	8.3	16.8
	20.2	28.0	16.1	24.0	76.4	19.2	16.0	17.9	27.6	25.1	4.4	17.5	25.6	0.0	14.0
	14.0	26.9	12.7	5.2	57.5	16.9	13.9	16.8	23.4	12.6	0.5	12.7	24.6	-1.3	12.3
	11.4	26.1	12.5	-2.4	35.4	16.1	13.6	16.4	23.3	12.3	0.5	11.6	21.1	-1.8	10.1
	8.1	21.5	12.2	-10.4	32.5	15.2	7.8	15.6	13.3	6.0	-0.4	9.3	8.5	-2.3	10.0
	6.5	16.1	11.6	-26.4	28.3	13.2	4.4	11.0	12.8	4.8	-1.2	8.5	7.8	-5.2	7.4
	6.3	15.7	11.6	-36.9	11.4	9.4	1.0	7.0	7.4	4.7	-1.4	5.1	7.5	-8.9	4.7
	6.1	11.8	9.8	-37.3	5.9	8.2	-6.9	4.8	-2.0	3.6	-1.8	4.7	3.5	-10.0	3.2
	2.8	4.3	7.0	-41.8	1.5	8.2	-8.7	4.2	-2.3	2.5	-4.6	2.6	3.0	-12.4	2.9
	2.7	1.8	5.1	-43.1	-12.9	6.5	-11.7	3.6	-8.6	-1.8	-14.6	1.5	-4.5	-13.4	1.7
Worst	2.4	0.5	2.2	-53.2	-30.7	6.3	-18.2	-14.3	-12.7	-4.5	-32.6	1.3	-6.5	-14.2	-5.8

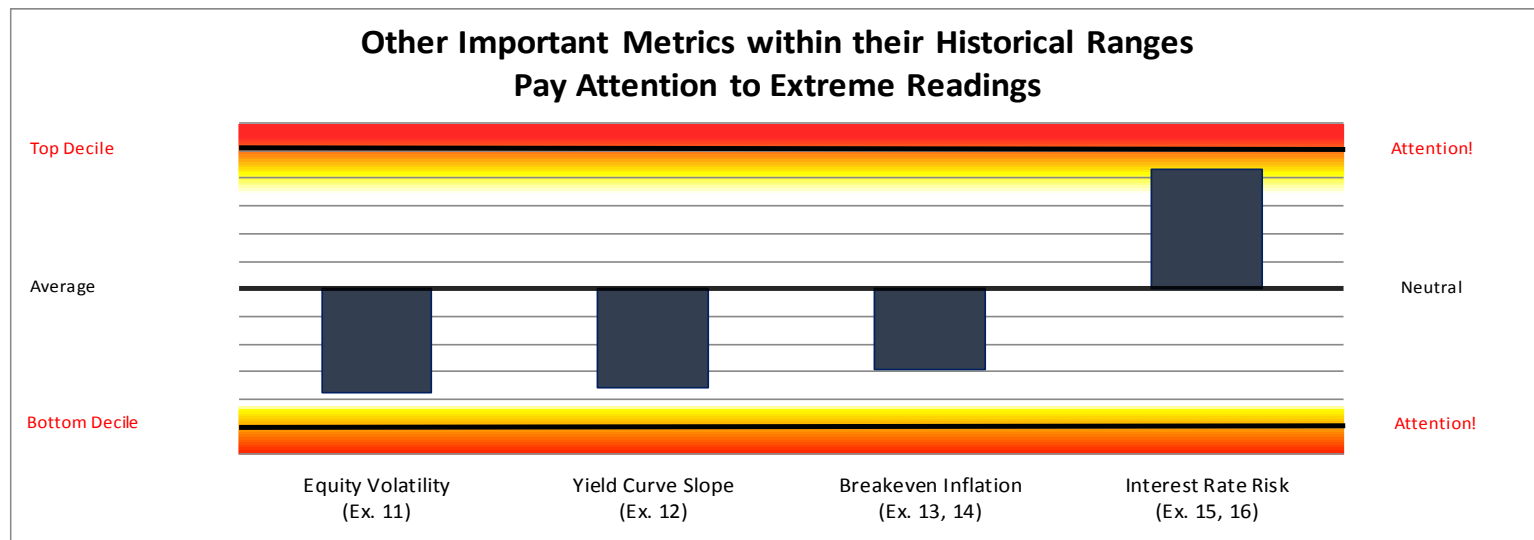
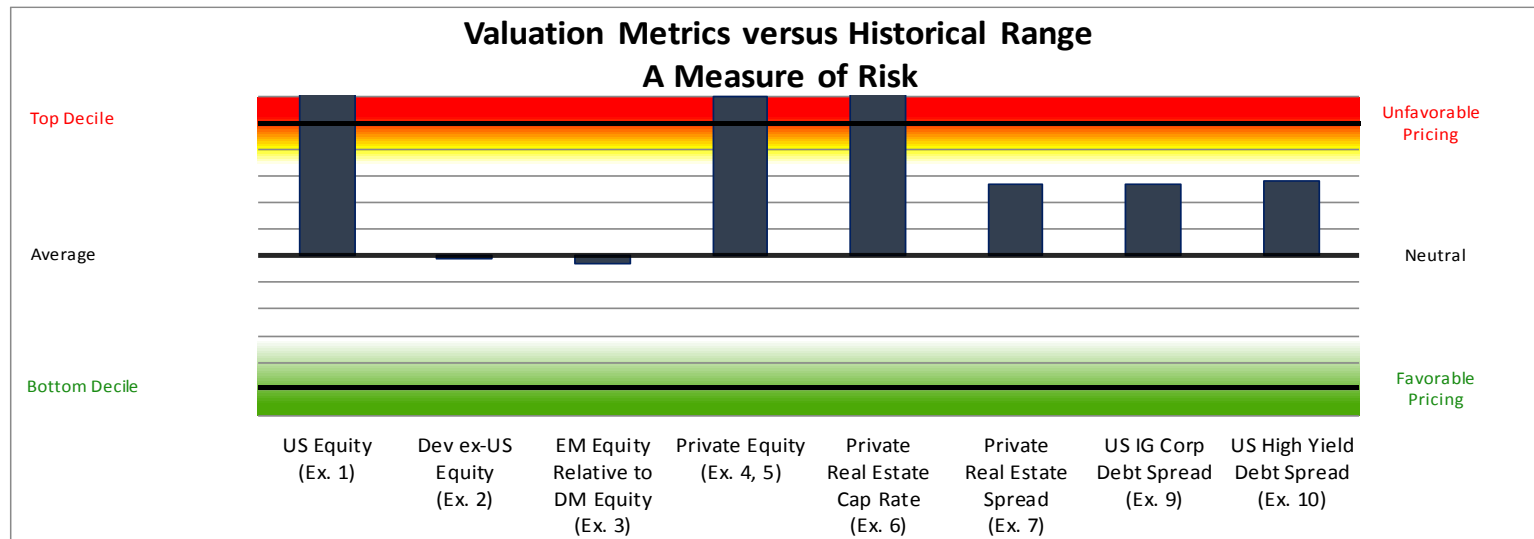
MSCI ACWI	Russell 3000 Index	Alerian MLP Index	MSCI EAFE Index	MSCI Emerging Markets	BB Agg	ICE BofAML High Yield	BB Long Treasury	BB TIPS Index	CS MF 18% Vol Index	NCREIF ODCE
-----------	--------------------	-------------------	-----------------	-----------------------	--------	-----------------------	------------------	---------------	---------------------	-------------

Takeaways

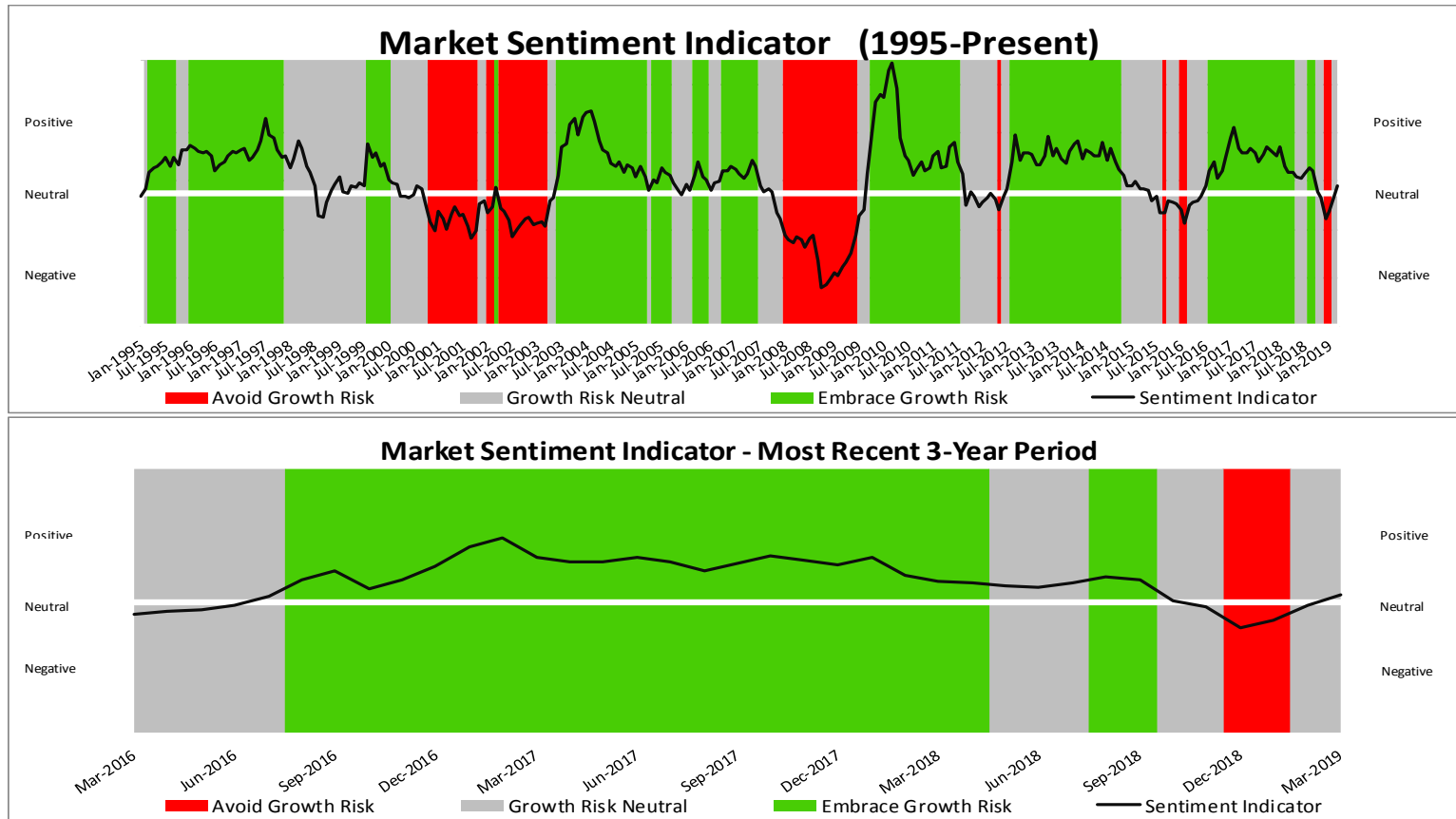
- Although March was a relatively muted period for most asset classes, the month capped off a historically strong quarter for most risk-based assets. Across the globe, the strong returns for broad equity markets in Q1 2019 effectively nullified the material drawdowns seen in Q4 2018. During the quarter, U.S. equity markets outperformed Non-U.S. markets, with most U.S. indices producing returns in the low-to-mid teens.
- Due to the strong rebound in public market risk-based assets to start 2019, private market assets are likely to show only a modest impact from the volatile trailing six-month period.
- U.S. equity markets remain expensive whereas Non-U.S. equity markets remain reasonably valued.
- The U.S. yield curve continued to flatten during the first quarter, with intermediate and long rates compressing by roughly 20-30 bps over the quarter. The yield curve is currently at its flattest point since the Great Financial Crisis.
- Implied equity market volatility decreased during the first quarter, as the VIX Index finished the quarter meaningfully below the long-term historical average.
- The Market Sentiment Indicator^[1] remained neutral (gray).
- **Market uncertainty is higher than numbers might indicate.** Diverging global economic growth, nuanced monetary policies, and ongoing geopolitical turmoil has resulted in increased uncertainty in the global capital markets. Moreover, equity and credit markets are currently producing different macroeconomic signals when compared to sovereign bond markets.

^[1] See Appendix for the rationale for selection and calculation methodology used for the risk metrics.

Risk Overview



Market Sentiment



Information Behind Current Sentiment Reading

Bond Spread Momentum Trailing-Twelve Months

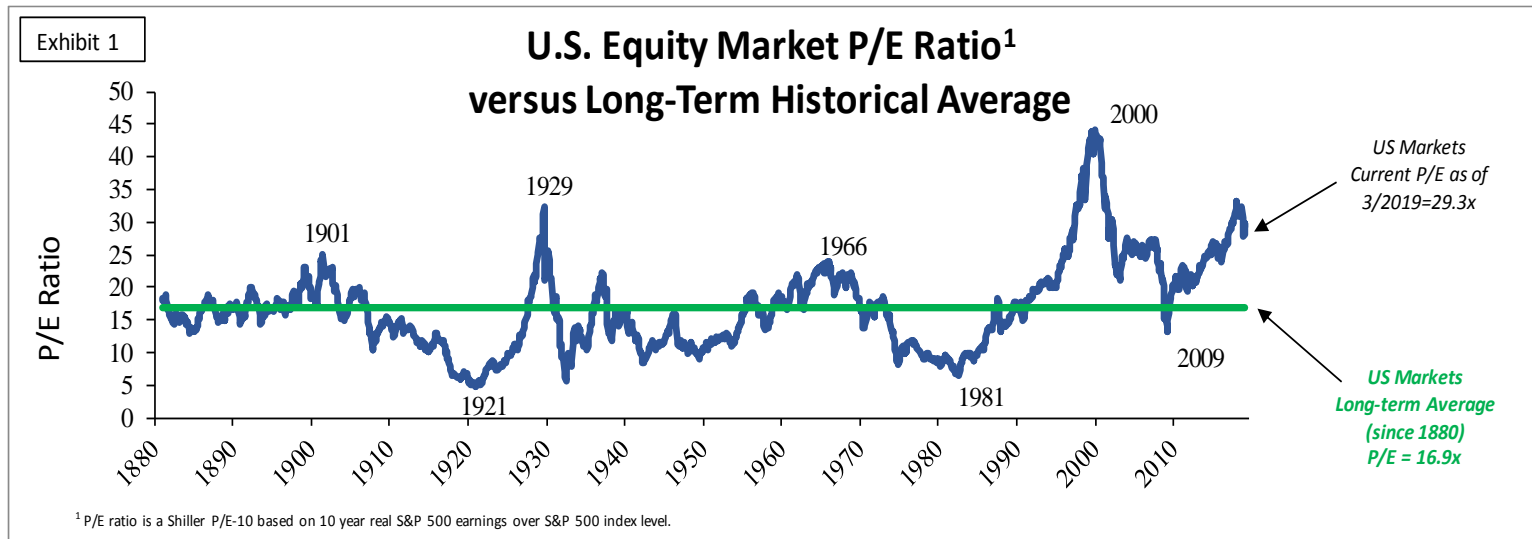
Equity Return Momentum Trailing-Twelve Months

Agreement Between Bond Spread and Equity Spread Momentum Measures?

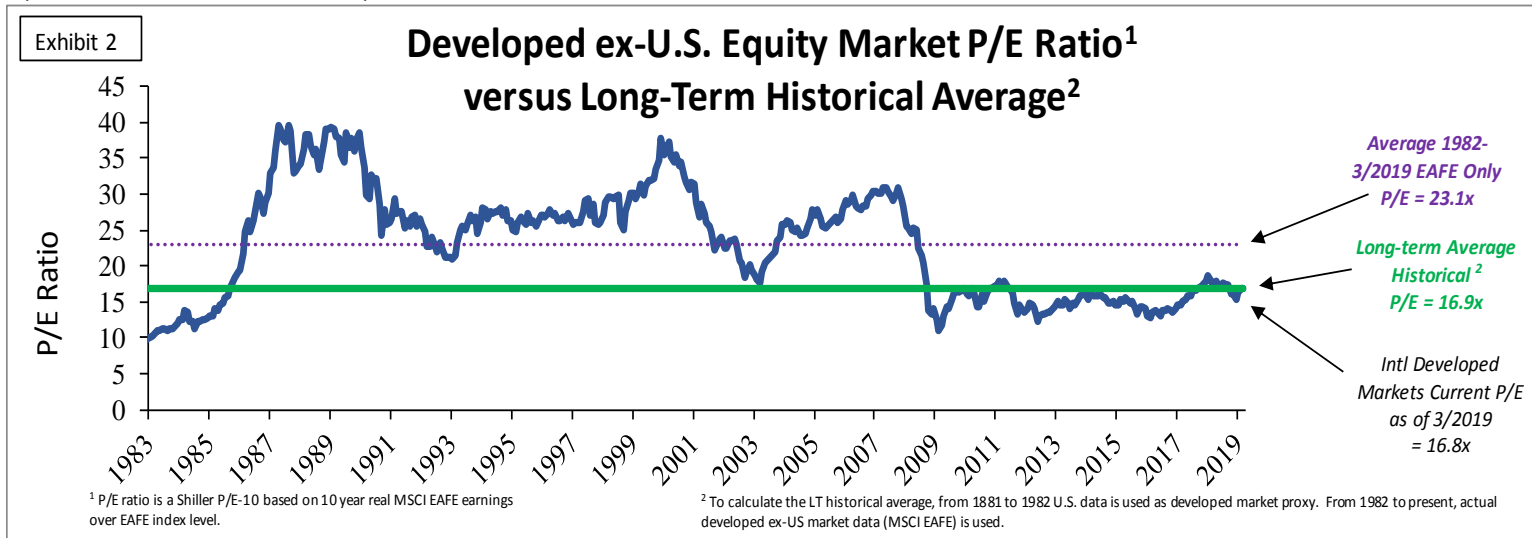
Growth Risk Visibility (Current Overall Sentiment)

Negative	■
Positive	■
Disagree	■
Neutral	■

Developed Public Equity Markets



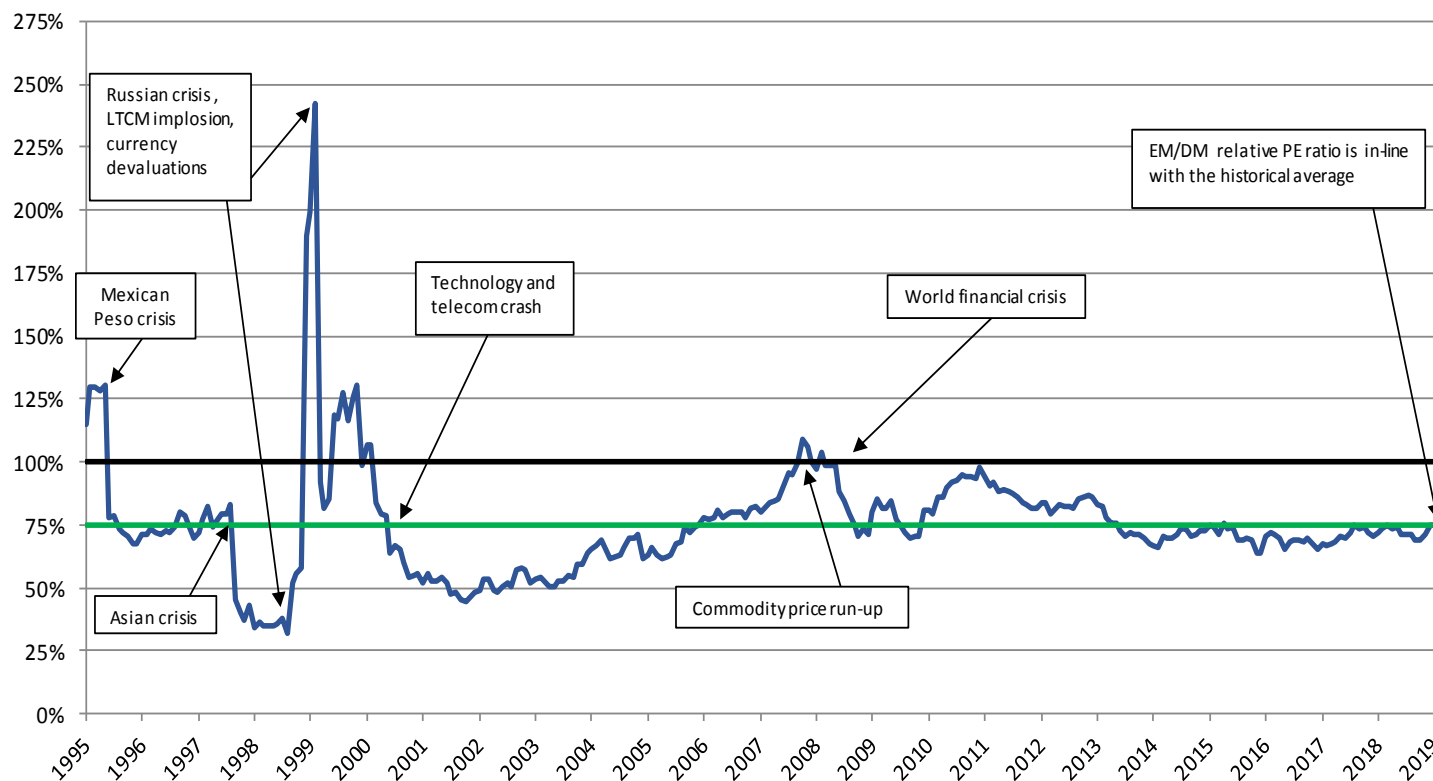
(Please note different time scales)



Emerging Market Public Equity Markets

Exhibit 3

Emerging Markets PE / Developed Markets PE (100% = Parity between PE Ratios)



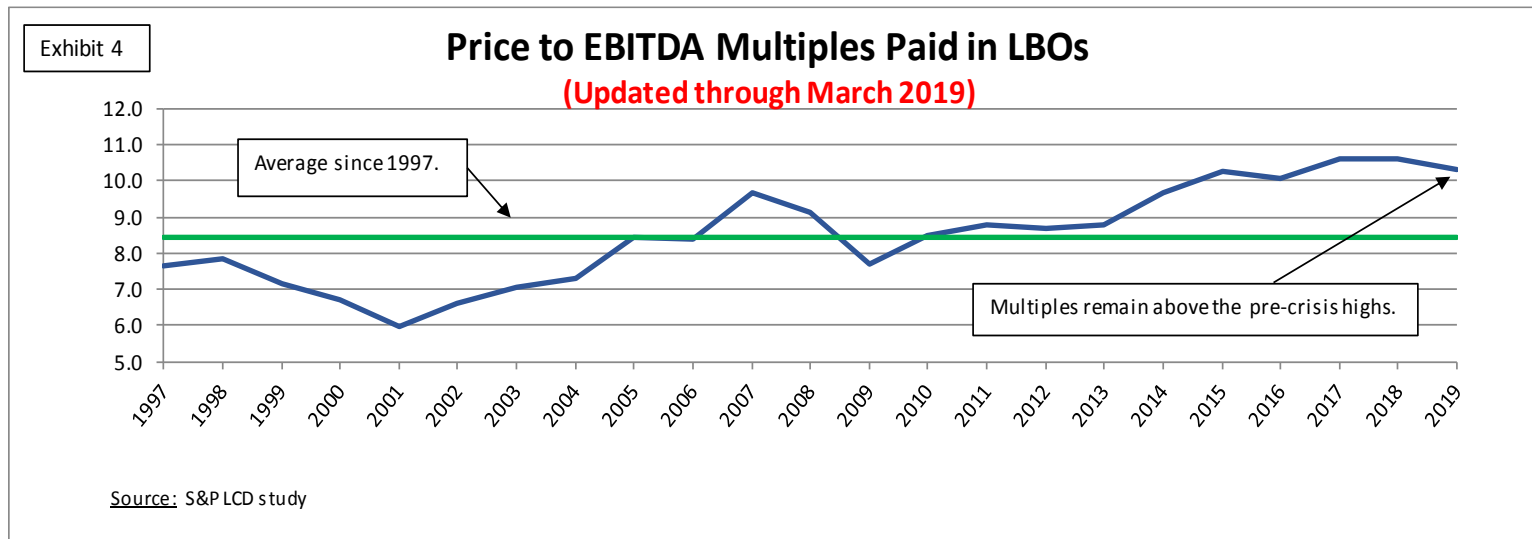
Source: Bloomberg, MSCI World, MSCI EMF

— EM/DM PE

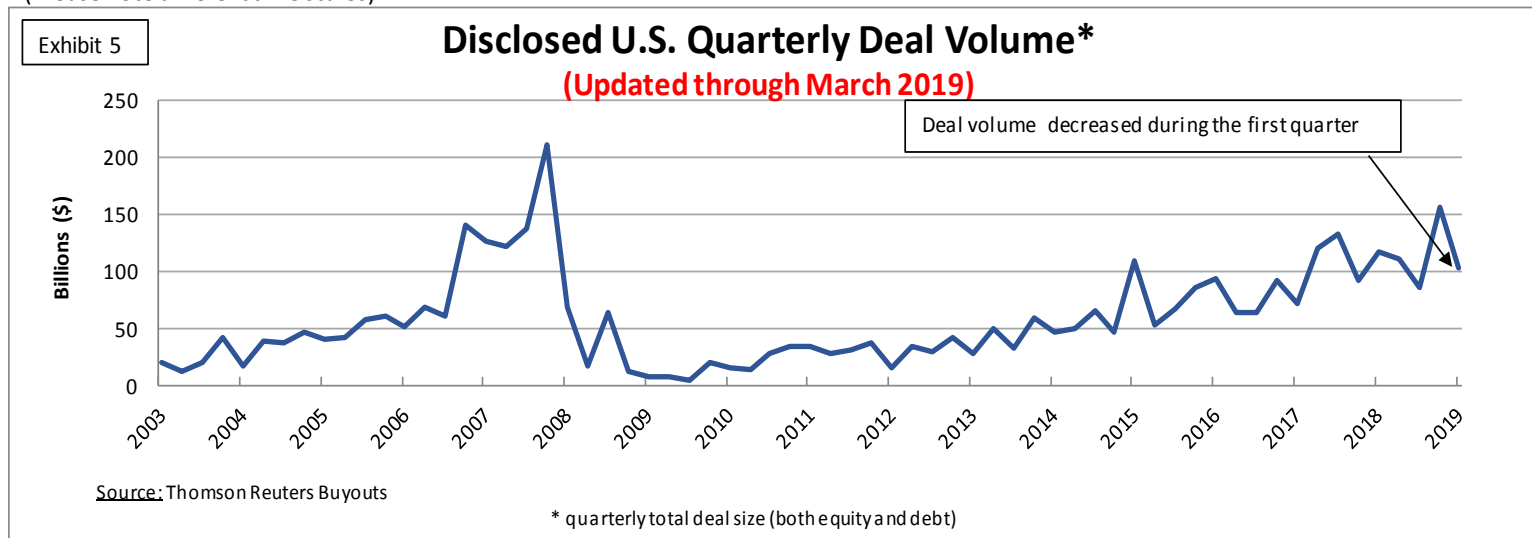
— Average EM/DM PE

— Parity

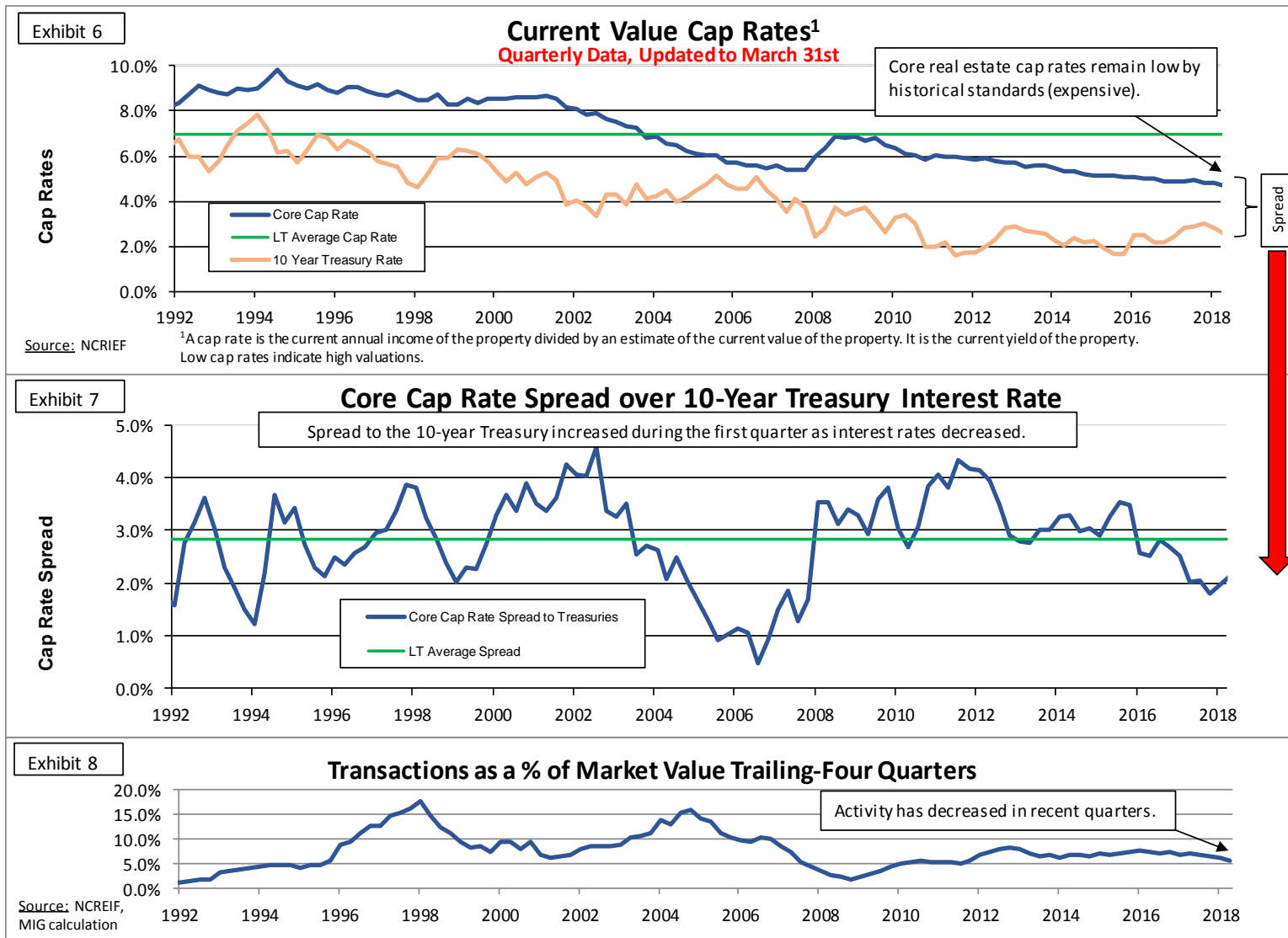
Private Equity



(Please note different time scales)



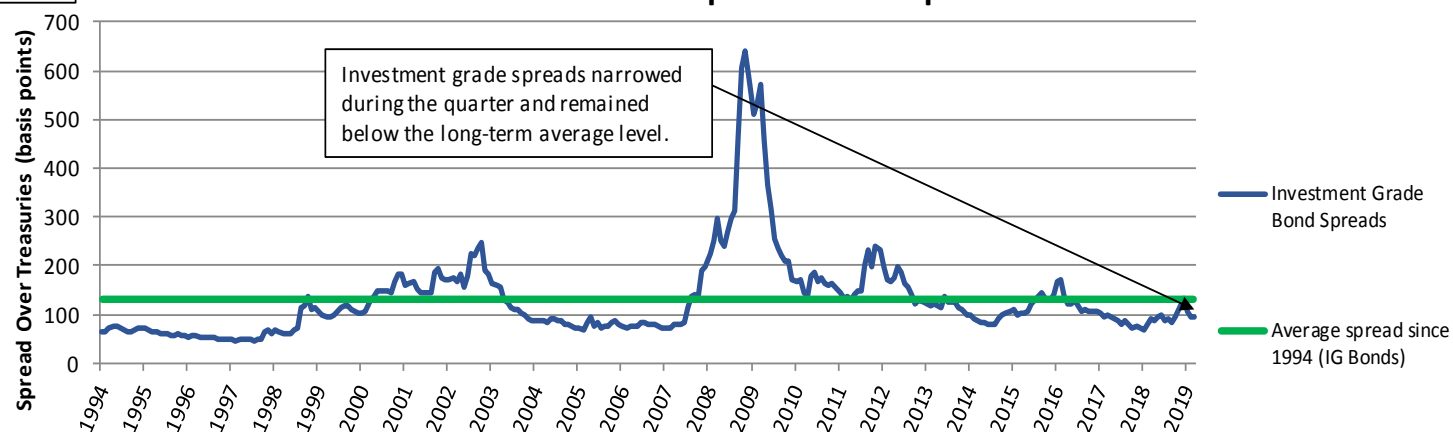
Private Real Estate



Credit Market U.S. Fixed Income

Exhibit 9

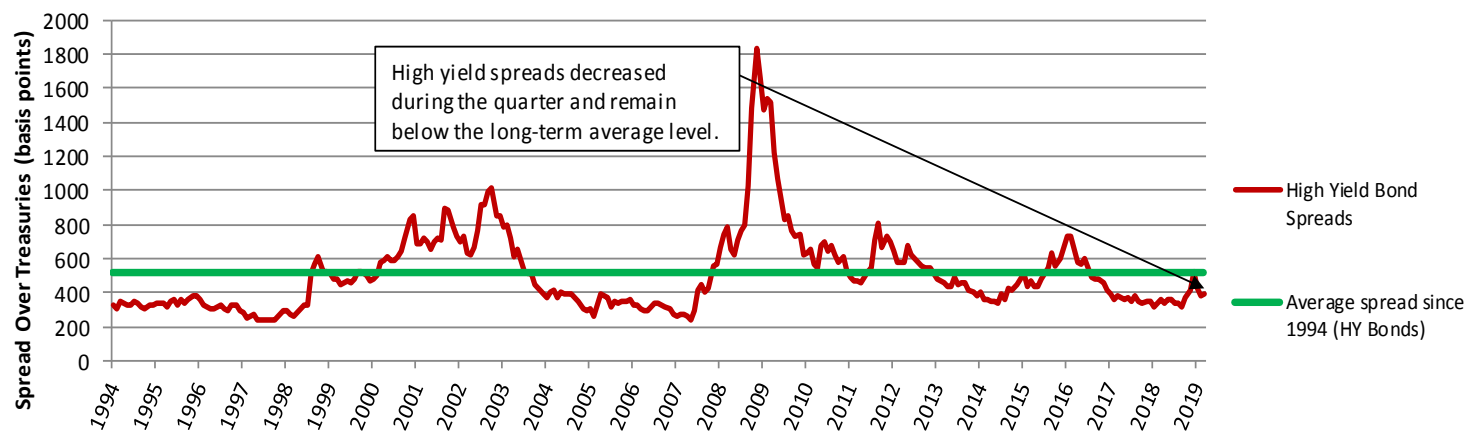
Investment Grade Corporate Bond Spreads



Source: LehmanLive: Barclays Capital US Corporate Investment Grade Index Intermediate Component.

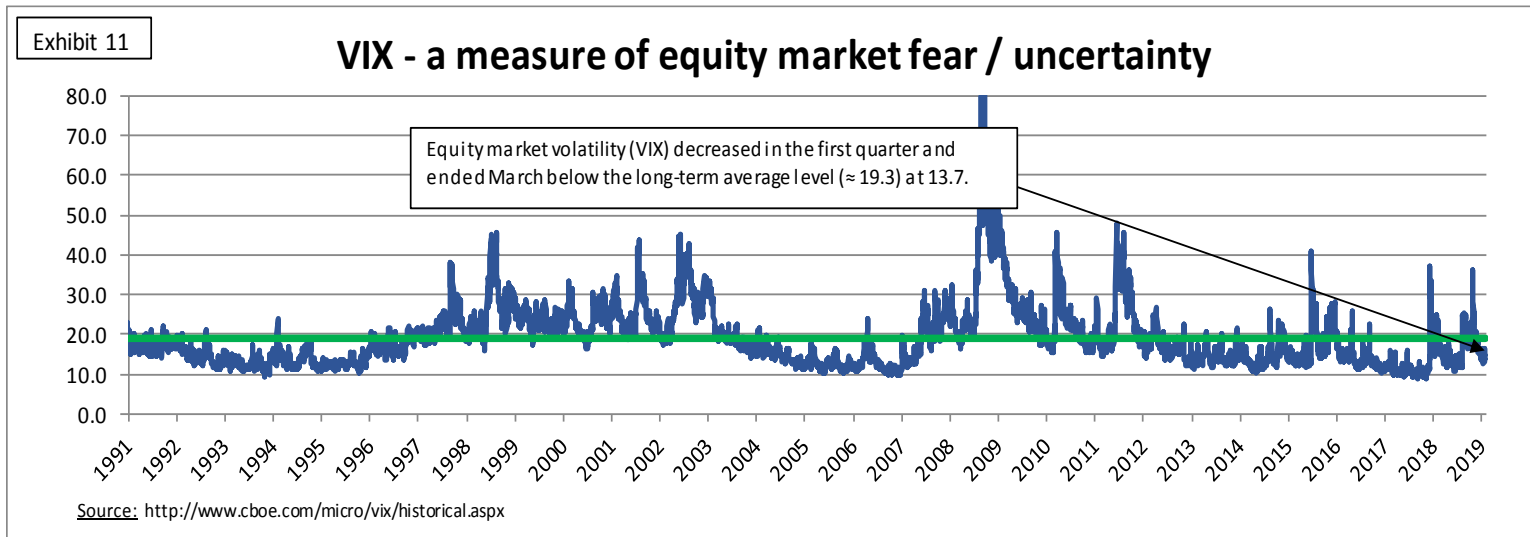
Exhibit 10

High Yield Corporate Bond Spreads

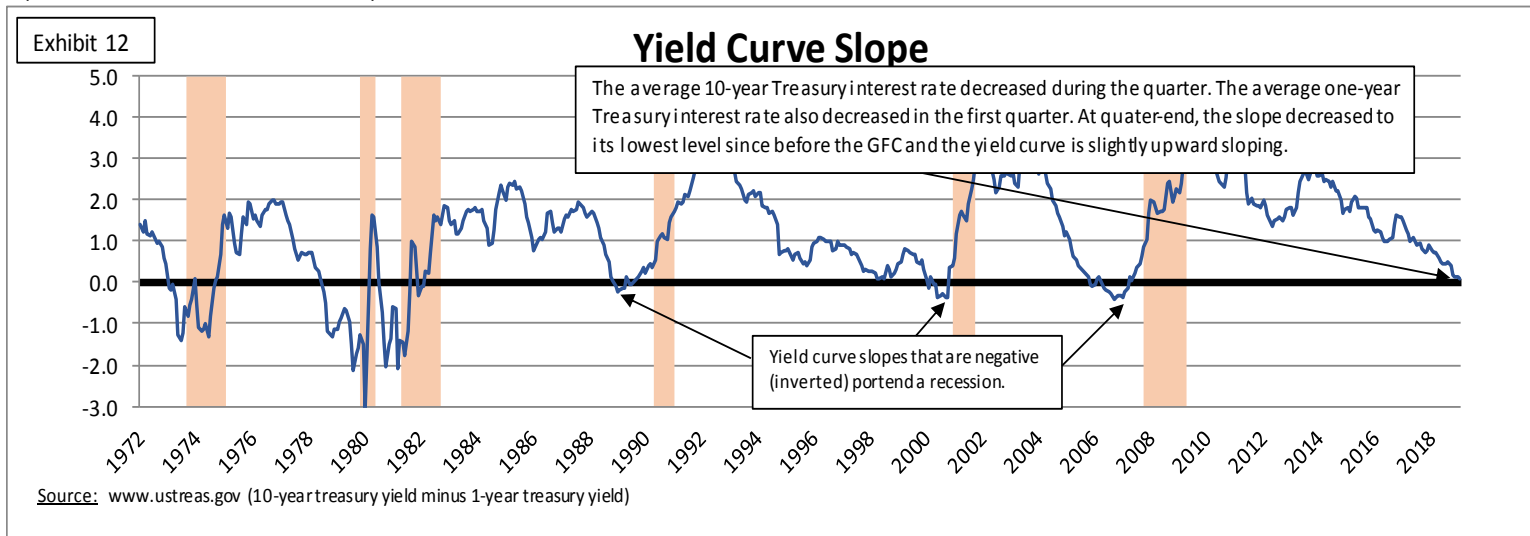


Source: LehmanLive: Barclays Capital U.S. Corporate High Yield Index.

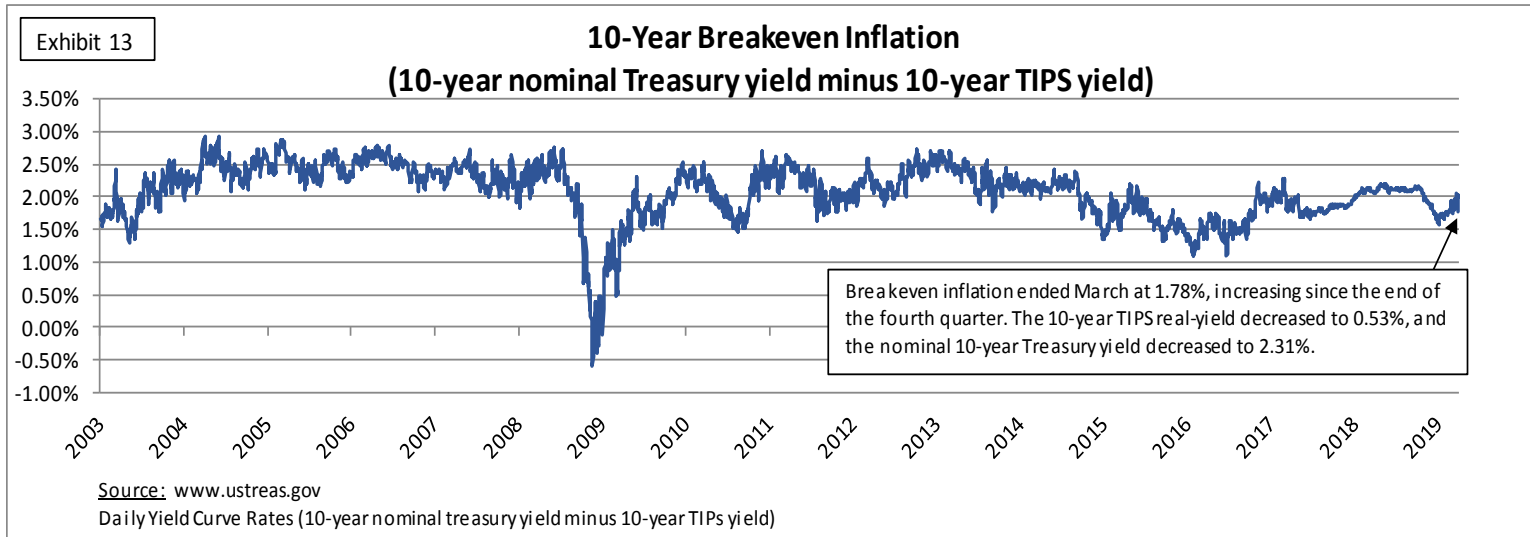
Other Market Metrics



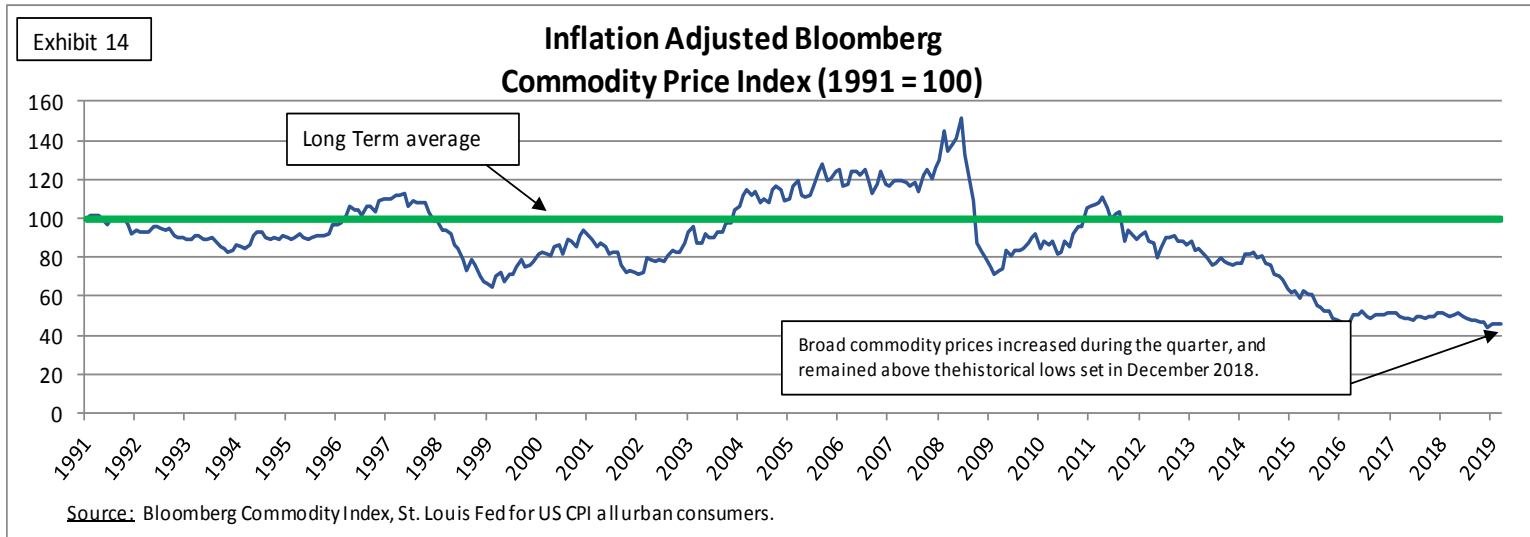
(Please note different time scales)



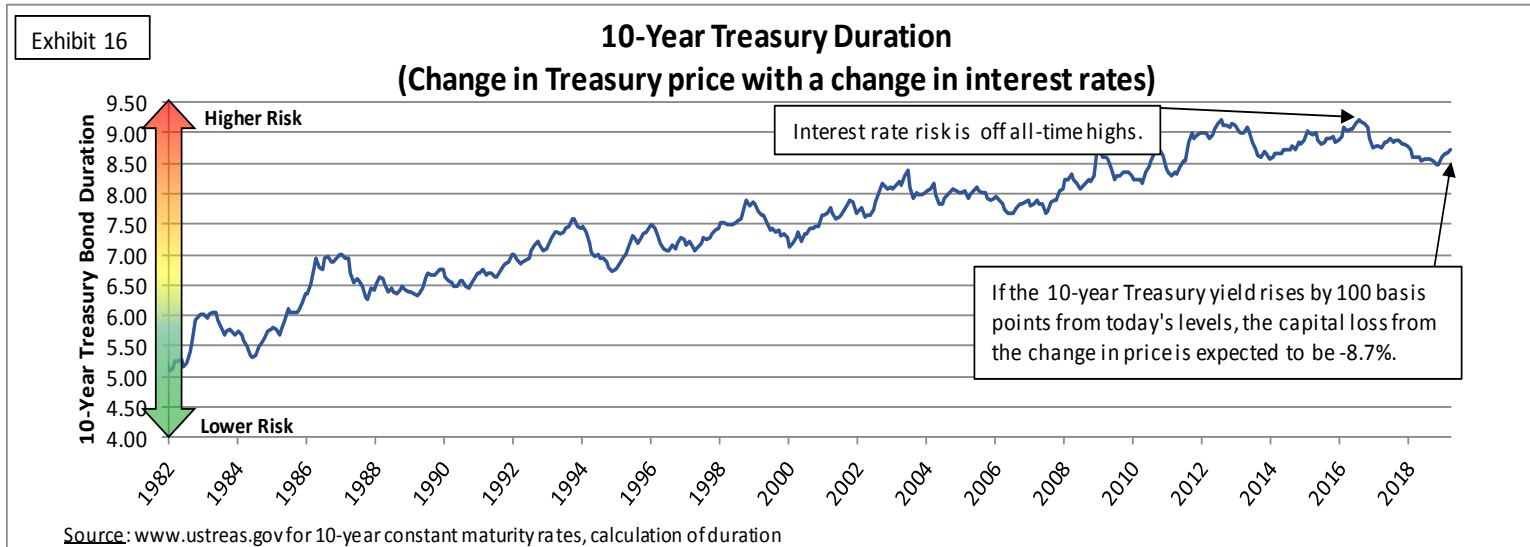
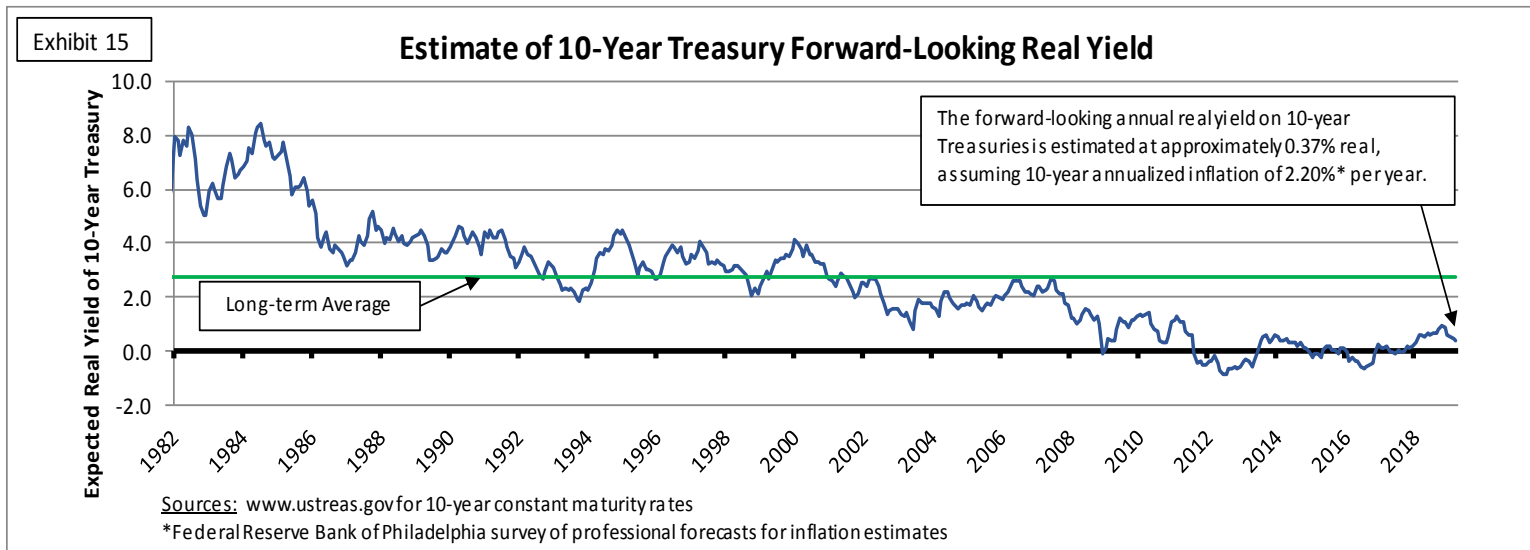
Measures of Inflation Expectations



(Please note different time scales)

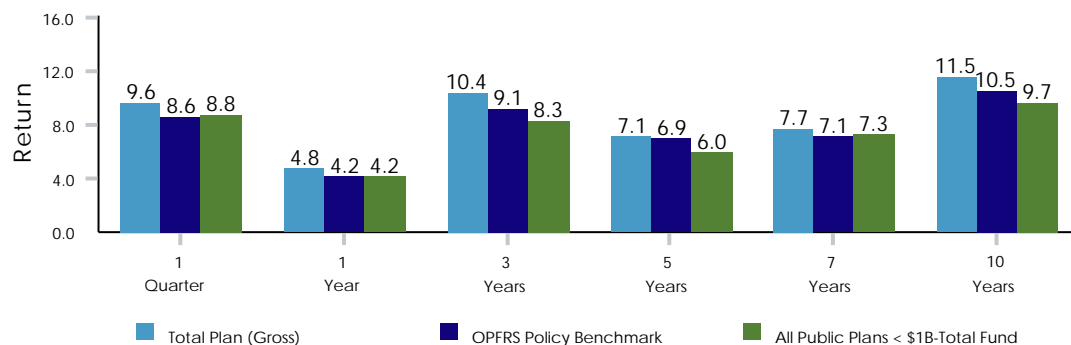


Measures of U.S. Treasury Forward-Looking Real Yield



Performance and Market Values As of March 31, 2019

Investment Performance



Portfolio Valuation (000's)

	1 Quarter	1 Year
OPFRS Total Plan		
Beginning Market Value	350,053	375,740
Net Contributions	-2,843	-12,403
Gain/Loss	33,522	17,396
Ending Market Value	380,733	380,733

Asset Class Performance (gross of fees)

	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years
OPFRS Total Plan	9.6	4.8	10.4	7.1	7.7	11.5
OPFRS Policy Benchmark*	8.6	4.2	9.1	6.9	7.1	10.5
Excess Return	1.0	0.6	1.3	0.2	0.6	1.0
Domestic Equity	14.8	6.9	13.8	10.1	12.6	16.3
Russell 3000 (Blend)**	14.0	8.8	13.5	10.4	12.6	16.0
Excess Return	0.8	-1.9	0.3	-0.3	0.0	0.3
International Equity	11.6	-4.8	9.2	4.0	5.9	9.9
MSCI ACWI Ex US (Blend)^	10.4	-3.7	8.6	3.0	5.2	9.3
Excess Return	1.2	-1.1	0.6	1.0	0.7	0.6
Fixed Income	3.5	4.7	3.6	3.5	3.2	6.0
Bloomberg Barclays Universal (Blend)^^	3.3	4.5	2.6	3.0	2.9	4.4
Excess Return	0.2	0.2	1.0	0.5	0.3	1.6
Crisis Risk Offset	5.9	-	-	-	-	-
SG Multi Alternative Risk Premia	3.2	-	-	-	-	-
Excess Return	2.7	-	-	-	-	-
Covered Calls	9.6	7.2	9.9	7.9	-	-
CBOE BXM	6.8	3.3	7.4	5.9	-	-
Excess Return	2.8	3.9	2.5	2.0	-	-
Cash	0.5	2.0	1.3	0.8	0.6	-
FTSE 3 Month T-Bill	0.6	2.1	1.2	0.7	0.5	-
Excess Return	-0.1	-0.1	0.1	0.1	0.1	-

Evolving Policy Benchmark consists of 40% Russell 3000, 12% MSCI ACWI ex U.S., 33% Bbg BC Universal, 5% CBOE BXM, 6.7% SG Multi Asset Risk Premia, 3.3% Bbg BC Long Treasury

** Domestic Equity Benchmark consists of S&P 500 thru 3/31/98, 10% R1000, 20% R1000V, 5% RMC from 4/1/98 - 12/31/04, and Russell 3000 from 1/1/05 to present

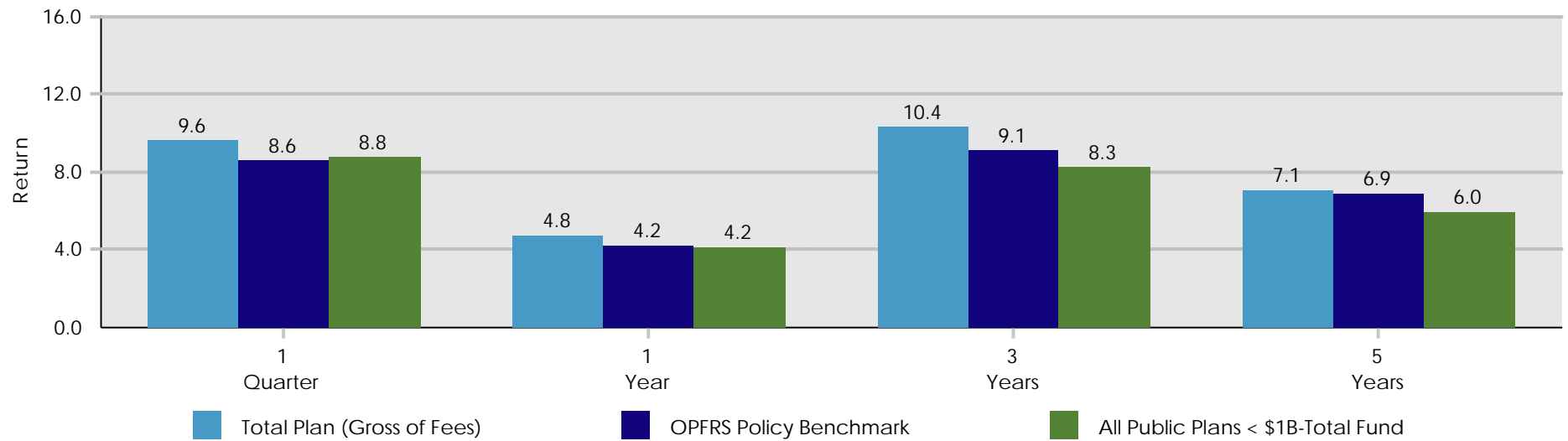
^ International Equity Benchmark consists of MSCI EAFE thru 12/31/04, and MSCI ACWI x US thereafter.

^^ Fixed Income Benchmark consists of Bbg BC Aggregate prior to 4/1/06, and Bbg BC Universal thereafter.

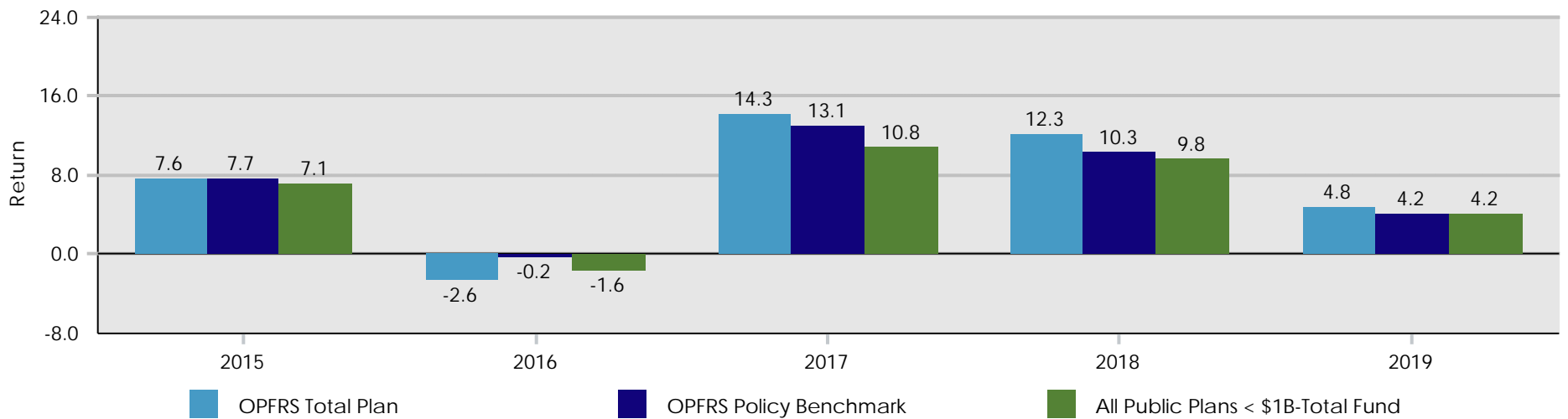
OPFRS Portfolio Relative Performance Results

As of March 31, 2019

Trailing Period Performance (annualized)



12-month Performance- As of March 31, 2019



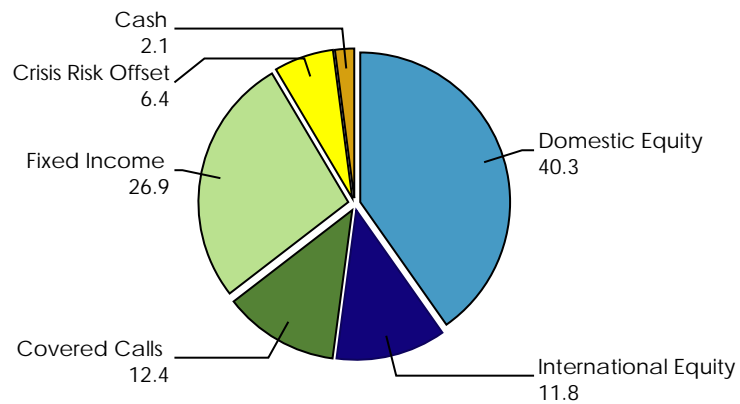
Actual vs. Target Allocation
As of March 31, 2019

	Asset Allocation (\$000)	Asset Allocation (%)	Target Allocation* (%)	Variance (%)
OPFRS Total Plan	380,733	100.0	100.0	0.0
Domestic Equity	153,270	40.3	40.0	0.3
International Equity	45,111	11.8	12.0	-0.2
Total Fixed Income	102,563	26.9	33.0	-6.1
Covered Calls	47,389	12.4	5.0	7.4
Crisis Risk Offset	24,521	6.4	10.0	-3.6
Cash	7,879	2.1	0.0	2.1

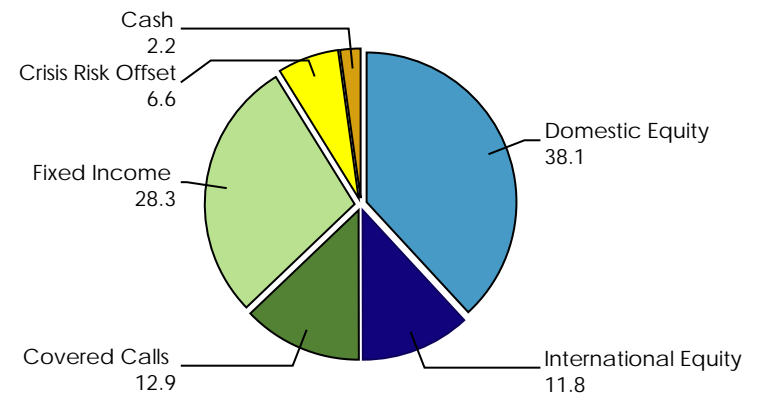
*Target weightings reflect the Plan's evolving asset allocation (effective 5/31/2017).

Actual Asset Allocation Comparison

March 31, 2019 : \$380,733,117



December 31, 2018 : \$350,053,340



Manager Performance - Gross of Fees

As of March 31, 2019

Domestic Equity

Manager - Style	Mkt Value (\$000)	1 Quarter	1 Year	3 Years	5 Years	Since Inception*	Inception Date
Large Cap Core							
Northern Trust Russell 1000 Index	83,179	14.0	9.3	13.5	10.6	13.7	06/2010
<i>Russell 1000 Index</i>		<i>14.0</i>	<i>9.3</i>	<i>13.5</i>	<i>10.6</i>	<i>13.7</i>	
Excess Return		0.0	0.0	0.0	0.0	0.0	
Large Cap Value							
SSgA Russell 1000 Value Index	8,159	12.0	5.7	10.5	---	7.2	11/2014
<i>Russell 1000 Value Index</i>		<i>11.9</i>	<i>5.7</i>	<i>10.5</i>	<i>---</i>	<i>7.1</i>	
Excess Return		0.1	0.0	0.0	---	0.1	
Large Cap Growth							
SSgA Russell 1000 Growth Index	9,679	16.1	12.7	16.5	---	13.1	11/2014
<i>Russell 1000 Growth Index</i>		<i>16.1</i>	<i>12.7</i>	<i>16.5</i>	<i>---</i>	<i>13.1</i>	
Excess Return		0.0	0.0	0.0	---	0.0	
Mid Cap Core							
EARNEST Partners - Active	30,831	20.1 (7)	8.3 (17)	16.4 (11)	11.4 (19)	9.6 (25)	04/2006
<i>Russell Midcap Index</i>		<i>16.5</i>	<i>6.5</i>	<i>11.8</i>	<i>8.8</i>	<i>8.4</i>	
Excess Return		3.6	1.8	4.6	2.6	1.2	
Small Cap Value							
NWQ - Active	9,244	12.7 (54)	-6.5 (90)	8.1 (80)	5.9 (63)	6.9 (83)	02/2006
<i>Russell 2000 Value Index</i>		<i>11.9</i>	<i>0.2</i>	<i>10.9</i>	<i>5.6</i>	<i>6.2</i>	
Excess Return		0.8	-6.7	-2.8	0.3	0.7	
Small Cap Growth							
Rice Hall James - Active	12,178	10.1 (98)	-3.7 (98)	---	---	9.0 (80)	07/2017
<i>Russell 2000 Growth Index</i>		<i>17.1</i>	<i>3.9</i>	<i>---</i>	<i>---</i>	<i>9.9</i>	
Excess Return		-7.0	-7.6	---	---	-0.9	

Over the latest three-month period ending March 31, 2019, two of OPFRS's active Domestic Equity managers outperformed their respective benchmarks.

All of OPFRS's passive Domestic Equity mandates performed in-line with their respective benchmarks.

Northern Trust, the Plan's passive large cap core transition account, continues to perform in-line with its benchmark over all time periods measured. This performance is within expectations for a passive mandate.

Manager Performance - Gross of Fees

As of March 31, 2019

Domestic Equity

SSgA Russell 1000 Value, the Plan's passive large cap value account, has continued to perform within expectations for a passive mandate.

SSgA Russell 1000 Growth, the Plan's passive large cap growth account, has continued to perform within expectations for a passive mandate.

EARNEST Partners, the Plan's mid cap core manager, outperformed its Russell Midcap benchmark by 3.6% over the quarter, placing it in the 7th percentile of its peer group. The portfolio has also outperformed its benchmark over the 1-year period by 1.8% and continues to outperform over the 3- and 5-year periods by 4.6% and 2.6% respectively. The portfolio also ranks in the top quartile of its peer group over all time periods measured.

NWQ, the Plan's small cap value manager, outperformed the Russell 2000 Value Index by 0.8% over the latest quarter, placing the portfolio in the 54th percentile of its peer group. NWQ continues to underperform over the 1- and 3-year periods by (6.7%) and (2.8%), respectively. NWQ continues to outperform its benchmark over the 5-year period by 0.3% with an annualized return of 5.9%.

Rice Hall James, the Plan's small cap growth manager, underperformed its Russell 2000 Growth benchmark over the most recent quarter by (7.0%), placing the portfolio in the 98th percentile of its peer group. Two straight difficult quarters have caused the portfolio to trail its benchmark over the 1 -year period by (7.6%) and rank in the 98th percentile of its peer group.

Manager Performance - Gross of Fees

As of March 31, 2019

International Equity

Manager - Style	Mkt Value (\$000)	1 Quarter	1 Year	3 Years	5 Years	Since Inception	Inception Date
Active International							
Fisher Investments	16,157	12.9 (13)	-3.6 (38)	8.9 (22)	4.0 (26)	4.4 (78)	04/2011
<i>MSCI AC World ex USA</i>		<i>10.4</i>	<i>-3.7</i>	<i>8.6</i>	<i>3.0</i>	<i>3.6</i>	
Excess Return		2.5	0.1	0.3	1.0	0.8	
Hansberger	15,780	11.5 (66)	-7.4 (88)	10.8 (25)	5.0 (38)	4.4 (76)	02/2006
<i>MSCI AC World ex USA</i>		<i>10.4</i>	<i>-3.7</i>	<i>8.6</i>	<i>3.0</i>	<i>4.0</i>	
Excess Return		1.1	-3.7	2.2	2.0	0.4	
Passive International							
SSgA	13,175	10.1	-3.4	7.7	2.7	7.0	08/2002
<i>MSCI EAFE Index</i>		<i>10.1</i>	<i>-3.2</i>	<i>7.8</i>	<i>2.8</i>	<i>7.1</i>	
Excess Return		0.0	-0.2	-0.1	-0.1	-0.1	

Over the latest three-month period ending March 31, 2019, both of OPFRS's two active International Equity managers outperformed their respective benchmark.

The SSgA account has performed roughly in-line with its benchmark over all time periods measured. This performance is within expectations for a passive mandate.

Hansberger, one of OPFRS' active international equity managers, outperformed the MSCI ACWI x US Index during the quarter by 1.1%, placing the fund in the 66th percentile of its peer group. Over the 12-month period, Hansberger underperformed its benchmark by (3.7%) with an absolute return of (7.4%). Hansberger continues to outperform over the 3- and 5-year periods with excess returns of 2.2% and 2.0%, respectively.

Fisher, one of OPFRS' active international equity managers, outperformed the MSCI ACWI x US Index by 2.5% during the quarter, ranking the fund in the 13th percentile of its peer group. Over the most recent 1- and 3-year periods, Fisher has outperformed its benchmark by 0.1% and 0.3%, respectively, and continues to outperform by 1.0% over the five year period.

Manager Performance - Gross of Fees

As of March 31, 2019

Fixed Income

Manager - Style	Mkt Value (\$000)	1 Quarter	1 Year	3 Years	5 Years	Since Inception	Inception Date
Core Fixed Income							
Ramirez	70,985	3.6 (10)	4.8 (34)	---	---	3.9 (10)	01/2017
<i>Bloomberg Barc. U.S. Aggregate Index</i>		2.9	4.5	---	---	2.9	
Excess Return		0.7	0.3	---	---	1.0	
Core-Plus Fixed Income							
Reams	23,647	2.8 (95)	5.4 (6)	2.7 (80)	3.1 (74)	5.5 (52)	02/1998
<i>Bbg Barclays Universal (Hybrid)</i>		3.3	4.5	2.6	3.0	4.9	
Excess Return		-0.5	0.9	0.1	0.1	0.6	
High Yield / Bank Loans							
DDJ Capital	7,931	4.1 (88)	2.1 (98)	10.2 (6)	---	6.4 (11)	02/2015
<i>ICE BofAML High Yield Master II</i>		7.4	5.9	8.7	---	5.6	
Excess Return		-3.3	-3.8	1.5	---	0.8	

Over the latest three-month period, ending March 31, 2019, one of OPFRS's three active Fixed Income managers outperformed their respective benchmarks.

Ramirez, the Plan's core fixed income manager, returned 3.6% compared to the benchmark return of 2.9% during the quarter, ranking the portfolio in the 10th percentile of its peer group. Over the 1-year period, Ramirez has outperformed its benchmark by 0.3% and ranked in the 34th percentile of its peer group.

Reams, the Plan's core plus fixed income manager, underperformed its benchmark by (0.5%) during the quarter and ranked in the 95th percentile of its peer group. Despite the poor quarter, Reams still managed to outperform its benchmark by 0.9% over the most recent 12-month period, good enough for a 6th percentile ranking. The portfolio has slightly outperformed its benchmark by 0.1% over the 3- and 5-year periods.

DDJ, the Plan's High Yield & Bank Loan manager, returned 4.1% during the most recent quarter but was unable to keep up with the benchmark's 7.4% return. A string of underperforming quarters has left DDJ trailing its benchmark by (3.8%) over the most recent 12-month period and ranking in the 98th percentile of its peer group. DDJ's returns over the 3-year period remain strong, outperforming its benchmark by 1.5% and ranking in the 6th percentile of its peer group.

Manager Performance - Gross of Fees

As of March 31, 2019

Covered Calls

Manager - Style	Mkt Value (\$000)	1 Quarter	1 Year	3 Years	5 Years	Since Inception	Inception Date
Covered Calls Composite							
Covered Calls	47,389	9.6	7.2	9.9	7.9	7.9	04/2014
CBOE BXM		6.8	3.3	7.4	5.9	5.9	
Excess Return		2.8	3.9	2.5	2.0	2.0	
CC - Passive Allocation							
Parametric BXM	23,421	7.5	6.6	8.5	6.8	6.8	04/2014
CBOE BXM		6.8	3.3	7.4	5.9	5.9	
Excess Return		0.7	3.3	1.1	0.9	0.9	
CC - Active Allocation							
Parametric DeltaShift	23,969	11.8	7.8	11.2	9.5	9.5	04/2014
CBOE BXM		6.8	3.3	7.4	5.9	5.9	
Excess Return		5.0	4.5	3.8	3.6	3.6	

During the latest three-month period ending March 31, 2019, OPFRS' aggregate Covered Calls portfolio outperformed its benchmark by 2.8%.

Parametric BXM Portfolio, the Plan's passive covered calls allocation outperformed its CBOE BXM index by 0.7% over the most recent quarter. Over the most recent 1-year period the portfolio has outperformed by 3.3% and has outperformed over the 3- and 5-year periods by 1.1% and 0.9%, respectively.

Parametric Delta Shift Portfolio, the Plan's active covered calls allocation has outperformed the CBOE BXM benchmark by 5.0% over the most recent quarter and has outperformed by 4.5% over the 1-year period. The portfolio continues to outperform over the 3-year period by 3.8% and has earned an annualized 9.5% over the most recent 5-year period, outperforming its benchmark by 3.6%.

Manager Performance - Gross of Fees

As of March 31, 2019

Crisis Risk Offset

Manager - Style	Mkt Value (\$000)	1 Quarter	1 Year	3 Years	5 Years	Since Inception	Inception Date
Crisis Risk Offset Composite							
Crisis Risk Offset	24,521	5.9	---	---	---	-1.5	09/2018
<i>CRO Composite Benchmark</i>		3.2	---	---	---	1.8	
Excess Return		2.7	---	---	---	-3.3	
CRO - Risk Premia / Trend Following							
Parametric S.A.R.P.	24,521	5.9	---	---	---	-1.5	09/2018
<i>SG Multi Alternative Risk Premia</i>		3.2	---	---	---	1.8	
Excess Return		2.7	---	---	---	-3.3	
CRO - Long Duration							
Pending Long Duration Manager	---	0.0	---	---	---	0.0	12/2018

During the latest three-month period ending March 31, 2019, OPFRS's partially funded aggregate Crisis Risk Offset portfolio outperformed its benchmark by 2.7%.

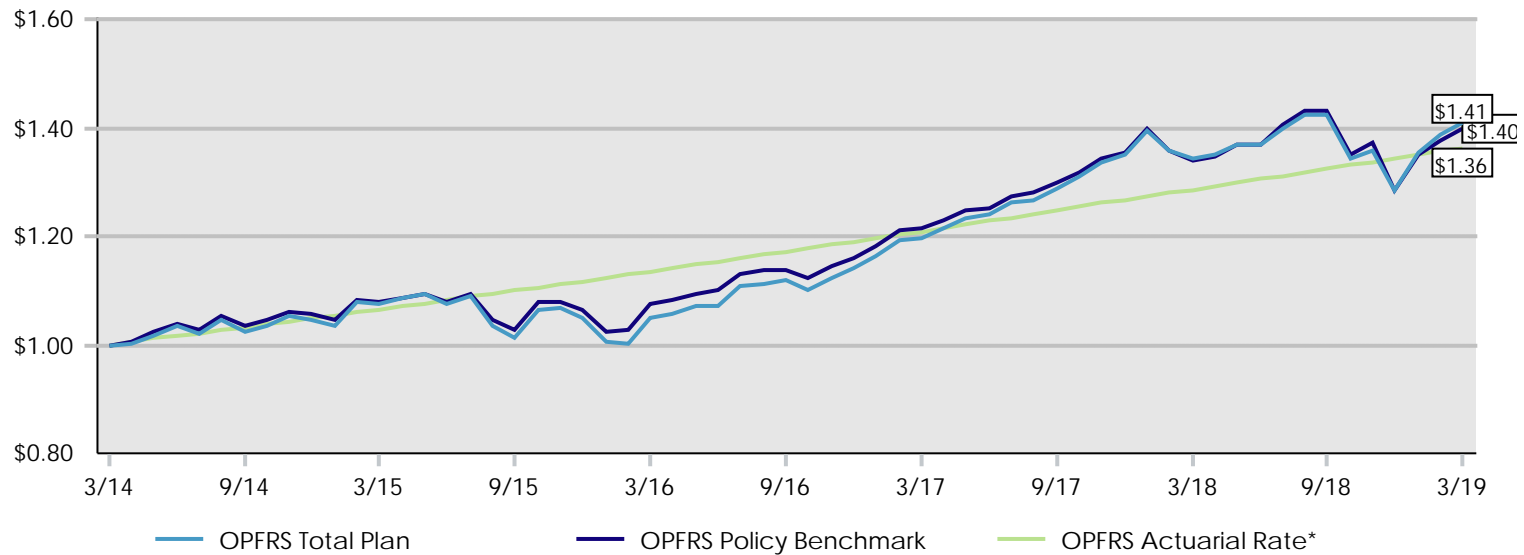
Parametric Systematic Alternative Risk Premia, the Plan's Risk Premia / Trend Following manager outperformed its benchmark by 2.7% during its first full quarter in the portfolio. Despite a much improved first quarter, the portfolio continues to trail its benchmark by (3.3%) since its funding in September 2018.

Pending Long Duration Manager, the Plan's Long Duration manager remains unfunded pending further discussion with the OPFRS Board.

OPFRS Total Portfolio 5-Year Performance

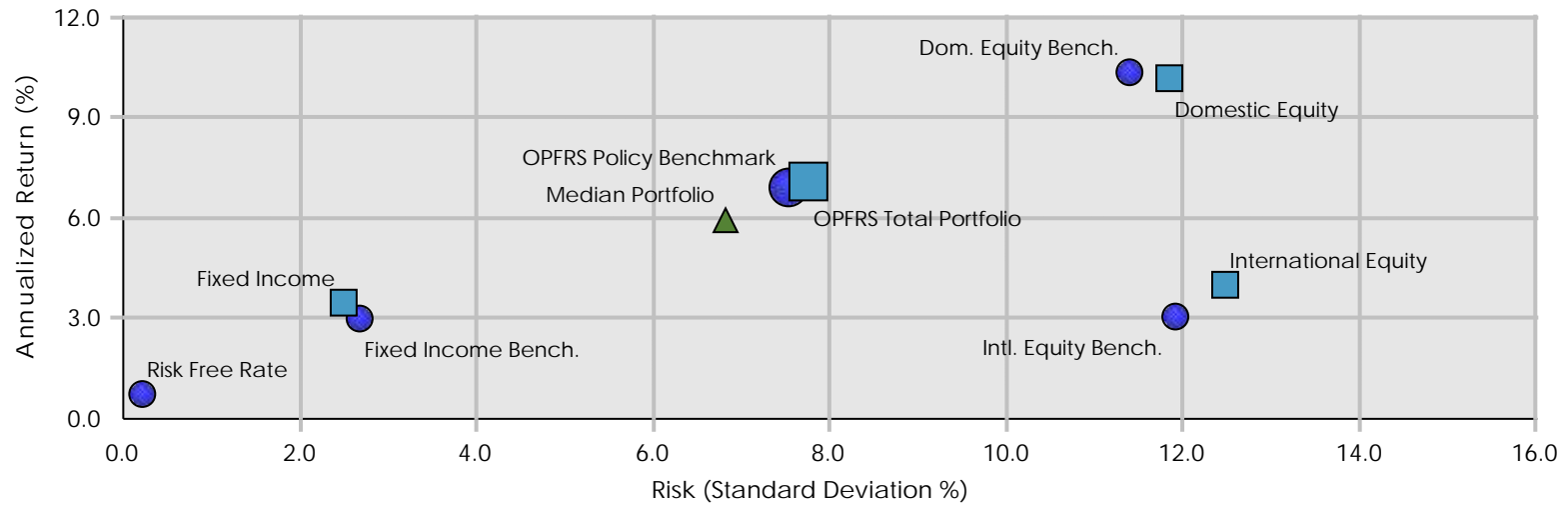
As of March 31, 2019

Growth of \$1 (5-year)

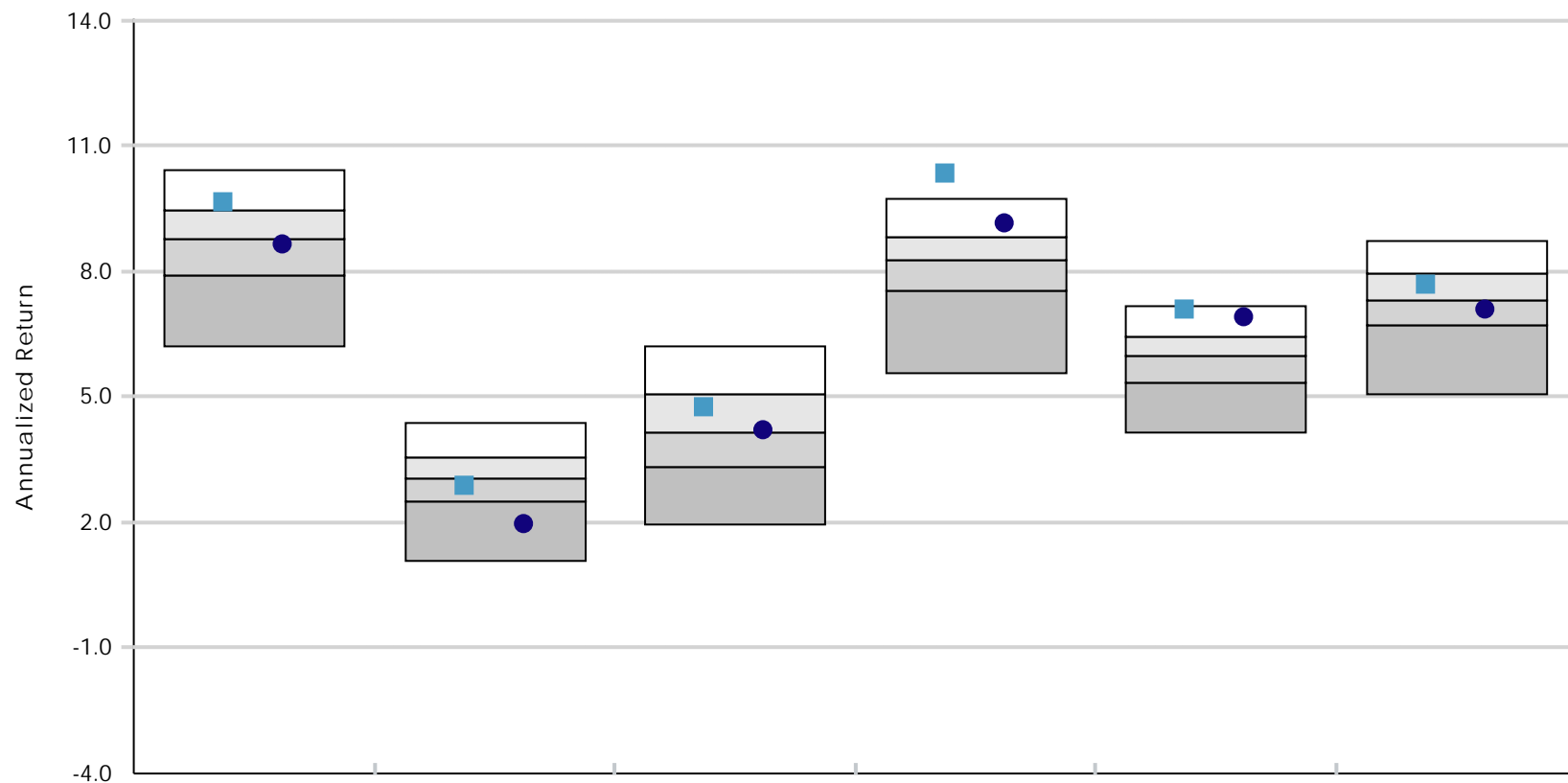


* The actuarial expected rate of return was 8% through 6/30/2009, 7.5% through 6/30/2010, 7% through 6/30/2011, 6.75% through 6/30/2014, 6.5% through 12/31/2017 and 6.0% currently

Risk/Return Performance (5-year)



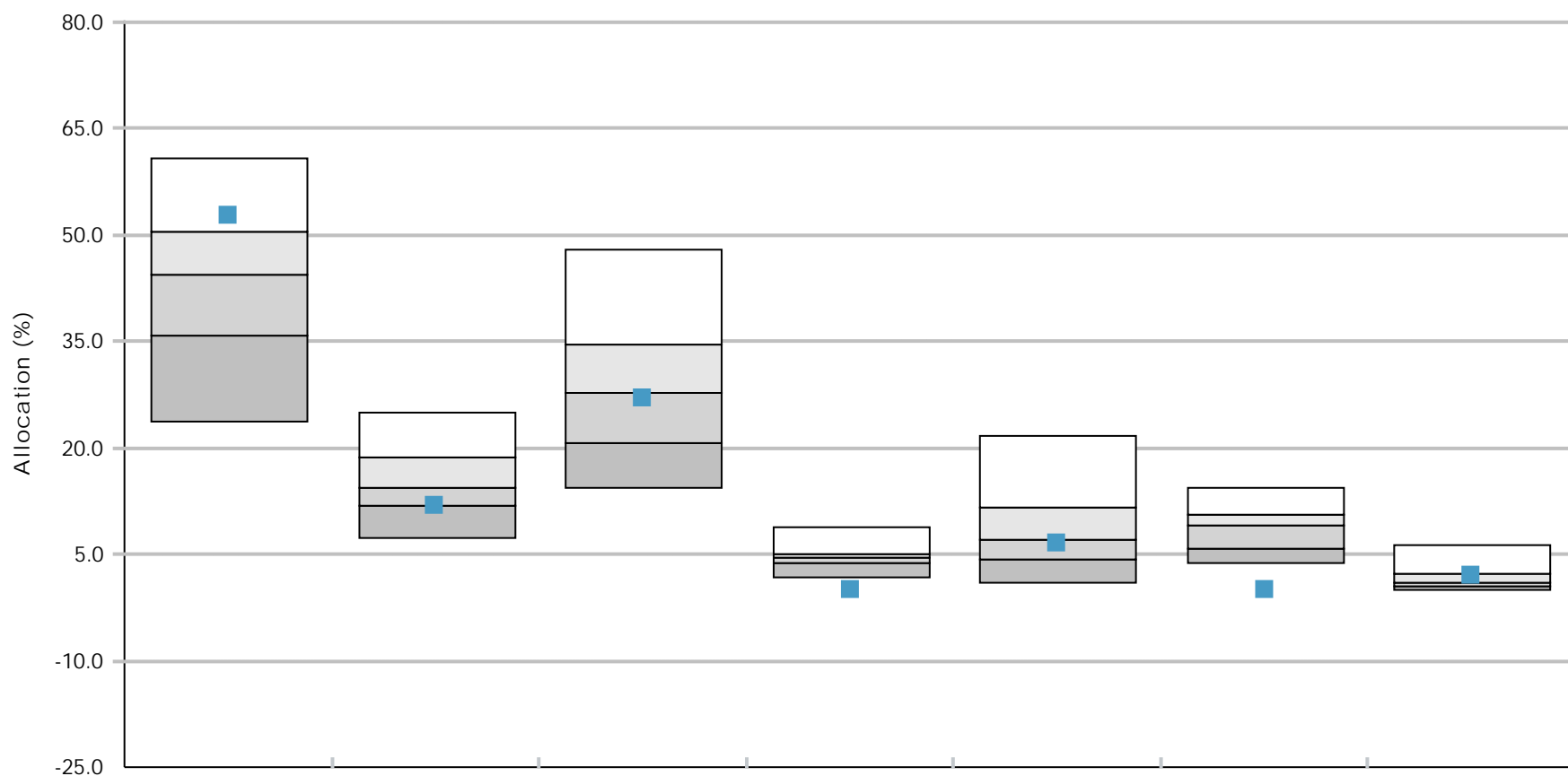
Plan Sponsor Peer Group Analysis
As of March 31, 2019



	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	7 Years
■ OPFRS Total Plan	9.6 (21)	2.9 (60)	4.8 (33)	10.4 (3)	7.1 (6)	7.7 (39)
● OPFRS Policy Benchmark	8.6 (55)	2.0 (86)	4.2 (49)	9.1 (17)	6.9 (9)	7.1 (59)
5th Percentile	10.4	4.4	6.2	9.8	7.2	8.7
1st Quartile	9.4	3.5	5.1	8.8	6.4	8.0
Median	8.8	3.1	4.2	8.3	6.0	7.3
3rd Quartile	7.9	2.5	3.3	7.6	5.3	6.7
95th Percentile	6.2	1.1	2.0	5.6	4.1	5.1
Population	265	261	258	248	241	231

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor TF Asset Allocation
As of March 31, 2019



	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
■ OPFRS Total Plan	52.7 (18)	11.8 (75)	26.9 (54)	0.0	6.4 (52)	0.0	2.1 (28)
5th Percentile	60.8	25.0	48.0	8.9	21.7	14.4	6.2
1st Quartile	50.4	18.6	34.5	4.9	11.7	10.5	2.2
Median	44.3	14.4	27.8	4.4	7.0	9.2	1.0
3rd Quartile	35.9	11.8	20.7	3.8	4.2	5.8	0.5
95th Percentile	23.8	7.2	14.3	1.7	1.1	3.9	0.1
Population	447	408	407	139	91	254	330

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Monitoring/Probation Status

As of March 31, 2019
Return vs. Benchmark since Corrective Action

Portfolio	Status	Concern	Months Since Corrective Action	Performance [^] Since Corrective Action (Gross)	Peer Group Percentile Ranking	Date of Corrective Action*
Hansberger	On Watch	Organizational	16	-3.4%	75	11/30/2017
MSCI ACWI ex-USA	---	---	16	-2.0%		
NWQ	On Watch	Organizational	14	-5.3%	80	1/31/2018
Russell 2000 Value	---	---	14	-2.7%		

[^]. Annualized performance if over one year.

* Approximate date based on when Board voted to either monitor a manager at a heightened level or place it on probation.

Investment Performance Criteria
For Manager Monitoring/Probation Status

Asset Class	Short-term (rolling 12 mth periods)	Medium-term (rolling 36 mth periods)	Long-term (60 + months)
Active Domestic Equity	Fd return < bench return – 3.5%	Fd annlzd return < bench annlzd return – 1.75% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Active International Equity	Fd return < bench return – 4.5%	Fd annlzd return < bench annlzd return – 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Passive International Equity	Tracking Error > 0.50%	Tracking Error > 0.45% for 6 consecutive months	Fd annlzd return < bench annlzd return – 0.40% for 6 consecutive months
Fixed Income	Fd return < bench return – 1.5%	Fd annlzd return < bench annlzd return – 1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months

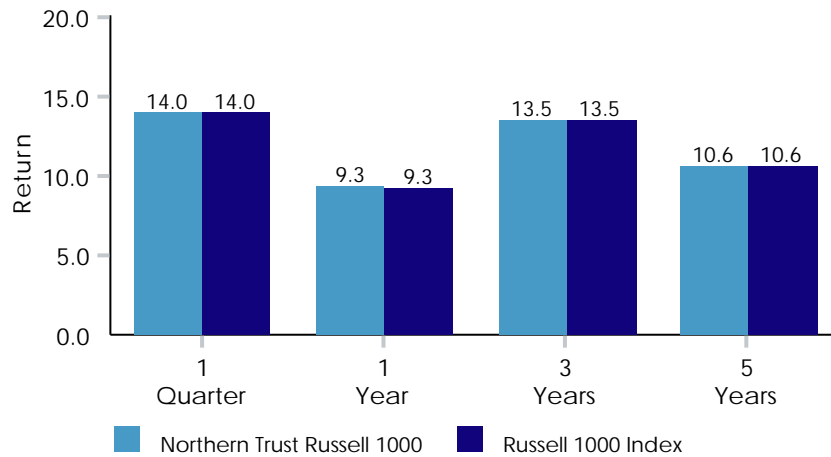
VRR – Value Relative Ratio – is calculated as: manager cumulative return / benchmark cumulative return.

Northern Trust Russell 1000 - gross of fees

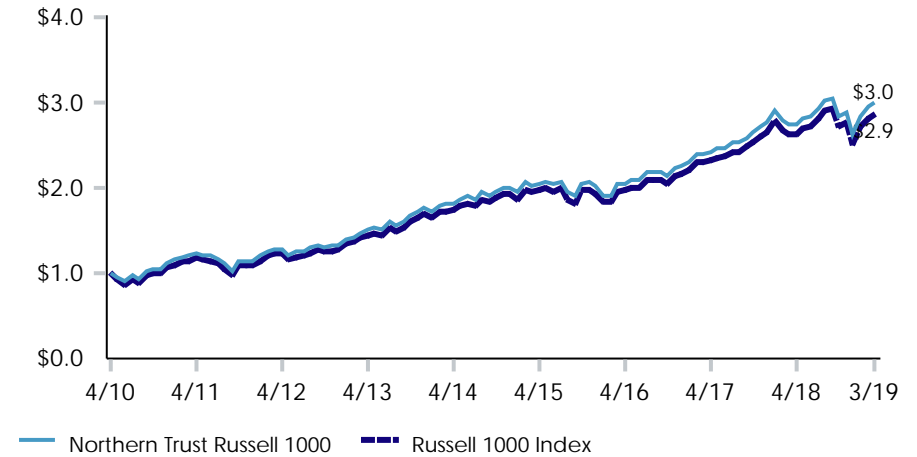
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Northern Trust Russell 1000	0.84	0.97	0.33	1.03	1.33	0.99	99.56	95.23	05/01/2010
Russell 1000 Index	0.00	1.00	-	0.97	0.00	1.00	100.00	100.00	05/01/2010

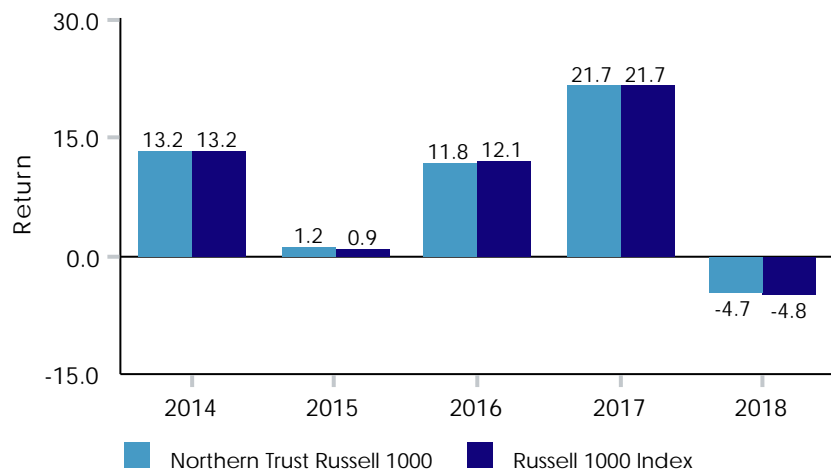
Trailing Period Performance



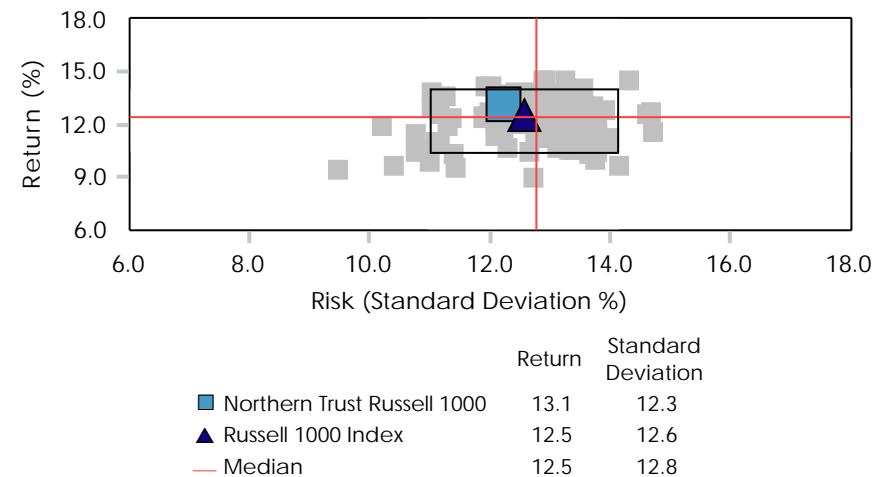
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

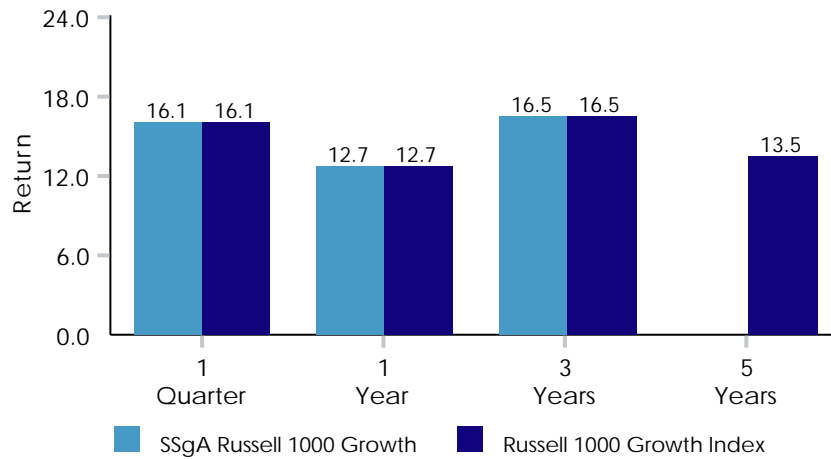


SSgA Russell 1000 Growth - gross of fees

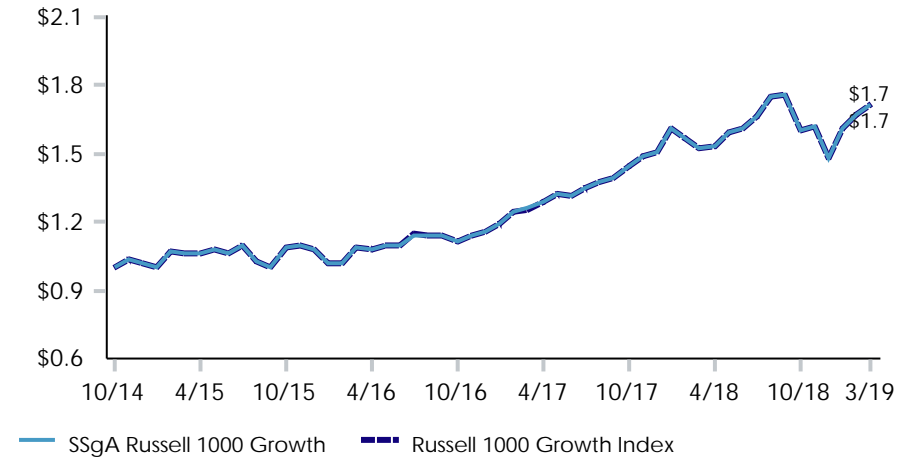
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
SSgA Russell 1000 Growth	0.01	1.00	0.06	0.98	0.03	1.00	99.99	99.96	11/01/2014
Russell 1000 Growth Index	0.00	1.00	-	0.98	0.00	1.00	100.00	100.00	11/01/2014

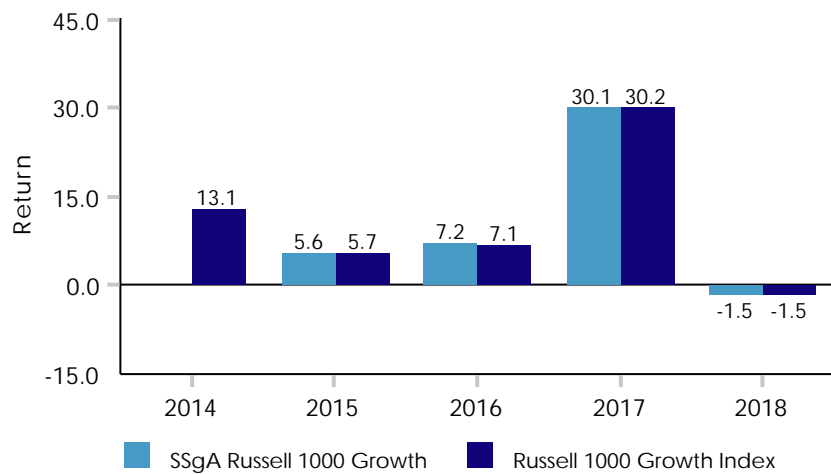
Trailing Period Performance



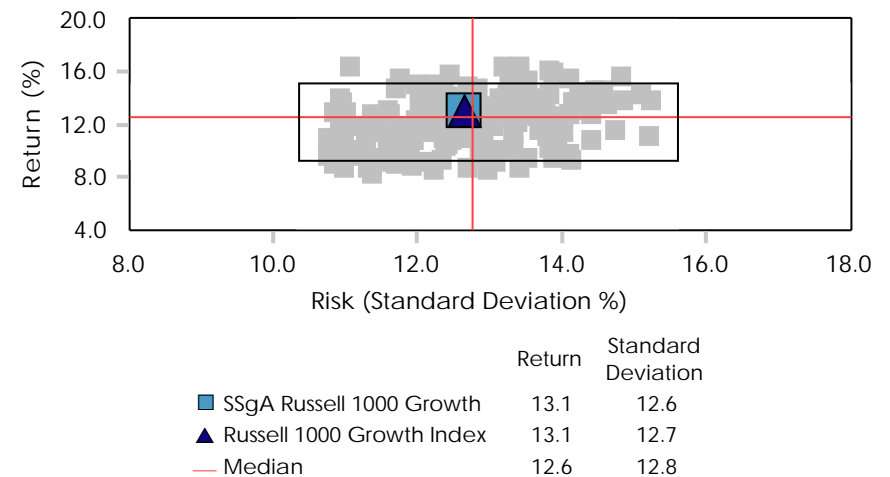
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

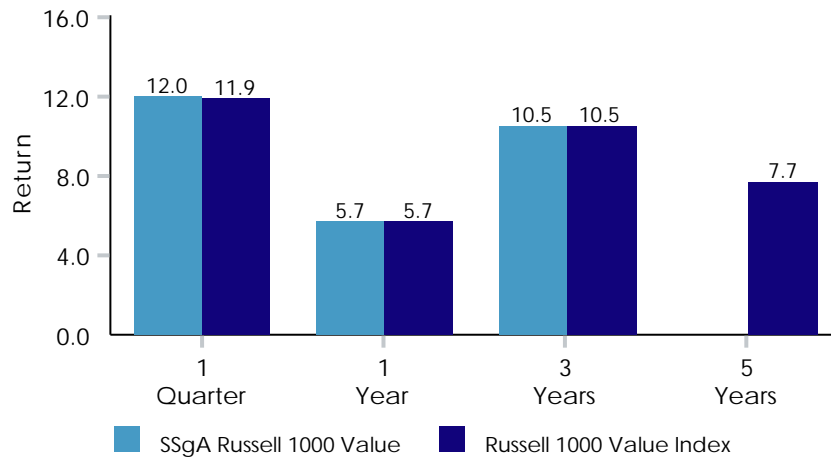


SSgA Russell 1000 Value - gross of fees

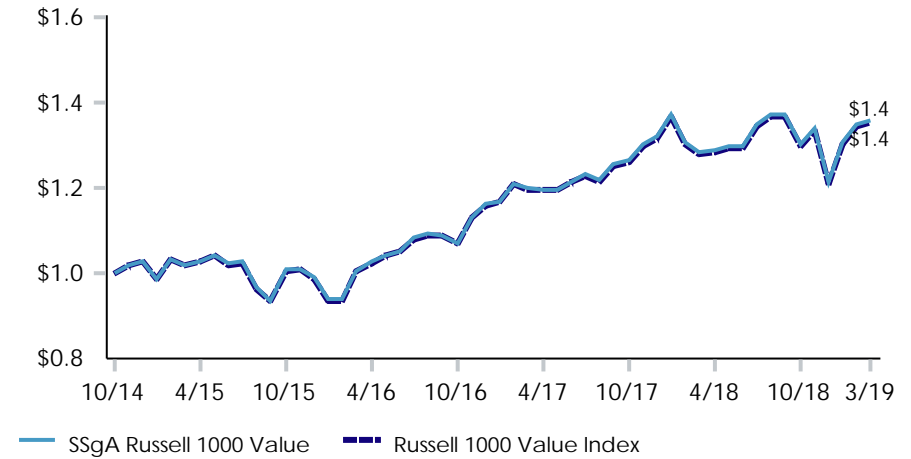
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
SSgA Russell 1000 Value	0.10	1.00	1.44	0.60	0.06	1.00	100.25	99.57	11/01/2014
Russell 1000 Value Index	0.00	1.00	-	0.59	0.00	1.00	100.00	100.00	11/01/2014

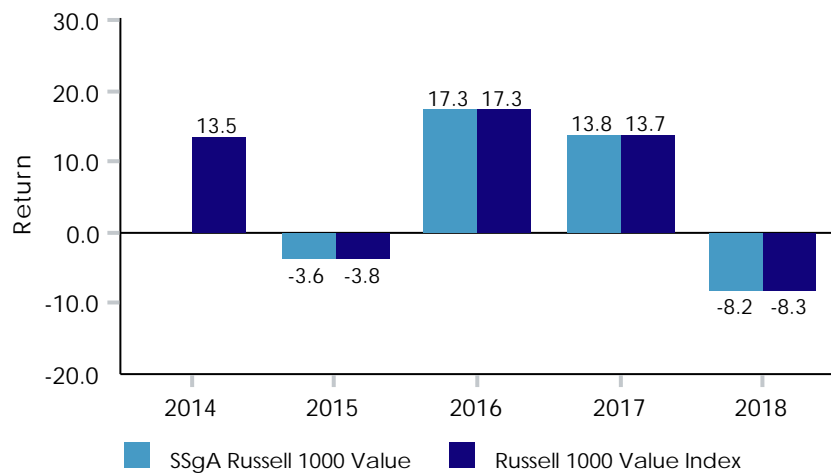
Trailing Period Performance



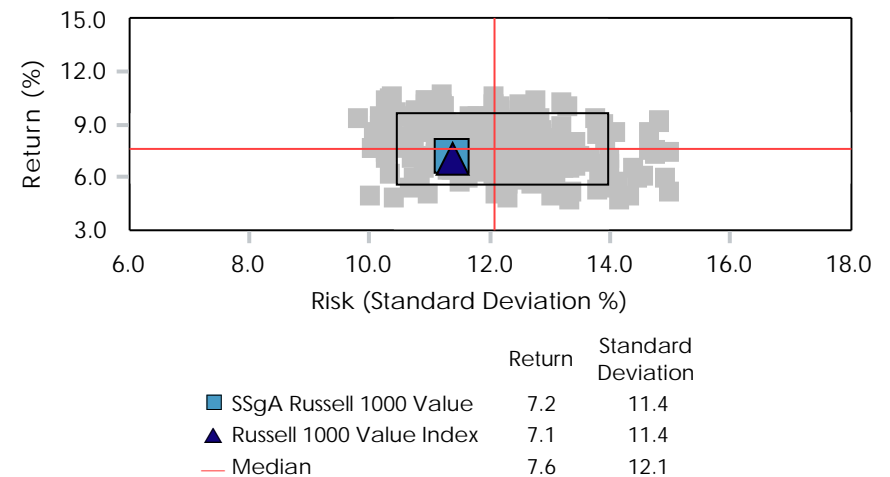
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

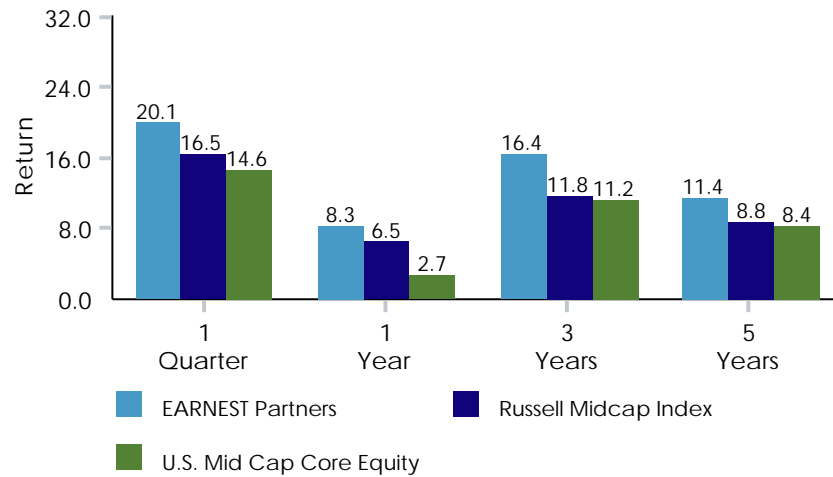


EARNEST Partners - gross of fees

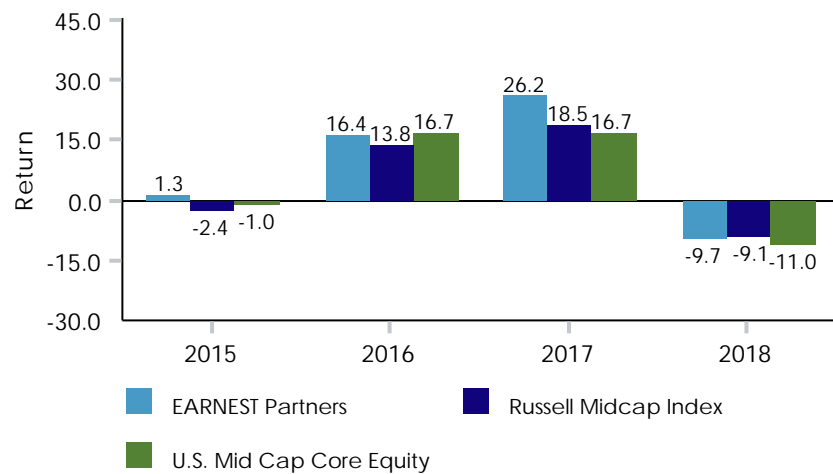
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
EARNEST Partners	0.93	1.00	0.28	0.56	3.38	0.96	100.68	95.42	03/01/2006
Russell Midcap Index	0.00	1.00	-	0.51	0.00	1.00	100.00	100.00	03/01/2006
U.S. Mid Cap Core Equity Median	-	-	-	-	-	-	-	-	-

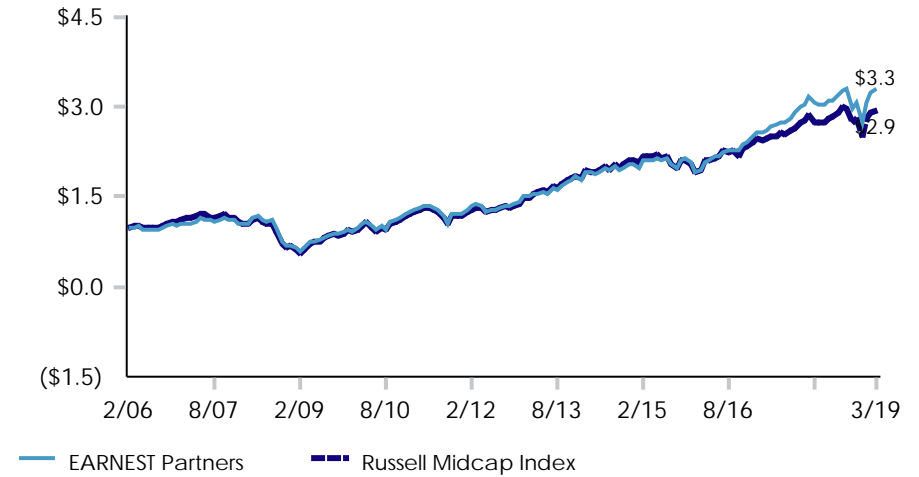
Trailing Period Performance



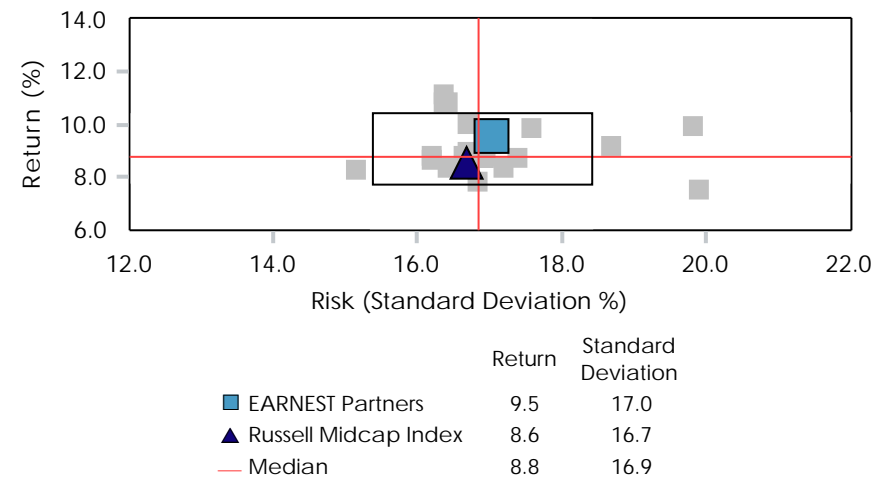
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception

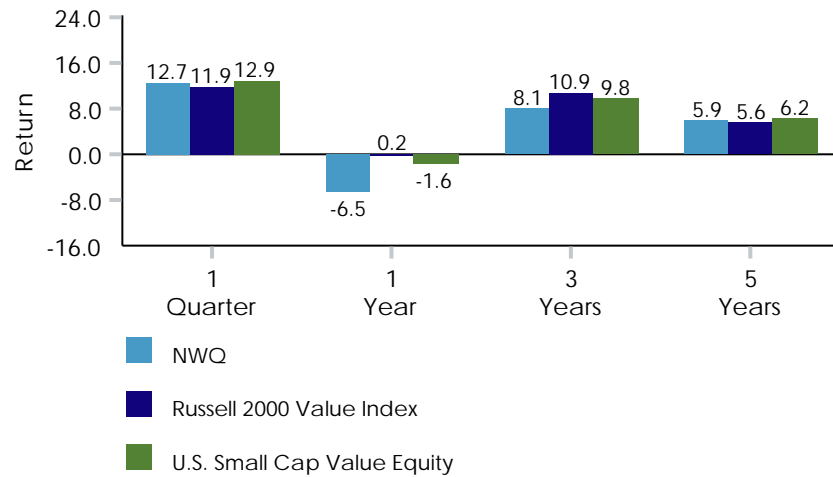


NWQ - gross of fees

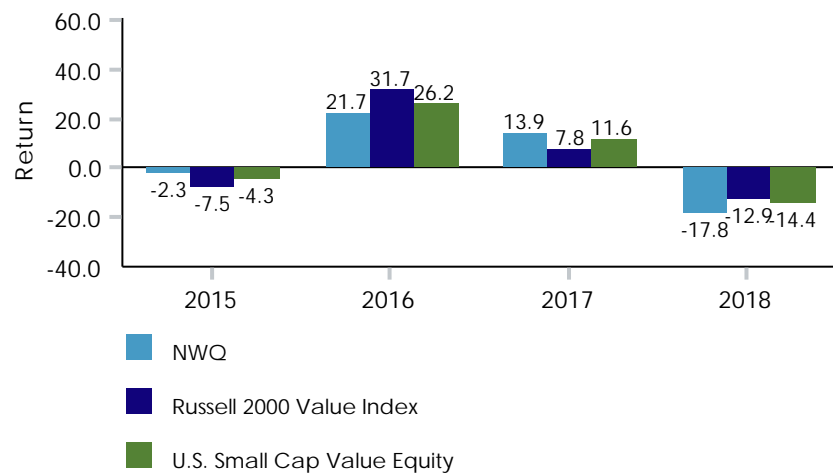
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
NWQ	0.31	1.01	0.06	0.38	6.78	0.89	101.48	100.16	01/01/2006
Russell 2000 Value Index	0.00	1.00	-	0.38	0.00	1.00	100.00	100.00	01/01/2006
U.S. Small Cap Value Equity Median	-	-	-	-	-	-	-	-	-

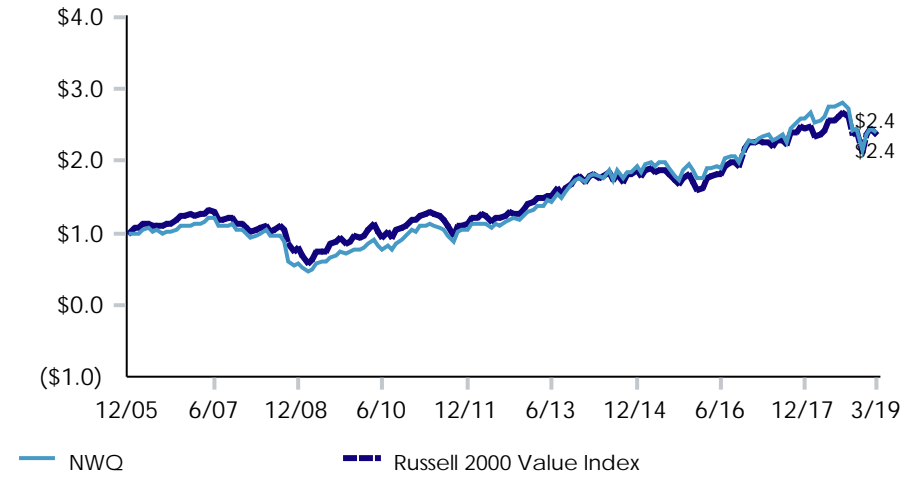
Trailing Period Performance



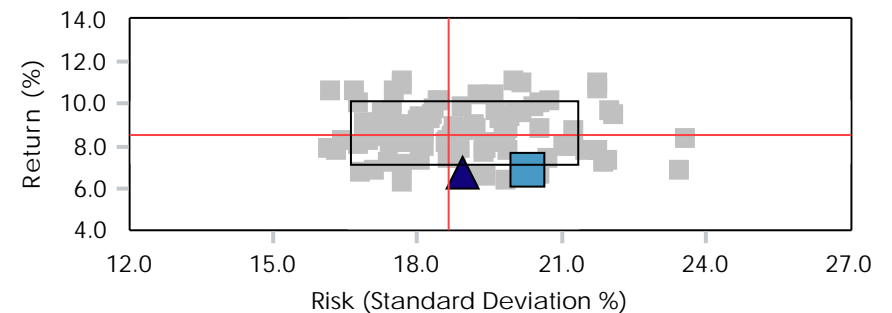
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception



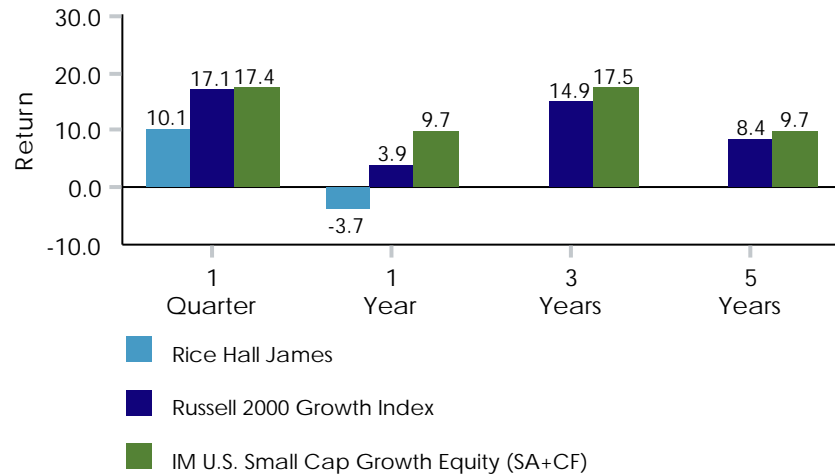
	Return	Standard Deviation
NWQ	6.9	20.3
Russell 2000 Value Index	6.8	18.9
Median	8.5	18.6

Rice Hall James - gross of fees

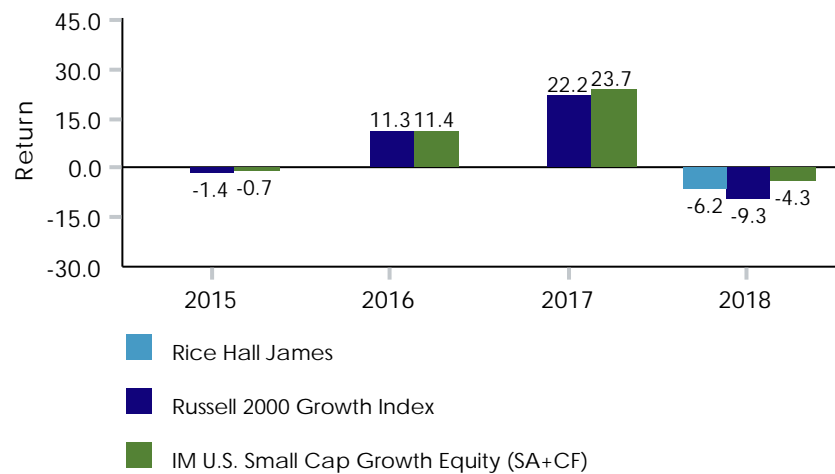
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Rice Hall James	-0.02	0.91	-0.20	0.48	5.33	0.92	91.25	91.69	07/01/2017
Russell 2000 Growth Index	0.00	1.00	-	0.51	0.00	1.00	100.00	100.00	07/01/2017
IM U.S. Small Cap Growth Equity (SA+CF) Median	-	-	-	-	-	-	-	-	-

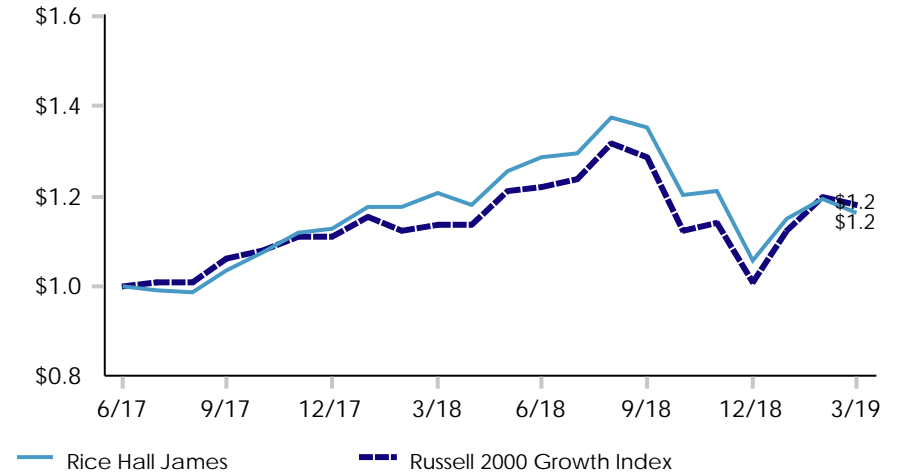
Trailing Period Performance



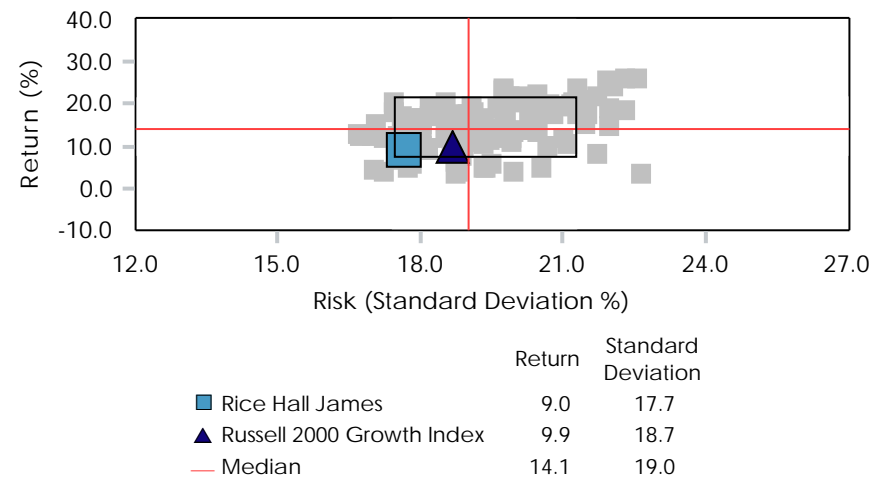
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception

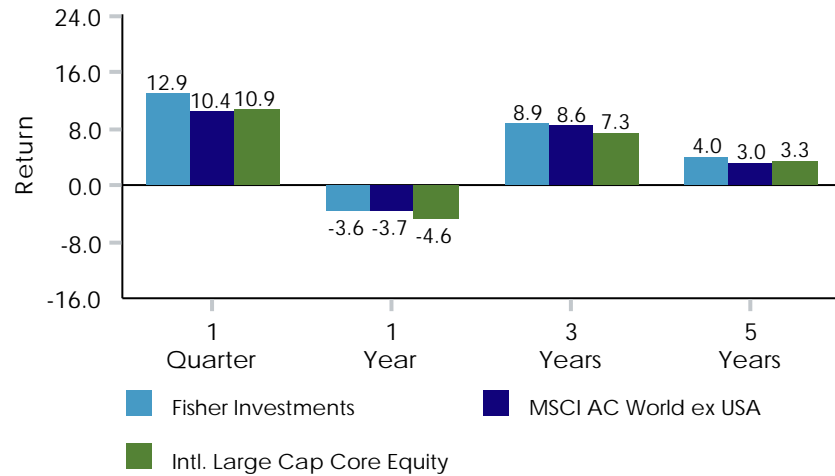


Fisher Investments - gross of fees

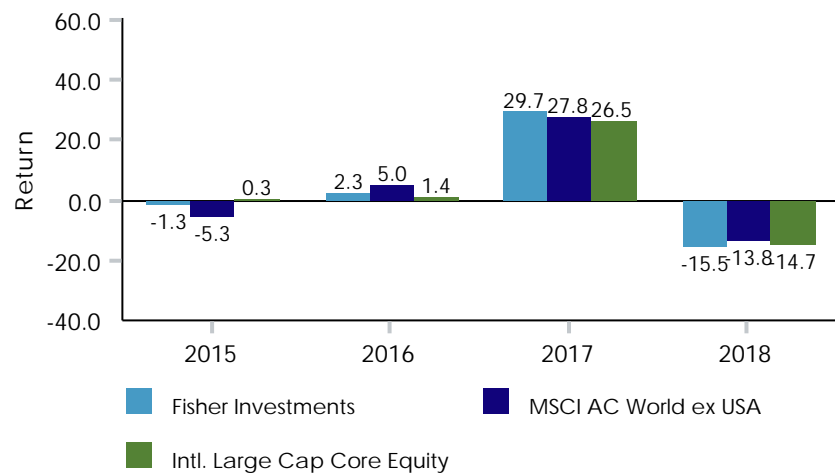
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Fisher Investments	0.56	1.09	0.27	0.32	3.48	0.95	106.84	102.88	03/01/2011
MSCI AC World ex USA	0.00	1.00	-	0.29	0.00	1.00	100.00	100.00	03/01/2011
Intl. Large Cap Core Equity Median	-	-	-	-	-	-	-	-	-

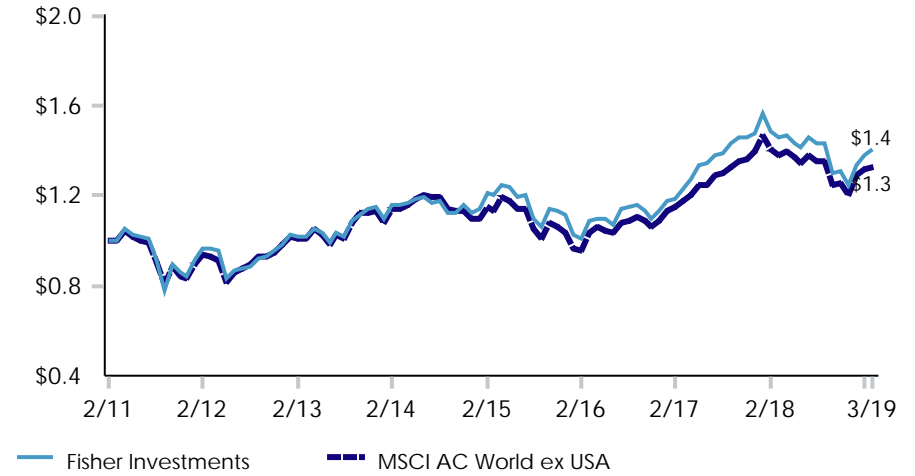
Trailing Period Performance



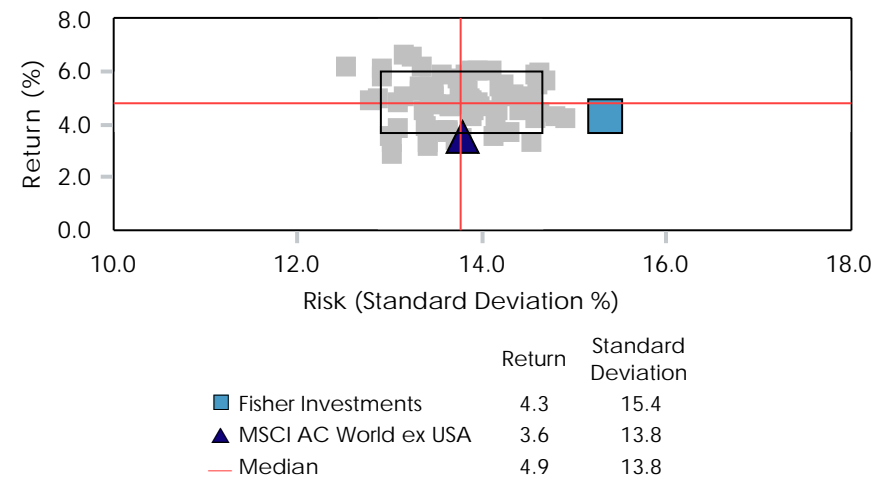
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception

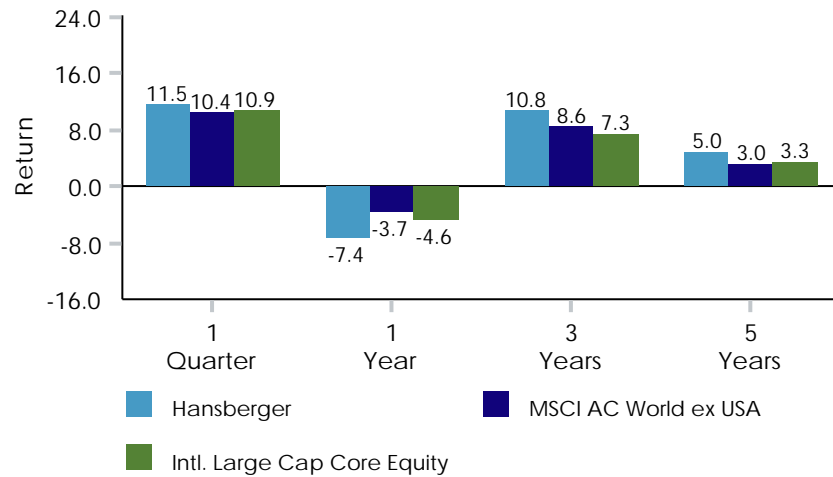


Hansberger - gross of fees

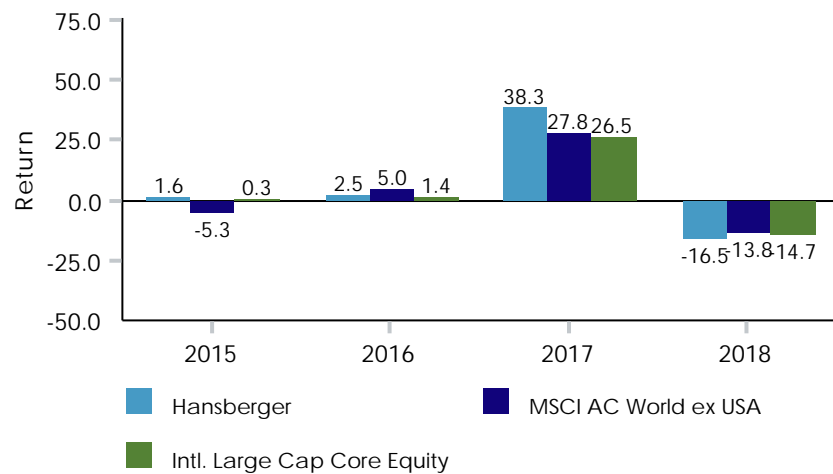
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Hansberger	-0.21	1.08	0.06	0.26	4.41	0.95	105.46	105.81	01/01/2006
MSCI AC World ex USA	0.00	1.00	-	0.27	0.00	1.00	100.00	100.00	01/01/2006
Intl. Large Cap Core Equity Median	-	-	-	-	-	-	-	-	-

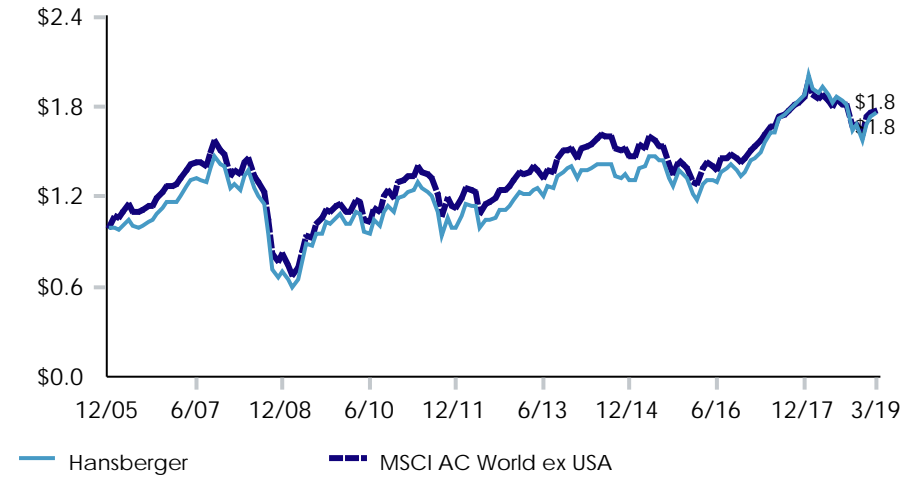
Trailing Period Performance



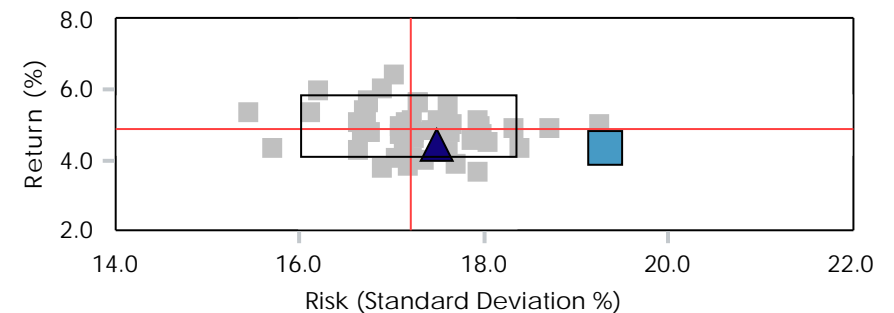
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception



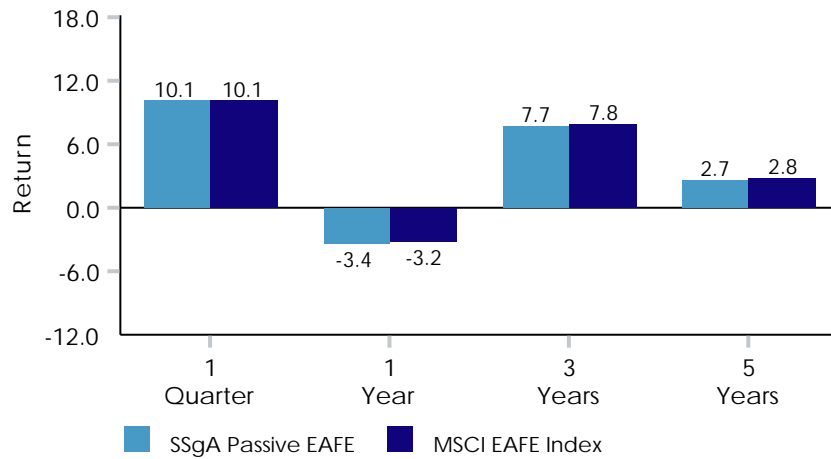
	Return	Standard Deviation
Hansberger	4.3	19.3
MSCI AC World ex USA	4.5	17.5
Median	4.9	17.2

SSgA Passive EAFE - gross of fees

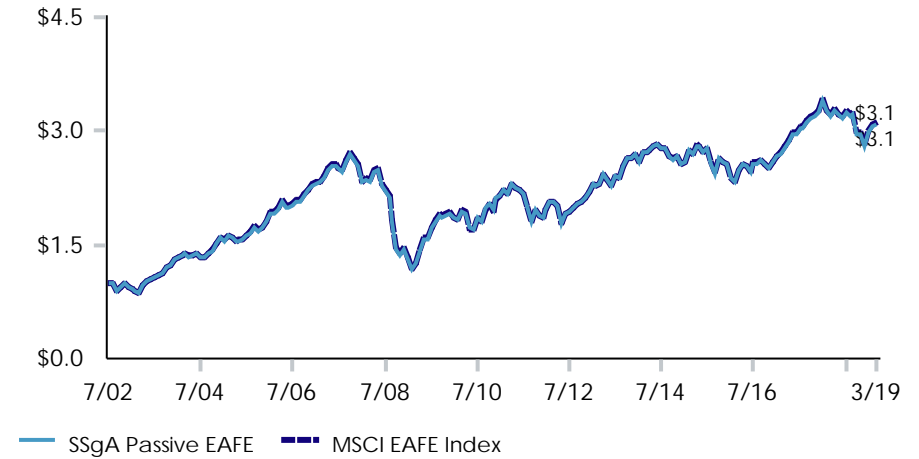
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
SSgA Passive EAFE	-0.01	0.99	-0.15	0.42	0.43	1.00	99.29	99.34	08/01/2002
MSCI EAFE Index	0.00	1.00	-	0.42	0.00	1.00	100.00	100.00	08/01/2002

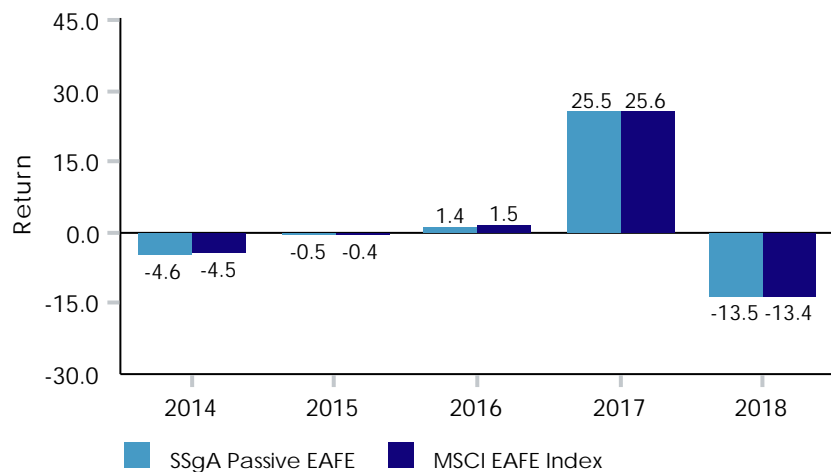
Trailing Period Performance



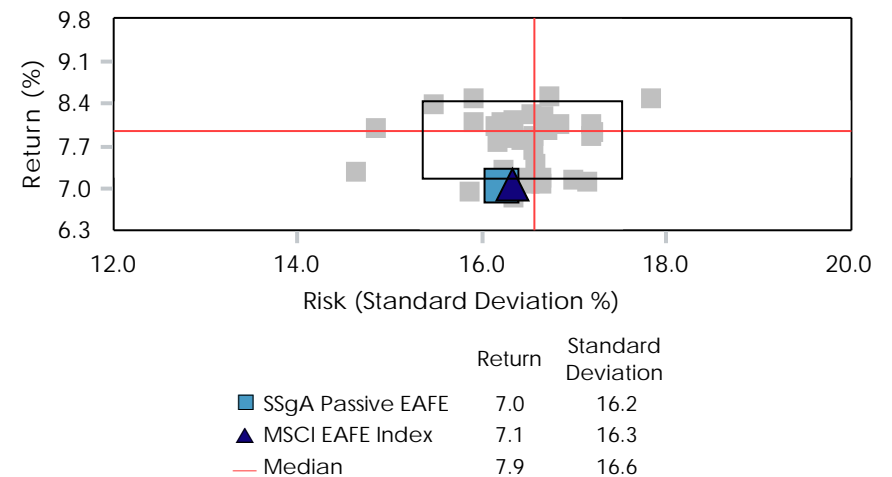
Growth of \$1 - Since Inception



Calendar Year Performance



Risk/Return - Since Inception

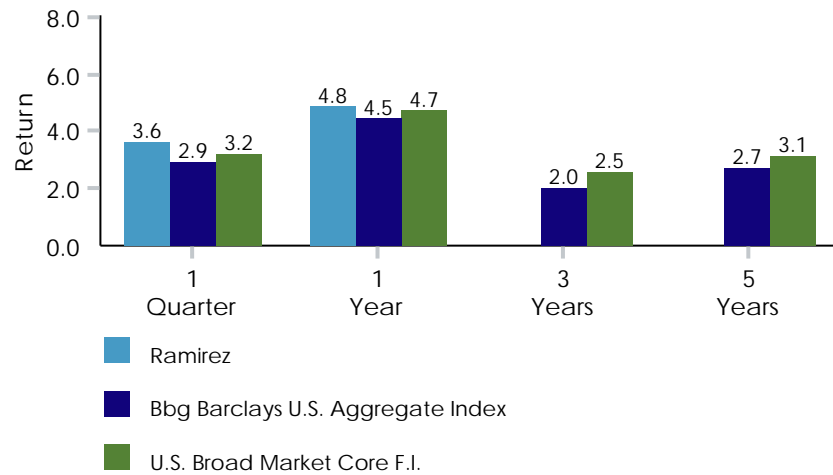


Ramirez - gross of fees

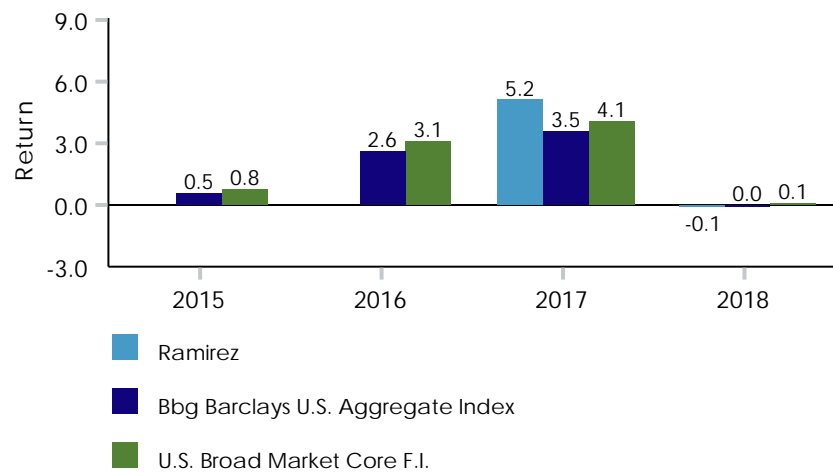
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Ramirez	1.23	0.90	1.49	0.98	0.63	0.94	105.70	72.28	01/01/2017
Bbg Barclays U.S. Aggregate Index	0.00	1.00	-	0.55	0.00	1.00	100.00	100.00	01/01/2017
U.S. Broad Market Core F.I. Median	-	-	-	-	-	-	-	-	-

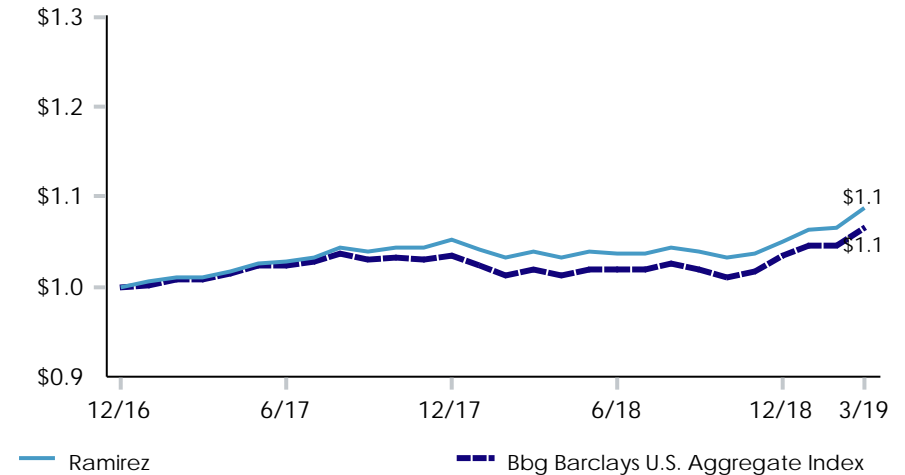
Trailing Period Performance



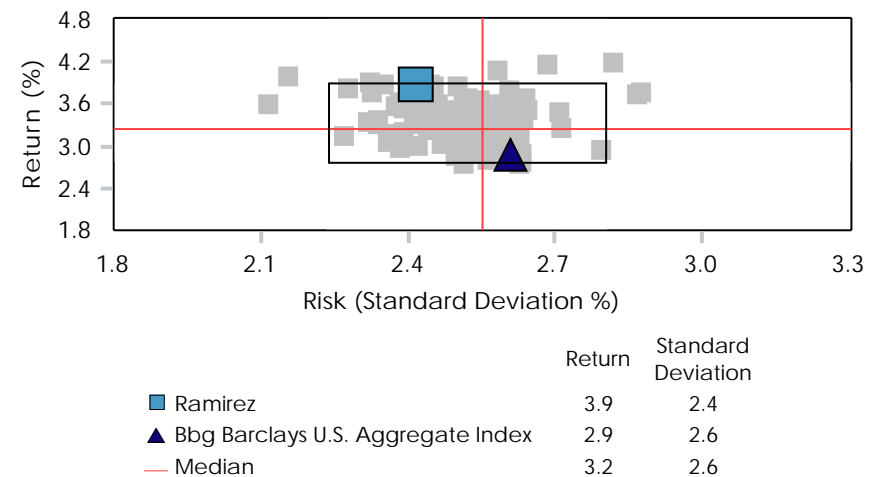
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception

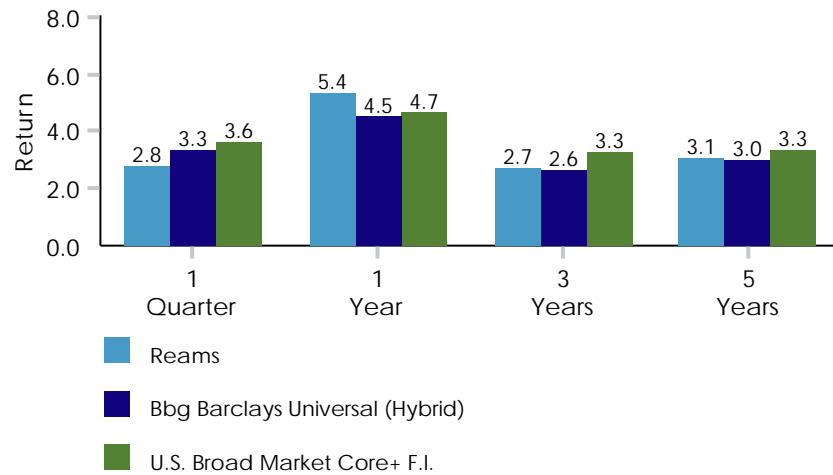


Reams - gross of fees

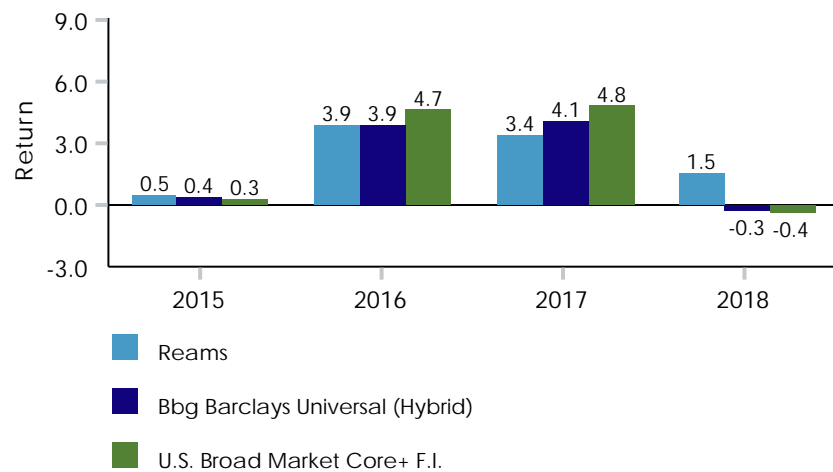
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
Reams	0.31	1.06	0.15	0.67	3.98	0.44	109.06	103.42	01/01/1998
Bbg Barclays Universal (Hybrid)	0.00	1.00	-	0.89	0.00	1.00	100.00	100.00	01/01/1998
U.S. Broad Market Core+ F.I. Median	-	-	-	-	-	-	-	-	-

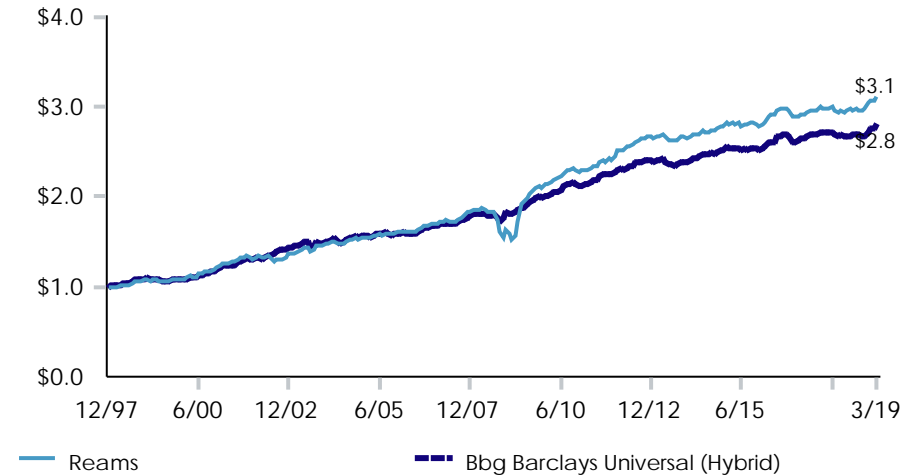
Trailing Period Performance



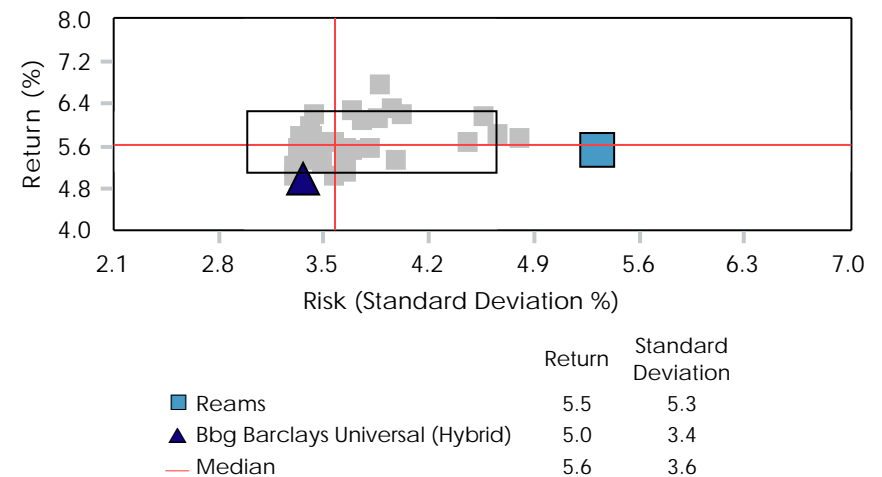
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception

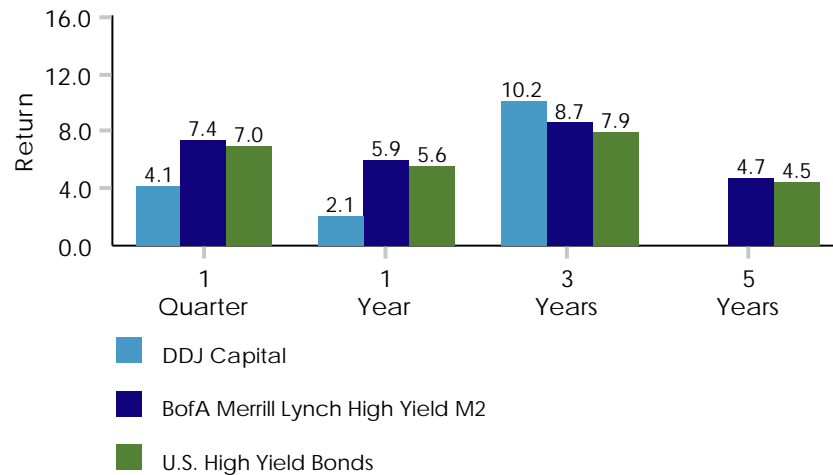


DDJ Capital - gross of fees

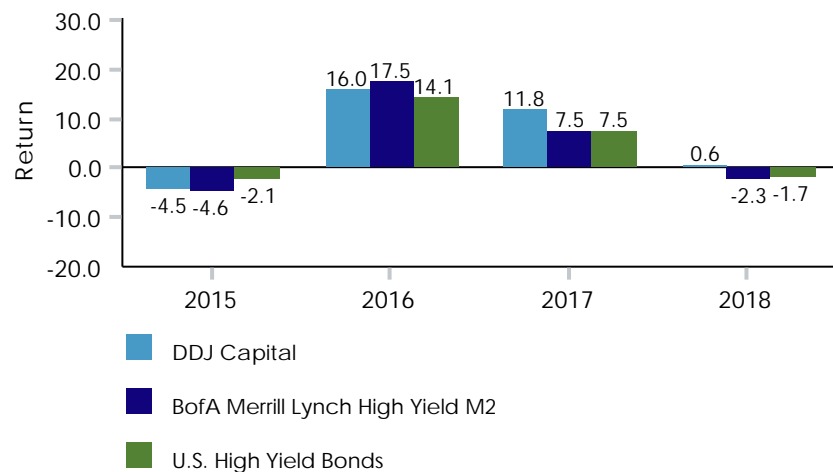
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
DDJ Capital	2.42	0.68	0.19	1.21	3.00	0.71	88.97	64.46	01/01/2015
BofA Merrill Lynch High Yield M2	0.00	1.00	-	0.87	0.00	1.00	100.00	100.00	01/01/2015
U.S. High Yield Bonds Median	-	-	-	-	-	-	-	-	-

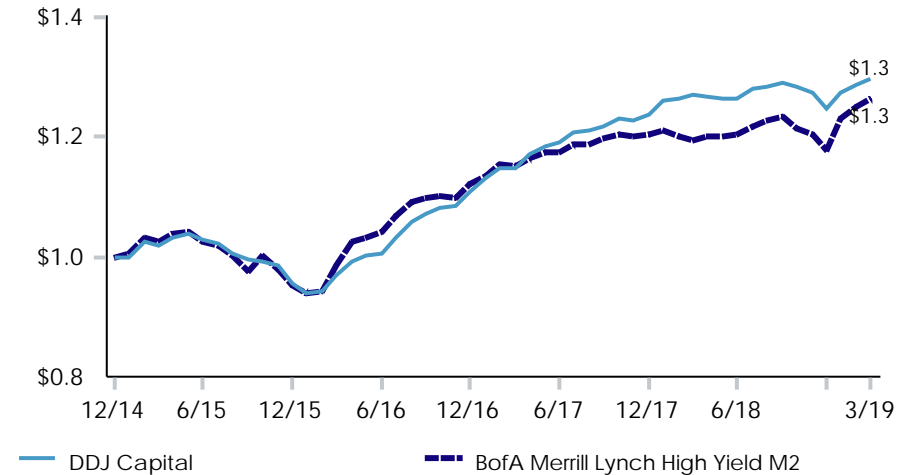
Trailing Period Performance



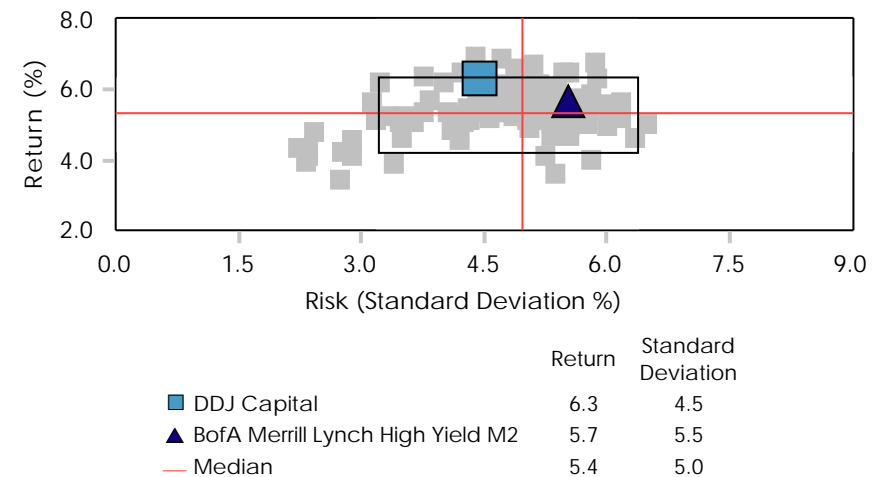
Calendar Year Performance



Growth of \$1 - Since Inception



Risk/Return - Since Inception

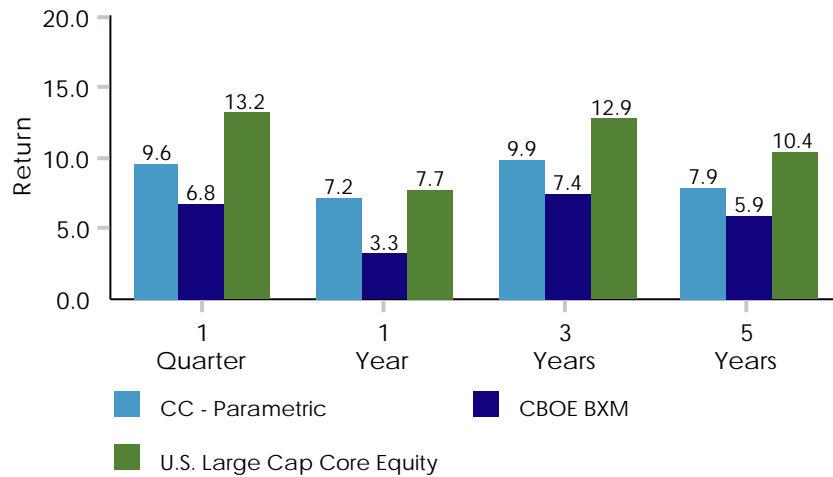


CC - Parametric - gross of fees

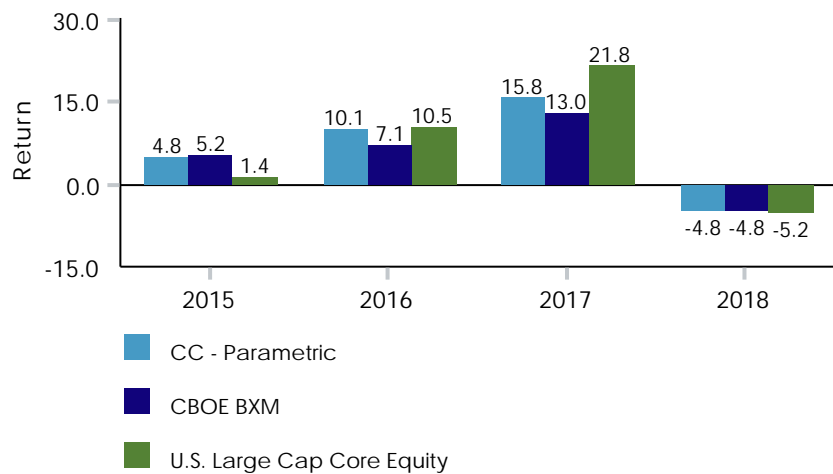
As of March 31, 2019

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Market Capture	Down Market Capture	Inception Date
CC - Parametric	1.26	1.07	0.73	0.88	2.28	0.92	117.03	106.51	03/01/2014
CBOE BXM	0.00	1.00	-	0.75	0.00	1.00	100.00	100.00	03/01/2014
U.S. Large Cap Core Equity Median	-	-	-	-	-	-	-	-	-

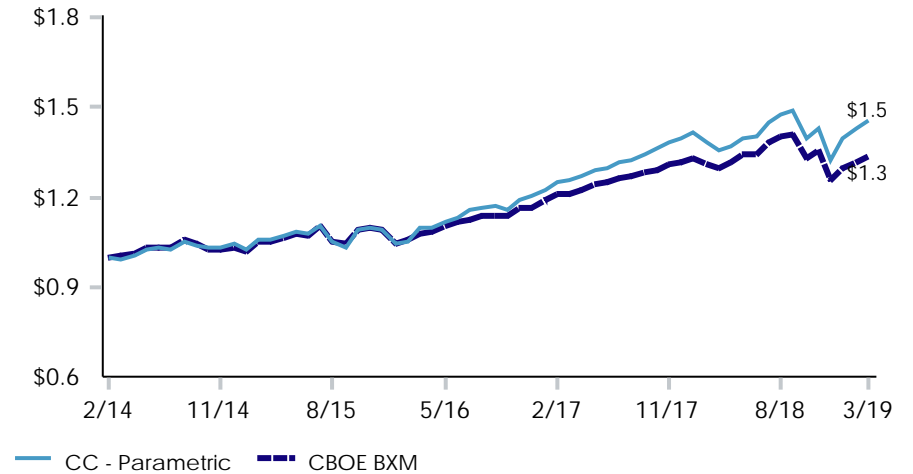
Trailing Period Performance



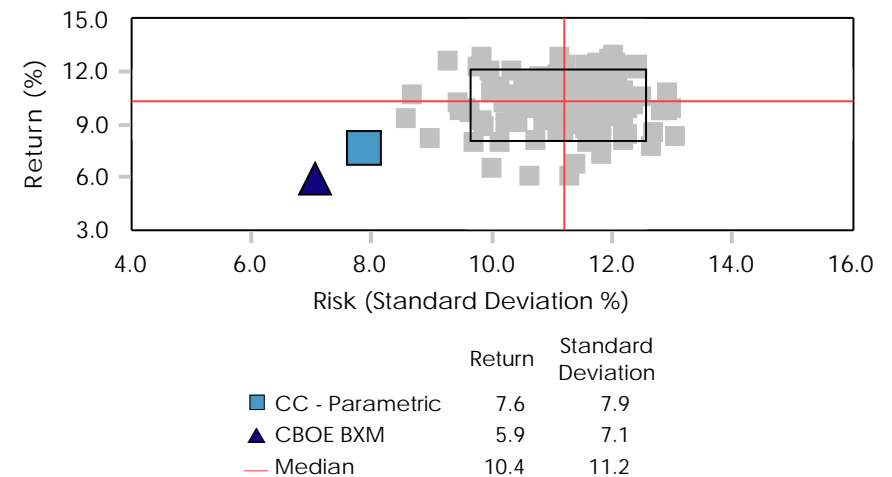
Calendar Year Performance



Growth of \$1 - Since Inception

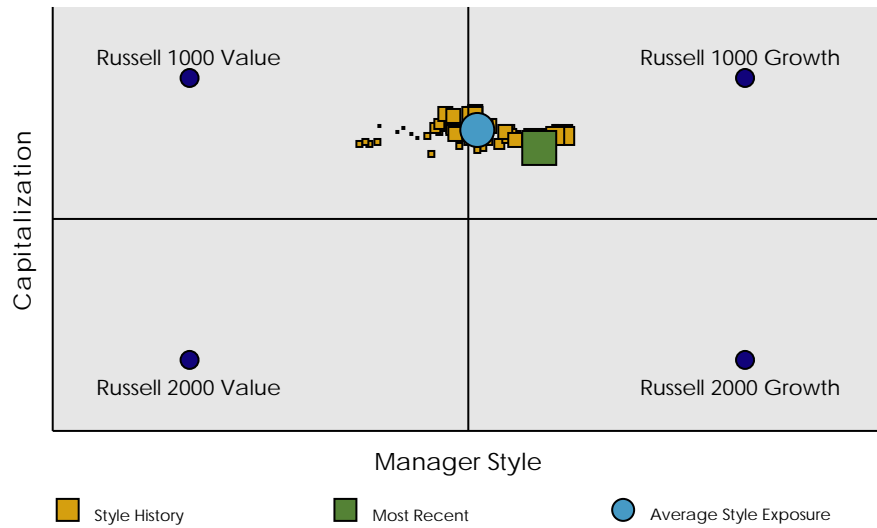


Risk/Return - Since Inception

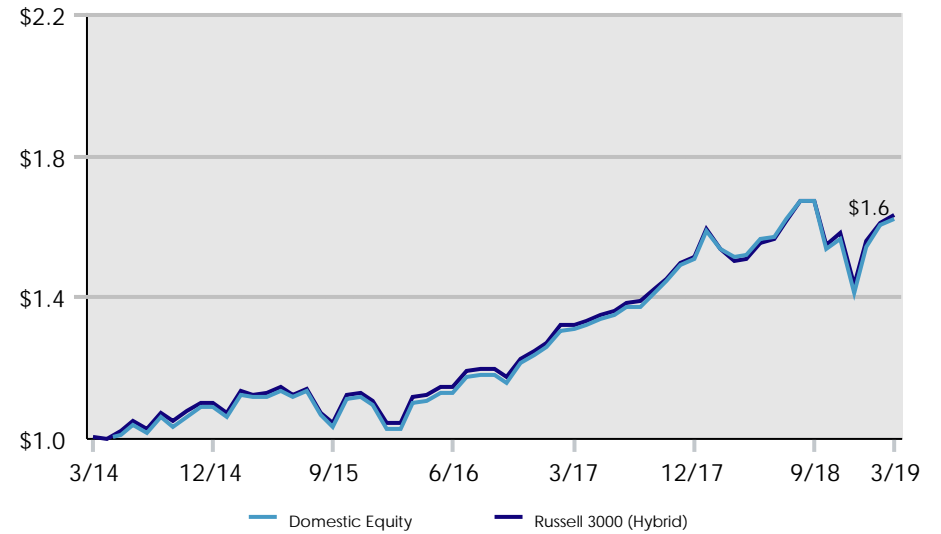


Domestic Equity Analysis As of March 31, 2019

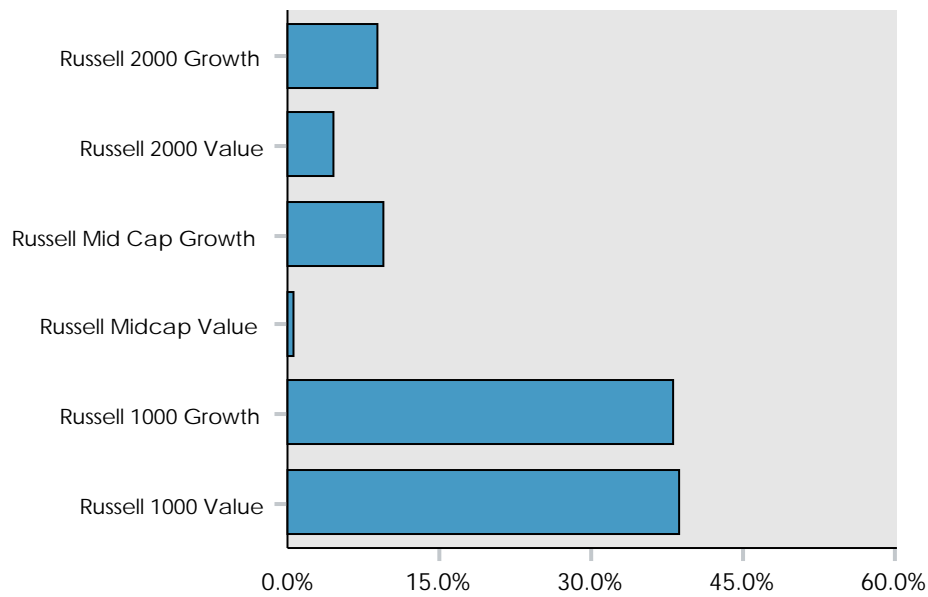
Style Map (5-Year)



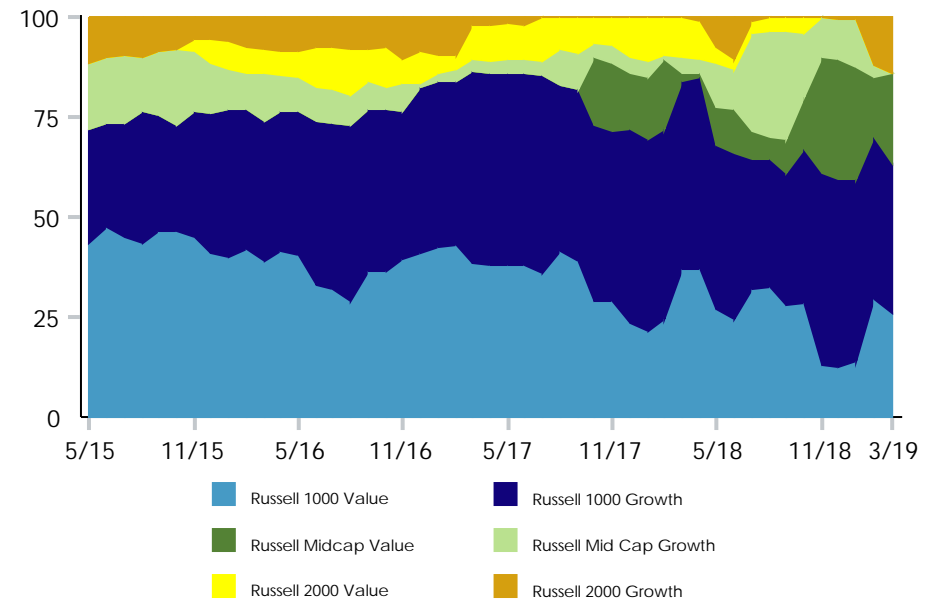
Growth of \$1 (5-Year)



Style Exposure

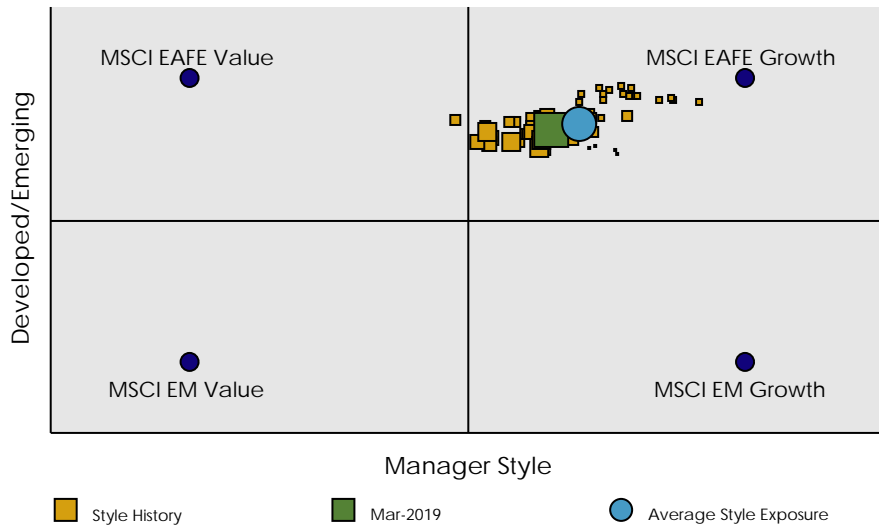


Style History (5-Year)

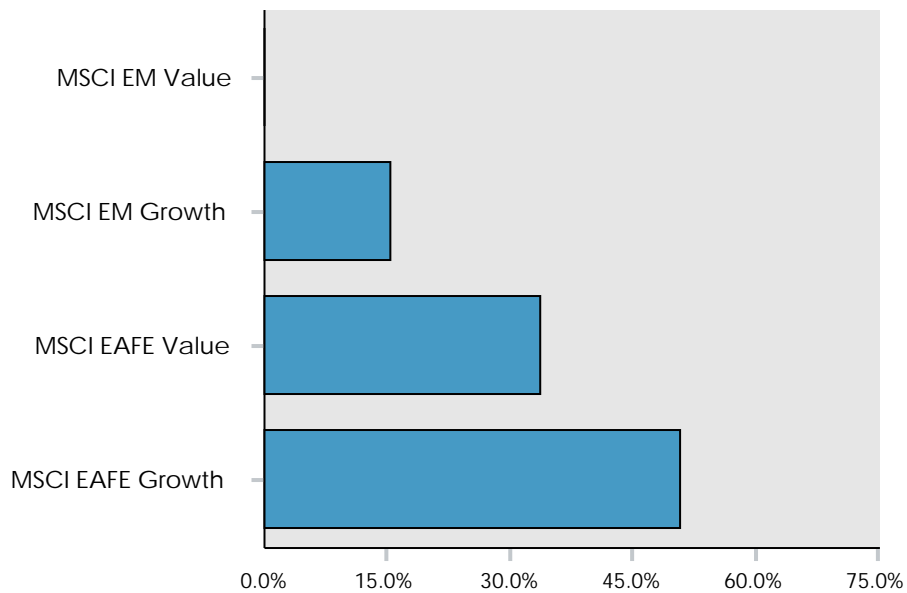


International Equity Analysis As of March 31, 2019

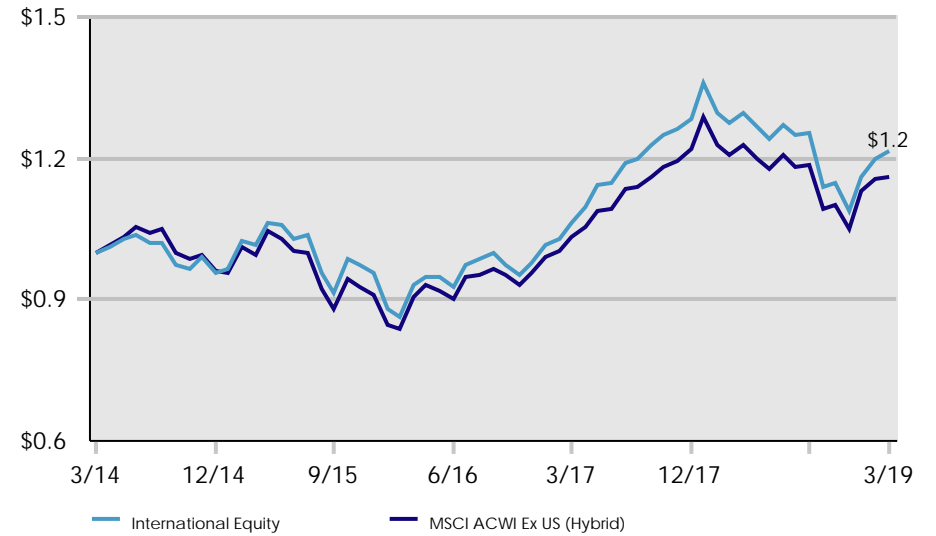
Style Map (5-Year)



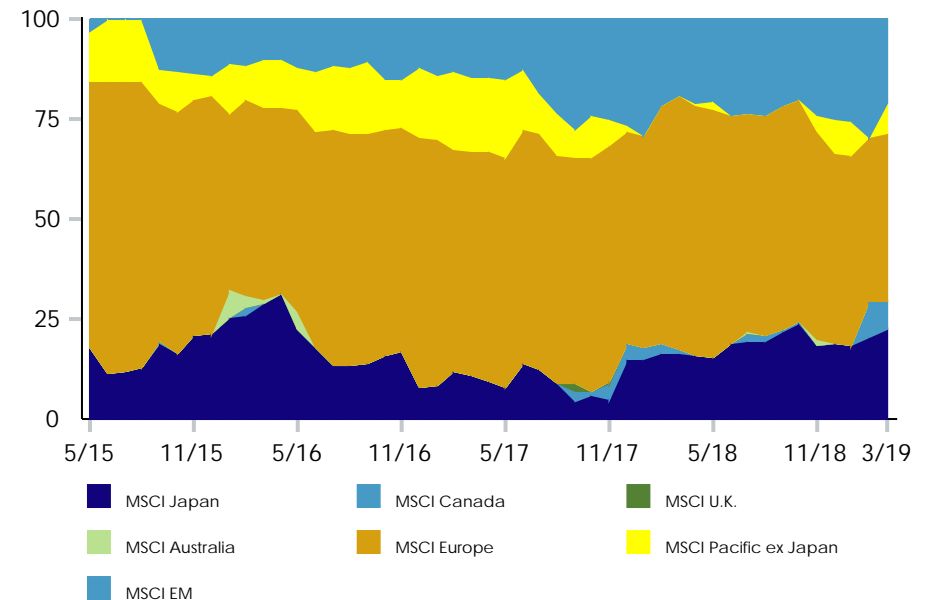
Style Exposure



Growth of \$1 (5-Year)

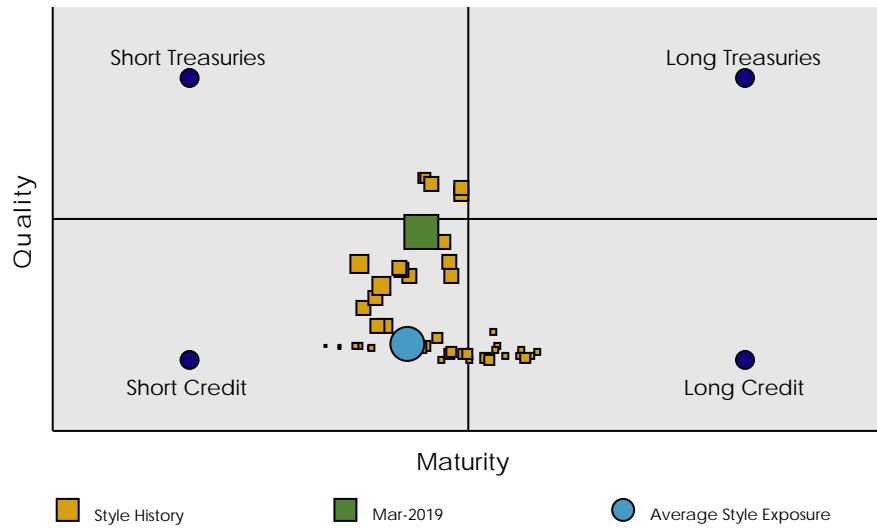


Style History (5-Year)

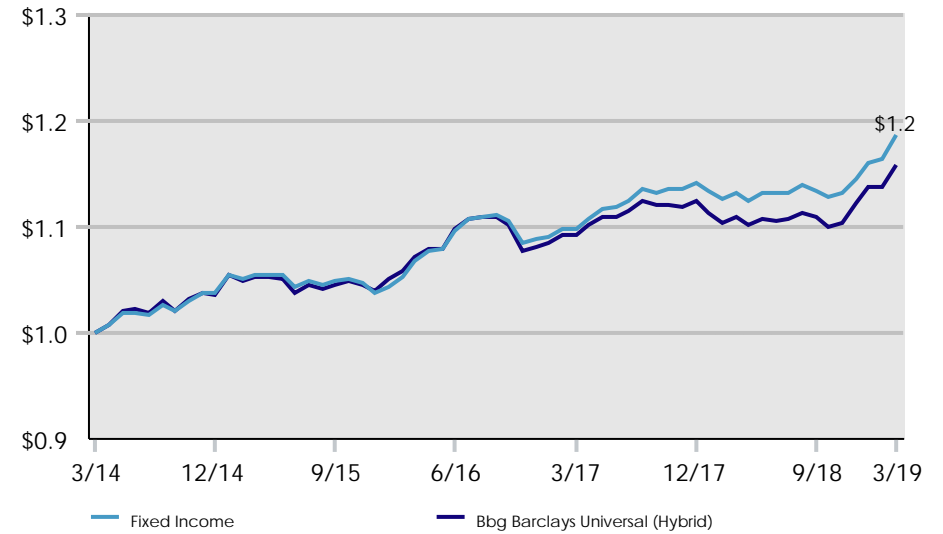


Fixed Income Analysis As of March 31, 2019

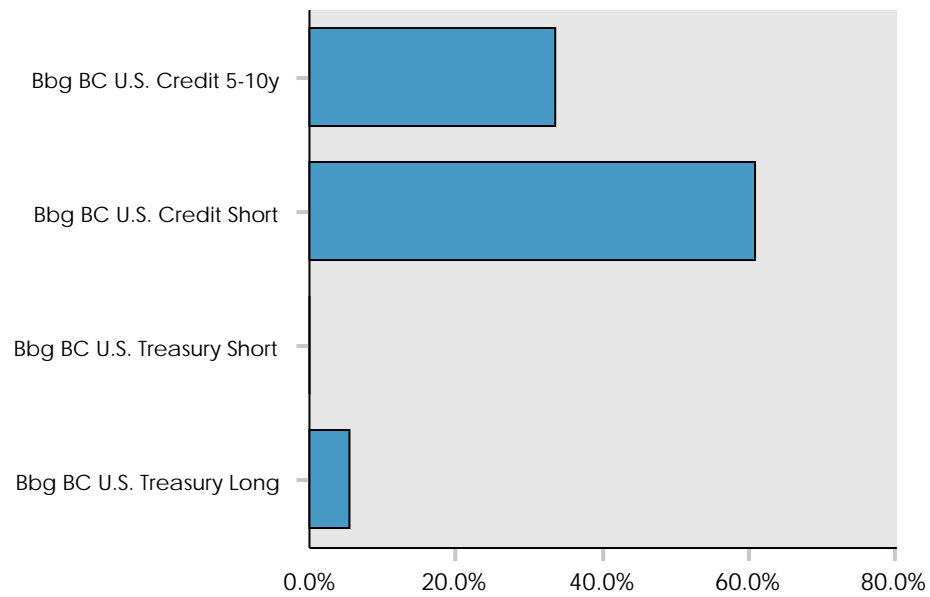
Style Map (5-Year)



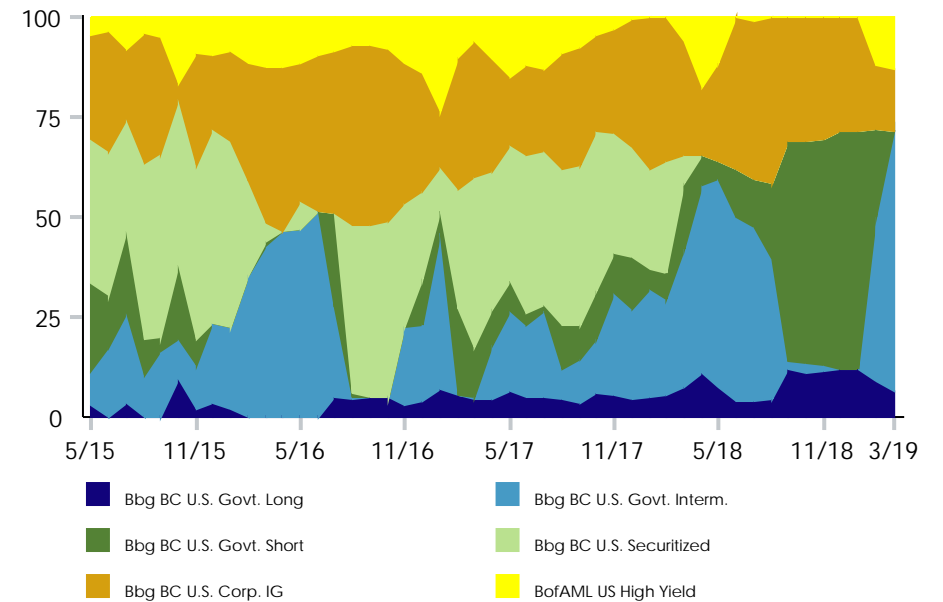
Growth of \$1 (5-Year)



Style Exposure



Style History (5-Year)



Glossary

Alpha

The premium an investment earns above a set standard. This is usually measured in terms of a common index (i.e., how the stock performs independent of the market). An Alpha is usually generated by regressing excess return on the S&P 500 excess return.

Annualized Performance

The annual rate of return that when compounded (t) times generates the same (t) period holding return as actually occurred from periods (1) to period (t).

Batting Average

Percentage of periods a portfolio outperforms a given index.

Beta

The measure of an asset's risk in relation to the Market (for example, the S&P 500) or to an alternative benchmark or factors. Roughly speaking, a security with a Beta of 1.5 will have moved, on average, 1.5 times the market return.

Bottom-up

A management style that de-emphasizes the significance of economic and market cycles, focusing instead on the analysis of individual stocks.

Dividend Discount Model

A method to value the common stock of a company that is based on the present value of the expected future dividends.

Growth Stock

Common stock of a company that has an opportunity to invest money and earn more than its opportunity cost of capital.

Information Ratio

The ratio of annualized expected residual return to residual risk. A central measurement for active management, value added is proportional to the square of the information ratio.

R - Squared

Square of the correlation coefficient. The proportion of the variability in one series that can be explained by the variability of one or more other series in a regression model. A measure of the quality of fit. 100% R-square means a perfect predictability.

Standard Deviation

The square root of the variance. A measure of dispersion of a set of data from its mean

Sharpe Ratio

A measure of a portfolio's excess return relative to the total variability of the portfolio.

Style Analysis

A returns-based analysis using a multi-factor attribution model. The model calculates a product's average exposure to particular investment styles over time (i.e., the products normal style benchmark).

Top-Down

Investment style that begins with an assessment of the overall economic environment and makes a general asset allocation decision regarding various sectors of the financial markets and various industries.

Tracking Error

The standard deviation of the difference between the returns of a portfolio and an appropriate benchmark.

Turnover

For mutual funds, a measure of trading activity during the previous year, expressed as a percentage of the average total assets of the fund. A turnover rate of 25% means that the value of trades represented (1/4) of the assets of the fund.

Value Stock

Stocks with low price/book ratios or price/earnings ratios. Historically, value stocks have enjoyed higher average returns than growth stocks (stocks with high price/book or price/earnings ratios) in a variety of countries.

Benchmark Definitions

Bloomberg Barclays Capital Universal: includes market coverage by the Aggregate Bond Index fixed rate debt issues, which are rated investment grade or higher by Moody's, S&P, or Fitch, in that order with all issues having at least one year to maturity and an outstanding par value of at least \$100 million and includes exposures to high yield CMBS securities. All returns are market value weighted inclusive of accrued interest.

MSCI ACWI x US: MSCI ACWI (All Country World Index) Free excluding US (gross dividends): is a free-floating adjusted market capitalization index designed to measure equity performance in the global developed and emerging markets. As of April 2002, the index consisted of 49 developed and emerging market country indices.

MSCI EAFE (Europe, Australasia, Far East): is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada.

Russell 1000: measures the performance of the 1,000 largest securities in the Russell 3000 Index. Russell 1000 is highly correlated with the S&P 500 Index and capitalization-weighted.

Russell 1000 Growth: measures the performance of those Russell 1000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than the Value universe.

Russell 1000 Value: measures the performance of those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

Russell Mid-Cap: measures the performance of the smallest 800 companies in the Russell 1000 Index, as ranked by total market capitalization.

Russell 2000: measures the performance of the 2,000 smallest securities in the Russell 3000 Index. Russell 2000 is market capitalization-weighted.

Russell 2000 Growth: measures the performance of those Russell 2000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-to-earnings ratios.

Russell 2000 Value: measures the performance of those Russell 2000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-to-earnings ratios.

CBOE BXM: measures the performance of a hypothetical buy-write strategy on the S&P 500 Index.

ICE BofA ML U.S. High Yield Master II: Tracks the performance of US dollar denominated below investment grade rated corporate debt publicly issued in the US domestic market. All securities in index must have a below investment grade rating and an investment grade rated country of risk (based on foreign currency long term sovereign debt ratings). Each securities have > 1 year remaining maturity, fixed coupon schedule, and a minimum amount outstanding of \$100 million.

Societe Generale (SG) Multi-Alternative Risk Premia: Represents risk premia managers with programs diversified across multiple asset classes utilizing multiple risk premia factors. These managers trade multiple asset classes such as equities, fixed income, currencies, and in many cases commodities, and aim to capture a diversity of discrete risk premia, including most prevalently value, carry, and momentum. These multi-asset, multi-risk premia strategies are typically systematic. Single asset class and risk premia programs are excluded. The SG Multi Alternative Risk Premia Index is an equally weighed, non-investable index of funds



RISK METRIC DESCRIPTION – Rationale for selection and calculation methodology

US Equity Markets:

Metric: $P/E \text{ ratio} = \text{Price} / \text{"Normalized" earnings for the S\&P 500 Index}$

To represent the price of US equity markets, we have chosen the S&P 500 index. This index has the longest published history of price, is well known, and also has reliable, long-term, published quarterly earnings. The price= P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the S&P 500 index). Equity markets are very volatile. Prices fluctuate significantly during normal times and extremely during periods of market stress or euphoria. Therefore, developing a measure of earnings power (E) which is stable is vitally important, if the measure is to provide insight. While equity prices can and do double, or get cut in half, real earnings power does not change nearly as much. Therefore, we have selected a well known measure of real, stable earnings power developed by Yale Professor Robert Shiller known as the Shiller E-10. The calculation of E-10 is simply the average real annual earnings over the past 10 years. Over 10 years, the earnings shenanigans and boom and bust levels of earnings tend to even out (and often times get restated). Therefore, this earnings statistic gives a reasonably stable, slow-to-change estimate of average real earnings power for the index. Professor Shiller's data and calculation of the E-10 are available on his website at <http://www.econ.yale.edu/~shiller/data.htm>. We have used his data as the base for our calculations. Details of the theoretical justification behind the measure can be found in his book *Irrational Exuberance* [Princeton University Press 2000, Broadway Books 2001, 2nd ed., 2005].

Developed Equity Markets Excluding the US:

Metric: $P/E \text{ ratio} = \text{Price} / \text{"Normalized" earnings for the MSCI EAFE Index}$

To represent the price of non-US developed equity markets, we have chosen the MSCI EAFE index. This index has the longest published history of price for non-US developed equities. The price= P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the MSCI EAFE index). The price level of this index is available starting in December 1969. Again, for the reasons described above, we elected to use the Shiller E-10 as our measure of earnings (E). Since 12/1972, a monthly price earnings ratio is available from MSCI. Using this quoted ratio, we have backed out the implied trailing-twelve month earnings of the EAFE index for each month from 12/1972 to the present. These annualized earnings are then inflation adjusted using CPI-U to represent real earnings in US dollar terms for each time period. The Shiller E-10 for the EAFE index (10 year average real earnings) is calculated in the same manner as detailed above.

However, we do not believe that the pricing and earnings history of the EAFE markets are long enough to be a reliable representation of pricing history for developed market equities outside of the US. Therefore, in constructing the Long-Term Average Historical P/E for developed ex-US equities for comparison purposes, we have elected to use the US equity market as a developed market proxy, from 1881 to 1982. This lowers the Long-Term Average Historical P/E considerably. We believe this methodology provides a more realistic historical comparison for a market with a relatively short history.

Emerging Market Equity Markets

Metric: $\text{Ratio of Emerging Market } P/E \text{ Ratio to Developed Market } P/E \text{ Ratio}$

To represent the Emerging Markets P/E Ratio, we have chosen the MSCI Emerging Market Free Index, which has P/E data back to January 1995 on Bloomberg. To represent the Developed Markets PE Ratio, we have chosen the MSCI World Index, which also has data back to January 1995 on Bloomberg. Although there are issues with published, single time period P/E ratios, in which the denominator effect can cause large movements, we feel that the information contained in such movements will alert investors to market activity that they will want to interpret.

RISK METRIC DESCRIPTION – Rationale for selection and calculation methodology

US Private Equity Markets:

Metrics: S&P LCD Average EBITDA Multiples Paid in LBOs and US Quarterly Deal Volume

The Average Purchase Price to EBITDA multiples paid in LBOs is published quarterly by S&P in their LCD study. This is the total price paid (both equity and debt) over the trailing-twelve month EBITDA (earnings before interest, taxes, depreciation and amortization) as calculated by S&P LCD. This is the relevant, high-level pricing metric that private equity managers use in assessing deals. Data is published monthly.

US quarterly deal volume for private equity is the total deal volume in \$ billions (both equity and debt) reported in the quarter by Thomson Reuters Buyouts. This metric gives a measure of the level of activity in the market. Data is published quarterly.

U.S Private Real Estate Markets:

Metrics: US Cap rates and Annual US Real Estate Deal Volume

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The date is published by NCREIF. We chose to use current value cap rate. These are capitalization rates from properties that were revalued during the quarter. While this data does rely on estimates of value and therefore tends to be lagging, (estimated prices are slower to rise and slow to fall than transaction prices), the data series goes back to 1979, providing a long data series for valuation comparison. Data is published quarterly.

Annual US real estate deal volume is the total deal transaction volume in \$ billions (both equity and debt) reported by Real Capital Analytics during the trailing-twelve months. This metric gives the level of activity in the market. Data is published monthly.

Measure of Equity Market Fear / Uncertainty

Metric: VIX – Measure of implied option volatility for U.S. equity markets

The VIX is a key measure of near-term volatility conveyed by implied volatility of S&P 500 index option prices. VIX increases with uncertainty and fear. Stocks and the VIX are negatively correlated. Volatility tends to spike when equity markets fall.

Measure of Monetary Policy

Metric: Yield Curve Slope

We calculate the yield curve slope as the 10 year treasury yield minus the 1 year treasury yield. When the yield curve slope is zero or negative, this is a signal to pay attention. A negative yield curve slope signals lower rates in the future, caused by a contraction in economic activity. Recessions are typically preceded by an inverted (negatively sloped) yield curve. A very steep yield curve (2 or greater) indicates a large difference between shorter-term interest rates (the 1 year rate) and longer-term rates (the 10 year rate). This can signal expansion in economic activity in the future, or merely higher future interest rates.

RISK METRIC DESCRIPTION – Rationale for selection and calculation methodology

Definition of “extreme” metric readings

A metric reading is defined as “extreme” if the metric reading is in the top or bottom decile of its historical readings. These “extreme” reading should cause the reader to pay attention. These metrics have reverted toward their mean values in the past.

Credit Markets US Fixed Income:

Metric: Spreads

The absolute level of spreads over treasuries and spread trends (widening / narrowing) are good indicators of credit risk in the fixed income markets. Spreads incorporate estimates of future default, but can also be driven by technical dislocations in the fixed income markets. Abnormally narrow spreads (relative to historical levels) indicate higher levels of valuation risk, wide spreads indicate lower levels of valuation risk and / or elevated default fears. Investment grade bond spreads are represented by the Barclays Capital US Corporate Investment Grade Index Intermediate Component. The high yield corporate bond spreads are represented by the Barclays Capital US Corporate High Yield Index.

Measures of US Inflation Expectations

Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

Inflation is a very important indicator impacting all assets and financial instruments. Breakeven inflation is calculated as the 10 year nominal treasury yield minus the 10 year real yield on US TIPS (treasury inflation protected securities). Abnormally low long-term inflation expectations are indicative of deflationary fears. A rapid rise in breakeven inflation indicates acceleration in inflationary expectations as market participants sell nominal treasuries and buy TIPS. If breakeven inflation continues to rise quarter over quarter, this is a signal of inflationary worries rising, which may cause Fed action and / or dollar decline.

Commodity price movement (above the rate of inflation) is an indication of anticipated inflation caused by real global economic activity putting pressure on resource prices. We calculate this metric by adjusted in the Dow Jones UBS Commodity Index (formerly Dow Jones AIG Commodity Index) by US CPI-U. While rising commodity prices will not necessarily translate to higher US inflation, higher US inflation will likely show up in higher commodity prices, particularly if world economic activity is robust.

These two measures of anticipated inflation can, and often are, conflicting.

Measures of US Treasury Bond Interest Rate Risk

Metrics: 10-Year Treasury Forward-Looking Real Yield and 10-Year Treasury Duration

The expected annualized real yield of the 10 year US Treasury Bond is a measure of valuation risk for US Treasuries. A low real yield means investors will accept a low rate of expected return for the certainty of receiving their nominal cash flows. MIG estimates the expected annualized real yield by subtracting an estimate of expected 10 year inflation (produced by the Survey of Professional Forecasters as collected by the Federal Reserve Bank of Philadelphia), from the 10 year Treasury constant maturity interest rate.

Duration for the 10-Year Treasury Bond is calculated based on the current yield and a price of 100. This is a measure of expected percentage movements in the price of the bond based on small movements in percentage yield. We make no attempt to account for convexity.

RISK METRIC DESCRIPTION – Rationale for selection and calculation methodology

What is the MIG Market Sentiment Indicator (PMSI)?

The PMSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The PMSI takes into account the momentum (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

How do I read the MIG Market Sentiment Indicator (PMSI) graph?

Simply put, the PMSI is a color coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the PMSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the PMSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.

How is the MIG Market Sentiment Indicator (PMSI) Constructed?

The PMSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:

1. Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)

2. Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration U.S. Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight). The scale of this measure is adjusted to match that of the stock return momentum measure.

The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure. The color reading on the graph is determined as follows:

1. If both stock return momentum and bond spread momentum are positive = GREEN (positive)
2. If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
3. If both stock return momentum and bond spread momentum are negative = RED (negative)

What does the MIG Market Sentiment Indicator (PMSI) mean? Why might it be useful?

There is strong evidence that time series momentum is significant and persistent. In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12 month period. The PMSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

Momentum is defined as the persistence of relative performance. There is a significant amount of academic evidence indicating that positive momentum (e.g., strong performing stocks over the recent past continue to post strong performance into the near future) exists over near-to-intermediate holding periods. See, for example, "Understanding Momentum," *Financial Analysts Journal*, Scowcroft, Sefton, March, 2005.

DISCLAIMER:

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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

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

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



MEMORANDUM

To: Oakland Police and Fire Retirement System (OPFRS)

From: Meketa Investment Group

Date: May 29, 2019

Re: International Equity Manager Search Update

This memo provides OPFRS with an update of the International Equity Manager Request-For-Proposal (RFP) process and provides an overview of managers for further consideration. The new International Equity manager will be allocated a total of approximately \$40 to \$50 million.

Summary

At the February 2019 Oakland PFRS meeting the Board approved a search for a new active core international equity manager that will be benchmarked to the MSCI ACWI ex US IMI index. Meketa subsequently released an RFP in April 2019 with a due date of April 29, 2019 for all prospective manager responses. As a result of the RFP, Meketa received responses from 55 prospective managers. Given the large array of manager responses, Meketa will use quantitative and qualitative screens to create a more focused list of prospective managers who will then undergo an in-depth scoring procedure to select a list of finalists for presentation to the OPFRS Investment Committee.

The RFP contains a wide spectrum of questions that seek specific answers from the manager candidates on several topics related to the investment management of an active international equity portfolio on behalf of OPFRS. Following discussions with the OPFRS Board, Meketa will bring back a list of finalist candidates.

Manager Responses

Meketa received responses from the 55 firms listed on the following pages. The table includes the firm name as well as their proposed product. Three managers (Lazard, Morgan Stanley, Vanguard) submitted multiple products for consideration.



MEMORANDUM

Active Core International Equity Manager Responses

Firm	Product
Acadian Asset Management	All Country World ex-US Equity
Addenda Capital	EAFE Equity
Affinity Investment Advisors	International Equity
Allianz Global	International Equity Growth
Ariel Investments	International (DM / EM)
Artisan Partners	Non-U.S. Growth
Attucks Asset Management	International Equity
Axiom Investors	International Equity
Baillie Gifford & Co	The International Equity Fund
Baring International Investment	Global ex-US Equity
Blackcrane Capital	Overseas Alpha
BMO Asset Management	Disciplined International Equity Strategy
Boston Partners Global Investors	International Equity
Brandywine Global	International Opportunistic Equity
Capital Bank & Trust	International All Countries Equity Trust
Dimensional Fund Advisors	TA World ex-US Core Equity
Dundas Partners	International Equity Growth Strategy
Hexavest	International Equity Strategy
Fiera Capital	International Equity
First Eagle	International Value Strategy
Fisher Investments	All Foreign Equity Focused
Foresight Global Investors	International Value
Franklin Templeton	All Country World ex-U.S. Equity
GQG Partners	International Equity Fund
GW&K Investment Management	International Small Cap
Hansberger Growth Investors	International Growth Equity
Harding Loevner	International Equity
Hardman Johnston Global Advisors	International Equity
HighVista Strategies	HSS All Country ex-US
Janus Henderson Group	Overseas
Jennison Associates	International Equity Opportunities
Kopernik Global Investors	International
Landry Investment Management	EAFE
Lazard Asset Management	ACW ex-US Equity Advantage International Strategic Equity Plus
Martin Investment Management	Tortue Capital
Metis Global Partners	International Equity
Morgan Stanley	International Advantage International Opportunity
Neuberger Berman	International All Country World ex-US



MEMORANDUM

Active Core International Equity Manager Responses (continued)

Firm	Product
Nikko Asset Management	International Select Equity
Parametric	Custom International Equity
Polen Capital	International Equity Growth
Pyrford International	International Equity
QMA	International Equity Opportunities Strategy
Rockefeller Capital Management	Non-US Equity Strategy
Schroder Investment Management	International Alpha Trust
Smith Asset Management	International Large Cap
Sprucegrove Investment Management	International & ACWI ex US Equities
Strategic Global Advisors	International ACWI ex US Equity
Sustainable Growth Advisors	International Growth Equity
Tocqueville Asset Management	International Multi Cap Equity
Vanguard	International Growth International Value
Vontobel Asset Management	Quality Growth International Equity
Westwood Global	WGI Developed ex US Strategy
William Blair Investment Management	International Leaders

DISCLAIMER

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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

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

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



MEMORANDUM

To: Oakland Police and Fire Retirement System (OPFRS)
From: Meketa Investment Group
Date: May 29, 2019
Re: Diversity Representation Survey of Managers

The purpose of this memo is to provide the System with data collected by surveying asset managers regarding their diversity representation as of March 31, 2019. The System requested that Meketa Investment Group (formerly Pension Consulting Alliance) collect this information at the March 27 Board Meeting following a discussion of minority representation at a specific manager.

Breakdowns for 11 asset managers and Meketa are displayed on the tables on the following page.



MEMORANDUM

Race and Ethnicity ^A	Percentage (%) of Board of Directors / Managing Members											
	DDJ Capital Management	Earnest Partners	Fisher	Hansberger Growth Investors	Meketa Investment Group	Northern Trust	NWQ Investment Management	Parametric Portfolio Assoc.	Ramirez Asset Management	Reams Asset Management	Rice Hall James & Assoc.	State Street Global Advisors
African American/Black	--	22%	--	--	4%	21%	--	--	--	--	--	Declined to provide
Asian/Hawaiian/Pacific Islander	--	11%	--	50%	9%	7%	--	8%	--	--	9%	
Latino/Hispanic	--	--	20%	--	2%	7%	--	--	75%	--	--	
White	100%	67%	80%	50%	82%	64%	100%	85%	25%	100%	91%	
American Indian/Alaska Native	--	--	--	--	--	--	--	--	--	--	--	
Other	--	--	--	--	2%	--	--	8%	--	--	--	
Gender												
Male	80%	89%	80%	100%	69%	21%	83%	85%	100%	100%	82%	
Female	20%	11%	20%	--	31%	79%	17%	15%	--	--	18%	
Non-Identified/Other	--	--	--	--	--	--	--	--	--	--	--	

Race and Ethnicity ^A	Percentage (%) of Firm (Entire Staff)											
	DDJ Capital Management	Earnest Partners	Fisher	Hansberger Growth Investors	Meketa Investment Group	Northern Trust	NWQ Investment Management	Parametric Portfolio Assoc.	Ramirez Asset Management	Reams Asset Management	Rice Hall James & Assoc.	State Street Global Advisors
African American/Black	--	17%	2%	--	7%	11%	5%	1%	5%	--	3%	2%
Asian/Hawaiian/Pacific Islander	4%	12%	10%	40%	9%	10%	14%	16%	16%	3%	6%	17%
Latino/Hispanic	--	2%	6%	--	7%	11%	8%	2%	21%	3%	3%	4%
White	93%	69%	77%	60%	76%	65%	73%	76%	58%	94%	88%	74%
American Indian/ Alaska Native	--	--	0%	--	--	--	--	1%	--	--	--	0%
Other	4%	--	4%	--	1%	2%	--	4%	--	0%	0%	3% ^B
Gender												
Male	57%	69%	70%	40%	57%	53%	70%	69%	84%	54%	64%	62%
Female	43%	31%	30%	60%	43%	47%	30%	31%	16%	46%	36%	37%
Non-Identified/Other	--	--	--	--	--	--	--	--	--	--	--	1%

^A Racial/ethnic categories appear as defined by EEOC guidance

^B Contains 2% of staff where ethnicity data is unavailable.

M E K E T A I N V E S T M E N T G R O U P

411 NW PARK AVENUE SUITE 401 PORTLAND OR 97209

503 226 1050 fax 503 226 7702 www.meketagroup.com



MEMORANDUM

To: Oakland Police and Fire Retirement System (OPFRS)

From: Meketa Investment Group (MIG)

Date: March 27, 2019

Re: Crisis Risk Offset (CRO) Implementation – Long Duration

Summary and Recommendation:

At the January 2019 OPFRS meeting, the Board approved a recommendation from MIG to research and utilize one of the plan's current investment managers for its Long Duration component of CRO. At the February 2019 OPFRS meeting, MIG recommended and the board approved that OPFRS utilize State Street Global Advisors (SSgA) and its passively managed strategy to the U.S. Long Treasury index.

Discussion:

As part of a recent OPFRS asset-liability study, the Board approved a new long-term strategic allocation policy. A key feature of the new strategic allocation policy is its allocation to a CRO strategic class. When fully structured and funded, the CRO class will be comprised of three equally weighted components: Long Duration, Systematic Trend Following, and Alternative Risk Premia. The CRO class is expected to (i) have a high probability of producing material appreciation during equity-crisis periods, and (ii) maintain its long-term purchasing power in the intervening market cycles.

As MIG has discussed at prior meetings, one segment of this new class is Long Duration. Long Duration portfolios are those that generally consist of long-dated (maturities in excess of 10 years) high-quality bonds (such as Treasuries and Government-backed high-quality agencies).

Long term Asset Allocation, Period ending 12/31/2018

Asset Class	12/31/2018 Actual	Long- Term Targets
Cash	2	0
Fixed Income	26	21
Credit	2	2
Covered Calls	13	5
Domestic Equity	38	40
International Equity	12	12
CRO	7	20



MEMORANDUM

Unlike the two other components of CRO (Trend Following and Alternative Risk Premia), the Long Duration segment of the asset class can be managed by most reputable fixed income investment firms and is relatively inexpensive to manage. Rather than conduct a full Long Duration manager search, MIG recommends OPFRS utilize one of its current investment managers to run this portion of the asset class.

MIG recommends that OPFRS engage SSgA for this mandate. Specifically, the passively managed U.S. Long Treasury Index. The reasons for this recommendation are 1) the simplicity of the mandate (there is no credit exposure), 2) the low cost of providing the allocation, 4bps for the commingled fund, and 3) SSgA is a current OPFRS manager that already runs mandates for the system.



DISCLAIMER

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

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

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

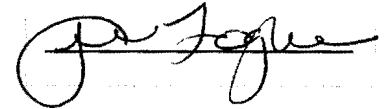
PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

OAKLAND POLICE AND FIRE RETIREMENT BOARD

CITY OF OAKLAND, CALIFORNIA

RESOLUTION No. 7052

*Approved as to
Form and Legality*



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

RESOLUTION AUTHORIZING A PROFESSIONAL SERVICE AGREEMENT WITH STATE STREET GLOBAL ADVISORS (SSgA), TO SERVE AS INVESTMENT MANAGER OF THE LONG DURATION TREASURY PLAN COMPONENT OF THE CRISIS RISK OFFSET INVESTMENT STRATEGY FOR THE OAKLAND POLICE AND FIRE RETIREMENT SYSTEM AT A FEE RATE NOT TO EXCEED 4 BASIS POINTS (4 BP OR 0.04 PERCENT) OF THE PORTFOLIO'S ASSETS VALUE EACH YEAR

WHEREAS, the Board manages and administers the Police and Fire Retirement System ("PFRS"), pursuant to the requirements of Article XXVI of the Oakland City Charter ("City Charter"); and

WHEREAS, Article XVI §17 of the California Constitution, commonly referred to as the Pension Protection Act or Proposition 162, and Article XXVI of the City Charter vest the Board with exclusive control of the administration and investment of the assets of the Police and Fire Retirement Fund (the "Fund"); and

WHEREAS, Article XXVI of the City Charter expressly authorizes the Board to secure competent investment counsel to provide advice and counsel regarding the investment of the Fund and further provides that discretionary powers granted to such investment counsel will be at the option of the Board; and

WHEREAS, the Retirement System approved an update to the Fund's asset allocation by Resolution No. 6976, approved on June 28, 2017, and implemented an asset allocation of 10% to the Crisis Risk Offset investment strategy; and

WHEREAS, the Crisis Risk Offset investment strategy is comprised of three investment components: (1) the Alternative Risk Premia plan, (2) the Systematic Trend Following plan, and (3) the Long Duration Treasury plan; and

WHEREAS, on February 27, 2019, the PFRS Investment Consultant, Meketa Investment Group ("Meketa"), reported that it had reviewed the investment options for the Long Duration Treasury Plan component of the Crisis Risk Offset investment strategy and recommended State Street Global Advisors ("SSgA") be investment manager for this investment component; and

WHEREAS, Meketa did provide its rationale for recommending that SSgA be selected as the Long Duration Treasury Plan investment manager; now, therefore, be it

OAKLAND POLICE AND FIRE RETIREMENT BOARD
CITY OF OAKLAND, CALIFORNIA

RESOLVED: That the Board authorizes execution of a service agreement with State Street Global Advisors to serve as investment manager of the Long Duration Treasury Plan of the Crisis Risk Offset Investment Strategy for the Oakland Police and Fire Retirement System; and be it

FURTHER RESOLVED, that the fee rate not exceed four basis points (4bp, or 0.04 percent) of the portfolio's assets value each year.

IN BOARD MEETING, CITY HALL, OAKLAND, CA **MAY 29, 2019**

PASSED BY THE FOLLOWING VOTE:

AYES: GODFREY, KASAIN, MELIA, MUSZAR, SPEAKMAN, WILKINSON
AND PRESIDENT JOHNSON

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
PRESIDENT

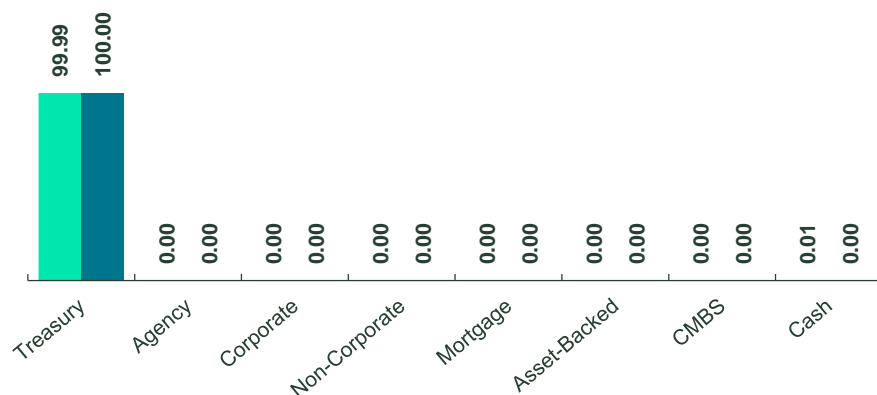
ATTEST: _____
SECRETARY

Long US Treasury Index Composite Characteristics and Performance

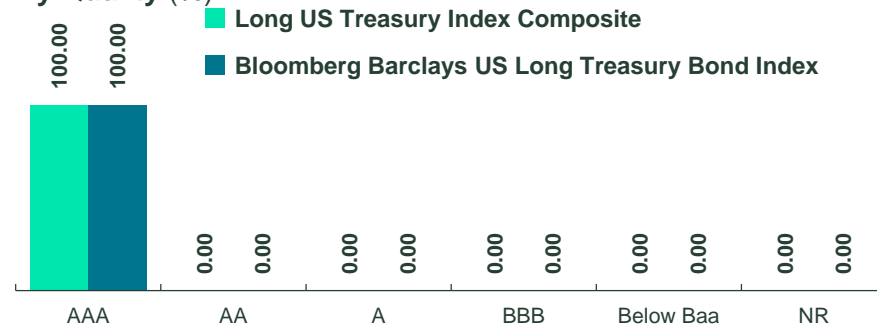
Long US Treasury Index Composite — Characteristics

	Long US Treasury Index Composite	Bloomberg Barclays US Long Treasury Bond Index
Number of Issues	50	49
Average Quality	AAA	AAA
Average Maturity	25.06	25.07
Yield to Worst (%)	2.99	2.99
Average Convexity	3.94	3.94
Modified Adjusted Duration	17.38	17.38
Composite AUM (\$M)*	5,048.26	N/A

Breakdown by Market Value: By Sector (%)



By Quality (%)

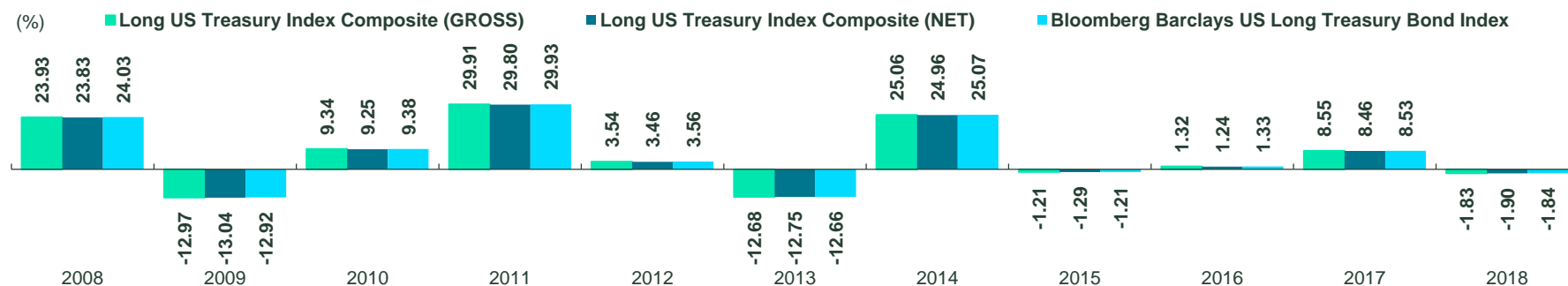


As of December 31, 2018. Sources: Market data, prices, and estimates for characteristics calculations provided by Barclays POINT. All other portfolio data provided by State Street Global Advisors. The Supplemental Information above (except for Composite AUM (shown in USD) is that of a single representative account within the Composite, which is subject to change. The representative account was chosen because it has no material restrictions and fairly represents the investment style of the Strategy. The Supplemental Information should not be deemed to be reflective of (and could differ from) the overall Composite or any other single account within the Composite. Characteristics, sectors, and weights are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. This information should not be considered a recommendation to invest in a particular sector or to buy or sell any security shown. It is not known whether they will be profitable in the future. Characteristics and weights presented are calculated using the month end market value of holdings. Average Credit Quality reflects market value weight of all the rated securities held by the portfolio (excludes unrated securities) using the middle rating provided by either S&P, Moody and Fitch or the lower if only two agency ratings are available.

Long US Treasury Index Composite Performance

Annualized returns for the period ending December 31, 2018 (USD)

	QTR (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception* (%)
Long US Treasury Index Composite (Gross) ^{1,2}	4.20	-1.83	-1.83	2.59	5.93	4.07	5.66
Bloomberg Barclays US Long Treasury Bond Index ⁴	4.19	-1.84	-1.84	2.58	5.93	4.09	5.69
Value Added	0.00	0.01	0.01	0.00	0.00	-0.01	-0.03
Long US Treasury Index Composite (Net) ^{1,3}	4.18	-1.90	-1.90	2.51	5.85	3.99	N/A
Bloomberg Barclays US Long Treasury Bond Index ⁴	4.19	-1.84	-1.84	2.58	5.93	4.09	N/A
Value Added	-0.01	-0.06	-0.06	-0.07	-0.08	-0.09	N/A



* Inception Date: May 2003. Source: State Street Global Advisors. ¹ Returns greater than one year are annualized. Returns represent past performance and are not a guarantee of future results. Current performance may differ from the performance shown. Returns shown are asset — weighted using Composite member market values, where the Composite member's return calculations are time-weighted and reflect the reinvestment of dividends and other income. ² These performance figures are provided gross of fees and expenses other than actual trading fees and expenses, and reflect all items of income, gain, and loss. ³ These performance figures (i) are provided net of actual trading, audit, custody, administrative and legal fees and expenses; (ii) beginning on 9/30/2014, adjusted quarterly to reflect the highest investment management fee on the actual fee schedule, inclusive of incentive fee, if any, of any account within the Composite ("Management Fee") at the relevant time; prior to 9/30/2014, adjusted for an assumed investment management fee, which is equal to or higher than the Management Fee (except in each case certain small accounts-subject to a minimum investment management fee-may have incurred an actual investment management fee higher than that fee assumed in calculating the performance shown above); and (iii) reflect all items of income, gain and loss. ⁴ Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income and the reinvestment of dividends (net of withholding tax rates) and other income and are calculated in US dollars.

It is not possible to invest directly in an index. Performance returns are calculated in US dollars. Calculation for value added returns may show rounding differences.

The above information is considered supplemental to the GIPS presentation for this Composite, which can be found in the Appendix or was previously presented.

A GIPS presentation is also available upon request. gUSTL

GIPS® Presentations

GIPS® is a trademark of the CFA Institute.

GIPS® Report: Long US Treasury Index Composite (As of December 31, 2017)

Gross Returns

Period	Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Inception May 2003
Long U.S. Treasury Index Composite	2.37	8.55	8.55	2.80	3.48	6.53	N/A
Bloomberg Barclays U.S. Long Treasury Bond Index	2.37	8.53	8.53	2.80	3.48	6.55	N/A

Year	Long U.S. Treasury Index Composite	Bloomberg Barclays U.S. Long Treasury Bond Index
2017	8.55	8.53
2016	1.32	1.33
2015	-1.21	-1.21
2014	25.06	25.07
2013	-12.68	-12.66
2012	3.54	3.56
2011	29.91	29.93
2010	9.34	9.38
2009	-12.97	-12.92
2008	23.93	24.03

Year	No. of Portfolios at Period End	Composite Dispersion	3 Yr Annualized Standard Deviation — Composite	3 Yr Annualized Standard Deviation — Benchmark	Total Assets at End of Period (USD)	% of Firm's Assets	Total Firm Assets (USD mil)
2017	*	N/A	10.42	10.42	4,538,832,357	0.17	2,714,705
2016	*	N/A	11.10	11.11	3,189,445,960	0.14	2,291,833
2015	*	N/A	10.41	10.42	2,993,575,870	0.14	2,188,091
2014	*	N/A	9.88	9.88	2,900,440,966	0.12	2,383,493
2013	*	N/A	12.26	12.26	2,856,135,726	0.13	2,279,237
2012	*	N/A	12.28	12.28	3,636,320,052	0.18	2,023,842
2011	*	N/A	13.48	13.48	3,731,299,055	0.21	1,768,142
2010	*	N/A	13.80	13.82	2,764,779,980	0.18	1,518,977
2009	*	N/A	12.75	12.77	2,282,186,012	0.17	1,360,125
2008	*	N/A	10.45	10.47	4,561,619,030	0.48	949,988

gUSTL

* 5 portfolios or less.

** Less than 3 years.

Quarterly and YTD returns are not annualized.

Investment Objective: The Strategy seeks an investment return that approximates as closely as practicable, before expenses, the performance of its benchmark index (the "Index") over the long term.

Investment Strategy: The Strategy is managed using a "passive" or "indexing" investment approach, by which SSGA attempts to replicate, before expenses, the performance of the Index. The Strategy will not necessarily own all of the securities included in the Index. The Strategy may attempt to invest in the securities comprising the Index, in the same proportions as they are represented in the Index. However, due to the diverse composition of securities in the Index and the fact that many of the securities comprising the Index may be unavailable for purchase, it may not be possible for the Strategy to purchase some of the securities comprising the Index. In such a case, SSGA will select securities for the Strategy comprising a portfolio that SSGA expects will provide a return comparable to that of the Index. SSGA expects that it will typically seek to replicate index returns for the Portfolio through investments in the "cash" markets - actual holdings of debt securities and other instruments - rather than through "notional" or "synthetic" positions achieved through the use of derivatives, such as futures contracts or swap transactions (except in the unusual case where SSGA believes that use of derivatives is necessary to achieve an exposure that is not readily available through the cash markets). The Strategy's return may not match the return of the Index.

Footnotes

Firm Definition: For the purpose of complying with the Global Investment Performance Standards (GIPS®), the firm ("SSGA-Global") is defined as all portfolios managed across the global offices of State Street Global Advisors (SSGA) and SSGA Funds Management, Inc., with the exception of Charitable Asset Management which is held out to the marketplace as a distinct business entity. Prior to January 2011, SSGA-Global excluded its wrap fee business and assets accounted for on a book value basis (global cash and stable value assets). Prior to July 2017, SSGA-Global excluded Fiduciary Advisory Solutions. In January 2011, SSGA acquired the Bank of Ireland Asset Management Limited (now known as SSGA Ireland Limited), a GIPS Compliant firm. On January 01, 2012 SSGA Ireland Limited assets were merged into SSGA-Global. In July 2016, SSGA acquired the asset management and advisory services business conducted by GE Asset Management Inc. formerly part GE Asset Management Limited ("GEAM") a GIPS Compliant firm. On July 01, 2017 GEAM assets were merged into SSGA-Global.

Composite Description: The Composite seeks to achieve the Investment Objective described below using the Investment Strategy described below.

Compliance Statement: SSGA-Global claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with GIPS. SSGA-Global claims compliance with the GIPS standards from January 01, 2000. The period prior to January 01, 2000 (where shown) is not in compliance, as not all actual fee-paying portfolios are in a composite. SSGA-Global has been independently verified for the periods January 01, 2000 through December 31, 2016. The verification report is available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. In January 2015, the GIPS Firm name changed from "SSGa-Global" to "SSGA-Global".

List Available: A complete list of the firm's composites and their descriptions is available upon request.

Creation Date: The composite was created on January 01, 2009.

Benchmark Description: The benchmark for the composite is the Bloomberg Barclays U.S. Long Treasury Bond Index. Index returns are unmanaged and do not reflect the deduction of any fees or expenses but include all items of income, gain, and loss. On October 01, 2016, the benchmark name changed from Barclays U.S. Long Treasury Bond Index to Bloomberg Barclays U.S. Long Treasury Bond Index.

Currency: Performance is presented in USD.

Use of Subadvisors: None.

Fees: Returns are expressed gross of management fees. The results do not reflect the deduction of investment management fees. Some members of this composite may accrue administration fees. The client's return will be reduced by the management fee. For example, if an annualized gross return of 10% was achieved over a 5-year period and a management fee of 1% per year was charged and deducted annually, then the resulting total return would be reduced from 61% to 54%.

Fee Schedule: Management fees are 0.040% of the first \$50,000,000; 0.030% of the next \$50,000,000; and 0.025% thereafter. The initial minimum investment for commingled funds is \$5M. The minimum annual management fee for separately managed accounts is \$175,000. Management fees may be adjusted based upon specific client requirements.

Derivatives Use: SSGA may use futures and other derivatives from time to time in the management of the Strategy generally as a temporary substitute for cash investments or for hedging purposes and not with the purpose of creating investment leverage.

Calculation Methodology: Additional information is available upon request regarding the firm's policies and procedures for calculating and reporting performance results as well as valuation procedures.

Annualized Returns: All returns for periods greater than one year have been annualized.

Withholding Taxes Differences: None.

Exchange Rates Differences Between Composite & Benchmark: None.

Minimum Asset Level for Inclusion: 0

Dispersion: Asset-Weighted standard deviation is calculated using the annual returns of the accounts that were included in the composite for all periods of the year.

Significant Events: In November 2007, on the departure of the North America CIO Sean Flannery, Global asset class CIOs were appointed (Alistair Lowe, Asset Allocation and Currency CIO; Mark Marinella, Fixed Income CIO; Steve Meier, Cash CIO and Arlene Rockefeller, Equities CIO). In October 2010, Kevin Anderson, Ph.D. was appointed CIO of Fixed Income and Currency replacing Mark Marinella. In June 2013, Steve Meier, CIO of Cash, replaced Kevin Anderson, Ph.D. as the CIO of Fixed Income, Currency and Cash. Kevin Anderson, Ph.D. previously CIO and Head of Fixed income, assumed the role of Head of Investments for the Asia Pacific. In July 2014, on the departure of Maria Dwyer, Matt Steinaway was named interim Chief Risk Officer. Matt replaced Maria Dwyer, who was appointed to the leadership team of the Office of Regulatory Initiatives Oversight. In November 2014, David Saulnier was appointed as Chief Risk Officer for SSGA, replacing Matt Steinaway. Matt Steinaway resumed his position as Head of Global Cash Management. In March 2015, Timothy Corbett was appointed Head of Global Investment Risk replacing Fred Gjerstad who has since left the firm. In March 2015, Ronald O' Hanley was appointed CEO and President of State Street Global Advisors replacing Scott Powers who retired. In June 2015, Greg Ehret was named President continuing to report to Ron O'Hanley, chief executive officer of SSGA. In August 2015, Matt Steinaway was appointed as Chief Risk Officer for SSGA, replacing David Saulnier who has since left the firm. In September 2015, John Philpot, Head of Portfolio Management EMEA Fixed Income Beta team, left the firm. In December 2015, Ronald O' Hanley, Chief Executive Officer of SSGA, re-assumed the role of President of the company upon the departure of Greg Ehret. Steven Lipiner was appointed Chief Financial Officer replacing Keith Crawford who was appointed head of global mergers and acquisitions. On March 30, 2016, SSGA agreed to acquire GE Asset Management (GEAM). The transaction was finalized on July 01, 2016. In July 2016, Ralph Layman became Vice Chairman of SSGA. In December 2016, Venky Venkataramani was appointed SSGA's Global Head of Fixed Income Beta Solutions replacing Brian Kinney. In November 2017, Jay Hooley announced his retirement as CEO by the end of 2018, to be succeeded by Ron O' Hanley who was also appointed President and COO. Cyrus Taraporevala will become President and CEO of State Street Global Advisors.

Past and Future Performance: Historic performance is not necessarily indicative of actual future investment performance, which could differ substantially.

Important Disclosures

Important Specific Information

FOR INVESTMENT PROFESSIONAL USE ONLY.

Past performance is not an indicator of future results. Diversification does not ensure a profit or guarantee against loss.

Passively managed strategies seek to replicate the performance of a specified index. The strategy is passively managed and may underperform its benchmarks. An investment in the strategy is not appropriate for all investors and is not intended to be a complete investment program. Investing in the strategy involves risks, including the risk that investors may receive little or no return on the investment or that investors may lose part or even all of the investment.

BLOOMBERG®, a trademark and service mark of Bloomberg Finance L.P. and its affiliates, and BARCLAYS®, a trademark and service mark of Barclays Bank Plc, have each been licensed for use in connection with the listing of the Bloomberg/Barclays Indices.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without SSGA's express written consent.

The trademarks and service marks referenced herein are the property of their respective owners. Third party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

All material has been obtained from sources believed to be reliable. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.

United States: State Street Global Advisors, One Iron Street, Boston MA, 02210.

Web: www.ssga.com

© 2019 State Street Corporation — All Rights Reserved.

Tracking Code: 2466431.1.3.AM.INST

Expiration Date: May 31, 2019



MEMORANDUM

To: Oakland Police and Fire Retirement System (OPFRS)
From: David Sancewich, Sean Copus, CFA – Meketa Inv. Group
Date: May 29, 2019
Re: 2019 Ongoing Strategic Investment Agenda

On an ongoing (monthly) basis, Meketa develops a list of projects that we expect to work closely with OPFRS to complete over throughout the calendar year (see table below). In an attempt to coordinate the scheduling of these tasks, this memo details a Preliminary Investment Project Agenda by calendaring and prioritizing the expected tasks and deliverables that would be required to fulfill the Agenda. Meketa welcomes any suggestions and/or modifications to the proposed timeline.

2019 Preliminary Investment Project Agenda

Expected Completion Date	Task
June 2019	<ul style="list-style-type: none">• Asset Allocation Review and Update• Long Duration Treasury discussion• International Equity Search: Semi Finalists• Cash Flow Report (3Q 2019)
July 2019	<ul style="list-style-type: none">• Flash Performance Report (2Q2019)• International Equity Search: Finalists selection• TBD: Educational Topic
August 2019	<ul style="list-style-type: none">• PCA Performance Report (2Q 2019)• International Equity Search: Finalist Interviews• Manager Update: Reams
September 2019	<ul style="list-style-type: none">• TBD: Educational Topic• Cash Flow Report (4Q2019)• Thermal Coal List Report - Update
October 2019	<ul style="list-style-type: none">• Flash Performance Report (3Q 2019)• Manager Update: Parametric• Service Contract Extension - Parametric



MEMORANDUM

Expected Completion Date	Task
November 2019	<ul style="list-style-type: none">• PCA Performance report (3Q2019)• Manager Update: Ramirez
December 2019	<ul style="list-style-type: none">• TBD: Depends on meeting schedule• Cash Flow Report (1Q2020)

Bold are priority strategic items.

This agenda continues forward with the implementation of a new potential asset allocation as a result of the asset liability modeling in 2017.

This agenda includes only major strategic items. PCA also expects to work with the Staff and Board to complete more routine tasks and projects, as expected.

All persons wishing to address the Board must complete a speaker's card, stating their name and the agenda item (including "Open Forum") they wish to address. The Board may take action on items not on the agenda only if findings pursuant to the Sunshine Ordinance and Brown Act are made that the matter is urgent or an emergency.

Oakland Police and Fire Retirement Board meetings are held in wheelchair accessible facilities. Contact the Retirement Unit, 150 Frank Ogawa Plaza, Suite 3349 or call (510) 238-7295 for additional information.



Retirement Unit
150 Frank H. Ogawa Plaza
Oakland, California 94612

AGENDA

RETIREMENT BOARD MEMBERS

Walter L. Johnson, Sr.
President

Jaime T. Godfrey
Vice President

Katano Kasaine
Member

Martin J. Melia
Member

Robert J. Muszar
Member

John C. Speakman
Member

Steven Wilkinson
Member

REGULAR MEETING of the BOARD OF ADMINISTRATION of the OAKLAND POLICE AND FIRE RETIREMENT SYSTEM ("PFRS")

Wednesday, May 29, 2019 – 11:30 am
One Frank H. Ogawa Plaza, Hearing Room 1
Oakland, California 94612

- - - ORDER OF BUSINESS - - -

- | | |
|-----------|--|
| A. | Subject: PFRS Board Meeting Minutes |
| | From: Staff of the PFRS Board |
| <hr/> | |
| | Recommendation: APPROVE April 24, 2019 PFRS Board meeting minutes. |
|
 | |
| B. | Subject: Resolution No. 7060 – Approve creation of the Policy Governing the Overpayment and Underpayment of Member Retirement Allowances |
| | From: Staff of the PFRS Board |
| <hr/> | |
| | Recommendation: APPROVE Resolution No. 7060 – Creation of the Policy Governing the Overpayment and Underpayment of Member Retirement Allowances. |
|
 | |
| C. | Subject: Election of a new 3-Year Alternating Police/Fire Board Position |
| | From: Staff of the PFRS Board |
| <hr/> | |
| | Recommendation: ACCEPT an informational report regarding the Election of a new 3-Year Alternating Police/Fire Board Position to fill Board seat currently held by Martin J. Melia through August 31, 2019. |

ORDER OF BUSINESS, continued

D. AUDIT AND OPERATIONS COMMITTEE AGENDA – MAY 29, 2019

- D1. Subject:** Administrative Expenses Report
From: Staff of the PFRS Board
-
- Recommendation:** **ACCEPT** an informational report regarding PFRS administrative expenses from July 1, 2018 through March 31, 2019.
- D2. Subject:** Informational report regarding 2006 Management Audit of the PFRS System
From: Staff of the PFRS Board
-
- Recommendation:** **ACCEPT** an informational report regarding the scope, cost and System changes made based on the findings of the 2006 Management Audit of the PFRS System for a future management audit.

E. INVESTMENT & FINANCIAL MATTERS COMMITTEE AGENDA – MAY 29, 2019

- E1. Subject:** Investment Manager Performance Review – Rice Hall James and Associates, LLC
From: Rice Hall James and Associates, LLC
-
- Recommendation:** **ACCEPT** an Informational Report regarding review of Rice Hall James and Associates, LLC, a PFRS Small Cap Growth Domestic Equities Investment Manager.
- E2. Subject:** Investment Manager Overview – Rice Hall James and Associates, LLC, a small cap Growth Domestic Equities Investment Manager
From: Meketa Investment Group
-
- Recommendation:** **APPROVE** the evaluation, review and possible watch status placement of Rice Hall James and Associates, LLC, a PFRS Small Cap Growth Domestic Equities Investment Manager.
- E3. Subject:** Investment Manager Overview – DDJ Capital Management, LLC
From: Meketa Investment Group
-
- Recommendation:** **APPROVE** the evaluation, review and possible watch status placement of DDJ Capital Management, LLC, a PFRS High Yield and Bank Loan Fixed Income Investment Manager.

ORDER OF BUSINESS, continued

- E4. **Subject:** **Investment Market Overview**
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** an informational report on the global investment markets through April 2019.
- E5. **Subject:** **Investment Fund Performance for the Quarter Ending March 31, 2019**
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** informational report on the Investment Fund Performance for the Quarter Ending March 31, 2019.
- E6. **Subject:** **Informational Report on the status of the Request for Proposal (RFP) for the new PFRS Active International Equity Asset Class Investment Manager**
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** an Informational Report on the status of the Request for Proposal (RFP) for the new PFRS Active International Equity Asset Class Investment Manager.
- E7. **Subject:** **Informational Report on the diversity of the Board of Directors for each Investment Manager of the PFRS Investment Fund**
From: Meketa Investment Group
-
- Recommendation:** **ACCEPT** an informational report on the diversity of the Board of Directors for each Investment Manager of the PFRS Investment Fund.
- E8. **Subject:** **Consideration of: 1) professional services agreement with State Street Global Advisors (SSgA) to serve as investment manager of the long duration treasury plan component of the crisis risk offset investment strategy for the Oakland Police and Fire Retirement System (PFRS); and 2) Temporary alternative investment options (i.e. Exchange-Traded Fund)**
From: Staff of the PFRS Board
-
- Recommendation:** **APPROVE Resolution No. 7052** – Resolution authorizing a professional service agreement with State Street Global Advisors (SSgA), to serve as investment manager of the long duration treasury plan component of the crisis risk offset investment strategy for the Oakland Police and Fire Retirement System at a fee rate not to exceed 4 basis points (4 bp or 0.04 percent) of the portfolio’s assets value each year”, or **APPROVE** Temporary Alternative Investment options (i.e. Exchange-Traded Fund).

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
REGULAR BOARD MEETING
MAY 29, 2019**

ORDER OF BUSINESS, continued

- | | |
|--------------------------------|---|
| F. Subject: | Member Resolution(s) No. 7061 - 7062 |
| From: | Staff of the PFRS Board |
| Recommendation: | APPROVE Member Resolution(s) No. 7061 - 7062 |
| F1. Resolution No. 7061 | Resolution approving death benefit payments and directing warrants thereunder in the total sum of \$1,000.00 payable to the beneficiaries of deceased member(s) as follows: Estate of Scott W. Dulgar; Elizabeth Trost. |
| F2. Resolution No. 7062 | Resolution fixing the monthly allowance of Mildred A. Tomatis, spouse of Joseph P. Tomatis, retired member of the Police and Fire Retirement System. |
- G. NEW BUSINESS**
- H. OPEN FORUM**
- I. FUTURE SCHEDULING**

A BOARD MEETING of the Oakland Police and Fire Retirement System ("PFRS") was held on April 24, 2019 in Hearing Room 1, One Frank Ogawa Plaza, Oakland, California.

Board Members Present:

- Walter L. Johnson, President
- Katano Kasaine, Member
- R. Steven Wilkinson, Member
- John C. Speakman, Member
- Robert J. Muszar, Member

Board Members Absent:

- Jaime T. Godfrey, Vice President
- Martin J. Melia, Member

Additional Attendees:

- David Jones, PFRS Plan Administrator
- Jennifer Logue, PFRS Legal Counsel
- David Low & Teir Jenkins, Staff Member
- Sean Copus, Meketa Investment Group
- Kristen Chase, Meketa Investment Group

The meeting was called to order at 11:39 am.

A. Approval of PFRS Board Meeting Minutes – Member Muszar made a motion to approve the March 27, 2019 PFRS Board meeting minutes, second by Member Speakman. Motion Passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAIN – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5/ NOES: 0 / ABSTAIN: 0)

B. Approval of Resolution No. 7054 – Resolution authorizing settlement of Alameda County Superior Court Case No. RG16838274 – PFRS Legal Counsel Jennifer Logue reported that resolution no. 7054 stated the approval of the settlement of the court case no. RG16838274 between the ROPOA and PFRS. Member Speakman made the motion to approve resolution no. 7054, second by member Kasaine. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAIN – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5/ NOES: 0 / ABSTAIN: 0)

C. Approval of Resolution No. 7055 – Assignment of Pension Consulting Alliance to Meketa Investment Group – Plan Administrator David Jones reported that Resolution No. 7055 gives Board approval of the assignment of PCA to the Meketa Investment Group. Member Speakman made a motion to approve resolution no 7055, second by member Kasaine. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAIN – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5/ NOES: 0 / ABSTAIN: 0)

D. Status of Alameda County Superior Court Case RG14753080 and Appellate District Case no. A148987 – PFRS Legal Counsel Jennifer Logue reported the decision of the California First Appellate District Case No. A148987 pertaining to Alameda County Superior Court Case RG14753080. Following some Board discussion, Member Muszar made a motion to accept the verbal report from the PFRS Legal Counsel, second by member Speakman. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5/ NOES: 0 / ABSTAIN: 0)

Later in the meeting, PFRS Legal Counsel Jennifer Logue reported that the public report of the appellate decision was released by the appellate court on this matter. Ms. Logue then handed out printed copies of the findings of the Appellate court on this matter.

E. PFRS AUDIT COMMITTEE MEETING – APRIL 24, 2019

E1. Administrative Expenses Report – Teir Jenkins presented the status of the administrative expenditures of the PFRS plan through February 28, 2019. Member Muszar made a motion to accept the informational report from staff, second by Kasaine. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5/ NOES: 0 / ABSTAIN: 0)

E2. Policy Governing the Overpayment or Underpayment of Member Benefits – Member Speakman reported the Audit Committee discussed the matter of the Policy Governing the Overpayment or Underpayment of Member Benefits. He and Member Kasaine reported that the Committee planned to submit the draft policy identified as attachment 1 of this agenda item to Board members to offer any final suggestions for edits and that Staff and the Plan Administrator would submit a version for Board approval at the upcoming Board meeting. President Johnson said the Audit Committee should do its work to make changes and agree on a final document and bring it before the Board for action. Member Speakman made motion to add this matter to the May 2019 Agenda, second by member Kasaine. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5/ NOES: 0 / ABSTAIN: 0)

E3. 2006 Management Audit of the PFRS System – Member Speakman reported the Audit Committee's discussion about the request to review the 2006 management audit of the PFRS system for consideration of conducting a follow-up management audit. Members Speakman said the committee discussed this matter and acted to bring this matter before the Board so it may decide to direct staff to conduct an updated management audit of the Staff of the PFRS fund. President Johnson recommended this matter be returned to be Audit Committee to refine its recommendation for the Board. **MOTION:** Member Muszar made a motion to accept President Johnson's recommendation to return this matter to the Audit Committee for continued discussion with staff to obtain cost, original findings, and scope of the planned management audit item, second by member Speakman. Discussion continued.

Member Kasaine said returning this matter to the audit committee would not be efficient. Member Kasaine suggested the Plan Administrator, not the committee, be exclusively assigned the work to produce information and that he present his findings to the Committee or Board. President Johnson explained why he disagreed with this assessment.

Member Muszar withdrew his motion. President Johnson directed this matter be returned to be Audit Committee to refine its recommendation for the Board.

E4. Annual Report for the Fiscal Year ending June 30, 2019– Member Speakman, Member Muszar, and Plan Administrator Jones reported that they would work with the Retired Oakland Police Officers Association and Local 55 to obtain member contribution information for the next published PFRS Annual Report.

E5. Resolution No. 7056 - Travel authorization for PFRS board member Jaime Godfrey – Member Speakman made a motion to approve Resolution No. 7056 - Travel authorization for PFRS board member Jaime Godfrey to travel and attend the 2019 IMN Global Indexing and ETF Conference (“2019 IMN Conference”) from June 19, 2019 to June 21, 2019 in Dana Point, CA with an estimated budget of One Thousand Eight Hundred Sixty Dollars (\$1,860.00), second by member Muszar. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – ABSENT / MELIA – Y / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5 / NOES: 0 / ABSTAIN: 0)

E6. Resolution No. 7057 - Travel authorization for PFRS board member R. Steven Wilkinson – Member Speakman made a motion to approve Resolution No. 7057 - Travel authorization for PFRS board member R. Steven Wilkinson to travel and attend the 2019 National Association of Securities Professionals Pension and Finance Conference (“2019 NASP Conference”) from June 24, 2019 to June 26, 2019 in Baltimore, MD with an estimated budget of Two Thousand One Hundred Dollars (\$2,100.00), second by member Muszar. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – ABSENT / MELIA – Y
MUSZAR – Y / SPEAKMAN – Y / WILKINSON – ABSTAIN]
(AYES: 4 / NOES: 0 / ABSTAIN: 1)

E7. Resolution No. 7058 - Travel Authorization for PFRS Staff Member David Low – Member Speakman made a motion to approve Resolution No. 7058 - Travel Authorization for PFRS Staff Member David Low to travel and attend the 2019 California Association of Public Retirement Systems Administrative Assistant Roundtable Conference (“2019 CALAPRS Admin Roundtable Conference”) on April 26, 2019 in San Jose, CA with an estimated budget of One Hundred Eighty-Nine Dollars (\$189.00), second by member Muszar. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – ABSENT / MELIA – Y / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5 / NOES: 0 / ABSTAIN: 0)

E8. Resolution No. 7059 - Travel Authorization for PFRS Plan Administrator David Jones – Member Speakman made a motion to approve Resolution No. 7059 - Travel Authorization for PFRS Plan Administrator David Jones to travel and attend the 2019 California Association of Public Retirement Systems Administrators' Roundtable Conference (“2019 CALAPRS Administrators' Roundtable Conference”) on June 21, 2019 in San Jose, CA with an estimated budget of One Hundred Ninety-Four Dollars (\$194.00), second by member Muszar. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – ABSENT / MELIA – Y / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5 / NOES: 0 / ABSTAIN: 0)

F. PFRS INVESTMENT COMMITTEE MEETING – APRIL 24, 2019

F1. Investment Manager Performance Review – DDJ Capital Management, LLC
– David Levine and Jack O'Connor from DDJ Capital Management, LLC, presented the investment performance report and the underlying strategy of the PFRS Funds managed by DDJ. Following the report and some Board discussion, member Kasaine made a motion to accept the informational report from DDJ, second by member Speakman. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5 / NOES: 0 / ABSTAIN: 0)

F2. Investment Manager Overview – DDJ Capital Management, LLC – Kristen Chase from Meketa presented an overview of DDJ following their presentation. She said Meketa had no action to recommend regarding DDJ at this time. **MOTION:** Following some Board discussion, Member Kasaine made a motion to approve Meketa's recommendation of no action, second by member Speakman. **SUBSTITUTE MOTION:** Following some additional discussion, Member Muszar made a substitute motion to return this matter to the Investment Committee for further discussion, second by member Wilkinson. After additional discussion, a vote was called. The substitute motion failed due to a lack of four (4) affirmative votes by the Board member present.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – N / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – N / WILKINSON – Y]
(AYES: 3 / NOES: 2 / ABSTAIN: 0)

A vote on the original motion to approve Meketa's recommendation of no action at this time failed due to a lack of four (4) affirmative votes by the Board members present.

[GODFREY – ABSENT / JOHNSON – N / KASAINÉ – Y / MELIA – ABSENT / MUSZAR – N / SPEAKMAN – Y / WILKINSON – N]
(AYES: 2 / NOES: 3 / ABSTAIN: 0)

PFRS Legal Counsel Jennifer Logue reported that a recommendation by a Board member to return a Board agenda item to its committee for continued discussion is within the power of the Board president without the need for a Board motion. President Johnson directed this matter be returned to the Investment Committee for additional discussion before bringing it back to Board for action.

F3. Investment Market Overview – Sean Copus reported on the global economic factors affecting the PFRS Fund. Member Speakman made a motion to accept the informational report from Meketa, second by member Muszar. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAINÉ – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5 / NOES: 0 / ABSTAIN: 0)

F4. Informational Report on Preliminary Investment Fund Performance for the Quarter Ending March 31, 2018 – Discussion of this matter was moved back to the Investment Committee for future discussion.

- F5. Informational Report on the status of the Request for Information for the new PFRS Active International Equity Asset Class Investment Manager –** Ms. Chase reported that the Request for Proposal (RFP) process has started for the new PFRS International Investment Portfolio manager at Meketa. She reported that Meketa will continue to update the PFRS Board of the progress of this RFP at each upcoming meeting. Member Wilkinson made a motion to accept the informational report from Meketa, second by member Speakman. Motion passed.

[GODFREY – ABSENT / JOHNSON – Y / KASAIN – Y / MELIA – ABSENT / MUSZAR – Y / SPEAKMAN – Y / WILKINSON – Y]
(AYES: 5 / NOES: 0 / ABSTAIN: 0)

- F6. Informational Report on the diversity of the Board of Directors for each Investment Manager of the PFRS Investment Fund –** Discussion of this matter was moved back to the Investment Committee for future discussion.

- F7. Resolution No. 7052 – Resolution authorizing a professional service agreement with State Street Global Advisors (SSgA) –** Action on this Board Resolution was delayed until the next PFRS Board meeting.

G. NEW BUSINESS – No Report.

- H. OPEN FORUM –** Pete Peterson, President of the Retired Oakland Police Officers Association (ROPOA), stated the ROPOAs readiness to negotiate equitable solutions to their differences with the PFRS Board and the City of Oakland. He expressed some frustration with the lines of communication between the ROPOA and PFRS Board and Staff. President Johnson asked all parties to be mindful that the PFRS Board is a public agency and direct communication between parties is not appropriate outside of public Board meetings.

The Board discussed the dissemination of information to the Board and what is appropriate and inappropriate forms of communication.

- I. FUTURE SCHEDULING –** The next PFRS Board meeting was scheduled for Wednesday, May 29, 2019. The Board and staff discussed what matters would be brought to the PFRS Board at the May 2019 Board meeting.

The meeting adjourned at 1:15 pm.

DAVID JONES, BOARD SECRETARY

DATE



AGENDA REPORT

TO: Oakland Police and Fire
Retirement Board

FROM: David Jones
Plan Administrator

SUBJECT: Approve Resolution No. 7060 creating the
Policy Governing the Overpayment and
Underpayment of Member Retirement
Allowances

DATE: May 20, 2019

SUMMARY

Oakland Police and Fire Retirement System ("PFRS") staff request that the PFRS Board of Administration ("PFRS Board") approve Resolution No. 7060 creating the Policy Governing the Overpayment and Underpayment of Member Retirement Allowances (the "Policy").

BACKGROUND

To develop this Policy, staff researched and reviewed the bylaws, rules and regulations, and operational policies of several public pension systems including: the San Diego City Employees' Retirement System, San Joaquin County Employees' Retirement Association, San Mateo County Employees' Retirement Association, San Jose Federated Employees' Retirement System, City of Fresno Retirement System, Fresno County Employees' Retirement Association, Sacramento Regional Transit District, and Contra Costa County Employees' Retirement Association. Staff used this research, to draft a Policy to specifically address the needs and concerns of PFRS. The Policy will guide staff in the effective and efficient resolution of overpayment and underpayment of retirement allowances to members.

At the April 25, 2018 Audit Committee meeting, staff submitted for Audit Committee review the Agenda Report addressing the Draft Policy Governing Overpayment and Underpayment of Member Retirement Allowances. Following Audit Committee discussion, a motion made by Member Muszar was passed (1) to hold this matter over until the June 2018 Audit Committee meeting for further discussion and (2) to have Committee Members submit to staff written comments by June 15, 2018 in order for them to be published with the June 2018 agenda.

On April 30, 2018, staff delivered by email the DRAFT Policy Governing Overpayment and Underpayment of Member Retirement Allowances to each Board member requesting comments be returned to staff by June 13, 2018.

PFRS Board Meeting
May 29, 2019

Board of Administration, Oakland Police and Fire Retirement System

Subject: Approve Resolution No. 7060 creating the Policy Governing the Overpayment and Underpayment of Member Retirement Allowances

Date: May 20, 2019

Page 2

At the June 27, 2018 Audit Committee meeting, the Audit Committee decided that continued work on this matter would be carried over to the August 29, 2018 Audit Committee meeting for continued discussion and editing.

At the August 29, 2018 Audit Committee meeting, the Audit Committee decided that continued work on this matter would be carried over to the next scheduled Audit Committee meeting for continued discussion and editing. However, the September 26, 2018 Audit Committee was canceled and the work on this matter was carried over to the October 31, 2018 Audit Committee meeting for continued discussion and editing.

At the October 31, 2018 Audit Committee meeting, The Audit committee decided that continued work on this matter would be carried over to the next meeting when the Audit Committee will have all three committee members available to discuss this matter, which was expected to be the November 28, 2018 Audit Committee meeting.

At the November 28, 2018 Audit committee meeting, following Audit Committee discussion, Member Muszar suggested he work with staff prior to future committee discussion of the overpayment and underpayment policy to refine his suggested edits detailed in attachment 2. Upon completing these refinements, the Audit Committee would re-commence discussion on the Draft Policy Governing Overpayment and Underpayment of PFRS Member Benefits.

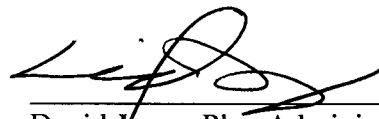
At the January 31, 2019 Audit Committee meeting, the committee continued to refine the policy. Following committee discussion, Member Muszar agreed to continue to discuss further refinements to this policy with staff. The Audit Committee continued this matter to the April 2019 Audit Committee meeting for continued discussion.

At the April 24, 2019 Board meeting, the Board approved final edits to the draft policy and instructed Staff to bring forth the completed policy and Board Resolution approving the Policy to the May 2019 Board meeting.

RECOMMENDATION

Staff recommends the PFRS Board approve Resolution No. 7060 creating the Policy Governing the Overpayment and Underpayment of Member Retirement Allowances.

Respectfully submitted,



David Jones, Plan Administrator
Oakland Police and Fire Retirement System

Attachments (1):

1. **Resolution No. 7060 - Policy Governing the Overpayment and Underpayment of PFRS Member Retirement Allowances.**

PFRS Board Meeting
May 29, 2019

ATTACHMENT 1

OAKLAND POLICE AND FIRE RETIREMENT BOARD
CITY OF OAKLAND, CALIFORNIA

RESOLUTION NO. 7060

Approved to Form
and Legality



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

**RESOLUTION APPROVING THE ADOPTION OF THE POLICY
GOVERNING THE OVERPAYMENT OR UNDERPAYMENT OF MEMBER
RETIREMENT ALLOWANCES BY THE OAKLAND POLICE AND FIRE
RETIREMENT SYSTEM BOARD**

WHEREAS, pursuant to Oakland City Charter Section 2601(e), the City of Oakland Police and Fire Retirement Board (the "Board") "shall possess power to make all necessary rules and regulations for its guidance and shall have exclusive control of the administration and investment of the fund established for the maintenance and operation of the system..."; and

WHEREAS, the Audit Committee of the City of Oakland Police and Fire Retirement System ("PFRS") has forwarded a Policy Governing the Overpayment or Underpayment of Member Retirement Allowances to the Board for consideration and adoption; and

WHEREAS, the Board has considered the Policy Governing the Overpayment or Underpayment of Member Retirement Allowances; now, therefore, be it

RESOLVED: That the PFRS Policy Governing the Overpayment or Underpayment of Member Retirement Allowances attached hereto as **Exhibit 1** is hereby adopted as a Policy of the City of Oakland Police and Fire Retirement System; and be it

FURTHER RESOLVED: That the PFRS Policy Governing the Overpayment or Underpayment of Member Retirement Allowances shall become effective immediately upon final adoption of this Resolution by an affirmative vote of at least four (4) members of the Board.

IN BOARD MEETING, CITY HALL, OAKLAND, CA MAY 29, 2019

PASSED BY THE FOLLOWING VOTE:

AYES: GODFREY, KASAIN, MELIA, MUSZAR, SPEAKMAN, WILKINSON,
AND PRESIDENT JOHNSON

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
PRESIDENT

ATTEST: _____
SECRETARY

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
POLICY GOVERNING THE OVERPAYMENT OR UNDERPAYMENT
OF MEMBER RETIREMENT ALLOWANCES**

I. PURPOSE

The purpose of this Policy Governing the Overpayment or Underpayment of Member Retirement Allowances ("Policy") is to set forth procedures for handling the overpayment and underpayment of Retirement Allowance payments to members and beneficiaries ("Members") of the Oakland Police and Fire Retirement System ("PFRS").

The PFRS Board may implement a different correction process that it determines is appropriate. In the event of any inconsistency between applicable law and this Policy, the law shall take precedence.

II. INTRODUCTION

The Oakland Police and Fire Retirement Board ("PFRS Board") has a fiduciary obligation to the retirement fund to conserve fund assets and protect the integrity of the fund for the benefit of all PFRS Members.

Members have a right to accurate and timely pension payments. Except as determined by a court of law or the PFRS Board pursuant to the Policy, no Member may receive or retain retirement allowance payments over the amounts to which the Member is entitled, and no Member may be deprived of retirement allowance payments to which the Member is entitled.

III. POLICY

It is the policy of the PFRS Board, acting through its delegated administrative staff ("Staff"), to investigate any alleged retirement allowance overpayments or underpayments promptly and diligently, and make every reasonable effort to recover overpayments and pay out underpayments of Retirement Allowances, unless the PFRS Board determines, pursuant to the terms of this Policy, that circumstances dictate otherwise.

After the discovery of an overpayment or underpayment of retirement allowances, and after the required written notification to the affected Member, PFRS will adjust future retirement allowance payments to the Member to reflect the correct total amount to which the Member is entitled (as indicated below). PFRS will also pay or assess the Member as appropriate for the underpayment or overpayment in a lump sum, installments, adjustments to future monthly retirement allowance payments, or a combination of these methods to which the Members are entitled in accordance with this policy and applicable law.

Overpayment of Retirement Allowance to PFRS' Members and Beneficiaries

1. PFRS Staff will correct the Member's recurring monthly overpayment to the correct amount going forward at the earliest practical time after discovering any overpayments.

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
POLICY GOVERNING THE OVERPAYMENT OR UNDERPAYMENT
OF MEMBER RETIREMENT ALLOWANCES**

2. PFRS will take all reasonable steps to recover the full amount of all overpayments subject to the provisions of the Policy and applicable law.
3. PFRS will recover overpayments by (a) a lump sum payment from the Member, (b) periodic installment payments from the Member, or (c) offsetting the amount to be recovered against monthly retirement allowance payments over a period of time not to exceed three years; unless the PFRS Board, in its discretion and because of legal or practical considerations, determines that another process is warranted.
4. The PFRS Board believes that considerations of cost effectiveness make it prudent and reasonable to pursue recovery of overpayments only where the cumulative total amount overpaid to the Member is \$20 or more. Accordingly, the Retirement Plan Administrator (the "Plan Administrator") is authorized to not seek recovery of any overpayments where the total amount overpaid to the Member is less than \$20.
5. The Plan Administrator shall have authority to negotiate the terms of recovering overpayments through installments, lump sums, or as offsets against monthly retirement allowance payments for amounts below five thousand dollars (\$5,000.00). The PFRS Board must approve installment overpayment recovery agreements when the total amount of overpayment is five thousand dollars (\$5,000.00) or more. Among other things, the likelihood of collection, the cost of collection, the amount of possible recovery and documented financial hardship of the Member or Member's estate will be considered by the Plan Administrator and/or the PFRS Board when agreeing to installment recovery terms. Any forgiveness of debt above One Hundred Dollars (\$100.00) must be approved by the PFRS Board.
6. PFRS may pursue all legal remedies to collect overpayments, including making a claims against an estate or trust.
7. Upon the death of the Member before full repayment of an overpayment has been made, PFRS shall pursue a claim or claims against the Member's estate, survivors, heirs and/or beneficiaries to recover the unpaid amounts.
8. If a Member dies while making repayments to PFRS, the entire balance of the amount owed shall become due upon the Member's death and deducted from the final remittance check. Any remaining unpaid balance shall be pursued in accordance with this Policy. Overpayments due shall not be deducted from a Member's \$1,000 death benefit payment unless there is no designated qualified beneficiary. If the deceased Member has a surviving spouse who is entitled to a reduced continuation of the Member's monthly retirement allowance, the Plan Administrator has the authority to collect a reduced monthly amount from the surviving spouse without changing the total amount owed by the deceased Member.
9. Before collecting an overpayment from the monthly retirement allowance of a Member without consent, PFRS will give at least 30-day's notice.

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
POLICY GOVERNING THE OVERPAYMENT OR UNDERPAYMENT
OF MEMBER RETIREMENT ALLOWANCES**

10. The PFRS Board adopts the following procedures for accomplishing the recovery of overpaid retirement allowances:
- A. **Notification of Overpayment.** Upon discovery of an overpayment, PFRS shall send a **Notice of Overpayment of Member Retirement Allowance** by certified mail, return receipt requested, or by express delivery service, to the Member advising the Member as follows:
- i. The notice will identify the facts and circumstances of the overpayment and details showing the total amount of the overpayment.
 - ii. The notice will request payment to PFRS of the amount overpaid, subject to the provisions of the Policy.
 - iii. The notice will provide three options of repayment, one of which may be selected by the Member:
 - (1) Option 1 — lump sum payment to PFRS for the full amount overpaid. Lump sum payment must be made within 30 days of the notice.
 - (2) Option 2 — reduction from monthly retirement allowance payments in ~~the an~~ amount ~~equal to~~ not to exceed ten percent (10%) of the total ~~overpayment~~ monthly retirement allowance, until paid back in full.
 - (3) Option 3 — repayment in equal installments over the same length of time that the overpayments occurred or three years, whichever is longer. Unless a financial hardship is approved by the PFRS Board, the installment period shall not exceed 3 years.
 - iv. The notice and agreement to repay excess retirement allowances will provide that Option 2 (10%) will go into effect by default if the Member fails to choose an alternative option within 30 days following the date of the notice.
 - v. The notice shall state that dispute of overpayment must be submitted in writing to the Retirement office within 30 days following the date the notice was sent. This dispute should include supporting documentation, if applicable.

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
POLICY GOVERNING THE OVERPAYMENT OR UNDERPAYMENT
OF MEMBER RETIREMENT ALLOWANCES**

Underpayment of Retirement Allowance to Members and Beneficiaries

1. When PFRS has underpaid Retirement Allowances, the Member shall be entitled to a prospective adjustment to his or her Retirement Allowance necessary to correct the underpayment, as well as a lump sum payment for all past underpayments. The corrective payment shall be made as soon as is reasonably practicable following PFRS's discovery of the underpayment.
2. PFRS shall send a Notice of Underpayment of Member Retirement Allowances by certified mail, return receipt requested, to each affected Member.
3. If a Member who was underpaid Retirement Allowances has died prior to payment of the lump sum amount due, the following procedures will be followed:
 - A. **Deceased Member with a Qualifying Widow/Widower for Survivor's Continuance**
 - i. If a deceased Member has a qualifying widow/ widower, the payment will be made directly to that person.
 - B. **Deceased Member without a Qualifying Widow/Widower for Survivor's Continuance**
 - i. If there is an open probate (i.e., no order for final distribution has been made), payment will be made to the estate through the personal representative or other legal process provided for in the Member's state of residence.
 - ii. If final distribution of the estate has been made, PFRS will review the order for final distribution to determine how assets that were unknown at the time of final distribution are to be distributed under the order. Payment will then be made in compliance with the order for final distribution, if possible.
 - iii. If the Member's estate passed into an intervivos trust, the underpayment may be made to the Trustee after satisfactory inspection of trust documents.
 - iv. If probate was not established, distribution will be made in accordance with any applicable and valid Affidavit for Payment of Personal Property pursuant to California Probate Code Section 13101 or other legal process provided for in the Member's state of residence.

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
POLICY GOVERNING THE OVERPAYMENT OR UNDERPAYMENT
OF MEMBER RETIREMENT ALLOWANCES**

- v. PFRS staff shall make reasonable efforts to locate the beneficiary entitled to payment by sending a letter by certified mail, return receipt requested, to the last known address of each such beneficiary, or by other means of similar intended effect.
 - vi. If, after taking the above steps, PFRS staff has not been able locate a beneficiary entitled to payment, PFRS shall hold the funds on behalf of that beneficiary for five years. If the funds are not claimed within five years, the funds may be transferred into the PFRS reserve fund. If a beneficiary later appears to claim the funds, the PFRS Board will consider such claims on a case-by-case basis.
4. Underpayments of \$20 or less will only be paid at the request of the Member.

IV. Periodic Review

- 1. Review of this Policy will be conducted by the Audit and Operations Committee not less than every three years.

The Policy Governing the Overpayment or Underpayment of Member Retirement Allowances of the Oakland Police and Fire Retirement System is hereby approved by vote of the Retirement Board, effective May 29, 2019.

WALTER L. JOHNSON, SR.
PRESIDENT
OAKLAND POLICE & FIRE RETIREMENT SYSTEM BOARD

DAVID JONES
SECRETARY
OAKLAND POLICE & FIRE RETIREMENT SYSTEM BOARD



A G E N D A R E P O R T

TO: Oakland Police and Fire
Retirement Board

FROM: David Jones

SUBJECT: Election of 3-Year Alternating
Police/Fire Board Position

DATE: May 20, 2019

SUMMARY

The 3-year alternating police/fire member board seat currently held by Martin J. Melia will expire on August 31, 2019. Pursuant to the PFRS election guidelines outlined in section 11 of the PFRS Rules and Regulations, an election for this board seat will be conducted by the Staff of the PFRS board with the assistance of the City Clerk's office.

BACKGROUND

Member Melia, a retired PFRS Fire member, was elected to the 3-year elected term as the PFRS 3-year alternating police/fire member. His election to the Board seat completes Member Steven Bernard's term as 3-year alternating police/fire member following his early resignation from the 3-year board position, effective July 1, 2017. Member Melia's board seat is set to expire on August 31, 2019 and a new 3-year alternating police/fire member will need to be elected to this seat from the retired police membership.

Following the PFRS rules & regulations section 11.2, the PFRS staff will inform the Retired Oakland Police Officers Association (ROPOA) of the upcoming board vacancy and deliver to them the election schedules and nomination forms.

Should no more than one (1) nomination form be received by the nomination form submission deadline of 5 pm, July 25, 2019, then the single nominee will be automatically elected to the nominated position; an election would otherwise follow on August 28, 2019. The incumbent board member will complete his board term through August 31, 2019 and the elected board member will begin the new term at the September 2019 board meeting.

PFRS Board Meeting
May 29, 2019

The following timeline shows the due dates for nominees and PFRS staff during this election cycle:

- Last day for furnishing the Retired Oakland Police Officers Association (ROPOA) a notice stating that nominating papers may be obtained from the Retirement Systems office **June 3, 2019**
- Last day for filing nominees to submit nominating papers to the City Clerk's Office **July 25, 2019**
- Last day for City Clerk to certify to Office of P&F Board the names of members nominated **July 25, 2019**
- Last day for mailing of ballots to members **August 14, 2019**
- Last day for delivering to City Clerk the Roster of Police Department **August 14, 2019**
- Ballots due to City Clerk no later than 10 am **August 28, 2019**
- Day for counting of ballots by City Clerk **August 28, 2019**

Respectfully submitted,



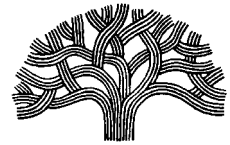
David Jones, Plan Administrator
Oakland Police and Fire Retirement System

Attachment:

- **Nomination Form – 3-year Alternating Police/Fire Position**
- **Rules & Regulations – Excerpt of Election**

ATTACHMENT 1

CITY OF OAKLAND



150 FRANK H. OGAWA PLAZA, 3RD FLOOR • OAKLAND, CALIFORNIA 94612-2021

Finance Department
Treasury Bureau
Retirement Unit

(510) 238-7295
FAX (510) 238-7129

OAKLAND POLICE AND FIRE RETIREMENT SYSTEMS BOARD – NOMINATION FORM

I / We, the undersigned, am / are a retired member(s) of the Oakland Police Department, and a member(s) of the Oakland Police and Fire Retirement Systems. I / We hereby nominate, _____, a retired member of the Oakland Police and Fire Retirement Systems, as a candidate for membership on the Police and Fire Retirement Board from the retired membership of the Oakland Police Department for the term beginning **September 1, 2019** and ending **August 31, 2022**.

	<u>Print Name</u>	<u>Signature</u>	<u>Date</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

I accept the nomination and consent to serve, if elected.

Signature of Nominee

NOTE: 10 retired members of the Oakland Police Department who are also members of the Oakland Police and Fire Retirement System must sign this nominating paper. The person nominated must also be a retired member of the Oakland Police Department and a member of the Oakland Police and Fire Retirement System. Before filing, the person nominated must sign the above statement accepting the nomination and consenting to serve if elected. **Nominating papers must be filed in the Office of the City Clerk, One Frank Ogawa Plaza, Room 101, Oakland, CA, no later than 5:00 p.m. July 17, 2019.**

ATTACHMENT 2

**OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
RULES AND REGULATIONS**

**Article 11: ELECTION OF MEMBERS OF THE BOARD REPRESENTING RETIRED MEMBERS OF
 THE RETIREMENT SYSTEM**

Section 11.1: Day for Counting of Ballots

The fourth Wednesday in August of the year in which such election is required to be held is hereby designated as the day for counting of ballots.

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM RULES AND REGULATIONS

In the event of a vacancy of one or more of the elected PFRS Retirement Board seats before the completion of the full term, the day for counting ballots for the election to fill the vacant PFRS Retirement Board seat shall be the fourth Wednesday of the month that follows 90 days after the date of being informed of the vacancy.

Section 11.2: Notice of Nomination

On or before the first business day in June of each year in which an election is required, the office of the Police and Fire Retirement Board shall send a notice stating that nomination papers may be obtained at the office of said Police and Fire Retirement Board, the place where nomination papers shall be filed and the final date of filing thereof, the date when ballots will be counted and such other information as may be appropriate to the following organizations:

- Retired Oakland Police Officers' Association (ROPOA)
- International Association of Fire Fighters, Local 55 (IAFF Local 55)

In the event of a vacancy of one of the elected PFRS Retirement Board seats before the completion of the full term, the office of the Police and Fire Retirement Board shall send notice as stated above no later than ten (10) calendar days after the date of being informed of the vacancy.

Section 11.3: Nomination for Membership

Nomination for membership on the Police and Fire Retirement Board from the retired membership of the Police and Fire Department shall be in writing on forms supplied by the office of said Police and Fire Retirement Board upon request. Nomination papers shall be substantially in the form shown in Appendix A. Nomination papers shall be signed by at least ten retired members of the Police or Fire Department, as the case may be, who are members of the POLICE AND FIRE RETIREMENT SYSTEM, other than the person nominated. Each signatory of a nominating paper shall write the date of his/her signature at the end of the line opposite his/her signature. Beneficiaries of deceased members are not eligible to vote in elections.

Section 11.4: Date of Filing Nomination Papers

Nominating papers shall be filed in the Office of the Oakland City Clerk, Room 306 of the Oakland City Hall, not less than thirty-five days before the day of counting ballots. If said date falls on a non-business day for the City of Oakland, it shall be filed on the next business day.

Section 11.5: Determination of Sufficiency of Nominating Papers

The City Clerk of the City of Oakland will determine when a member is nominated and for this purpose shall have access to the records of the Police and Fire Retirement Board the names of those retired members of the respective departments determined by him to have been nominated.

Section 11.6: Winner by Default

In the event that only one person is nominated in accordance with this Article 11 as a member of the Board, that person shall be declared a winner.

Section 11.7: Mailing of Ballots

Not less than fifteen days before the day for the counting of the ballots that shall be prepared by and mailed for the office of the Police and Fire Retirement Board to each retired member of the Police Department of Fire Department who is a member of the Police and Fire Retirement System a ballot addressed to his or

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM RULES AND REGULATIONS

her address as shown by the records of the Police and Fire Retirement Board. The Ballots shall contain the names in alphabetical order of the candidates certified by the City Clerk as nominated. Such ballot, sealed in a blank envelope provided for this purpose, which shall be enclosed in another envelope, also provided for such purpose, upon which the voter shall place his or her name, may be returned to the City Clerk not later than 10:00 a.m. of the day for the counting of ballots.

Section 11.8: Roster of Eligible Voters

There shall be prepared in the office of the Police and Fire Retirement Board a roster of eligible voters which shall contain the names of the retired members of the Police or Fire Department who are members of the Police and Fire Retirement System, excluding beneficiaries of deceased members. Such roster of eligible voters shall be delivered to the City Clerk not less than fifteen days before the day for the counting of ballots and shall be in such form as to permit appropriate asking thereon by the City Clerk to indicate that an eligible member has voted.

Section 11.9: Counting of Ballots

On the day for the counting of ballots at the hour of 10:00 A.M. thereof, the ballot box shall be opened and no ballot received after said hour shall be counted. The ballots will be counted under the supervision and control of the City Clerk in such manner that the identity of the individual casting any ballot will not be disclosed. No ballot shall be counted unless it is enclosed in an envelope bearing the name of the voter. No ballot shall be counted which contains a vote for a person not nominated in accordance with Article 12. Upon the conclusion of the counting of the ballots, the City Clerk will certify the count and the candidate elected, and notify each candidate thereof by mail.

Section 11.10: Vote Necessary for Election

The candidate receiving the highest number of eligible votes shall be declared elected.

Section 11.11: Disposition of Ballots after Counting

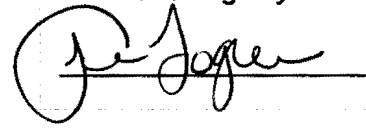
Upon conclusion of the counting of the ballots they shall be kept by the City Clerk in the manner and for the period the ballots of municipal elections are kept.

Section 11.12: Procedure to Fill Vacancy of Elected Members

In the event a vacancy occurs before the end of a full term in any of the three (3) elected offices of the Board which are filled by retired members of the Retirement System, a successor shall be elected for the unexpired portion of the term vacated. The successor shall be elected from the same department of the member who is vacating the seat for the remainder of said unexpired three (3) year, or five (5) year, term. The election shall be governed by Article 11.

OAKLAND POLICE AND FIRE RETIREMENT BOARD *Approved to Form
and Legality*
CITY OF OAKLAND, CALIFORNIA

RESOLUTION No. 7061



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

**RESOLUTION APPROVING DEATH BENEFIT PAYMENTS AND
DIRECTING WARRANTS THEREUNDER IN THE TOTAL SUM OF
\$1,000.00 PAYABLE TO THE BENEFICIARIES OF DECEASED
MEMBER(S) AS FOLLOWS: ESTATE OF SCOTT W. DULGAR,
ELIZABETH TROST**

WHEREAS, due proof having been received of the death of the persons named in Column (1) below, retired members of the Oakland Police or Fire Department, under Article XXVI of the Charter of the City of Oakland; and

WHEREAS, the beneficiaries to whom the death benefit provided in Charter Section 2612 are payable, are the persons whose names are stated in Column (2) opposite the respective names of the deceased retired member; and

WHEREAS, the amount of said death benefit is stated in Column (4) opposite said respective names; now, therefore, be it

RESOLVED: That the Retirement Board does hereby approve the Death Benefit payment to the persons named in Column (2); and be it

FURTHER RESOLVED: That the Director of Finance, be and is hereby directed to draw and sign warrants for the amount in Column (4) payable to the respective persons whose name(s) appear(s) in Column (2):

(1) Name of Deceased Member	(2) Name of Beneficiary(ies)	(3) Relationship of Beneficiary(ies)	(4) Death Benefit Amount
Scott W. Dulgar	Estate of Scott W. Dulgar		\$1,000.00
Harold D. Newberry	Elizabeth Trost	Daughter	\$1,000.00

IN BOARD MEETING, CITY HALL, OAKLAND, CA MAY 29, 2019

PASSED BY THE FOLLOWING VOTE:

AYES: GODFREY, KASAIN, MELIA, MUSZAR, SPEAKMAN, WILKINSON, AND
PRESIDENT JOHNSON

NOES:

ABSENT:

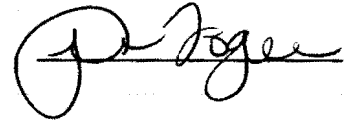
ATTEST: _____
PRESIDENT

ATTEST: _____
SECRETARY

OAKLAND POLICE AND FIRE RETIREMENT BOARD
CITY OF OAKLAND, CALIFORNIA

Approved to Form
and Legality

RESOLUTION NO. 7062



ON MOTION OF MEMBER _____ SECONDED BY MEMBER _____

RESOLUTION FIXING THE MONTHLY ALLOWANCE OF MILDRED A. TOMATIS, SPOUSE OF JOSEPH P. TOMATIS RETIRED MEMBER OF THE POLICE AND FIRE RETIREMENT SYSTEM

WHEREAS, the retired member of the Police and Fire Retirement System, whose name appears below (1), died on the date shown below (2); and

WHEREAS, the surviving spouse, whose name appears below (3), does not claim that each of such deaths were by reason of an injury received in, or illness caused by or arising out of the performance of duty; and

WHEREAS, there is now presented to this Board, the monthly allowance shown below (7) and as calculated by the Actuary in accordance with Article XXVI of the Charter of the City of Oakland; now, therefore, be it

RESOLVED: That the Police and Fire Retirement Board fixes, and it does hereby fix, the amount in Column (7), as the monthly allowance to which said surviving spouse is entitled, effective on the date shown in Column (4):

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Name of Deceased Member	Date of Death	Name of Surviving Spouse	Effective Date of Allowance	Form of Retirement	% of Compensation Attached to Avg. Rank Held	Monthly Allowance
Joseph P. Tomatis	03/24/2019	Mildred A. Tomatis	03/25/2019	Service	40.555%	\$4,750.57

IN BOARD MEETING, CITY HALL, OAKLAND, CA MAY 29, 2019

PASSED BY THE FOLLOWING VOTE:

AYES: KASAINÉ, GODFREY, MELIA, MUSZAR, SPEAKMAN, WILKINSON,
AND PRESIDENT JOHNSON

NOES:

ABSTAIN:

ABSENT:

ATTEST: _____
PRESIDENT

ATTEST: _____
SECRETARY