

**MCERA INVESTMENT RETIREMENT BOARD AGENDA
THURSDAY, MAY 23, 2019
MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
3199 M STREET, MERCED, CA 95348**

Please turn your cell phone or other electronic device to non-audible mode.

CALL TO ORDER: 8:15 A.M.

- ROLL CALL.
- APPROVAL OF MINUTES – May 9, 2019.

PUBLIC COMMENT

Members of the public may comment on any item under the Board's jurisdiction. Matters presented under this item will not be discussed or acted upon by the Board at this time. For agenda items, the public may make comments at the time the item comes up for Board consideration. Persons addressing the Board will be limited to a maximum of five (5) minutes in total. Please state your name for the record.

BOARD ACTION¹/DISCUSSION

Pursuant to Govt. Code § 31594 and MCERA's Investment Objectives & Policy Statement due diligence analysis requirement:

1. Presentation and discussion of the 2019 Quarterly Investment Performance Report and April Monthly Preliminary Report with possible board action on any funds – Meketa Investment Group.
2. Discussion and possible action to broaden Barrow, Hanley, Mewhinney, & Strauss', LLC investment portfolio guidelines to allow up to a 15% allocation in High Yield/opportunistic exposures – Meketa.
3. Discussion and possible action to adopt Resolution pertaining to Government Code Section 31529.9 – Staff.
4. Discussion and possible adoption of MCERA Administrative Budget and discussion of non-administrative projected numbers – Staff.
5. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MCERA's Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:
 - a. SACRS UC Berkeley Program, July 22-24, 2019, Berkeley, CA.
 - b. Principles of Pension Management for Trustees, August 26-29, 2019 Malibu, CA.
 - c. CALAPRS Administrators Institute, September 25-27, 2019, Carmel, CA.
 - d. SACRS Fall Conference, November 12-15, 2019, Monterey, CA.

INFORMATION ONLY

MCERA Upcoming Board Meetings:

Please note: The MCERA Board Meeting and/or Education Day times and dates may be changed in accordance with the Ralph M. Brown Act by the MCERA Board as required.

- June 13, 2019

¹ "Action" means that the Board may dispose of any item by any action, including but not limited to the following acts: approve, disapprove, authorize, modify, defer, table, take no action, or receive and file.

- June 27, 2019
- July 11, 2019

ADJOURNMENT

All supporting documentation is available for public review in the office of the Merced County Employees' Retirement Association, 3199 M Street, Merced, California, 95348 during regular business hours, 8:00 a.m. – 5:00 p.m., Monday through Friday.

The agenda is available online at www.co.merced.ca.us/retirement

Any material related to an item on this Agenda submitted to the Merced County Employees' Retirement Association, after distribution of the Agenda packet is available for public inspection in the office of the Merced County Employees' Retirement Association.

Persons who require accommodation for a disability in order to review an agenda, or to participate in a meeting of the Merced County Employees' Retirement Association per the American Disabilities Act (ADA), may obtain assistance by requesting such accommodation in writing addressed to Merced County Employees' Association, 3199 M Street, Merced, CA 95348 or telephonically by calling (209) 726-2724. Any such request for accommodation should be made at least 48 hours prior to the scheduled meeting for which assistance is requested.

**MCERA RETIREMENT BOARD MEETING MINUTES
THURSDAY, MAY 9, 2019
MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
3199 M STREET, MERCED, CA 95348**

ROLL CALL: 8:15 A.M.

Board Members Present: Darlene Ingersoll, Scott Silveira, Al Peterson (arrived at 8:17 am), Janey Cabral, Ryan Paskin, Michael Rhodes, and Jason Goins. **Counsel:** Forrest Hansen. **Staff:** Mark Harman, Adriana Valdez, Michelle Lee, Sheri Villagrana and Brenda Mojica.

Absent: Karen Adams, David Ness, and Scott Johnston.

APPROVAL OF MINUTES: April 25, 2019.

Motion to approve the April 25, 2019 meeting minutes.

Silveira/Paskin U/A (7-0).

PUBLIC COMMENT

No public comment.

CLOSED SESSION

RETURN TO OPEN SESSION

(1) DISABILITY RETIREMENT APPLICATIONS: PERSONNEL EXCEPTION

Disability update and possible action:

Motion to grant a service connected disability and deny a non-service connected disability for Alejandro Barba.

Paskin/Goins U/A (7-0).

Motion to grant service connected disability and deny non-service connected disability for Derrell Smith.

Goins/Peterson U/A (7-0).

MCERA Board made a decision to terminate CopperRock from MCERA's portfolio in the amount of \$20,688,938.47. The MCERA Board approved investments of approximately \$10,150,000 (each) to funds Acadian ACWI ex US Small Cap Fund, LLC and Driehaus International Small Cap Growth Collective Investment Trust to replace CopperRock. The remaining \$388,938.47 was put into the cash account with custodial bank.

CONSENT CALENDAR

RETIREMENTS:

All items of earnable compensation for service or disability retirements listed below are in compliance with the pay code schedule approved by the Board of Retirement. The retirement is authorized; however, administrative adjustments may be necessary to alter the amount due to: audit, late arrival of data, court order, etc.

a. Johnson, Michael	Health	2 Yrs. Svc.	Eff. 05/03/2019
b. Lamas, Angelo	Retirement	20 Yrs. Svc.	Eff. 04/20/2019
c. Soles, Linda	Superior Courts	8 Yrs. Svc.	Eff. 04/27/2019

YTD fiscal year 2018/2019 retirees: 087*
YTD fiscal year 2017/2018 retirees: 082
YTD fiscal year 2016/2017 retirees: 065

*one member rescinded retirement application

REFUND OF SERVICE PURCHASE: None

IN SERVICE DEATH BENEFIT: None

MONTHLY BUDGET REPORT: Submitted

Motion to approve Consent Calendar.

Peterson/Paskin U/A (7-0).

REGULAR CALENDAR

BOARD ACTION¹/DISCUSSION

1. Discussion and possible action to approve MCERA's updated Disability Handbook and Employee Handbook which are being updated with IRS Regulations disclosures/language – Staff.

Motion to adopt proposed changes to the Disability Handbook and Employee Handbook.

Cabral/Peterson U/A (7-0).

2. Appointment of ad hoc MCERA Board Committee pertaining to MCERA building infrastructure and improvements – Chair.

The Chair appointed Trustees Paskin, Silveira, and Adams to the Ad Hoc building infrastructure committee.

3. Discussion and possible action on Legislative Review – Staff.

No action taken.

4. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MCERA's Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:

- a. NCPERS Annual Conference & Exhibition, May 19-22, 2019, Austin, TX.
- b. CALAPRS Administrators Roundtable, June 21, 2019, San Jose, CA.
- c. SACRS UC Berkeley Program, July 22-24, 2019, Berkeley, CA.
- d. Principles of Pension Management for Trustees, August 26-29, 2019 Malibu, CA.
- e. CALAPRS Administrators Institute, September 25-27, 2019, Carmel, CA.
- f. SACRS Fall Conference, November 12-15, 2019, Monterey, CA.

Motion to approve Trustee Cabral to attend the Principles of Pension Management on August 26-29, 2019 in Malibu, CA.

Paskin/Rhodes U/A (7-0).

INFORMATION ONLY

Trustee Goins informed the Board that Merced County is holding a Peace Officer Memorial Ceremony at 9:00 am on May 15, 2019 at the Administration Building.

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Trustee Silveira informed the Board that he has been receiving several solicitations and invitations from investment managers since his appointment as a Trustee on MCERA's Retirement Board.

The Fiscal Manager informed the Board that MCERA has installed motion-activated cameras that are monitored for any actual security breaches.

The Fiscal Manager informed the Board that there is an Ad Hoc Budget Committee meeting immediately following this Board meeting.

Chair Ingersoll reminded the Board of the next scheduled board meeting on May 23, 2019.

ADJOURNMENT

The meeting adjourned at 8:51 a.m.

Respectfully submitted,

Darlene Ingersoll, Chair

Al Peterson, Secretary

Date

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MEETING MATERIALS

Merced County Employees' Retirement Association

First Quarter 2019 Full Review

May 23, 2019



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

BOSTON
MASSACHUSETTS

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ILLINOIS

MIAMI
FLORIDA

PORTLAND
OREGON

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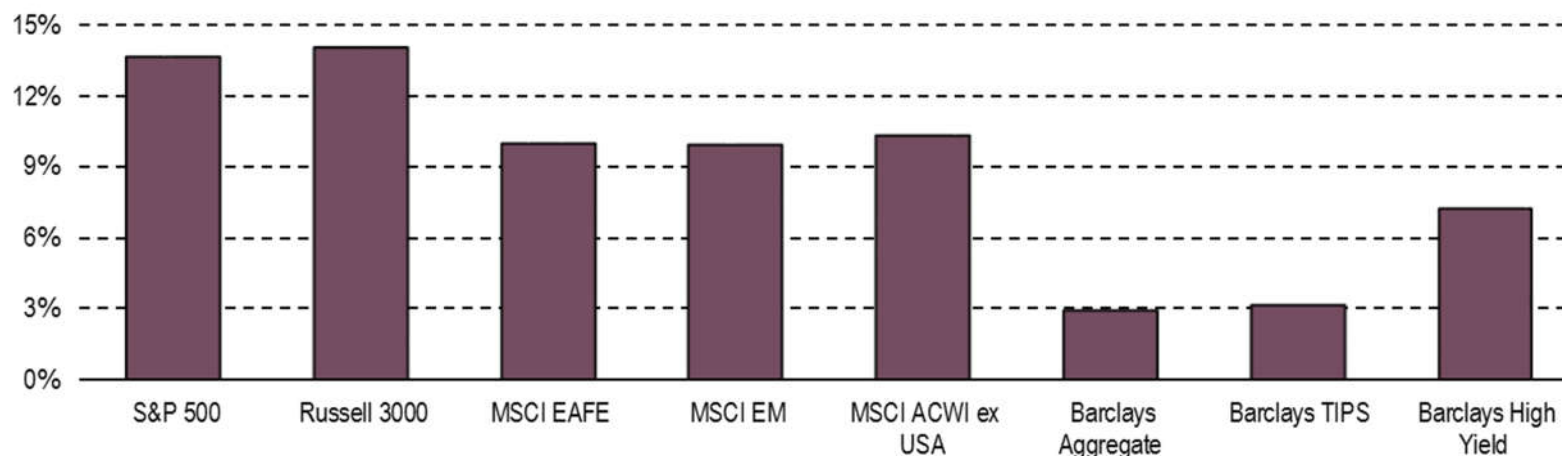
- 1. Executive Summary**
- 2. World Markets First Quarter of 2019**
- 3. Capital Markets Outlook & Risk Metrics**
- 4. Quarterly Review As of March 31, 2019**
- 5. Disclaimer, Glossary, and Notes**

Executive Summary

Market Review for the First Quarter 2019

During the first quarter, world stocks and credit markets rebounded considerably from the fourth quarter of 2018. Equity markets were up close to, or into, the double digits in many parts of the world. In the fixed income markets, interest rates generally fell, with lower quality bonds outpacing higher quality bonds. Major central banks appeared to be steering away from tighter monetary policy and there was more optimism that the trade war between the U.S. and China would eventually be resolved. Despite this new sense of optimism, there are still concerns over the slowing of global economic growth as well as the growing uncertainty relating to Brexit.

Q1 Returns for Major Indices



Growth > Value

US Treasury 10 yr: -28 basis points

Small Cap > Large Cap

MCERA Portfolio Overview for Q1

As of Q1 2019, total assets invested were at \$835.8 million.

- The Fund returned +7.6% for the first quarter of 2019 (81st percentile among peers), while surpassing the policy benchmark by +1.1% during the quarter.
- The strong Q1 return was largely explained by the Total Equity portion of the portfolio in both absolute and relative terms. The U.S. Equity sleeve returned +14.6%, exceeding its benchmark by 50 basis points. The International Equity managers posted double digit returns as well, with Developed International reporting a +10.3% return and Emerging Markets Equity returning +13.8%. The former exceeded its benchmark by 30 basis points, the latter by 390 basis points.
- In the U.S. Equity space, Mellon Dynamic U.S. Equity delivered the strongest absolute and relative returns for the latest quarter at +15.9% versus +13.6% for the S&P 500. The combination of the extended U.S. Equity exposure and the long Treasury positions were additive and helped boost returns for the period. Based on Q1 returns, this manager was top decile in terms of peer rankings.
- As we mentioned in our preliminary March report, Wells Capital (Emerging Markets Equity manager) was a key contributor for the quarter as it had a very strong January (+10.8%). Notable positive contributions to relative performance in that month came from China/Hong Kong, India and Brazil. At the end of the quarter, Wells Capital had approximately 39.7% allocation to China/Hong Kong, with about half of the positive excess return explained by this exposure (mostly through selection). This fund was also top quartile versus its peers for the quarter.
- Although DFA U.S. Small Cap Trust posted positive double digit returns (+12.0%), it still trailed its benchmark by nearly 260 basis points. Stock selection in Health Care was a leading detractor, while both allocation and selection detracted in Financials.

MCERA Portfolio Overview for Q1 (continued)

- The Fixed Income section posted positive returns at +2.6%, matching its benchmark. Barrow Hanley was able to generate a return of +3.1%, outpacing its benchmark by 20 basis points. The overweight corporate credit exposure helped provide the positive excess return during a period where spreads tightened, specifically in BBB and A securities.
- Through Q1, U.S. Equity, Private Equity, and Opportunistic Credit were out of policy ranges.
 - U.S. Equity has purposely been left overweight relative to the policy target as it will be one of the main sources of future Private Equity commitments, and equities are the most closely aligned asset class.
 - As you recall, it will take considerable time to fund up to the policy target for Private Equity, hence the significant underweight to the new asset allocation policy target.
 - The Board recently approved two new managers within Opportunistic Credit in the March meeting; we should see this space funded soon.

Manager Updates / Recommendations / Watch List

Barrow Hanley Update

- At the April Board meeting, BHMS provided a review on the existing Core Fixed Income mandate with MCERA and proposed the mandate allow for looser investment guidelines. Specifically, BHMS proposed allowing for an upper bound allocation of 15% of the portfolio to (non-investment grade) high yield instruments.
- The primary investment objectives for this strategy, and the role of BHMS within the context of the overall Plan program, is to provide both safety and liquidity to the portfolio. The Core mandate has offered consistent returns achieved through a low risk approach, and we recommend that the mandate remain unchanged.
- Additionally, with the recent approval of the Opportunistic Credit category and the selection of managers currently in the process of being funded, we believe extending BHMS' guidelines to allow for incremental returns is unnecessary.

Asset Allocation Update

- Private Equity will take additional time to fund up to its new target; therefore, we expect this category to remain underweight relative to targets for the next several years. As such, other asset classes will be overweight during that time, including Public Equities and Fixed Income.
- After reviewing the SSgA Real Assets Fund, the Board approved to reduce the exposure to SSgA from \$32 million to \$16 million, with the proceeds used to bring Emerging Markets Equity to target and fund up the Vanguard Short-Term Bond Index for future capital call funding and new manager allocations.
- The two new International Small Cap Managers (Acadian and Driehaus) were funded in April with the proceeds from the full liquidation of Copper Rock. They appear in the April interim performance report.
- In April, the relative positioning between U.S. Equity and Developed International Equity was adjusted to correct the overweight to International Developed. Specifically, we moved \$10 million from Mellon International to Mellon Dynamic U.S Equity.

Manager Updates / Recommendations / Watch List (continued)

- Also in April, Barrow Hanley was reduced by approximately half (\$67.5 million) to fund the Vanguard Total Bond Market Index Fund, mainly as a way of reducing fees.
- Once the new Opportunistic Funds (GoldenTree Multi-Sector Strategy and PIMCO Income) are established, they will be funded through Barrow Hanley. We will also incorporate the new Opportunistic Funds benchmark as a component to the overall Policy benchmark once the position is allocated.

Performance Report Update

- Private Real Estate has been separated from the Real Assets category as the Board approved to have a specific allocation target for that category. Historical data prior to Jan 1, 2019 for Real Assets will still reflect Private Real Estate. Please note that this will have no impact to overall Fund level results.

Watch List

No funds on the watch list.

Active Manager Expectations

Manager	Strategy Description	Beta (High/Low/Neutral)	Tracking Error Range (bps)	Environments Manager Underperforms
Domestic Equity				
DFA U.S. Small Cap Trust	Very diversified small cap portfolio that tilts toward value	Neutral	2.0% to 2.7%	In growth-oriented markets
PanAgora U.S. Small Cap Core Stock Selector	Diversified, quantitatively managed small cap portfolio	Neutral	2.5% to 4.0%	In low quality rallies or at market inflection points
Mellon Capital MCM Dynamic U.S. Equity	Very diversified, quantitative, large cap core portfolio	Neutral (higher in more recent periods)	2.5% to 5.0%	When investors misprice forward looking return/risk characteristics; when returns are concentrated in one sector
Developed Markets Equity (Non-U.S.)				
Driehaus International Small Cap Growth	Diversified growth manager that seeks to invest in companies experiencing positive growth inflections, using a combination of fundamental and macroeconomic analysis.	Low	4.0% to 7.0%	At market inflection points, with abrupt leadership change. Deep value, low quality market environments.
Acadian ACWI ex US Small Cap Equity	Very diversified international small cap portfolio, employing highly adaptive quantitative models	Neutral	2.5% to 4.5%	During narrow markets, abrupt changes in leadership. In "value" challenged periods.
Emerging Markets Equity				
Wells Capital Berkeley St Emerging Markets	Diversified, quality-at-a-reasonable price manager	Low	3.5% to 4.0%	Deep value, low quality market environments
Investment Grade Bonds				
Barrow Hanley Core Fixed Income	Conservative, low tracking-error core strategy focused on bottom-up security selection	Neutral	0.2% to 0.7%	At market Inflection points, but should track the index very closely

Manager Monitor

Manager	Significant Events (Yes/No)	Last Meeting with Board of Retirement	Last Meeting with MIG	Comments
Domestic Equity Assets				
Mellon Capital BNY Mellon MCM Dynamic US Equity Fund	No	-	Mar 2017	Merger of smaller boutiques – Met Mellon in March 2017 to go over HY Beta Strategy & conference call for Carbon Efficiency strategy.
Mellon Capital EB DV Large Cap Stock Index Fund	No	-	Mar 2017	Merger of smaller boutiques – Met Mellon in March 2017 to go over HY Beta Strategy & conference call for Carbon Efficiency strategy.
DFA US Small Cap Trust	No	-	Aug 2018	Co-CEO resignation (8/17) – Our view is that the departure is immaterial to the investment thesis for DFA's products. Met with DFA to discuss non-U.S. equities in August of this year.
PanAgora US Small Cap Core Stock Selector	No	-	Aug 2018	CEO Eric Sorensen, who is credited with turning the firm around, has not announced a plan to retire and no formal succession plan is in place. We do not recommend any changes at this time.
Developed Markets Equity (Non-U.S.) Assets				
Driehaus International Small Cap Growth	No	-	May 2019	Regular onsite to discuss organizational update.
Acadian ACWI ex US Small Cap Equity	No	-	Mar 2019	Onsite meeting to go over Non-US small cap strategies.
Mellon Capital EB DV International Stock Index Fund	No	-	Mar 2017	Merger of smaller boutiques – Met Mellon in March 2017 to go over HY Beta Strategy & conference call for Carbon Efficiency strategy.
Emerging Markets Equity Assets				
Wells Capital Berkeley Street Emerging Markets Fund	No	-	June 2018	Met with Bob Hrabchak (product specialist) with overview of EM strategy – very quality oriented and valuation sensitive with a long-term view. Jerry Zhang is the lead portfolio manager who has been running the product for 12 years.
US Fixed Income Assets				
Barrow Hanley Core Fixed Income Fund	No	Apr 2019	Aug 2018	John Williams, founder of fixed income group retired in Feb 2018. Retirement was announced well in advance.
Vanguard Short Term Treasury Index Fund	No	-	July 2017	Review of Target Date Retirement Funds.
Private Equity Program	N/A	N/A	N/A	Oversight by Cliffwater.
Real Assets Program	N/A	N/A	N/A	Oversight by Cliffwater.
Hedge Fund Program	N/A	N/A	N/A	Oversight by Cliffwater.

Active Manager Peer Rankings

Investment Managers	Product	Peer Group	Market Value (\$ mm)	YTD March	1 YR	3 YR	5 YR	10 YR	Client Inception	Years in portfolio
DFA	US Small Cap Equity Strategy	US Small Cap Core	17.5	81	64	69	61	44	Jun-14	4.8
PanAgora	US Small Cap Core Stock Selector	US Small Cap Core	17.7	39	55	55	44	10	Sep-13	5.6
Mellon Capital	Dynamic US Equity Strategy	US Large Cap Core	81.2	7	27	4	2	1	Dec-12	6.3
Copper Rock ¹	International Small Cap	EAFE Small Cap	20.4	29	58	97	93	84	Sep-13	5.6
Acadian ²	All-Country World ex US Small Cap	Non-US Div Small Cap	--	44	49	15	32	10	May-19	--
Driehaus ²	International Small Cap Growth	Non-US Div Small Cap	--	15	29	18	13	18	May-19	--
Wells Capital	Berkeley Street Emerging Markets	Emerging Markets	67.2	14	17	26	30	51	Mar-12	7.1
Barrow Hanley	Core Fixed Income	US Core Fixed Income	137.0	63	31	66	59	70	Mar-10	9.1

Source: eVestment universe data.

Shaded values are rankings prior to Client inception in the strategy.

Ranks are based on gross of fee returns for extended periods (shaded values).

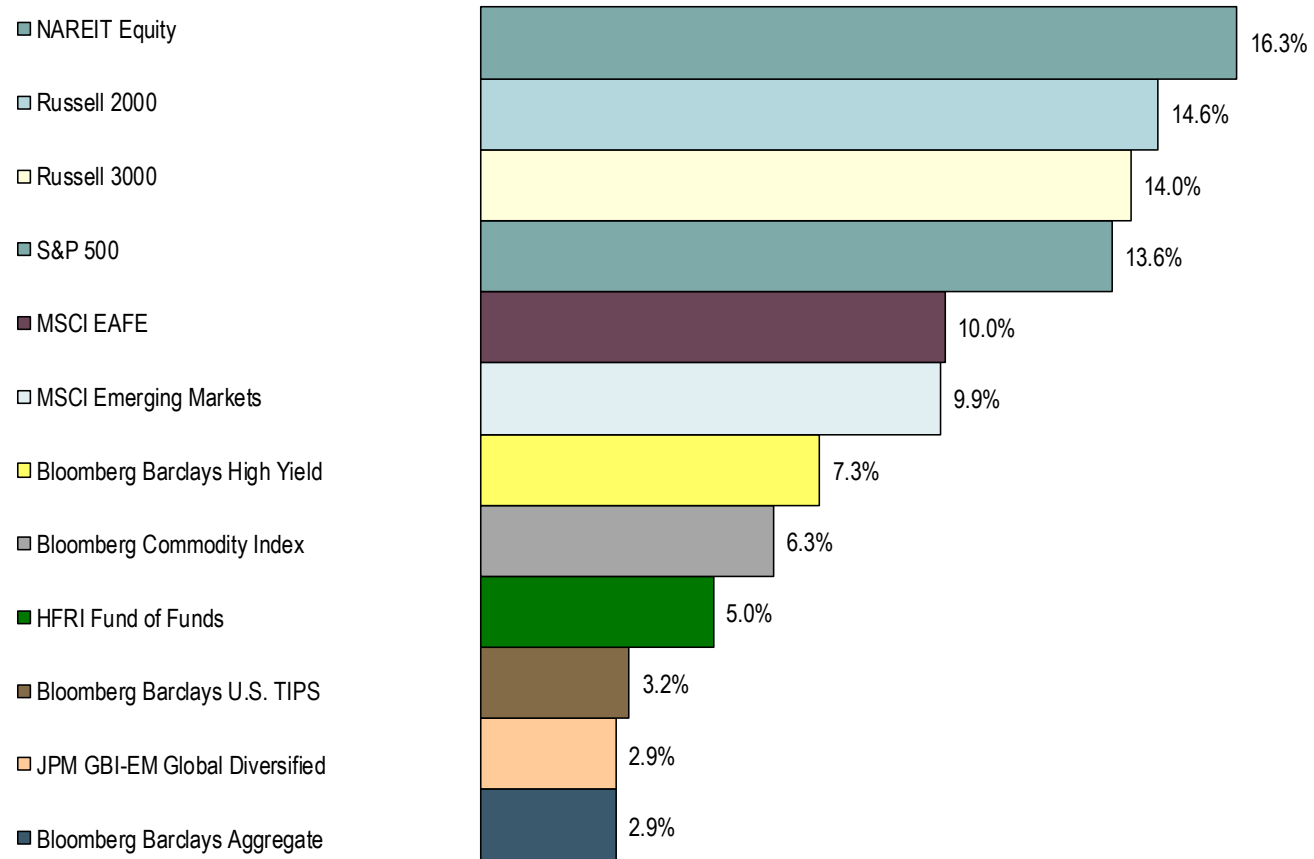
¹ Copper Rock as of April 2019 has been liquidated from the portfolio and has been replaced by Driehaus and Acadian.

² Acadian and Driehaus were funded in April 2019 – all results are based on strategy composite results.



The World Markets First Quarter of 2019

The World Markets¹ First Quarter of 2019



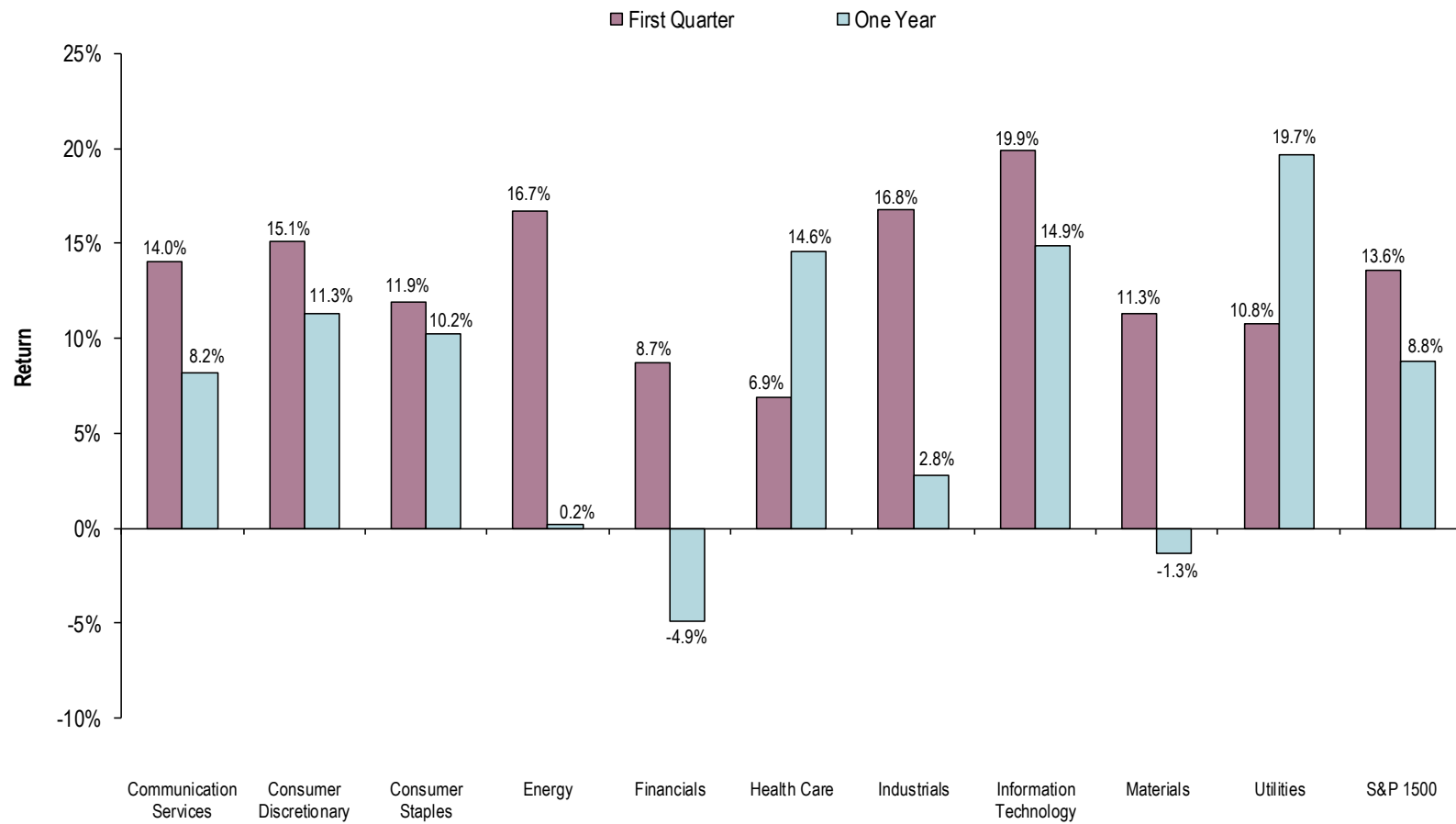
¹ Source: InvestorForce.

Index Returns¹

	1Q19 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Domestic Equity					
S&P 500	13.6	9.5	13.5	10.9	15.9
Russell 3000	14.0	8.8	13.5	10.4	16.0
Russell 1000	14.0	9.3	13.5	10.6	16.0
Russell 1000 Growth	16.1	12.7	16.5	13.5	17.5
Russell 1000 Value	11.9	5.7	10.5	7.7	14.5
Russell MidCap	16.5	6.5	11.8	8.8	16.9
Russell MidCap Growth	19.6	11.5	15.1	10.9	17.6
Russell MidCap Value	14.4	2.9	9.5	7.2	16.4
Russell 2000	14.6	2.0	12.9	7.1	15.4
Russell 2000 Growth	17.1	3.9	14.9	8.4	16.5
Russell 2000 Value	11.9	0.2	10.9	5.6	14.1
Foreign Equity					
MSCI ACWI (ex. U.S.)	10.3	-4.2	8.1	2.6	8.8
MSCI EAFE	10.0	-3.7	7.3	2.3	9.0
MSCI EAFE (Local Currency)	10.6	2.8	8.5	6.0	9.8
MSCI EAFE Small Cap	10.7	-9.4	7.5	4.5	12.8
MSCI Emerging Markets	9.9	-7.4	10.7	3.7	8.9
MSCI Emerging Markets (Local Currency)	10.1	-1.7	11.3	7.2	10.2
Fixed Income					
Bloomberg Barclays Universal	3.3	4.5	2.6	3.0	4.4
Bloomberg Barclays Aggregate	2.9	4.5	2.0	2.7	3.8
Bloomberg Barclays U.S. TIPS	3.2	2.7	1.7	1.9	3.4
Bloomberg Barclays High Yield	7.3	5.9	8.6	4.7	11.3
JPM GBI-EM Global Diversified	2.9	-7.6	3.3	-0.8	4.3
Other					
NAREIT Equity	16.3	20.3	6.0	9.0	18.2
Bloomberg Commodity Index	6.3	-5.3	2.2	-8.9	-2.6
HFRI Fund of Funds	5.0	0.5	4.1	2.3	3.6

¹ Source: InvestorForce.

S&P Sector Returns¹



¹ Source: InvestorForce. Represents S&P 1500 (All Cap) data.

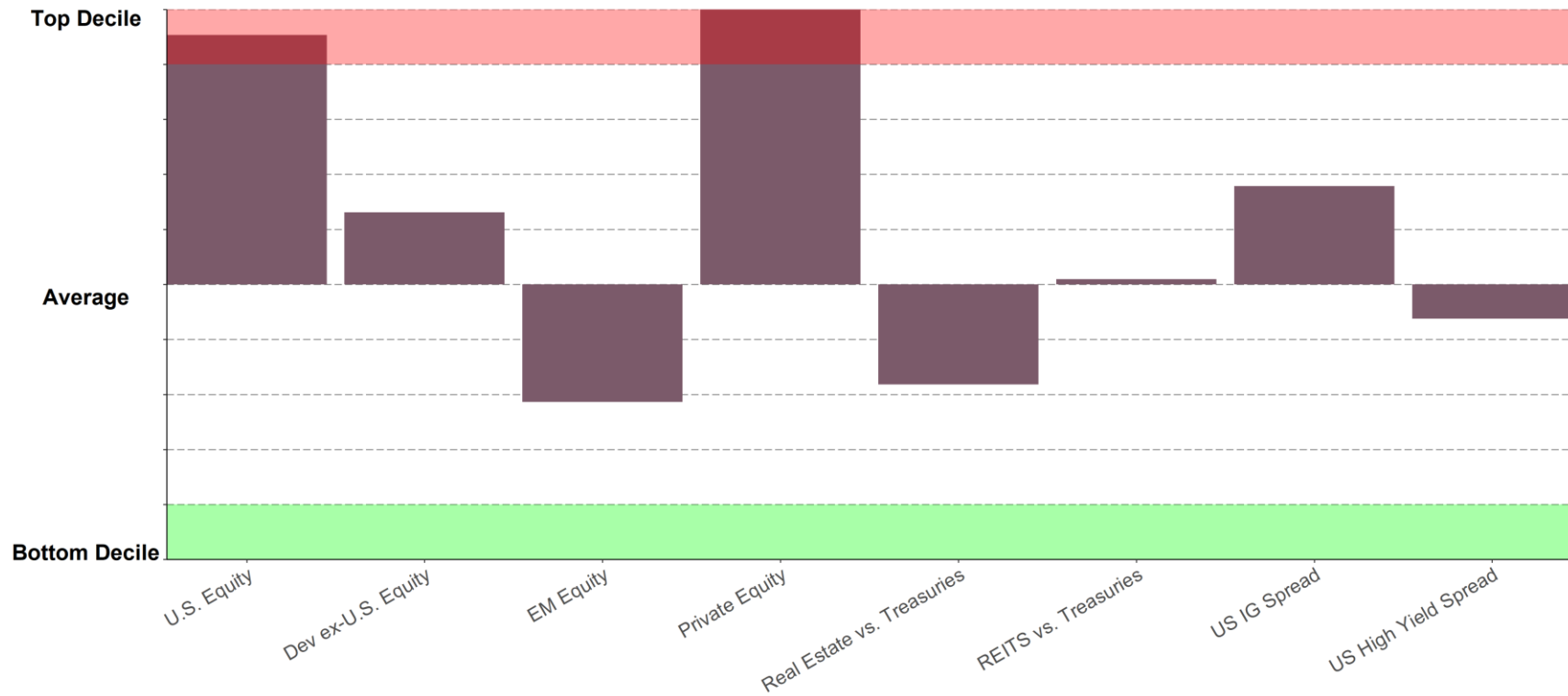
Capital Markets Outlook & Risk Metrics

Capital Market Outlook - Takeaways

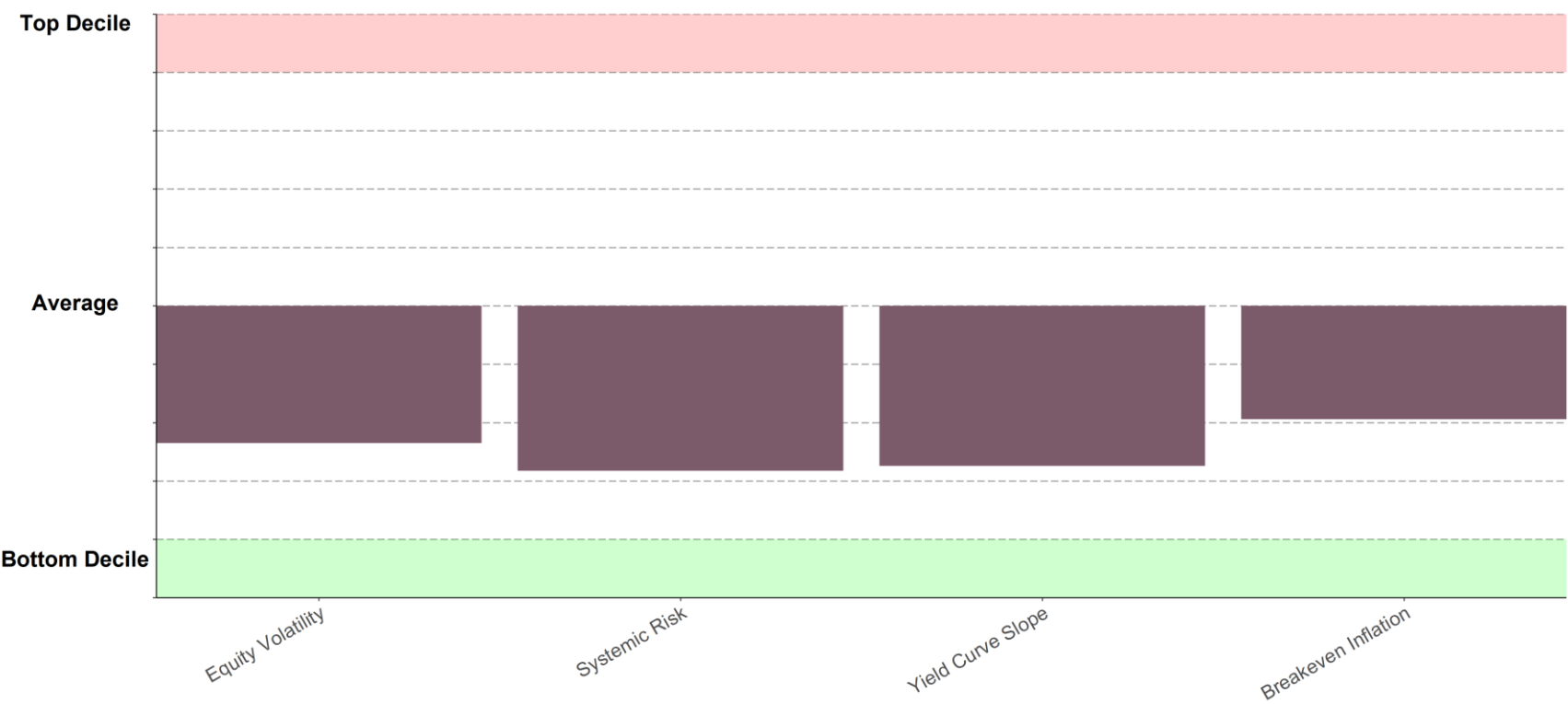
- April reverted back to several capital market themes of prior years: 1) U.S. Equity outperforming Non-U.S. Equity, 2) Growth outpacing Value, and 3) tepid returns to Fixed Income. In aggregate, April generally rewarded investors who took on equity and credit (i.e., economic growth) risks across the 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.

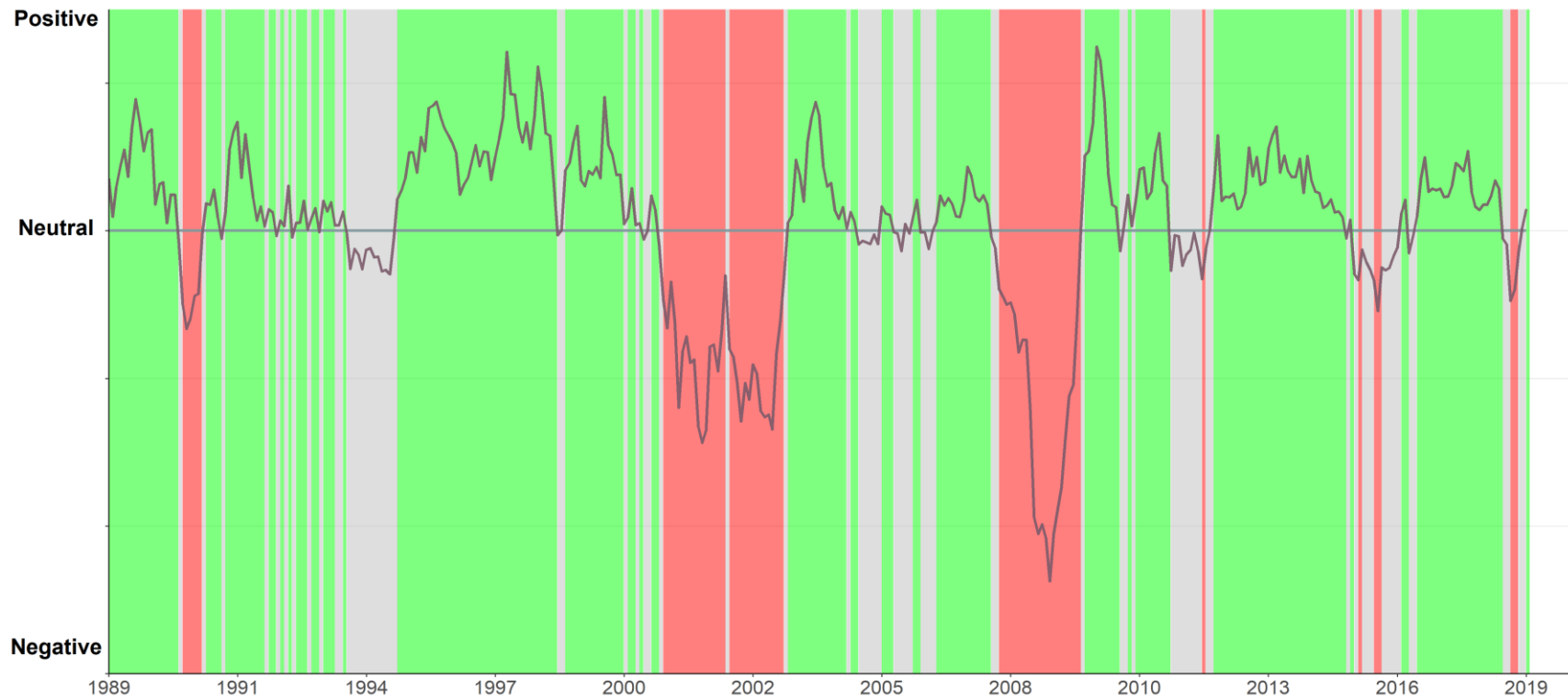
Risk Overview/Dashboard (1)



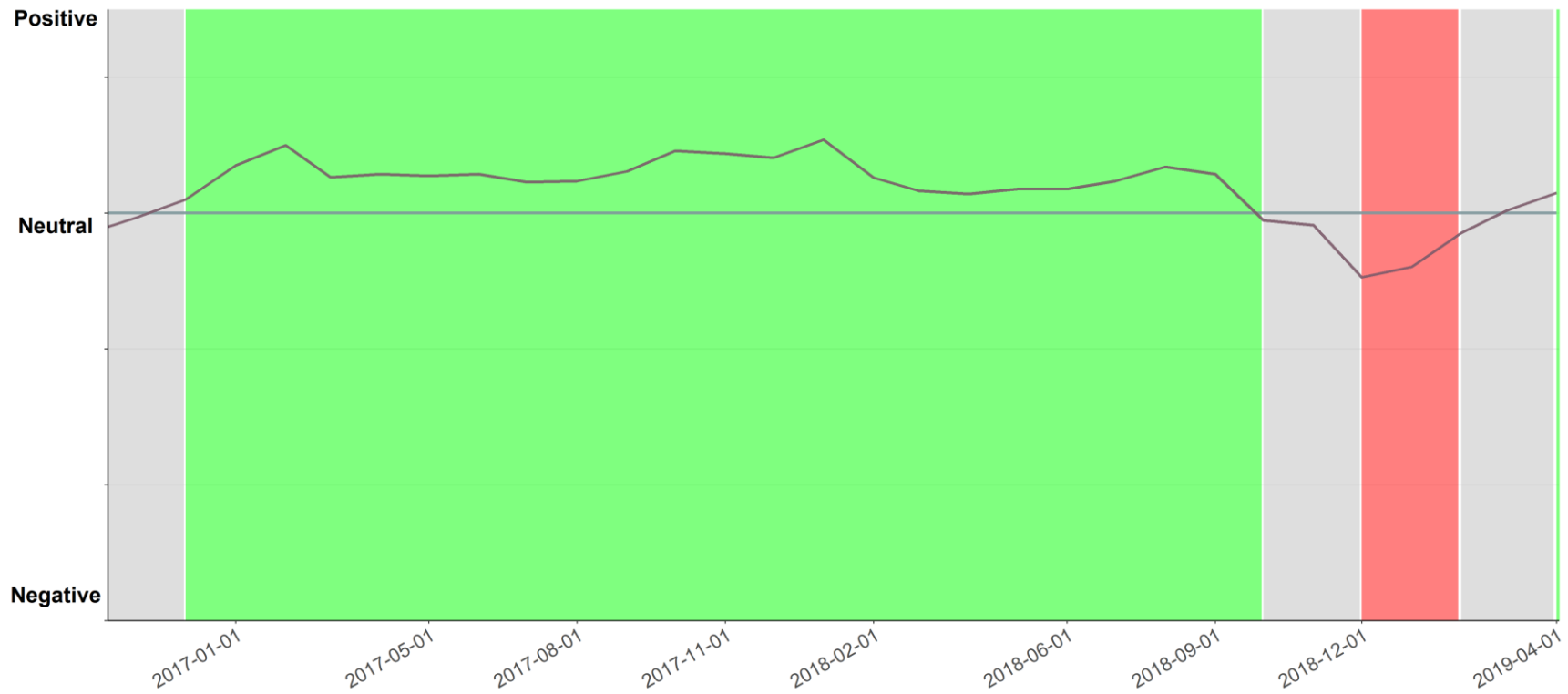
Risk Overview/Dashboard (2)



Market Sentiment Indicator (All History)



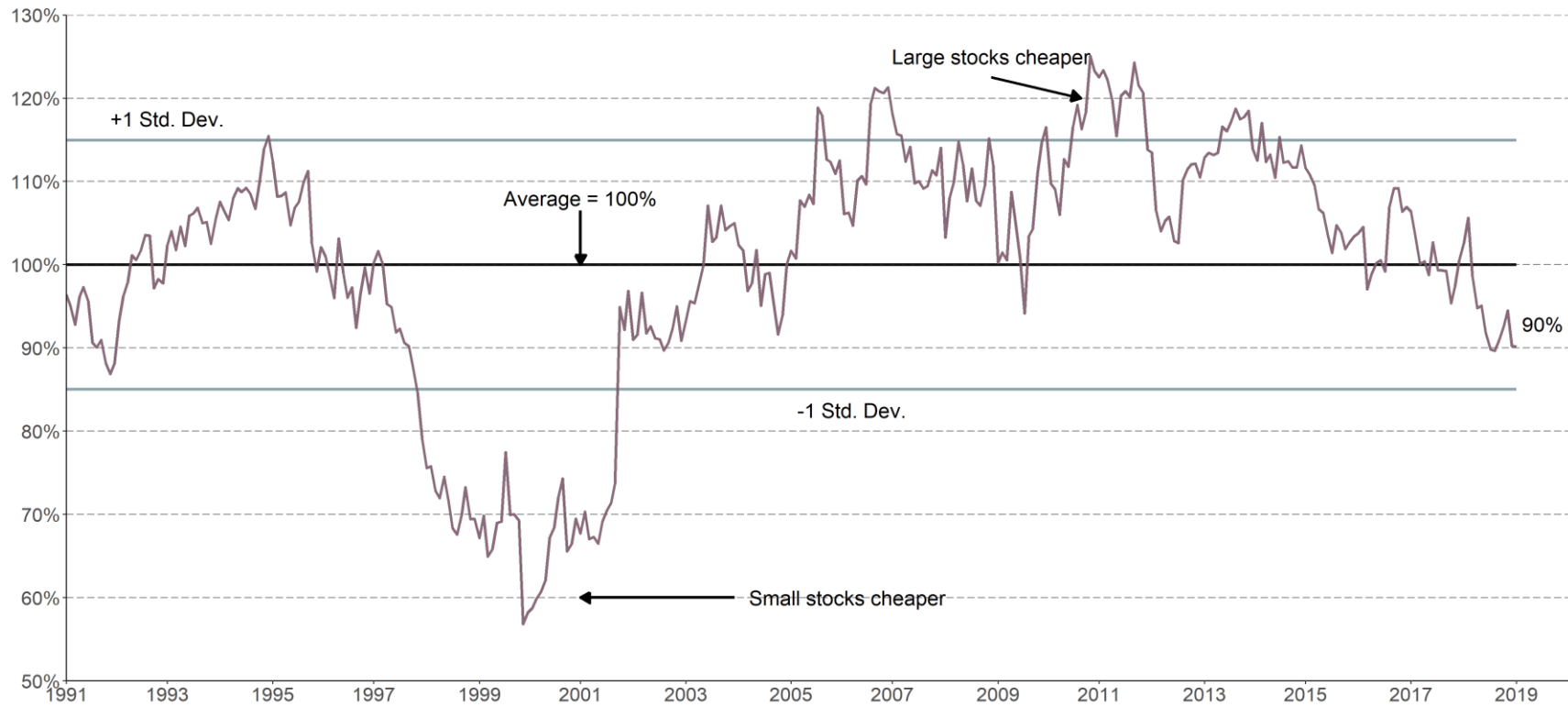
Market Sentiment Indicator (Last Three Years)



U.S. Equity Cyclically Adjusted P/E



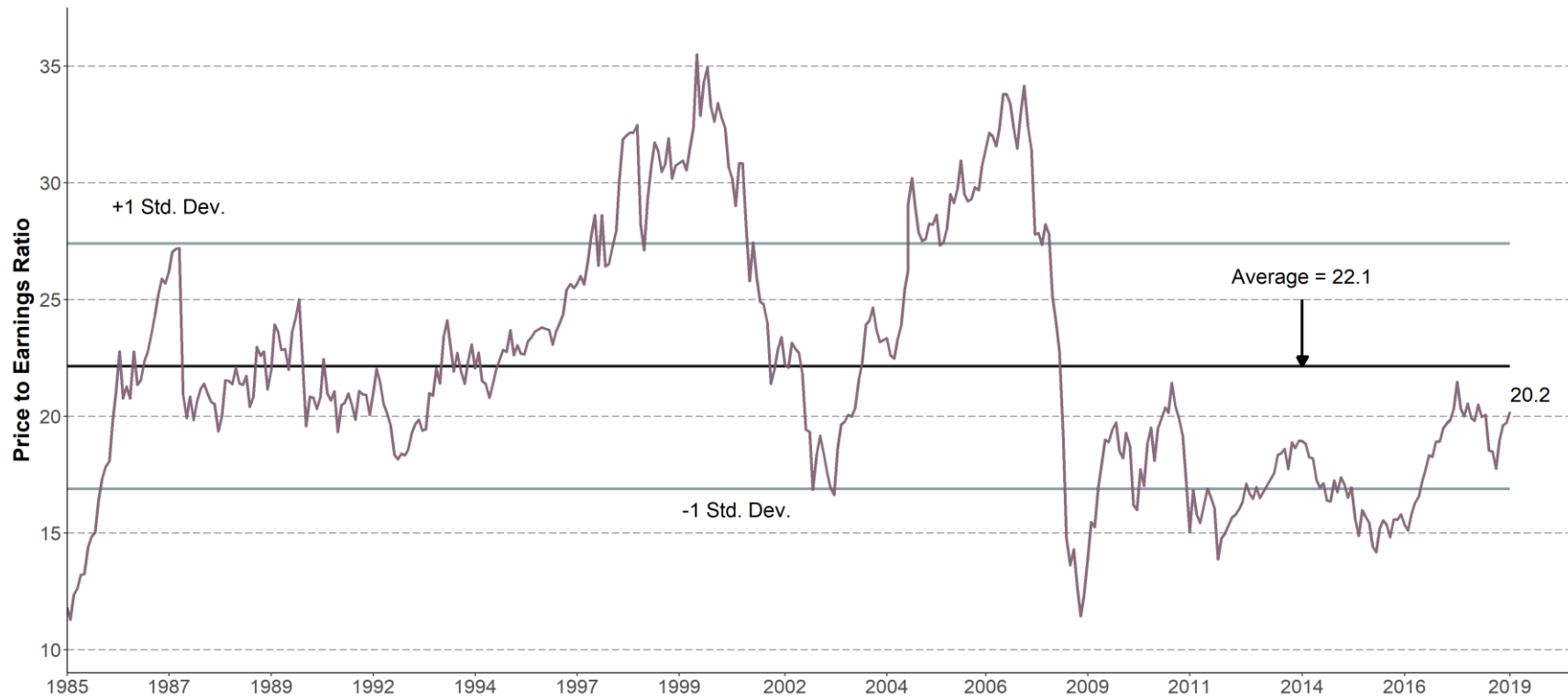
Small Cap P/E vs. Large Cap P/E



Growth P/E vs. Value P/E



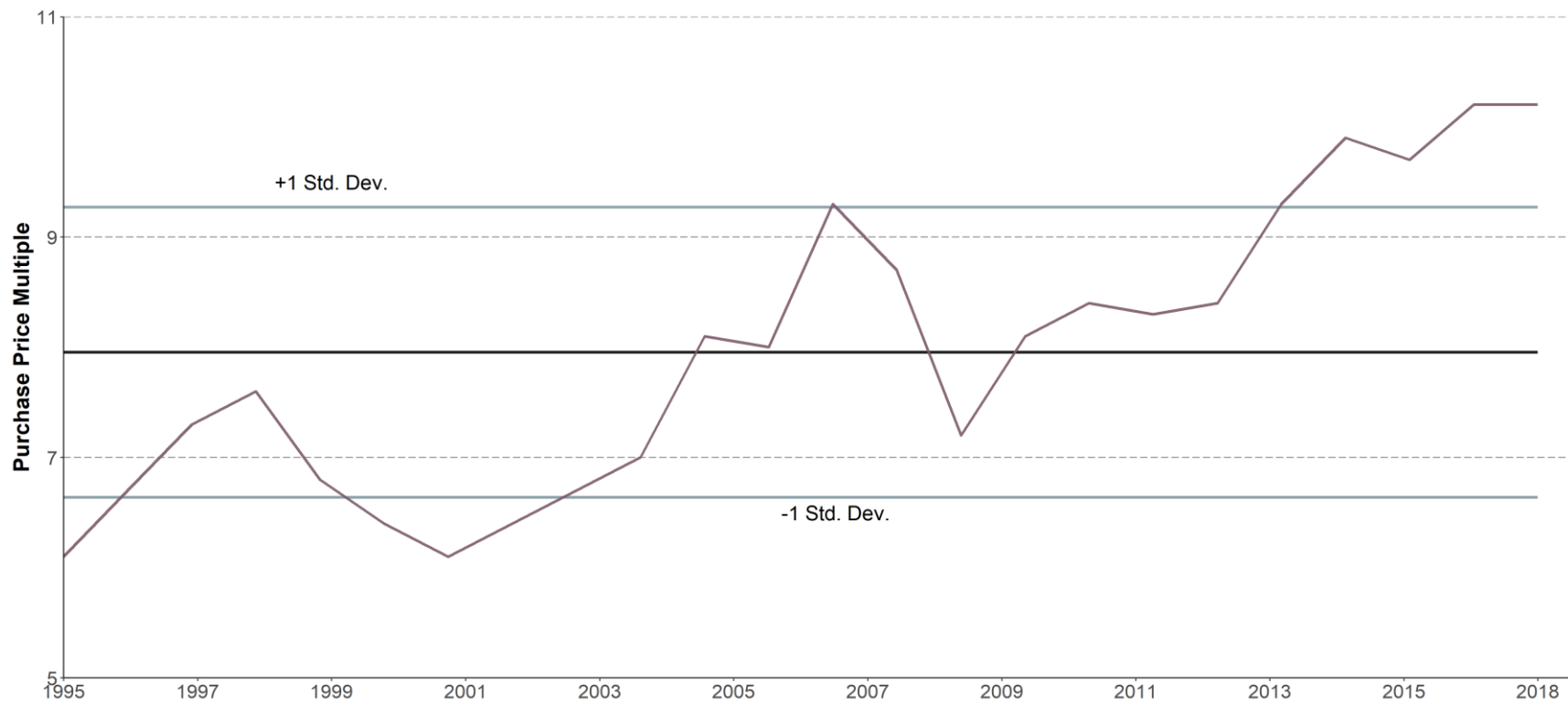
Developed International Equity Cyclically Adjusted P/E



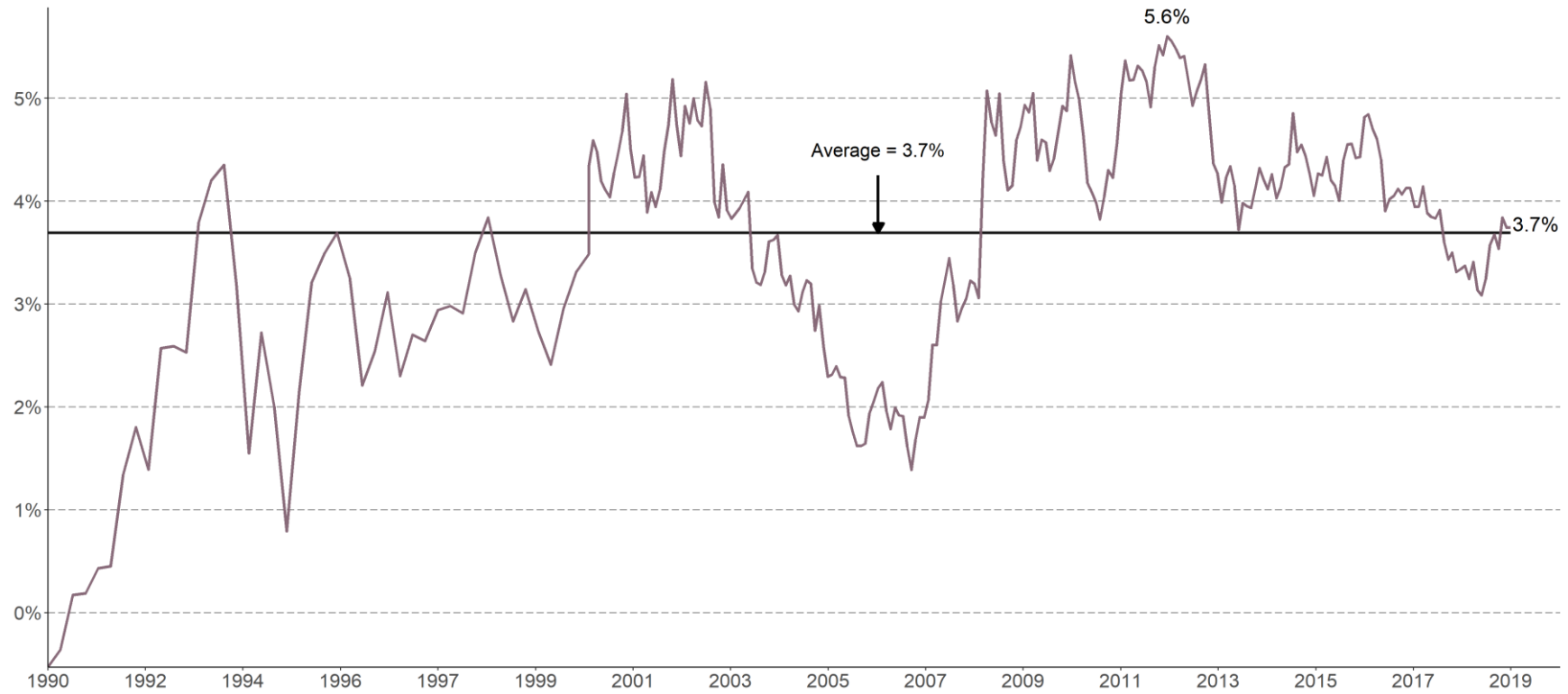
Emerging Market Equity Cyclically Adjusted P/E



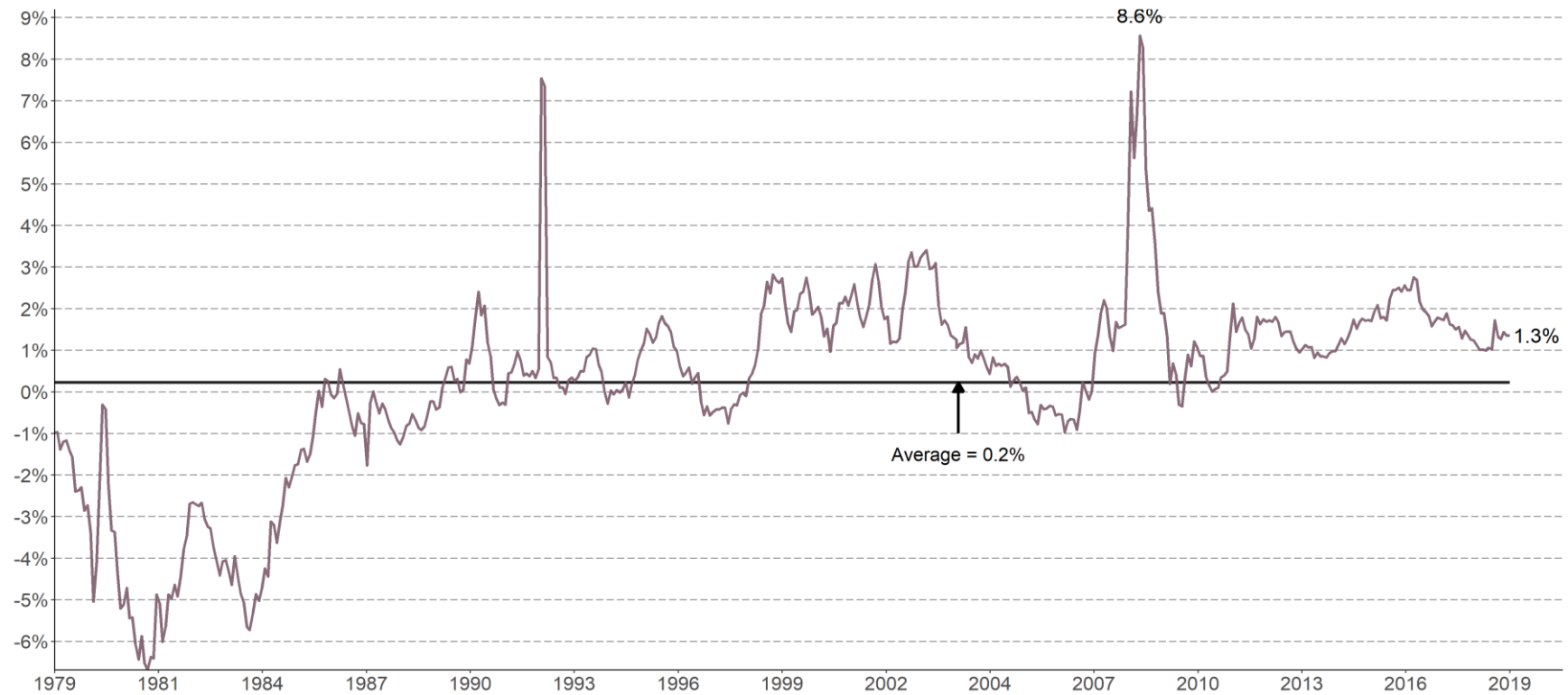
Private Equity Multiples



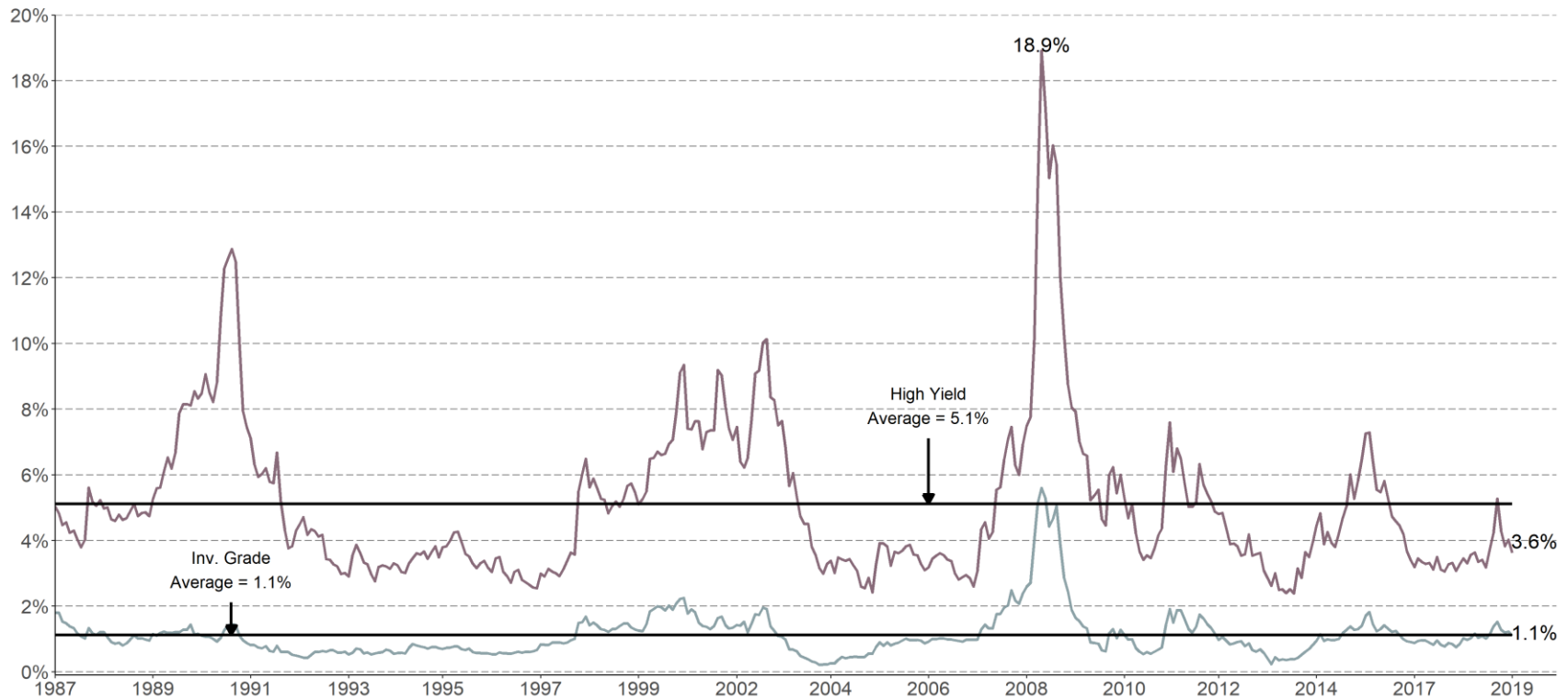
Core Real Estate Spread vs. Ten-Year Treasury



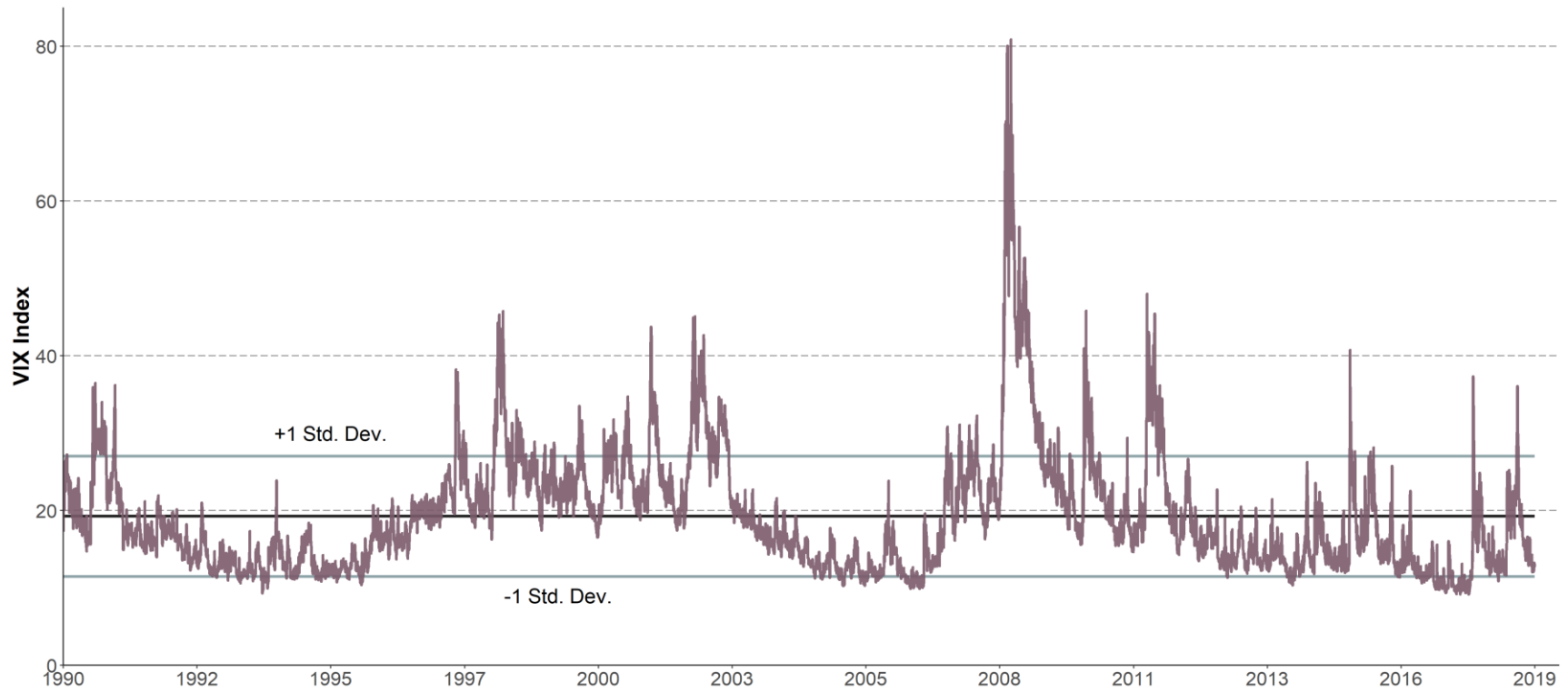
REITs Dividend Yield Spread vs. Ten-Year Treasury

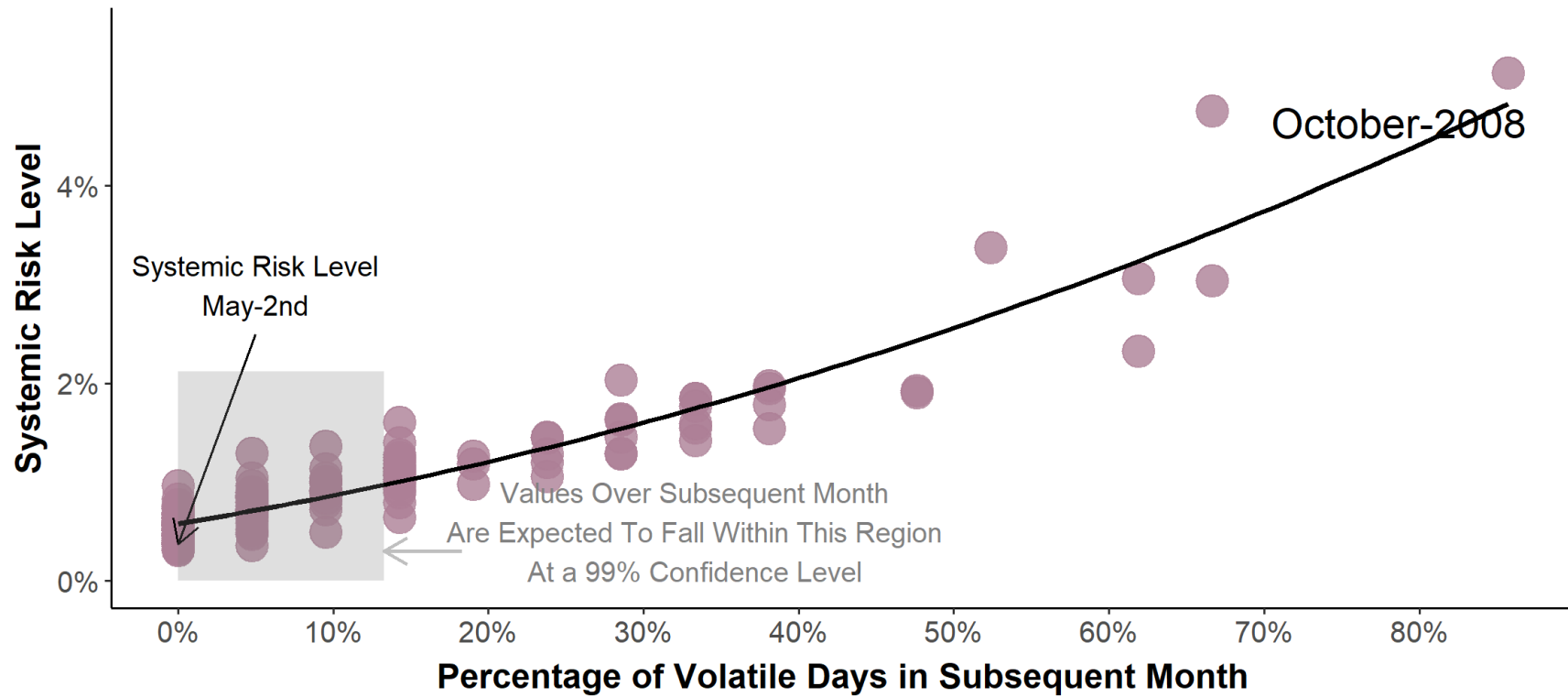


Credit Spreads



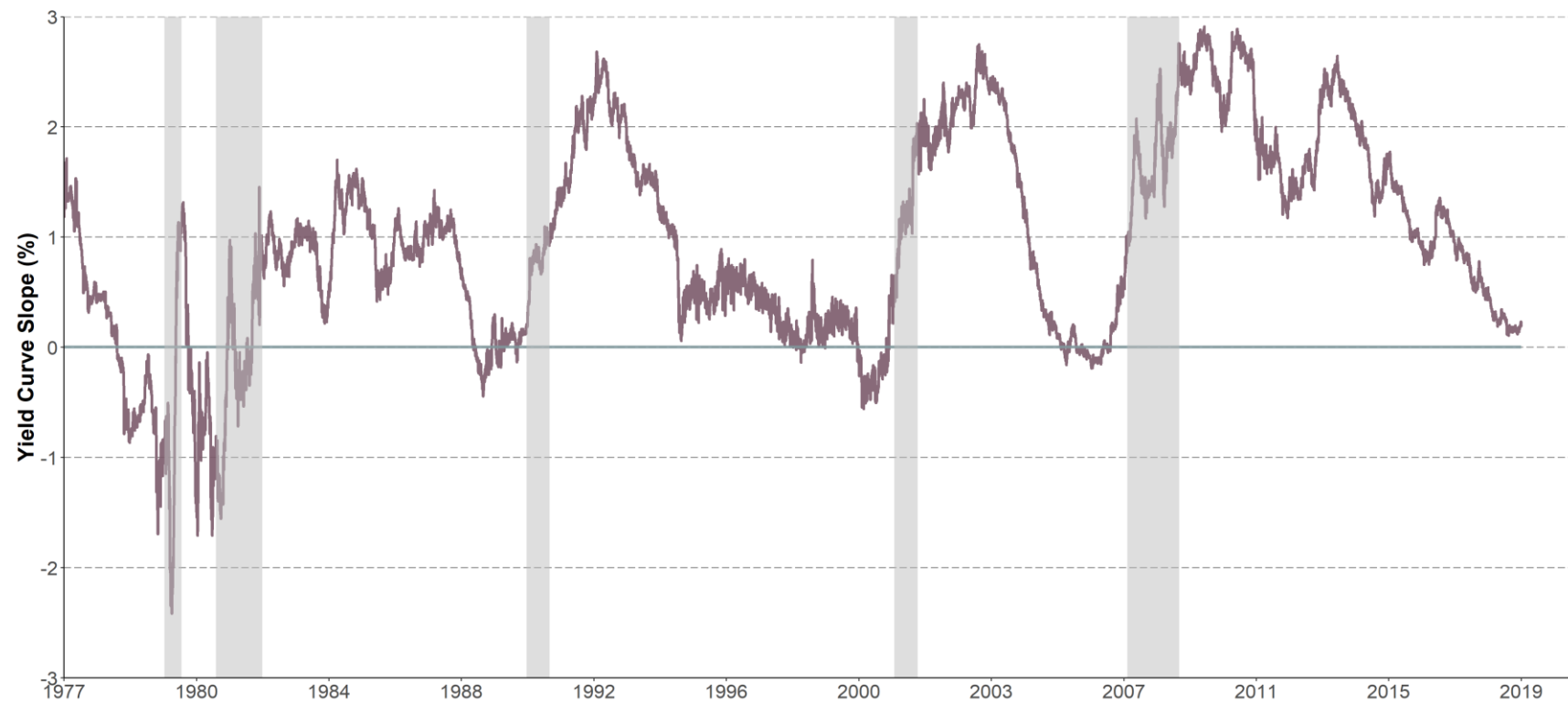
Equity Volatility



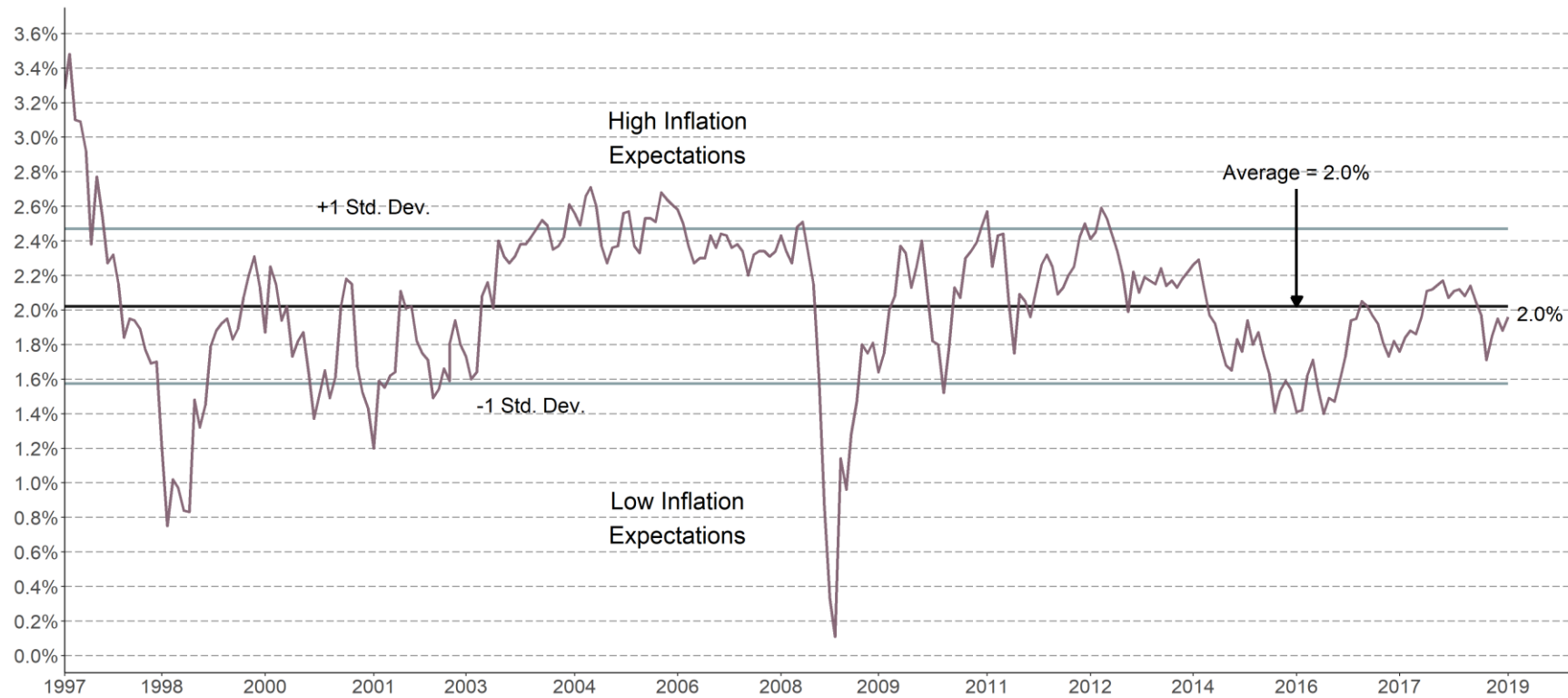
Systemic Risk and Volatile Market Days¹

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.

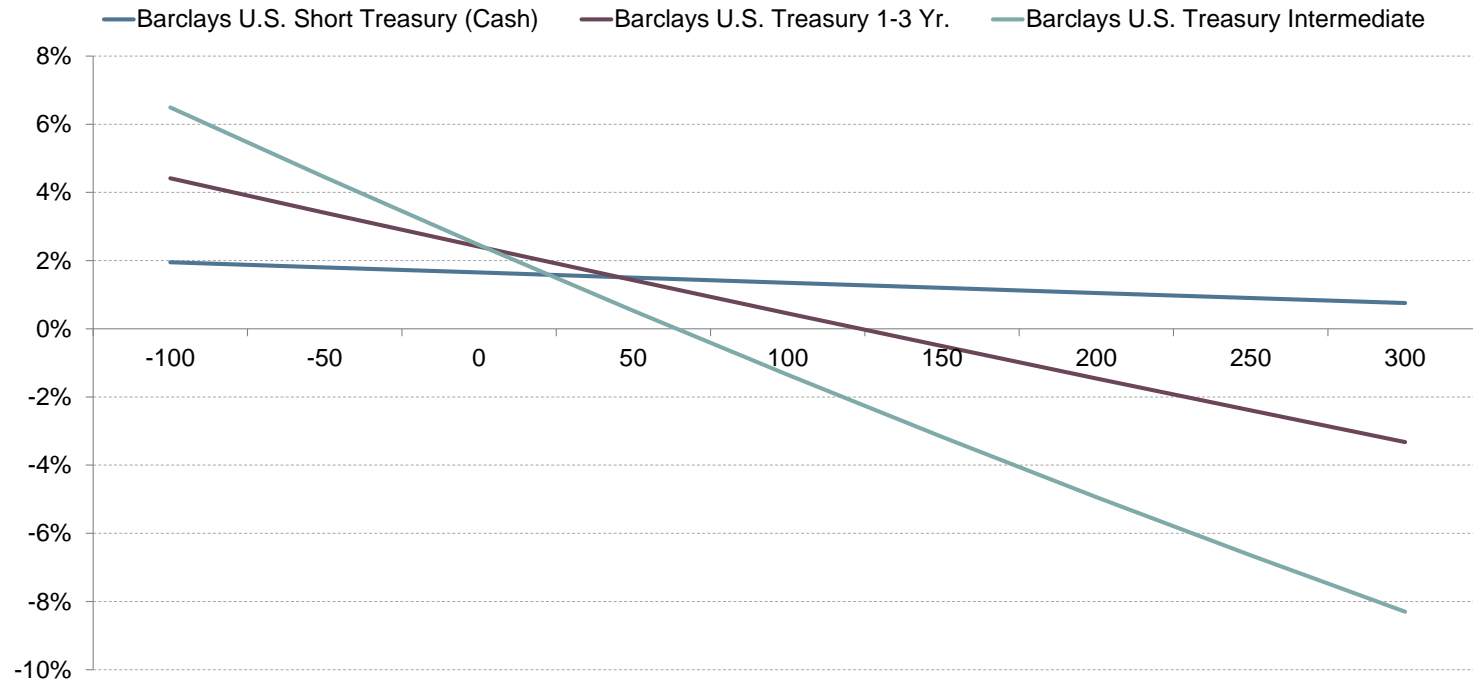
Yield Curve Slope (Ten Minus Two)



Ten-Year Breakeven Inflation



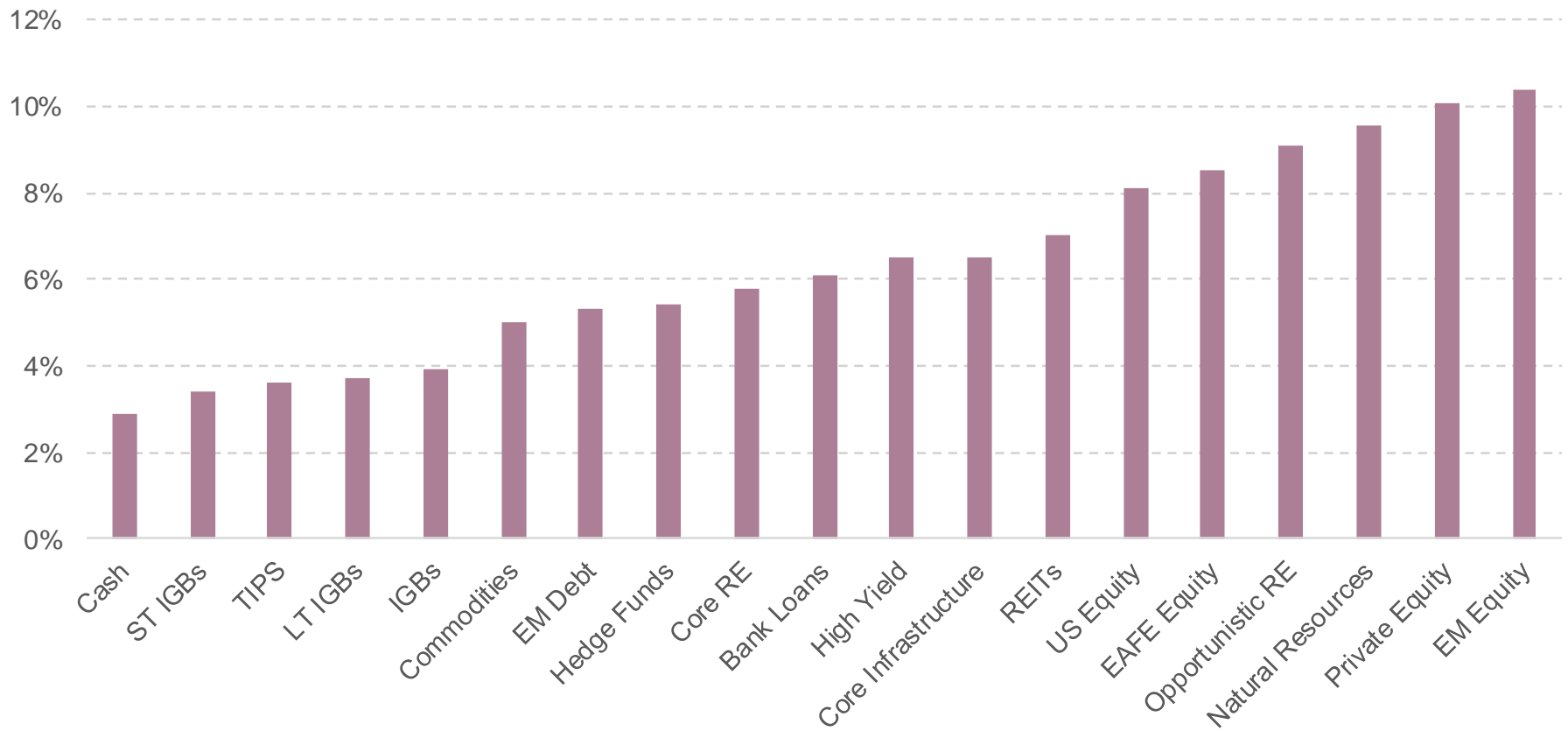
Total Return Given Changes in Interest Rates (bps)¹



	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:

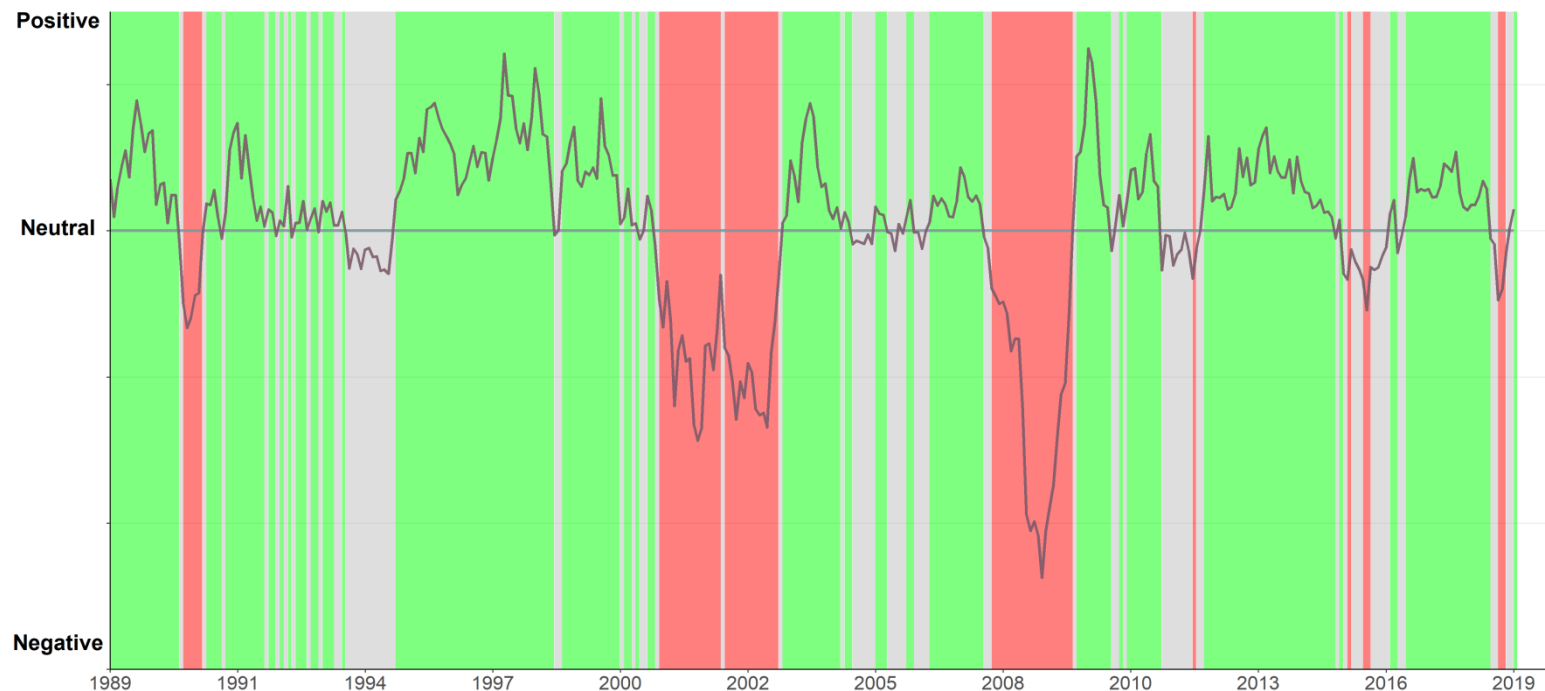
What is the Meketa Market Sentiment Indicator (MIG-MSI)?

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:

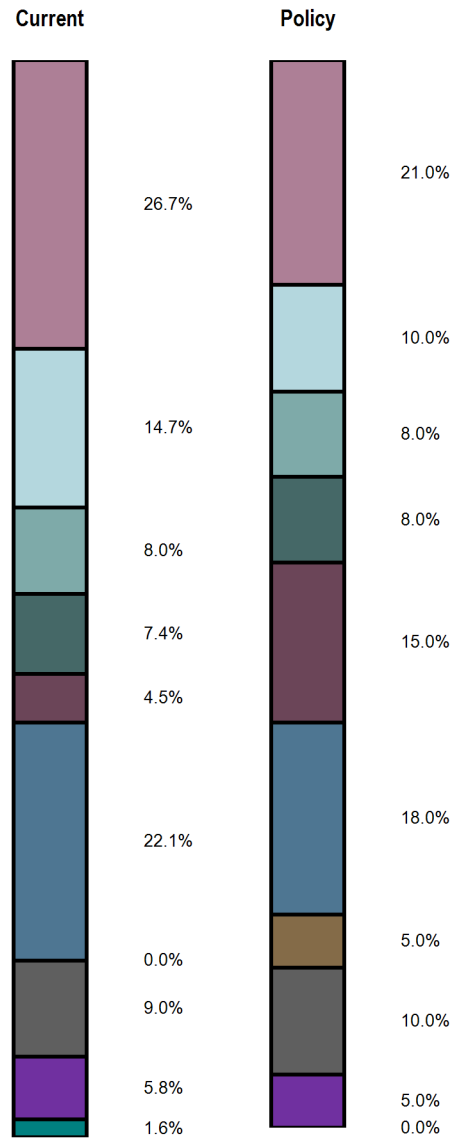
- If both stock return momentum and bond spread momentum are positive = GREEN (positive)
- If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
- If both stock return momentum and bond spread momentum are negative = RED (negative)

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.

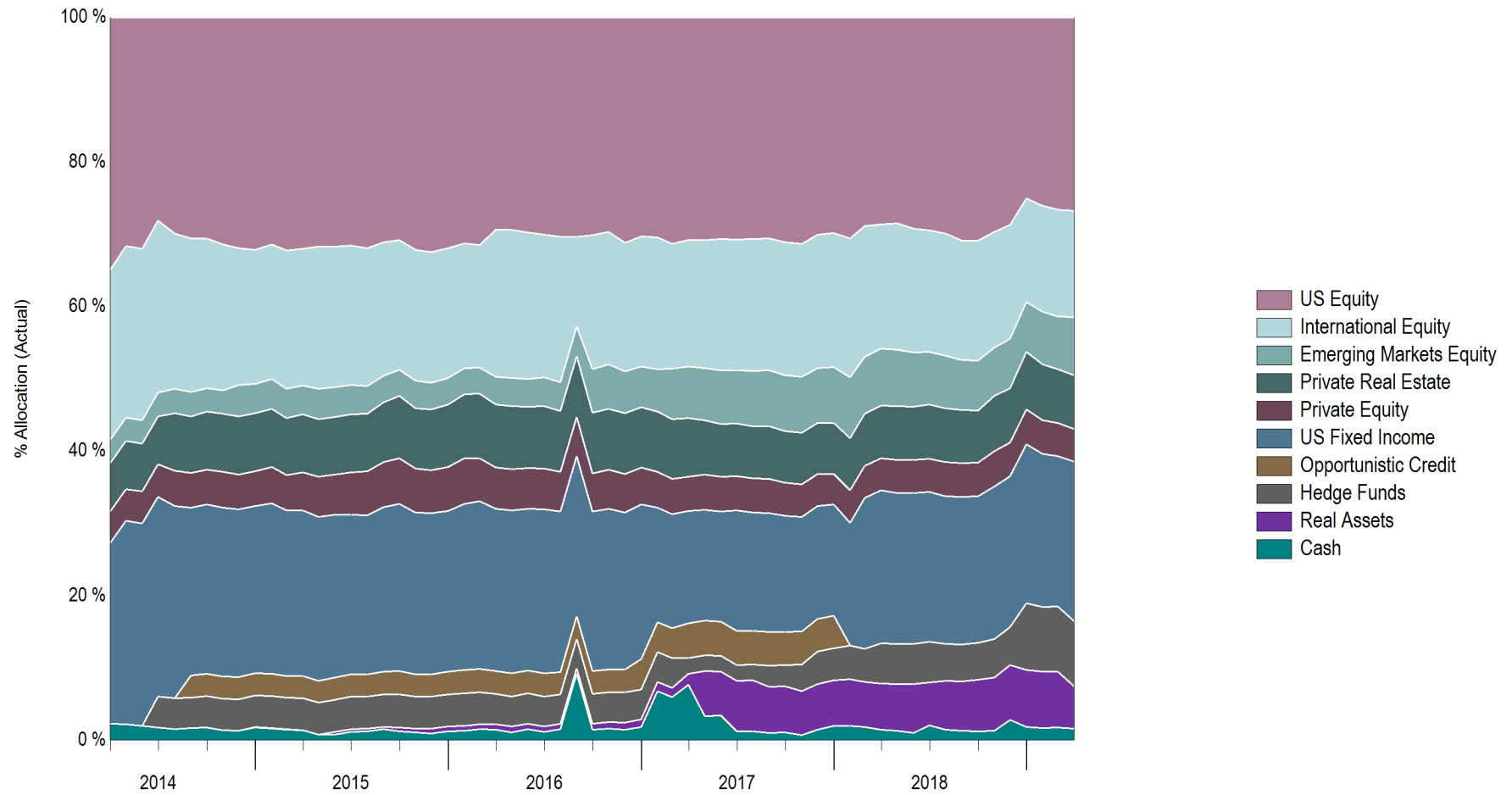
Quarterly Review As of March 31, 2019



Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
US Equity	\$223,381,378	26.7%	21.0%	5.7%	15.0% - 26.0%	No
International Equity	\$123,207,291	14.7%	10.0%	4.7%	5.0% - 15.0%	Yes
Emerging Markets Equity	\$67,248,736	8.0%	8.0%	0.0%	4.0% - 12.0%	Yes
Private Real Estate	\$61,912,343	7.4%	8.0%	-0.6%	6.0% - 10.0%	Yes
Private Equity	\$38,017,768	4.5%	15.0%	-10.5%	5.0% - 20.0%	No
US Fixed Income	\$184,574,864	22.1%	18.0%	4.1%	13.0% - 23.0%	Yes
Opportunistic Credit	--	--	5.0%	-5.0%	3.0% - 7.0%	No
Hedge Funds	\$74,906,340	9.0%	10.0%	-1.0%	5.0% - 15.0%	Yes
Real Assets	\$48,786,849	5.8%	5.0%	0.8%	3.0% - 7.0%	Yes
Cash	\$13,733,940	1.6%	0.0%	1.6%	0.0% - 5.0%	Yes
Total	\$835,769,508	100.0%	100.0%			

Asset Allocation History
5 Years Ending March 31, 2019



As of March 31, 2019

Asset Class Performance Summary

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)*	835,769,508	100.0	7.6	7.6	2.0	3.3	8.3	6.0	10.1	7.9	Dec-94
Total Fund (Gross)*			7.7	7.7	2.2	3.5	8.6	6.3	10.5	8.1	
<i>Policy Index</i>			6.5	6.5	1.4	2.8	8.6	6.3	10.7	5.9	Dec-94
Total Fund w/o Alternatives (Net)	598,412,270	71.6	9.7	9.7	1.8	2.5	8.8	5.9	--	--	Dec-94
Total Fund w/o Alternatives (Gross)			9.8	9.8	2.0	2.8	9.1	6.2	--	--	
<i>Policy Index w/o AI</i>			9.3	9.3	2.5	3.1	8.9	5.9	--	--	Dec-94
US Equity (Net)	223,381,378	26.7	14.6	14.6	3.4	7.9	13.9	11.1	16.4	9.9	Dec-94
US Equity (Gross)			14.6	14.6	3.6	8.1	14.1	11.3	16.6	10.0	
<i>80% R1000 / 20% R2000</i>			14.1	14.1	3.3	7.9	13.5	10.0	15.8	9.9	Dec-94
International Equity (Net)	190,456,027	22.8	11.4	11.4	-2.2	-4.7	8.0	2.3	9.4	5.1	Dec-98
International Equity (Gross)			11.6	11.6	-1.9	-4.4	8.4	2.8	10.0	5.3	
<i>International Equity Custom</i>			10.1	10.1	-1.3	-4.4	9.0	3.3	9.2	4.3	Dec-98
Developed International Equity (Net)	123,207,291	14.7	10.3	10.3	-3.8	-4.7	7.1	1.9	9.6	3.0	Jan-08
Developed International Equity (Gross)			10.4	10.4	-3.7	-4.6	7.4	2.3	10.1	3.4	
<i>MSCI EAFE</i>			10.0	10.0	-2.5	-3.7	7.3	2.3	9.0	2.1	Jan-08
Emerging Markets Equity (Net)	67,248,736	8.0	13.8	13.8	1.4	-5.0	11.6	4.5	--	3.4	Apr-12
Emerging Markets Equity (Gross)			14.0	14.0	2.1	-4.1	12.6	5.5	--	4.4	
<i>MSCI Emerging Markets</i>			9.9	9.9	0.6	-7.4	10.7	3.7	8.9	2.9	Apr-12
US Fixed Income (Net)	184,574,864	22.1	2.6	2.6	4.2	4.2	3.2	2.9	4.7	5.3	Dec-94
US Fixed Income (Gross)			2.6	2.6	4.3	4.4	3.4	3.1	5.1	5.4	
<i>US Fixed Custom</i>			2.6	2.6	4.3	4.2	3.3	3.1	4.0	5.6	Dec-94
Private Real Estate (Net)	61,912,343	7.4	2.4	2.4	5.8	7.8	7.2	7.9	--	--	Mar-99
Private Real Estate (Gross)			2.4	2.4	5.8	7.8	7.5	8.7	9.2	8.7	
<i>NCREIF ODCE (net)</i>			1.2	1.2	4.7	6.6	7.0	9.2	7.7	7.5	Mar-99

Data prior to March 2018 provided by prior consultant.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity (Net)	38,017,768	4.5	0.7	0.7	6.1	12.8	11.2	9.5	7.9	8.0	Jun-05
Private Equity (Gross)			0.7	0.7	6.1	12.8	11.2	9.5	8.1	8.2	
<i>Thomson Reuters Cambridge Private Equity Index</i>			<i>0.0</i>	<i>0.0</i>	<i>3.8</i>	<i>9.4</i>	<i>14.7</i>	<i>12.6</i>	<i>--</i>	<i>--</i>	<i>Jun-05</i>
Hedge Fund (Net)	74,906,340	9.0	3.8	3.8	-0.5	1.5	6.4	--	--	3.7	Jun-14
Hedge Fund (Gross)			3.8	3.8	-0.4	1.6	6.5	--	--	3.8	
<i>Hedge Fund Custom</i>			<i>4.6</i>	<i>4.6</i>	<i>-0.3</i>	<i>0.2</i>	<i>4.3</i>	<i>--</i>	<i>--</i>	<i>2.7</i>	<i>Jun-14</i>
Real Assets (Net)	48,786,849	5.8	4.6	4.6	5.3	7.6	6.7	7.5	--	--	Mar-99
Real Assets (Gross)			4.6	4.6	5.4	7.7	7.0	8.2	--	--	
<i>Real Asset Custom</i>			<i>13.2</i>	<i>13.2</i>	<i>9.8</i>	<i>12.9</i>	<i>11.3</i>	<i>8.5</i>	<i>--</i>	<i>--</i>	<i>Mar-99</i>
Private Infrastructure (Net)	21,463,361	2.6	0.3	0.3	4.5	6.1	9.8	--	--	6.5	Dec-14
Private Infrastructure (Gross)			0.3	0.3	4.5	6.1	9.8	--	--	6.5	
<i>S&P Global Infrastructure Net TR USD</i>			<i>13.8</i>	<i>13.8</i>	<i>5.8</i>	<i>8.2</i>	<i>7.7</i>	<i>4.5</i>	<i>--</i>	<i>4.2</i>	<i>Dec-14</i>
Private Natural Resources (Net)	10,744,485	1.3	1.2	1.2	7.9	10.1	16.9	--	--	17.4	Sep-15
Private Natural Resources (Gross)			1.2	1.2	7.9	10.1	16.9	--	--	17.4	
<i>S&P Global Natural Resources Index TR USD</i>			<i>12.4</i>	<i>12.4</i>	<i>-5.2</i>	<i>-0.1</i>	<i>13.4</i>	<i>1.8</i>	<i>4.9</i>	<i>14.4</i>	<i>Sep-15</i>
Cash (Net)	13,733,940	1.6	0.3	0.3	0.8	0.8	--	--	--	--	
Cash (Gross)			0.3	0.3	0.8	0.8	--	--	--	--	

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Real Assets includes State Street Real Asset NL Fund



As of March 31, 2019

Trailing Net Performance

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund*	835,769,508	100.0	--	7.6	7.6	2.0	3.3	8.3	6.0	10.1	7.9	Dec-94
Policy Index				6.5	6.5	1.4	2.8	8.6	6.3	10.7	5.9	Dec-94
InvestorForce Public DB \$250mm-\$1B Net Median				8.3	8.3	2.5	3.6	8.3	5.7	9.9	7.4	Dec-94
InvestorForce Public DB \$250mm-\$1B Net Rank				77	77	71	61	43	34	40	36	Dec-94
Total Fund w/o Alternatives	598,412,270	71.6	71.6	9.7	9.7	1.8	2.5	8.8	5.9	--	--	Dec-94
Policy Index w/o AI				9.3	9.3	2.5	3.1	8.9	5.9	--	--	Dec-94
InvestorForce Public DB \$250mm-\$1B Net Median				8.3	8.3	2.5	3.6	8.3	5.7	9.9	7.4	Dec-94
InvestorForce Public DB \$250mm-\$1B Net Rank				9	9	84	88	25	41	--	--	Dec-94
US Equity	223,381,378	26.7	37.3	14.6	14.6	3.4	7.9	13.9	11.1	16.4	9.9	Dec-94
80% R1000 / 20% R2000				14.1	14.1	3.3	7.9	13.5	10.0	15.8	9.9	Dec-94
InvestorForce All DB US Eq Net Median				14.0	14.0	3.6	7.5	13.0	9.5	15.4	9.6	Dec-94
InvestorForce All DB US Eq Net Rank				24	24	54	41	16	4	7	27	Dec-94
Mellon Dynamic US Equity	81,155,671	9.7	36.3	15.9	15.9	6.1	9.6	15.5	13.4	--	17.0	Dec-12
S&P 500				13.6	13.6	5.9	9.5	13.5	10.9	15.9	13.9	Dec-12
eV US Large Cap Core Equity Net Median				13.1	13.1	4.1	6.9	12.1	9.4	14.8	12.9	Dec-12
eV US Large Cap Core Equity Net Rank				7	7	31	27	4	2	--	1	Dec-12
Mellon Large Cap	107,058,152	12.8	47.9	14.0	14.0	5.6	9.3	13.5	--	--	13.5	Mar-16
Russell 1000				14.0	14.0	5.5	9.3	13.5	10.6	16.0	13.5	Mar-16
eV US Large Cap Core Equity Net Median				13.1	13.1	4.1	6.9	12.1	9.4	14.8	12.1	Mar-16
eV US Large Cap Core Equity Net Rank				27	27	37	30	20	--	--	20	Mar-16
DFA Small Cap	17,511,053	2.1	7.8	12.0	12.0	-6.8	-0.2	10.5	--	--	6.8	Jun-14
Russell 2000				14.6	14.6	-5.3	2.0	12.9	7.1	15.4	7.0	Jun-14
eV US Small Cap Core Equity Net Median				13.6	13.6	-5.6	1.0	11.7	6.9	15.6	6.9	Jun-14
eV US Small Cap Core Equity Net Rank				81	81	66	64	69	--	--	53	Jun-14

Historical returns for the US Equity Composite prior to January 2012 and for the International Equity Composite prior to December 2010 are gross only.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
PanAgora	17,656,502	2.1	7.9	14.3	14.3	-8.4	0.5	11.4	7.2	--	8.9	Sep-13
Russell 2000				14.6	14.6	-5.3	2.0	12.9	7.1	15.4	8.2	Sep-13
eV US Small Cap Core Equity Net Median				13.6	13.6	-5.6	1.0	11.7	6.9	15.6	8.4	Sep-13
eV US Small Cap Core Equity Net Rank				39	39	78	55	55	44	--	42	Sep-13
International Equity	190,456,027	22.8	31.8	11.4	11.4	-2.2	-4.7	8.0	2.3	9.4	5.1	Dec-98
International Equity Custom				10.1	10.1	-1.3	-4.4	9.0	3.3	9.2	4.3	Dec-98
InvestorForce All DB ex-US Eq Net Median				10.6	10.6	-2.5	-5.9	7.9	2.7	9.1	5.1	Dec-98
InvestorForce All DB ex-US Eq Net Rank				27	27	39	28	46	68	35	49	Dec-98
Developed International Equity	123,207,291	14.7	64.7	10.3	10.3	-3.8	-4.7	7.1	1.9	9.6	3.0	Jan-08
MSCI EAFE				10.0	10.0	-2.5	-3.7	7.3	2.3	9.0	2.1	Jan-08
Mellon International	102,853,121	12.3	83.5	10.0	10.0	-2.4	-3.2	7.7	--	--	7.7	Mar-16
MSCI EAFE				10.0	10.0	-2.5	-3.7	7.3	2.3	9.0	7.3	Mar-16
eV All EAFE Equity Net Median				10.1	10.1	-4.5	-5.6	6.9	3.0	9.9	6.9	Mar-16
eV All EAFE Equity Net Rank				52	52	31	29	31	--	--	31	Mar-16
Copper Rock	20,354,170	2.4	16.5	11.8	11.8	-10.9	-12.3	2.6	1.8	--	4.1	Sep-13
MSCI World ex USA Small Cap				10.9	10.9	-7.8	-8.7	7.3	3.7	12.2	5.0	Sep-13
eV EAFE Small Cap Equity Net Median				10.1	10.1	-9.4	-11.9	7.3	4.7	13.9	6.0	Sep-13
eV EAFE Small Cap Equity Net Rank				29	29	68	58	97	93	--	87	Sep-13
Emerging Markets Equity	67,248,736	8.0	35.3	13.8	13.8	1.4	-5.0	11.6	4.5	--	3.4	Apr-12
MSCI Emerging Markets				9.9	9.9	0.6	-7.4	10.7	3.7	8.9	2.9	Apr-12

Developed International Equity and Emerging Markets Equity composites were only reported as one composite prior to March 2018.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Wells Capital	67,248,736	8.0	100.0	13.8	13.8	1.4	-5.0	11.6	4.5	--	3.1	Mar-12
<i>MSCI Emerging Markets</i>				9.9	9.9	0.6	-7.4	10.7	3.7	8.9	2.7	Mar-12
<i>eV Emg Mkts Equity Net Median</i>				10.3	10.3	-0.3	-8.6	9.9	3.7	9.8	3.3	Mar-12
<i>eV Emg Mkts Equity Net Rank</i>				14	14	30	17	26	30	--	55	Mar-12
US Fixed Income	184,574,864	22.1	30.8	2.6	2.6	4.2	4.2	3.2	2.9	4.7	5.3	Dec-94
<i>US Fixed Custom</i>				2.6	2.6	4.3	4.2	3.3	3.1	4.0	5.6	Dec-94
<i>InvestorForce All DB US Fix Inc Net Median</i>				3.2	3.2	4.3	4.3	3.0	2.9	5.2	5.8	Dec-94
<i>InvestorForce All DB US Fix Inc Net Rank</i>				73	73	59	59	44	52	64	86	Dec-94
Barrow Hanley	136,991,243	16.4	74.2	3.1	3.1	4.7	4.6	2.0	2.7	--	3.3	Mar-10
<i>BBgBarc US Aggregate TR</i>				2.9	2.9	4.6	4.5	2.0	2.7	3.8	3.3	Mar-10
<i>eV US Core Fixed Inc Net Median</i>				3.2	3.2	4.6	4.4	2.2	2.8	4.3	3.6	Mar-10
<i>eV US Core Fixed Inc Net Rank</i>				63	63	41	31	66	59	--	69	Mar-10
Vanguard Short-Term Treasury Index Fund	47,583,621	5.7	25.8	1.0	1.0	2.5	2.7	--	--	--	2.7	Feb-18
<i>BBgBarc US Govt 1-3 Yr TR</i>				1.0	1.0	2.5	2.7	1.0	1.0	1.1	2.7	Feb-18
<i>BBgBarc US Govt 1-5 Yr TR</i>				1.2	1.2	3.0	3.2	1.0	1.3	1.5	3.2	Feb-18
<i>eV US Short Duration Fixed Inc Net Median</i>				1.4	1.4	2.8	3.1	1.6	1.4	2.1	3.0	Feb-18
<i>eV US Short Duration Fixed Inc Net Rank</i>				90	90	76	84	--	--	--	79	Feb-18

Historical returns for the US Fixed Income Composite prior to December 2010 and for Barrow Hanley prior to June 2010 are gross only.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Real Estate	61,912,343	7.4	7.4	2.4	2.4	5.8	7.8	7.2	7.9	--	--	Mar-99
<i>NCREIF ODCE (net)</i>				1.2	1.2	4.7	6.6	7.0	9.2	7.7	7.5	Mar-99
<i>InvestorForce All DB Real Estate Pub+Priv Net Median</i>				1.4	1.4	4.8	6.9	6.9	9.1	7.5	7.5	Mar-99
<i>InvestorForce All DB Real Estate Pub+Priv Net Rank</i>				17	17	19	30	45	88	--	--	Mar-99
Greenfield Gap VII	11,073,596	1.3	17.9	4.0	4.0	9.4	10.2	12.6	--	--	13.2	Dec-14
Patron Capital V	5,703,497	0.7	9.2	5.6	5.6	6.5	13.4	17.2	--	--	16.2	Jan-16
UBS Trumbull Property	42,952,430	5.1	69.4	1.7	1.7	5.0	6.8	5.1	7.4	6.8	7.3	Mar-99
Carlyle Realty VIII	414,355	0.0	0.7	-6.4	-6.4	-28.7	-28.7	--	--	--	-40.8	Dec-17
Taconic CRE Dislocation Fund II	1,691,598	0.2	2.7	-0.7	-0.7	--	--	--	--	--	-0.7	Nov-18
Carmel Partners Investment Fund VII	76,866	0.0	0.1	--	--	--	--	--	--	--	--	Apr-19
Private Equity	38,017,768	4.5	4.5	0.7	0.7	6.1	12.8	11.2	9.5	7.9	8.0	Jun-05
<i>Thomson Reuters Cambridge Private Equity Index</i>				0.0	0.0	3.8	9.4	14.7	12.6	--	--	Jun-05
<i>InvestorForce All DB Private Eq Net Median</i>				-0.1	-0.1	5.9	10.0	11.4	10.6	10.8	10.4	Jun-05
<i>InvestorForce All DB Private Eq Net Rank</i>				23	23	49	29	53	62	95	80	Jun-05
Adams Street	7,466,397	0.9	19.6	-1.5	-1.5	7.1	10.8	11.8	12.0	10.4	6.9	Sep-05
Invesco IV	474,703	0.1	1.2	0.0	0.0	-19.1	-16.1	5.7	7.1	7.6	8.2	Jun-05

Private Real Estate results prior to 1/1/2019 were included in the Real Assets composite. All results for the Private Real Estate composite that include the period prior to 1/1/2019 will reflect only the latest lineup of managers that Meketa received information for, therefore it may not reflect the entire Private Real Estate composite at that given time.

All private markets performance and market values reflect a 12/31/2018 capital account balance unless otherwise noted.

Historical returns for Invesco IV prior to April 2012 are gross only.

The market values for Invesco IV and Invesco VI reflect a 9/30/2018 capital account balance.

Adams Street includes Adams Street 2005, Adams Street 2007, and Adams Street 2011.



Merced County Employees' Retirement Association

Total Fund

As of March 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Invesco VI	5,976,760	0.7	15.7	0.0	0.0	5.3	10.4	11.8	13.3	--	11.9	Jun-13
Ocean Avenue II	9,730,272	1.2	25.6	8.0	8.0	13.8	32.7	22.0	--	--	12.5	Jun-14
Pantheon I	977,851	0.1	2.6	-3.0	-3.0	1.9	5.0	6.1	5.0	5.2	3.5	Dec-05
Pantheon II	3,998,727	0.5	10.5	0.9	0.9	11.0	15.9	14.3	11.6	--	11.8	Dec-11
Pantheon Secondary	1,167,621	0.1	3.1	-4.2	-4.2	13.3	10.5	4.9	3.3	1.3	3.7	Jun-07
Raven Asset Fund II	3,429,925	0.4	9.0	2.9	2.9	6.9	8.9	0.8	--	--	-1.2	Aug-14
Davidson Kempner Long-Term Distressed Opportunities Fund IV	2,895,578	0.3	7.6	2.8	2.8	15.1	15.9	--	--	--	15.9	Apr-18
GTCR Fund XII	696,498	0.1	1.8	-32.5	-32.5	-32.5	--	--	--	--	-32.5	Jun-18
Carrick Capital Partners III	733,208	0.1	1.9	-7.0	-7.0	--	--	--	--	--	-11.4	Aug-18
Cressey & Company Fund VI	444,228	0.1	1.2	-11.2	-11.2	--	--	--	--	--	-11.2	Jan-19
TCV X	26,000	0.0	0.1	--	--	--	--	--	--	--	--	Apr-19
Hedge Fund	74,906,340	9.0	9.0	3.8	3.8	-0.5	1.5	6.4	--	--	3.7	Jun-14
<i>Hedge Fund Custom</i>				4.6	4.6	-0.3	0.2	4.3	--	--	2.7	Jun-14
<i>InvestorForce All DB Hedge Funds Net Median</i>				3.1	3.1	-0.3	1.1	4.6	2.4	5.1	2.2	Jun-14
<i>InvestorForce All DB Hedge Funds Net Rank</i>				40	40	52	45	18	--	--	19	Jun-14
OZ Domestic II	10,144,211	1.2	13.5	9.2	9.2	2.3	4.3	9.0	--	--	5.8	Jun-14
Graham Absolute Return	7,234,742	0.9	9.7	3.3	3.3	-1.1	1.0	--	--	--	1.9	Aug-17

Pantheon I includes Pantheon US Fund VI and Pantheon Europe Fund IV.

Pantheon II Includes Pantheon US Fund IX, Pantheon Asia Fund VI, and Pantheon Europe Fund VII.

Pantheon Secondary includes Pantheon GLO SEC III B.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Wellington-Archipelago	11,697,160	1.4	15.6	8.6	8.6	1.4	1.6	--	--	--	4.7	Aug-17
KLS Diversified	9,124,788	1.1	12.2	0.5	0.5	-2.5	1.6	--	--	--	1.6	Oct-17
Winton	6,075,612	0.7	8.1	0.3	0.3	-1.5	0.8	--	--	--	1.6	Oct-17
Marshall Wace Eureka	3,148,339	0.4	4.2	4.5	4.5	-1.4	0.1	--	--	--	3.4	Nov-17
Silver Point Capital	12,138,007	1.5	16.2	2.1	2.1	-2.7	-0.8	--	--	--	1.2	Nov-17
Laurion Capital	5,189,381	0.6	6.9	1.5	1.5	--	--	--	--	--	4.8	Aug-18
Taconic Opportunity Fund	10,154,101	1.2	13.6	1.9	1.9	--	--	--	--	--	--	Dec-18
Real Assets	48,786,849	5.8	5.8	4.6	4.6	5.3	7.6	6.7	7.5	--	--	Mar-99
<i>Real Asset Custom</i>				13.2	13.2	9.8	12.9	11.3	8.5	--	--	Mar-99
SSgA	16,579,003	2.0	34.0	8.9	8.9	0.4	3.7	--	--	--	4.3	Apr-17
<i>Real Asset NL Custom Blended Index</i>				9.0	9.0	0.6	4.1	--	--	--	4.5	Apr-17
Private Infrastructure	21,463,361	2.6	44.0	0.3	0.3	4.5	6.1	9.8	--	--	6.5	Dec-14
<i>S&P Global Infrastructure Net TR USD</i>				13.8	13.8	5.8	8.2	7.7	4.5	--	4.2	Dec-14
KKR Global II	10,268,249	1.2	47.8	0.3	0.3	6.3	8.0	9.2	--	--	10.0	Dec-14
North Haven Infrastructure II	9,619,275	1.2	44.8	0.0	0.0	4.6	6.0	11.9	--	--	6.0	May-15
ISQ Global Infrastructure Fund II	1,267,229	0.2	5.9	5.7	5.7	-28.0	--	--	--	--	-28.0	Jul-18
KKR Global Infrastructure Investors III	308,608	0.0	1.4	-10.9	-10.9	--	--	--	--	--	-10.9	Jan-19

The market value for North Haven Infrastructure II reflects a 9/30/2018 capital account balance.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Natural Resources	10,744,485	1.3	22.0	1.2	1.2	7.9	10.1	16.9	--	--	17.4	Sep-15
<i>S&P Global Natural Resources Index TR USD</i>				12.4	12.4	-5.2	-0.1	13.4	1.8	4.9	14.4	Sep-15
EnCap XI	598,054	0.1	5.6	-4.6	-4.6	-14.0	-19.2	--	--	--	-35.0	Jul-17
EnCap IV	827,735	0.1	7.7	0.6	0.6	-9.1	-16.5	--	--	--	-15.4	Feb-18
GSO Energy Opportunities	4,429,328	0.5	41.2	-1.8	-1.8	3.1	5.4	19.5	--	--	16.8	Nov-15
Taurus Mining	2,729,061	0.3	25.4	4.9	4.9	15.0	18.7	14.6	--	--	18.1	Sep-15
Taurus Mining Annex	2,160,307	0.3	20.1	7.3	7.3	23.7	28.3	--	--	--	31.4	Jan-17
Cash	13,733,940	1.6	1.6	0.3	0.3	0.8	0.8	--	--	--	--	
Cash	8,438,358	1.0	61.4	0.4	0.4	1.2	1.3	1.1	0.8	--	--	Sep-03
Treasury Cash	5,295,581	0.6	38.6									

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

As of March 31, 2019

Benchmark History

As of March 31, 2019

Total Fund		
1/1/2019	Present	21% US Equity Custom / 18% International Equity Custom / 23% US Fixed Custom / 10% Hedge Fund Custom / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net)
1/1/2017	12/31/2018	27% US Equity Custom / 23% International Equity Custom / 22% US Fixed Custom / 5% Hedge Fund Custom / 9% Thomson Reuters Cambridge Private Equity Index / 14% Real Asset Custom
7/1/2014	12/31/2016	22.7% Russell 1000 / 5.7% Russell 2000 / 23.6% International Equity Custom / 28.5% US Fixed Custom / 4.5% Hedge Fund Custom / 8% NCREIF ODCE (net) / 7% Cambridge Assoc. U.S. Private Equity Index
US Equity		
12/31/1994	Present	80% Russell 1000 / 20% Russell 2000
International Equity		
1/1/2019	Present	56% MSCI EAFE Gross / 44% MSCI Emerging Markets Gross
1/1/2017	12/31/2018	69.56% MSCI EAFE Gross / 30.44% MSCI Emerging Markets Gross
7/1/2013	12/31/2016	MSCI ACWI ex USA Gross
US Fixed Income		
3/1/2018	Present	77.27% BBgBarc US Aggregate TR / 22.73% BBgBarc US Govt 1-5 Yr TR
1/1/2017	2/28/2018	77.27% BBgBarc US Aggregate TR / 22.73% Credit Suisse Leveraged Loans
8/1/2014	12/31/2016	71.93% BBgBarc US Aggregate TR / 17.54% ICE BofAML US High Yield TR / 10.53% Credit Suisse Leveraged Loans
Hedge Fund		
7/1/2017	Present	100% HFRI Fund of Funds Composite Index
1/1/2015	6/30/2017	50% HFRI Fund of Funds Composite Index / 50% HFRI RV: Multi-Strategy Index
Real Assets		
1/1/2019	Present	50% S&P Global Natural Resources Index TR USD / 50% S&P Global Infrastructure TR USD
6/1/2013	12/31/2018	57.14% NCREIF ODCE (net) / 21.43% S&P Global Natural Resources Index TR USD / 21.43% S&P Global Infrastructure TR USD

Benchmark History
As of March 31, 2019

SSgA		
4/30/2017	Present	25% Bloomberg Roll Select Commodities Index TR USD / 25% S&P Global LargeMidCap Commodity and Resources NR USD / 10% S&P Global Infrastructure TR USD / 15% DJ US Select REIT TR USD / 25% BBgBarc US TIPS TR

As of March 31, 2019

Statistics Summary
5 Years Ending March 31, 2019

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	6.00%	6.50%	-0.30	1.04	0.81	0.99%
Policy Index	6.30%	6.15%	--	1.00	0.90	0.00%
InvestorForce Public DB \$250mm-\$1B Net Median	5.74%	6.64%	-0.26	1.00	0.76	0.98%

As of March 31, 2019

Annual Investment Expense Analysis

As Of March 31, 2019

Name	Fee Schedule	Market Value	Estimated Fee	Estimated Fee Value
Total Fund w/o Alternatives		\$598,412,270		
US Equity		\$223,381,378		
Mellon Dynamic US Equity	0.30% of Assets	\$81,155,671	0.30%	\$243,467
Mellon Large Cap	0.04% of First 100.0 Mil, 0.02% Thereafter	\$107,058,152	0.04%	\$41,412
DFA Small Cap	0.35% of Assets	\$17,511,053	0.35%	\$61,289
PanAgora	0.80% of Assets	\$17,656,502	0.80%	\$141,252
International Equity		\$190,456,027		
Developed International Equity		\$123,207,291		
Mellon International	0.04% of Assets	\$102,853,121	0.04%	\$41,141
Copper Rock	0.85% of Assets	\$20,354,170	0.85%	\$173,010
Emerging Markets Equity		\$67,248,736		
Wells Capital	0.90% of First 100.0 Mil, 0.85% Thereafter	\$67,248,736	0.90%	\$605,239
US Fixed Income		\$184,574,864		
Barrow Hanley	0.30% of First 50.0 Mil, 0.20% of Next 100.0 Mil, 0.15% Thereafter	\$136,991,243	0.24%	\$323,982
Vanguard Short-Term Treasury Index Fund	0.05% of Assets	\$47,583,621	0.05%	\$23,792
Private Real Estate		\$61,912,343		
Greenfield Gap VII		\$11,073,596		
Patron Capital V		\$5,703,497		
UBS Trumbull Property		\$42,952,430		
Carlyle Realty VIII		\$414,355		
Taconic CRE Dislocation Fund II		\$1,691,598		
Carmel Partners Investment Fund VII		\$76,866		
Invesco IV		\$474,703		
Invesco VI		\$5,976,760		
Ocean Avenue II		\$9,730,272		

As of March 31, 2019

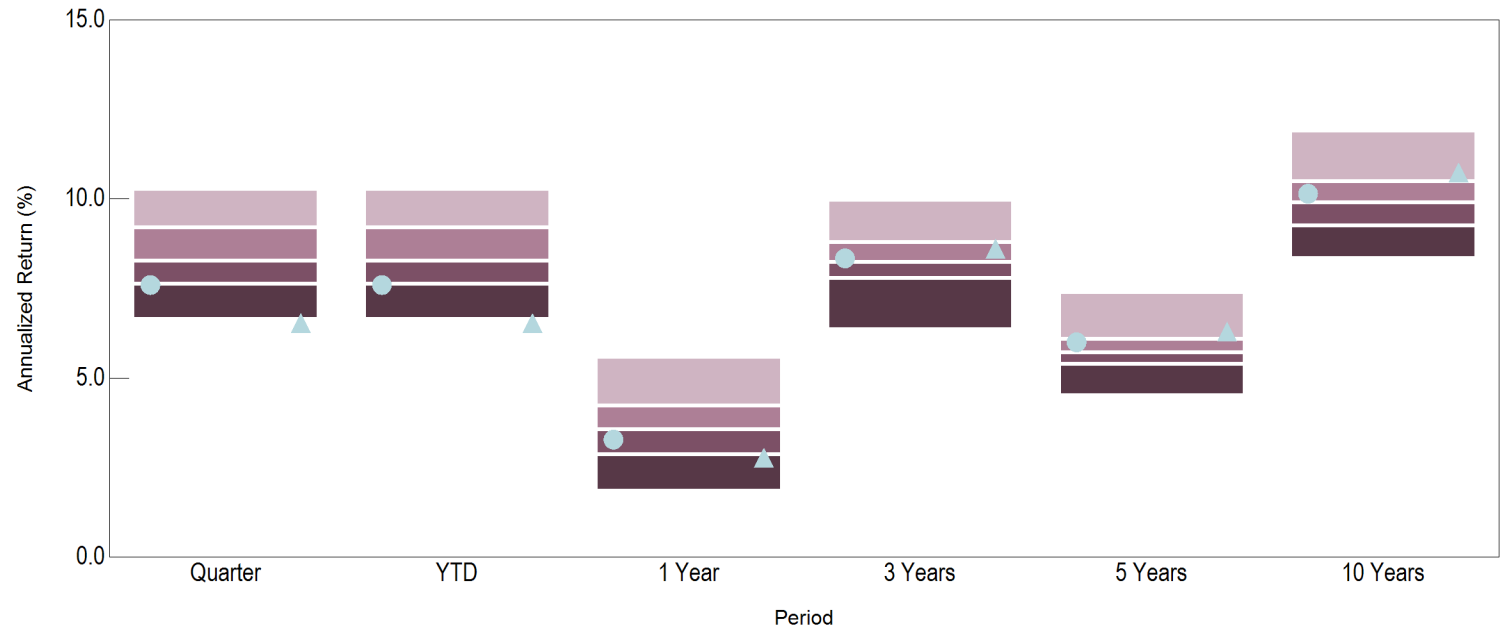
Name	Fee Schedule	Market Value	Estimated Fee	Estimated Fee Value
Pantheon I		\$977,851		
Pantheon II		\$3,998,727		
Pantheon Secondary		\$1,167,621		
Raven Asset Fund II		\$3,429,925		
Davidson Kempner Long-Term Distressed Opportunities Fund IV		\$2,895,578		
GTCR Fund XII		\$696,498		
Carrick Capital Partners III		\$733,208		
Cressey & Company Fund VI		\$444,228		
TCV X		\$26,000		
Hedge Fund		\$74,906,340		
OZ Domestic II	Performance-based 1.50 and 20.00	\$10,144,211	1.79%	\$181,444
Graham Absolute Return	Performance-based 1.75 and 20.00	\$7,234,742	1.75%	\$126,608
Wellington-Archipelago	Performance-based 1.00 and 20.00	\$11,697,160	1.25%	\$146,297
KLS Diversified	Performance-based 2.00 and 20.00	\$9,124,788	2.00%	\$182,496
Winton	Performance-based 0.90 and 20.00	\$6,075,612	1.27%	\$76,888
Marshall Wace Eureka	Performance-based 2.00 and 20.00	\$3,148,339	2.31%	\$72,802
Silver Point Capital	Performance-based 2.00 and 20.00	\$12,138,007	2.04%	\$247,206
Laurion Capital		\$5,189,381		
Taconic Opportunity Fund		\$10,154,101		
Real Assets		\$48,786,849		
SSgA	0.30% of First 50.0 Mil, 0.27% of Next 50.0 Mil, 0.25% Thereafter	\$16,579,003	0.30%	\$49,737
Private Infrastructure		\$21,463,361		
KKR Global II		\$10,268,249		
North Haven Infrastructure II		\$9,619,275		
ISQ Global Infrastructure Fund II		\$1,267,229		
KKR Global Infrastructure Investors III		\$308,608		
Private Natural Resources		\$10,744,485		

Merced County Employees' Retirement Association

As of March 31, 2019

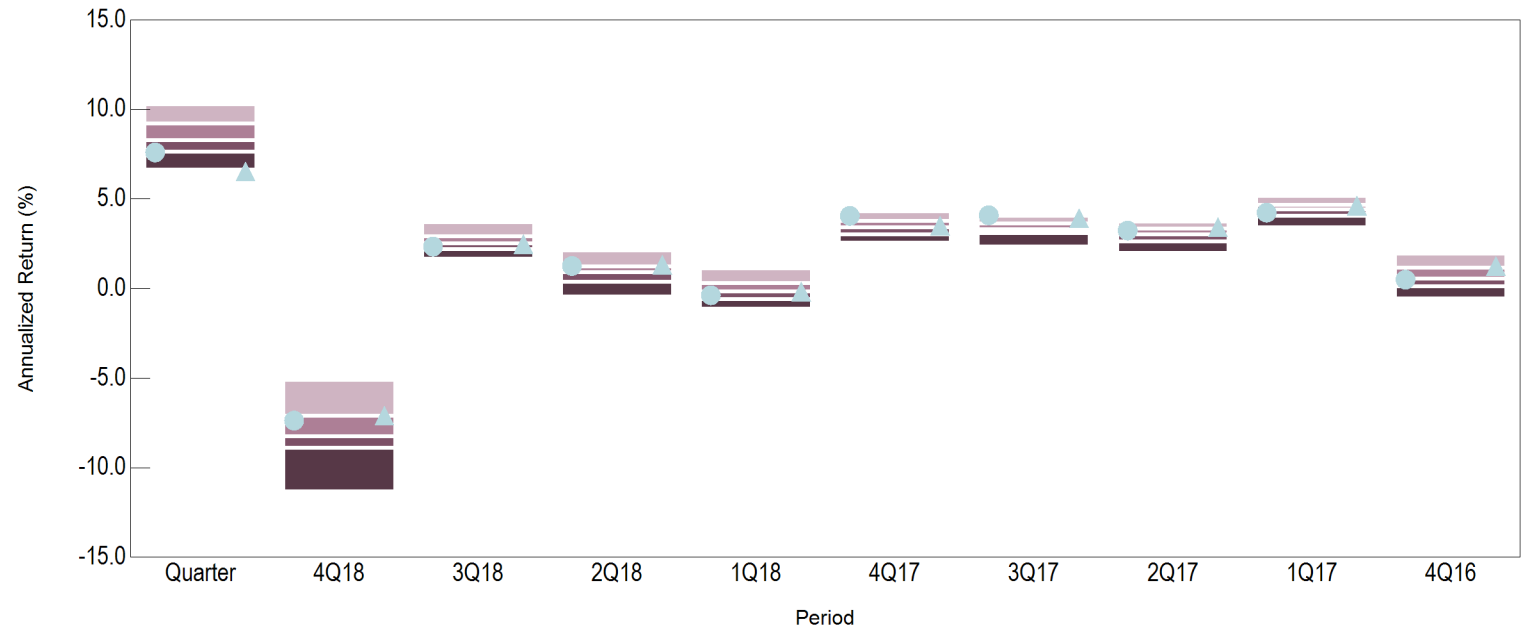
Name	Fee Schedule	Market Value	Estimated Fee	Estimated Fee Value
EnCap XI		\$598,054		
EnCap IV		\$827,735		
GSO Energy Opportunities		\$4,429,328		
Taurus Mining		\$2,729,061		
Taurus Mining Annex		\$2,160,307		
Cash		\$13,733,940		
Cash		\$8,438,358		
Treasury Cash		\$5,295,581		

InvestorForce Public DB \$250mm-\$1B Net Return Comparison
Ending March 31, 2019



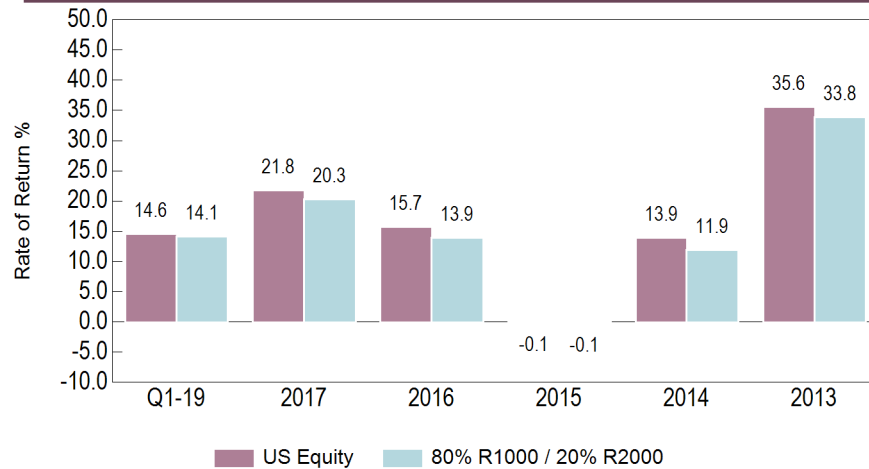
	Return (Rank)											
5th Percentile	10.3		10.3		5.6		10.0		7.4		11.9	
25th Percentile	9.2		9.2		4.2		8.8		6.1		10.5	
Median	8.3		8.3		3.6		8.3		5.7		9.9	
75th Percentile	7.6		7.6		2.9		7.8		5.4		9.3	
95th Percentile	6.7		6.7		1.9		6.4		4.5		8.4	
# of Portfolios	77		77		77		75		68		52	
<div><div></div>Total Fund</div>	7.6	(77)	7.6	(77)	3.3	(61)	8.3	(43)	6.0	(34)	10.1	(40)
<div><div></div>Policy Index</div>	6.5	(96)	6.5	(96)	2.8	(79)	8.6	(29)	6.3	(22)	10.7	(18)

InvestorForce Public DB \$250mm-\$1B Net Return Comparison
Ending March 31, 2019

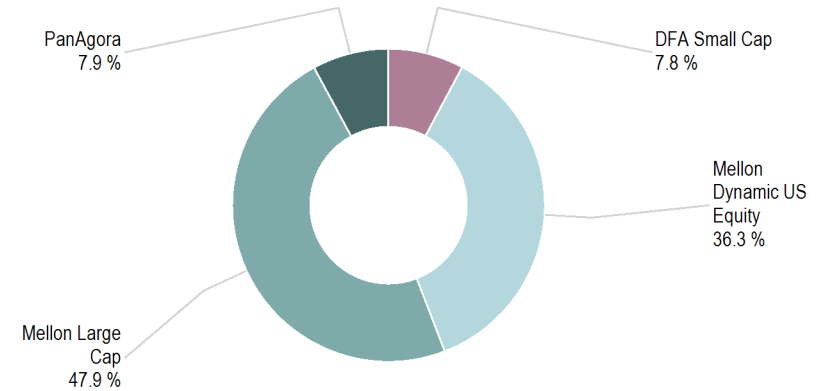


	Return (Rank)									
5th Percentile	10.3	-5.1	3.7	2.1	1.1	4.3	4.1	3.7	5.1	1.9
25th Percentile	9.2	-7.1	2.9	1.3	0.3	3.8	3.6	3.4	4.7	1.2
Median	8.3	-8.2	2.5	0.9	-0.1	3.4	3.3	3.0	4.4	0.6
75th Percentile	7.6	-8.9	2.2	0.4	-0.6	3.1	3.1	2.7	4.1	0.1
95th Percentile	6.7	-11.3	1.7	-0.4	-1.1	2.6	2.4	2.0	3.5	-0.5
# of Portfolios	77	73	57	61	56	59	61	61	64	57
● Total Fund	7.6 (77)	-7.4 (33)	2.3 (68)	1.3 (25)	-0.4 (66)	4.1 (16)	4.1 (4)	3.2 (29)	4.2 (65)	0.5 (54)
▲ Policy Index	6.5 (96)	-7.1 (28)	2.5 (56)	1.3 (23)	-0.2 (54)	3.5 (43)	3.9 (10)	3.4 (23)	4.6 (35)	1.3 (22)

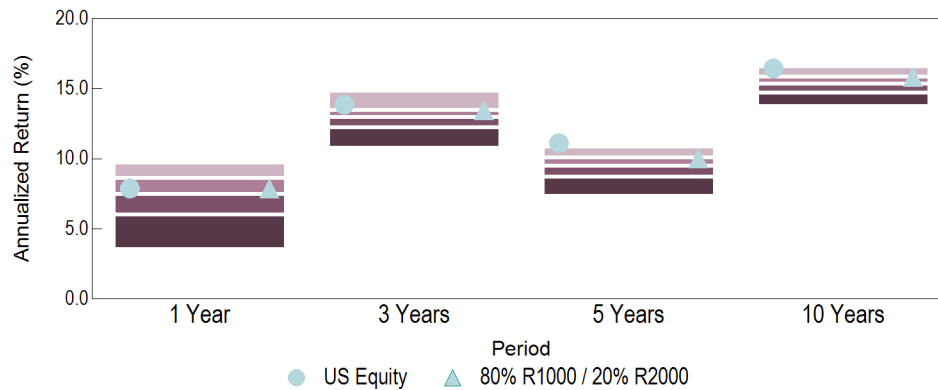
Return Summary



Current Allocation

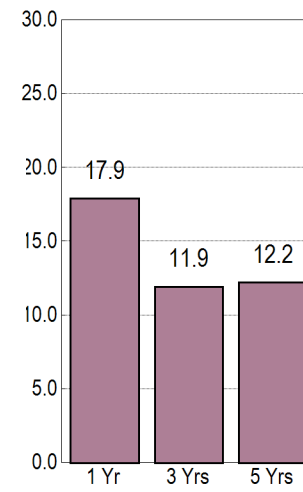


	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
US Equity	7.9	13.9	11.1	16.4
80% R1000 / 20% R2000	7.9	13.5	10.0	15.8
InvestorForce All DB US Eq Net Median	7.5	13.0	9.5	15.4
InvestorForce All DB US Eq Net Rank	41	16	4	7



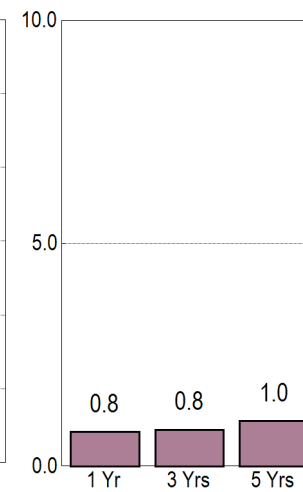
Anzld. Std. Deviation

US Equity



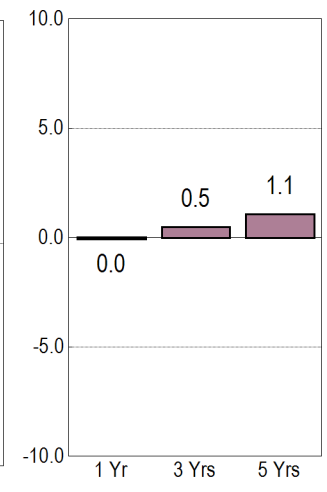
Tracking Error

US Equity



Information Ratio

US Equity



US Equity

As of March 31, 2019

US Equity Characteristics
vs Russell 3000

	Portfolio Q1-19	Index Q1-19
Characteristics		
Weighted Avg. Market Cap. (\$B)	161.6	178.6
Median Market Cap (\$B)	2.2	1.6
P/E Ratio	19.6	20.2
Yield	1.9	1.9
EPS Growth - 5 Yrs.	12.2	12.5
Price to Book	3.1	3.3
Beta (holdings; domestic)	1.0	1.0

US Equity Sector Distribution
vs Russell 3000

	Portfolio Q1-19	Index Q1-19
Sector Distribution		
Energy	4.6	5.1
Materials	2.9	3.0
Industrials	10.6	10.1
Consumer Discretionary	10.0	10.4
Consumer Staples	5.9	6.5
Health Care	13.3	14.3
Financials	13.1	13.2
Information Technology	18.3	21.1
Communication Services	8.0	9.1
Utilities	3.1	3.2
Real Estate	3.1	4.0

Top Holdings

CASH - USD	3.8%
UST Bill 03/14/19	2.8%
MICROSOFT	2.6%
APPLE	2.5%
AMAZON.COM	2.1%
BERKSHIRE HATHAWAY 'B'	1.2%
FACEBOOK CLASS A	1.2%
JOHNSON & JOHNSON	1.1%
JP MORGAN CHASE & CO.	1.1%
ALPHABET 'C'	1.1%

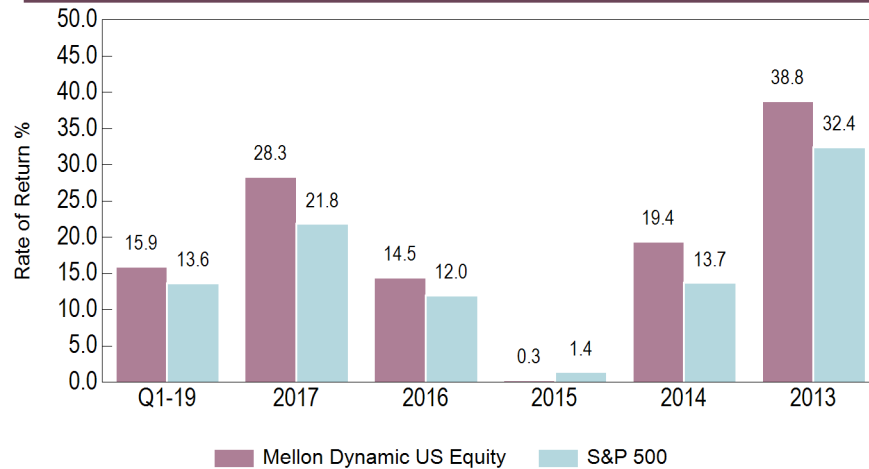
Best Performers

	Return %
IMMUNE DESIGN	350.0%
DIEBOLD NIXDORF	344.6%
TREVENA	262.8%
PROFESSIONAL DIVERSITY NETWORK	221.0%
SCYNEXIS	213.5%
FLOTEK INDUSTRIES	197.2%
SPARK THERAPEUTICS	191.0%
ION GEOPHYSICAL	178.8%
CATALYST PHARMACEUTICAL PARTNERS	165.6%
PIER 1 IMPORTS	149.7%

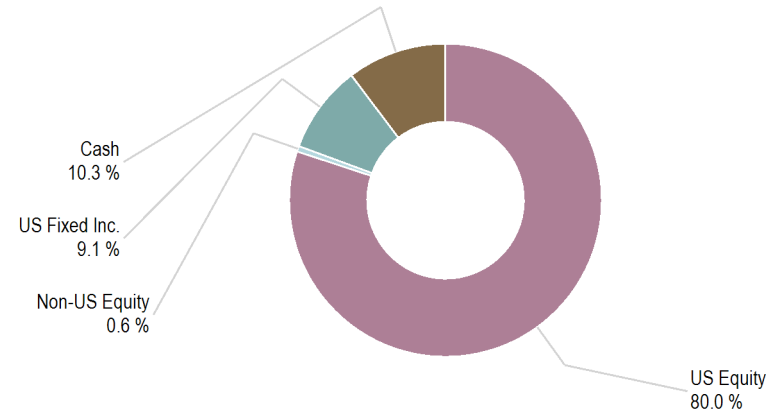
Worst Performers

	Return %
ACETO	-79.3%
PHI NON-VOTING	-76.8%
CLOUD PEAK ENERGY (XSC)	-71.3%
NOVAVAX	-70.1%
ATLAS FINANCIAL (NAS) HOLDINGS	-69.6%
GLOBAL EAGLE ENTM.	-68.2%
FTD COMPANIES	-65.5%
ARLO TECHNOLOGIES	-58.6%
ASCENA RETAIL GROUP	-57.0%
DIPLOMAT PHARMACY	-56.8%

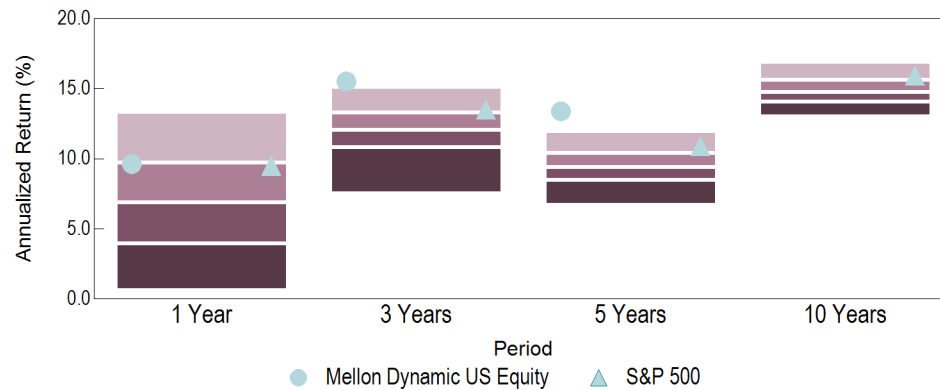
Return Summary



Current Allocation

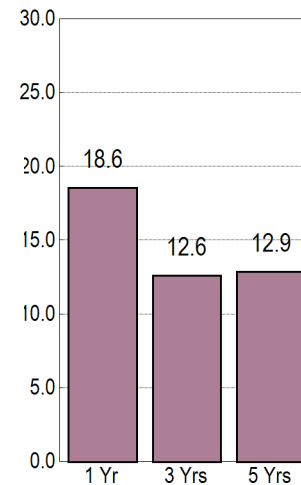


	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Mellon Dynamic US Equity	9.6	15.5	13.4	--
S&P 500	9.5	13.5	10.9	15.9
eV US Large Cap Core Equity Net Median	6.9	12.1	9.4	14.8
eV US Large Cap Core Equity Net Rank	27	4	2	--



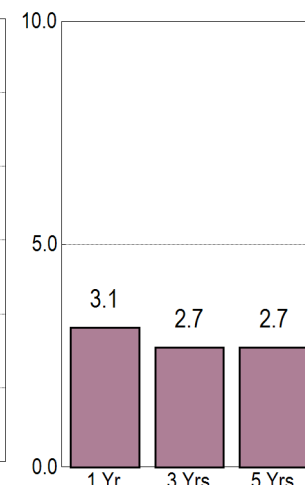
Anzld. Std. Deviation

Mellon Dynamic US Equity



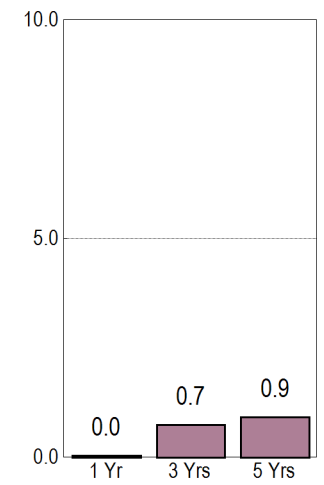
Tracking Error

Mellon Dynamic US Equity



Information Ratio

Mellon Dynamic US Equity



Mellon Dynamic US Equity

As of March 31, 2019

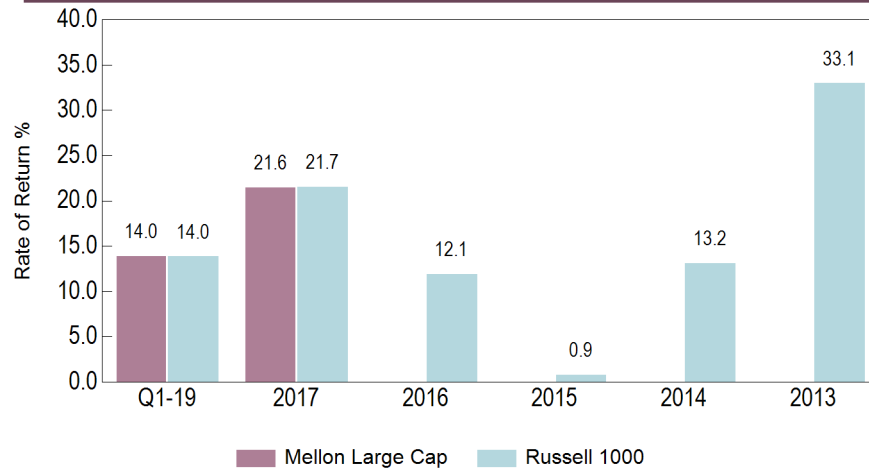
Account Information		Account Characteristics		Sector Distribution			
Account Name	Mellon Dynamic US Equity	Portfolio	Index	Portfolio	Index		
Account Structure	Commingled Fund	Q1-19	Q1-19	Q1-19	Q1-19		
Investment Style	Active	Characteristics		Sector Distribution			
Inception Date	12/31/12	Weighted Avg.	206.4	211.5	Energy	4.4	5.4
Account Type	US Equity	Market Cap. (\$B)			Materials	2.2	2.6
Benchmark	S&P 500	Median Market Cap (\$B)	21.2	21.2	Industrials	7.9	9.5
Universe	eV US Large Cap Core Equity Net	P/E Ratio	20.0	20.2	Consumer Discretionary	8.0	10.1
		Yield	2.0	2.0	Consumer Staples	5.8	7.3
		EPS Growth - 5 Yrs.	12.2	12.3	Health Care	11.9	14.6
		Price to Book	3.4	3.5	Financials	10.8	12.7
		Beta (holdings; domestic)	1.0	1.0	Information Technology	16.6	21.2
					Communication Services	8.1	10.1
					Utilities	2.6	3.3
					Real Estate	2.4	3.1

Top Holdings		Best Performers		Worst Performers	
CASH - USD	10.3%		Return %		Return %
UST Bill 03/14/19	7.8%	COTY CL.A	77.3%	PG&E	-25.1%
MICROSOFT	3.0%	CHIPOTLE MEXN.GRILL	64.5%	KRAFT HEINZ	-23.2%
APPLE	2.7%	XEROX	63.1%	BIOGEN	-21.4%
AMAZON.COM	2.3%	HESS	49.4%	CENTURYLINK	-19.3%
BERKSHIRE HATHAWAY 'B'	1.3%	XILINX	49.3%	MACY'S	-18.0%
FACEBOOK CLASS A	1.3%	ARISTA NETWORKS	49.2%	CVS HEALTH	-17.1%
UST Bill 03/07/19	1.3%	CELGENE	47.2%	NEWELL BRANDS (XSC)	-16.3%
JOHNSON & JOHNSON	1.3%	CADENCE DESIGN SYS.	46.1%	CIGNA	-15.3%
JP MORGAN CHASE & CO.	1.2%	HANESBRANDS	43.8%	ABIOMED	-12.1%
		ULTA BEAUTY	42.4%	CME GROUP	-12.1%

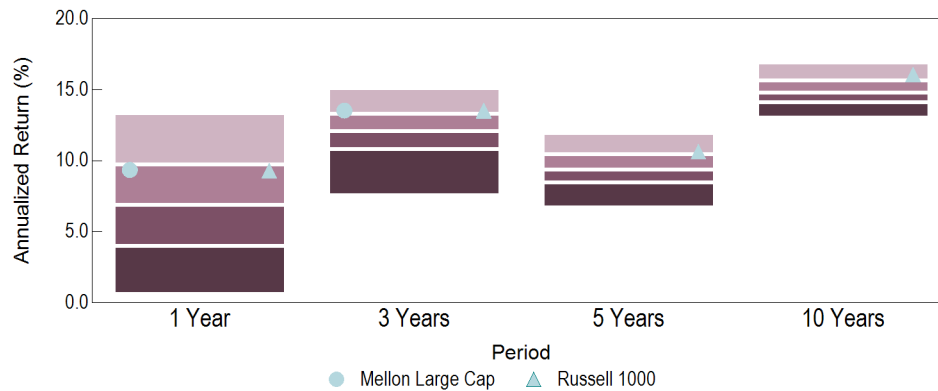
Current Allocations do not depict asset class weights based on long/short positions.



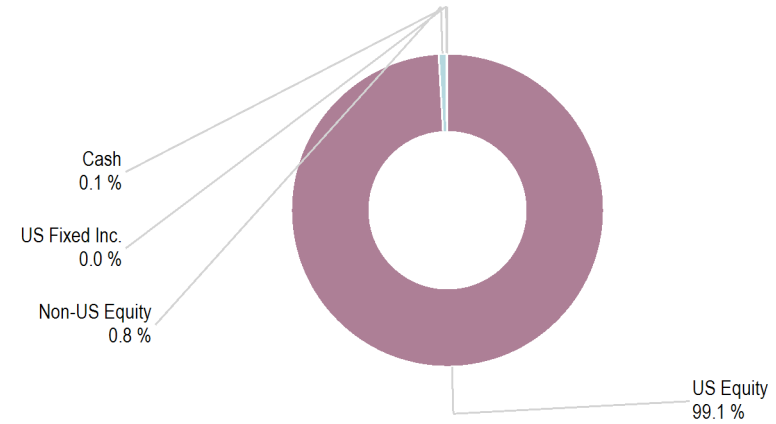
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Mellon Large Cap	9.3	13.5	--	--
Russell 1000	9.3	13.5	10.6	16.0
eV US Large Cap Core Equity Net Median	6.9	12.1	9.4	14.8
eV US Large Cap Core Equity Net Rank	30	20	--	--

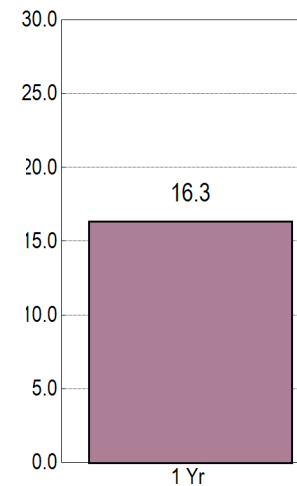


Current Allocation



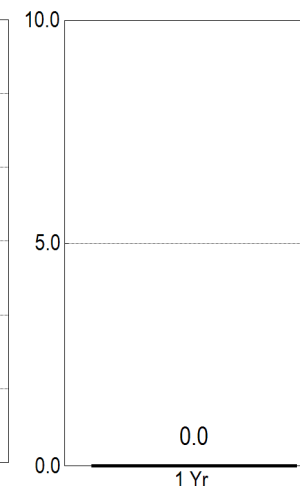
Anzld. Std. Deviation

Mellon Large Cap



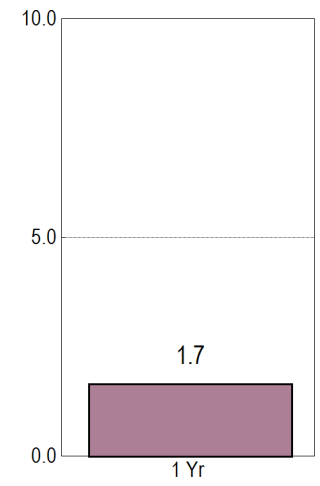
Tracking Error

Mellon Large Cap



Information Ratio

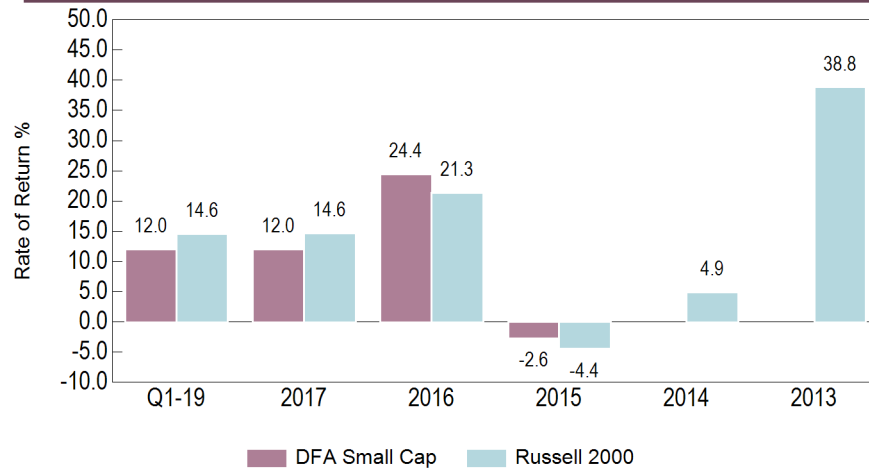
Mellon Large Cap



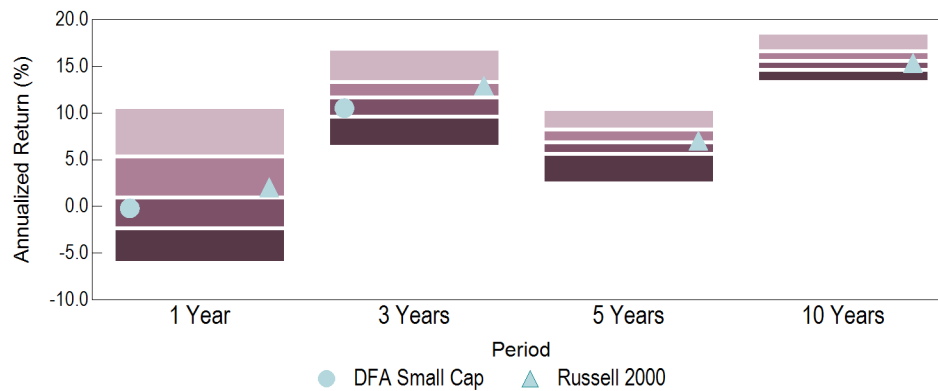
Account Information		Account Characteristics		Sector Distribution			
Account Name	Mellon Large Cap	Portfolio	Index	Portfolio	Index		
Account Structure	Commingled Fund	Q1-19	Q1-19	Q1-19	Q1-19		
Investment Style	Passive	Characteristics		Sector Distribution			
Inception Date	3/31/16	Weighted Avg.	186.8	192.0	Energy	5.1	5.2
Account Type	US Stock Large	Market Cap. (\$B)			Materials	2.9	2.9
Benchmark	Russell 1000	Median Market Cap (\$B)	10.0	10.0	Industrials	10.1	9.8
Universe	eV US Large Cap Core Equity Net	P/E Ratio	20.1	20.3	Consumer Discretionary	10.1	10.2
		Yield	2.0	1.9	Consumer Staples	6.7	6.8
		EPS Growth - 5 Yrs.	12.4	12.5	Health Care	14.3	14.2
		Price to Book	3.4	3.4	Financials	13.5	12.9
		Beta (holdings; domestic)	1.0	1.0	Information Technology	20.9	21.5
					Communication Services	9.5	9.5
					Utilities	3.1	3.2
					Real Estate	3.6	3.8

Top Holdings		Best Performers		Worst Performers	
MICROSOFT	3.3%		Return %		Return %
APPLE	3.1%	VERSUM MATERIALS	81.9%	UNITI GROUP	-27.8%
AMAZON.COM	2.6%	COTY CL.A	77.3%	PG&E	-25.1%
BERKSHIRE HATHAWAY 'B'	1.5%	NABORS INDUSTRIES	72.5%	KRAFT HEINZ	-23.2%
FACEBOOK CLASS A	1.5%	SAGE THERAPEUTICS	66.0%	REALOGY HOLDINGS	-21.8%
JOHNSON & JOHNSON	1.4%	WAYFAIR CL.A	64.8%	NU SKIN ENTERPRISES 'A'	-21.5%
JP MORGAN CHASE & CO.	1.3%	CHIPOTLE MEXN.GRILL	64.5%	BIOGEN	-21.4%
ALPHABET 'C'	1.3%	UNIVERSAL DISPLAY	63.5%	CENTENNIAL RSO.DEV.CL.A	-20.2%
EXXON MOBIL	1.3%	XEROX	63.1%	CENTURYLINK	-19.3%
ALPHABET A	1.3%	FLOOR & DECOR HOLDINGS 'A'	59.2%	QURATE RETAIL SERIES A	-18.1%
		BLUEBIRD BIO	58.6%	MACY'S	-18.0%

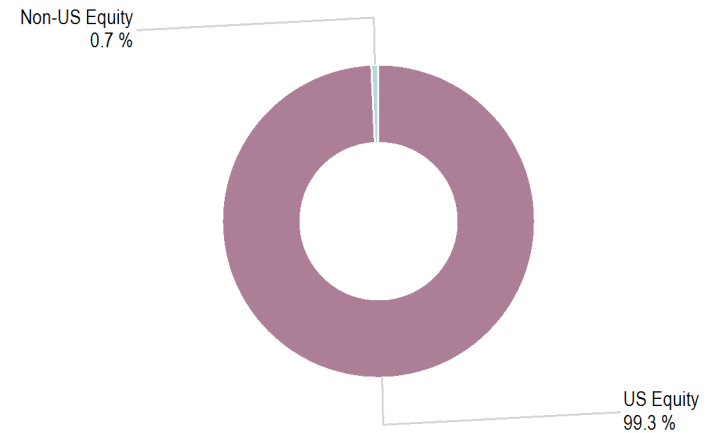
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
DFA Small Cap	-0.2	10.5	--	--
Russell 2000	2.0	12.9	7.1	15.4
eV US Small Cap Core Equity Net Median	1.0	11.7	6.9	15.6
eV US Small Cap Core Equity Net Rank	64	69	--	--

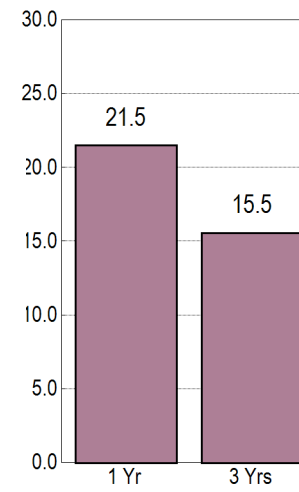


Current Allocation



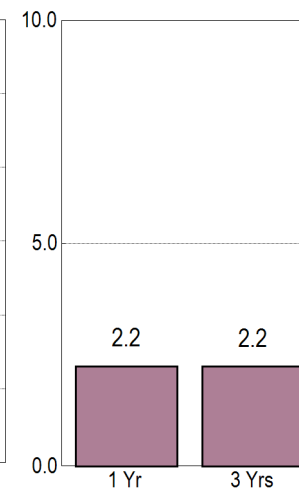
Anzld. Std. Deviation

DFA Small Cap



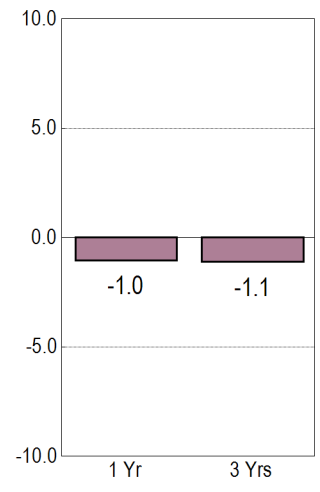
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DFA Small Cap



Information Ratio

DFA Small Cap



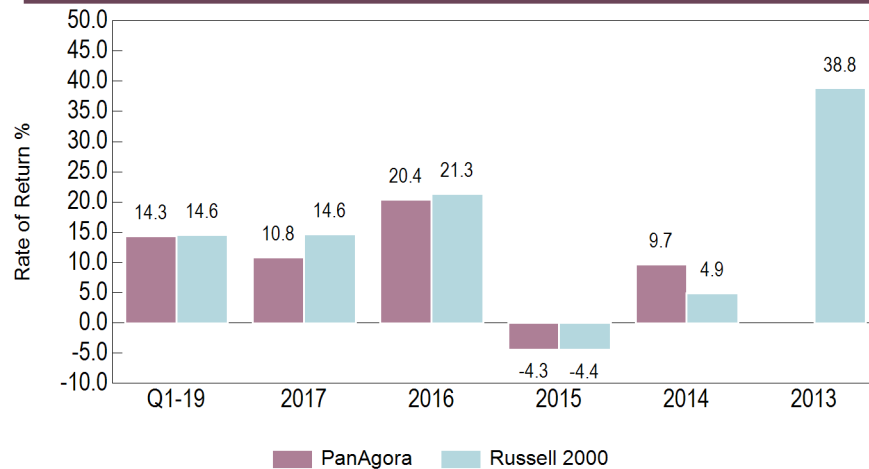
DFA Small Cap

As of March 31, 2019

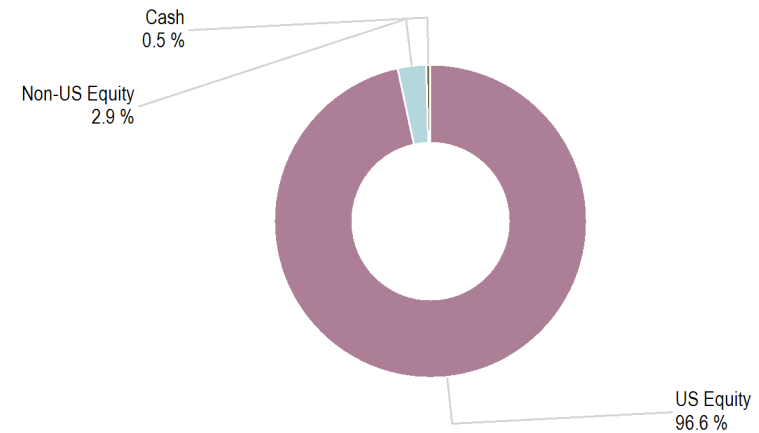
Account Information		Account Characteristics		Sector Distribution			
Account Name	DFA Small Cap	Portfolio	Index	Portfolio	Index		
Account Structure	Commingled Fund	Q1-19	Q1-19	Q1-19	Q1-19		
Investment Style	Active	Characteristics		Sector Distribution			
Inception Date	6/30/14	Weighted Avg.	2.1	2.4	Energy	4.8	3.6
Account Type	US Stock Small	Market Cap. (\$B)			Materials	5.5	3.8
Benchmark	Russell 2000	Median Market Cap (\$B)	0.7	0.8	Industrials	20.8	14.4
Universe	eV US Small Cap Core Equity Net	P/E Ratio	17.1	18.4	Consumer Discretionary	14.6	12.0
		Yield	1.4	1.4	Consumer Staples	4.7	2.8
		EPS Growth - 5 Yrs.	9.2	10.1	Health Care	8.3	16.0
		Price to Book	2.2	2.4	Financials	19.1	17.1
		Beta (holdings; domestic)	1.1	1.2	Information Technology	13.5	15.6
					Communication Services	3.8	3.3
					Utilities	4.0	3.8
					Real Estate	0.8	7.6

Top Holdings		Best Performers		Worst Performers	
NEXSTAR MEDIA GROUP CL.A	0.3%		Return %		Return %
PNM RESOURCES	0.3%	IMMUNE DESIGN	350.0%	ACETO	-79.3%
FIRSTCASH	0.3%	DIEBOLD NIXDORF	344.6%	PHI NON-VOTING	-76.8%
DECKERS OUTDOOR	0.3%	TREVENA	262.8%	CLOUD PEAK ENERGY (XSC)	-71.3%
SEABOARD	0.3%	PROFESSIONAL DIVERSITY NETWORK	221.0%	ATLAS FINANCIAL (NAS) HOLDINGS	-69.6%
ACI WORLDWIDE	0.3%	SCYNEXIS	213.5%	GLOBAL EAGLE ENTM.	-68.2%
INTEGRATED DEVICE TECH.	0.3%	FLOTEK INDUSTRIES	197.2%	FTD COMPANIES	-65.5%
MOOG 'A'	0.3%	SPARK THERAPEUTICS	191.0%	ARLO TECHNOLOGIES	-58.6%
ARMSTRONG WORLD INDS.	0.3%	ION GEOPHYSICAL	178.8%	ASCENA RETAIL GROUP	-57.0%
AARON'S	0.3%	CATALYST PHARMACEUTICAL PARTNERS	165.6%	DIPLOMAT PHARMACY	-56.8%
		PIER 1 IMPORTS	149.7%	MAIDEN HOLDINGS	-55.0%

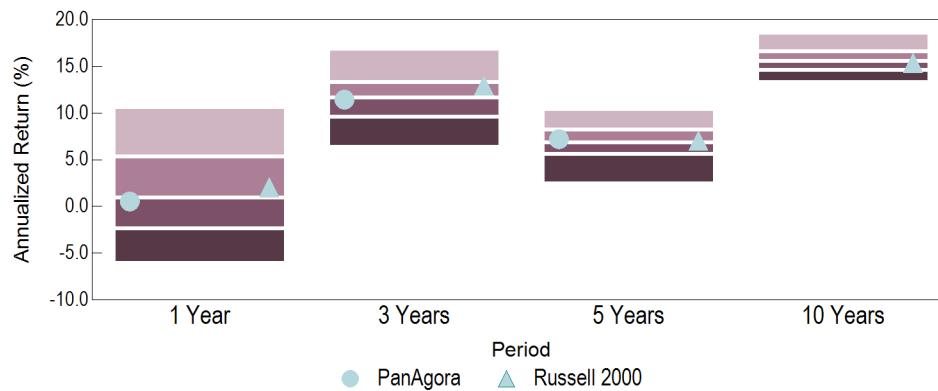
Return Summary



Current Allocation

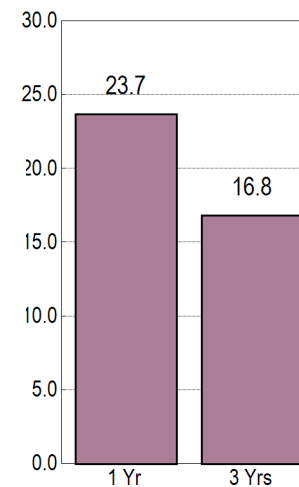


	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
PanAgora	0.5	11.4	7.2	--
Russell 2000	2.0	12.9	7.1	15.4
eV US Small Cap Core Equity Net Median	1.0	11.7	6.9	15.6
eV US Small Cap Core Equity Net Rank	55	55	44	--



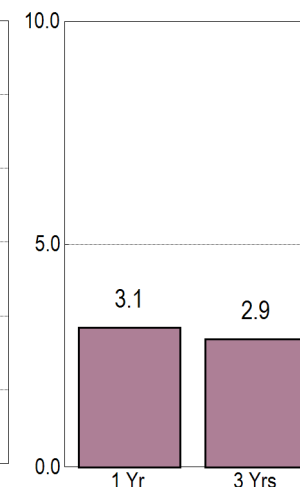
Anzld. Std. Deviation

PanAgora



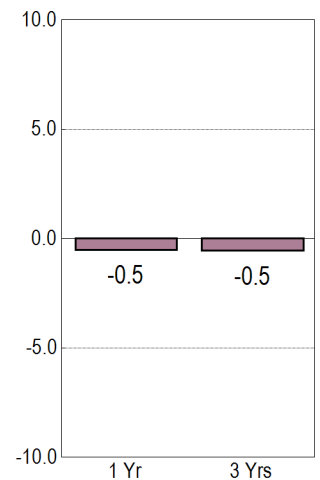
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PanAgora



Information Ratio

PanAgora

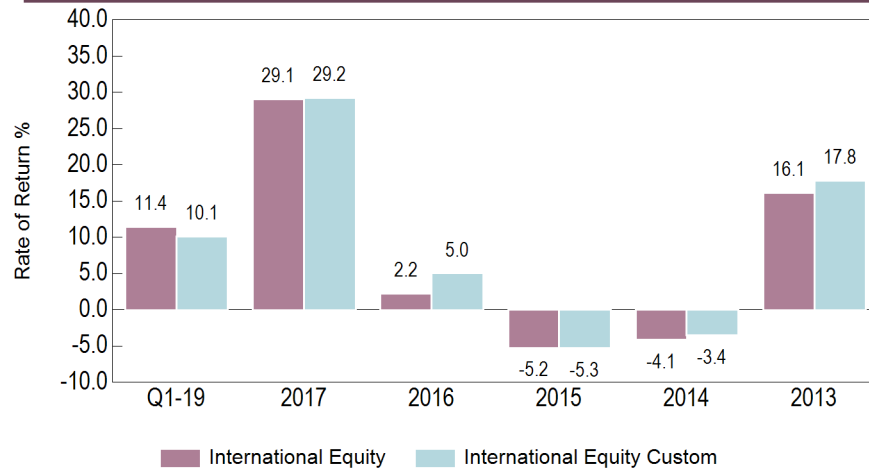


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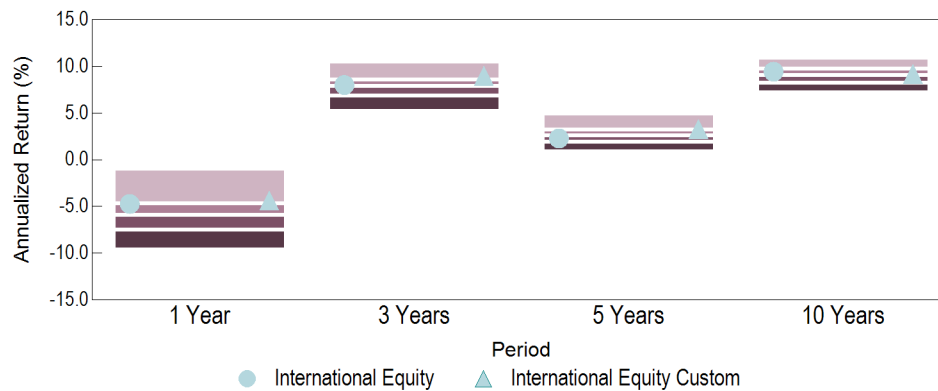
Account Information		Account Characteristics		Sector Distribution			
Account Name	PanAgora	Portfolio	Index	Portfolio	Index		
Account Structure	Commingled Fund	Q1-19	Q1-19	Q1-19	Q1-19		
Investment Style	Active	Characteristics		Sector Distribution			
Inception Date	9/30/13	Weighted Avg.	2.1	2.4	Energy	2.7	3.6
Account Type	US Stock Small Cap Core	Market Cap. (\$B)			Materials	3.0	3.8
Benchmark	Russell 2000	Median Market Cap (\$B)	0.8	0.8	Industrials	16.0	14.4
Universe	eV US Small Cap Core Equity Net	P/E Ratio	17.9	18.4	Consumer Discretionary	14.5	12.0
		Yield	1.3	1.4	Consumer Staples	3.3	2.8
		EPS Growth - 5 Yrs.	12.5	10.1	Health Care	18.0	16.0
		Price to Book	2.4	2.4	Financials	15.3	17.1
		Beta (holdings; domestic)	1.2	1.2	Information Technology	14.8	15.6
					Communication Services	2.7	3.3
					Utilities	3.6	3.8
					Real Estate	5.7	7.6

Top Holdings		Best Performers		Worst Performers	
INSPERITY	1.6%		Return %		Return %
PORTLAND GEN.ELEC.	1.4%	IMMUNE DESIGN	350.0%	NOVAVAX	-70.1%
HORIZON THERAPEUTICS PUBLIC	1.4%	CATALYST PHARMACEUTICAL PARTNERS	165.6%	WEIGHT WATCHERS INTERNATIONAL	-47.7%
PNM RESOURCES	1.3%	ROKU	110.5%	STAMPS.COM	-47.7%
WOODWARD	1.3%	VERACYTE	98.9%	IMMUNOGEN	-43.5%
FIVE BELOW	1.2%	DERMIRA	88.5%	VANDA PHARMACEUTICALS	-29.6%
VERINT SYSTEMS	1.2%	ACHILLION PHARMS.	86.2%	USANA HEALTH SCIENCES	-28.8%
GEO GROUP	1.2%	MONGODB A	75.6%	KIRKLAND'S	-26.2%
COMMVAULT SYSTEMS	1.2%	ARQULE	72.9%	CENTRAL GDN.& PET	-25.8%
DECKERS OUTDOOR	1.2%	BOOT BARN HOLDINGS	72.9%	TOWN SPORTS INTL.HDG.	-25.6%
		ARRAY BIOPHARMA	71.1%	CENTRAL GDN.& PET 'A' NV.	-25.6%

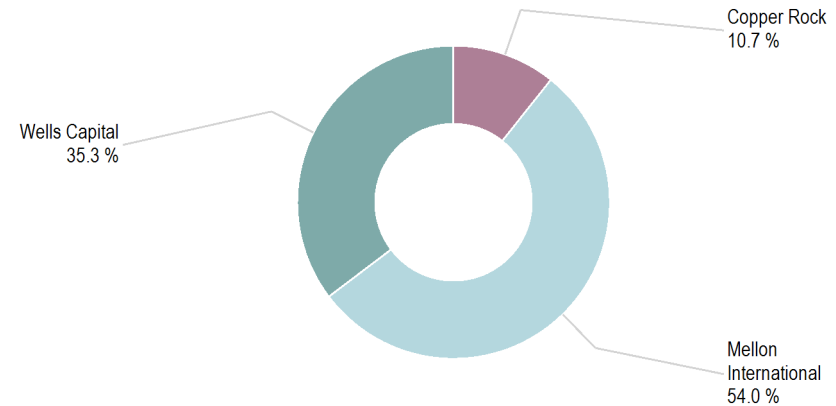
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
International Equity	-4.7	8.0	2.3	9.4
<i>International Equity Custom</i>	<i>-4.4</i>	<i>9.0</i>	<i>3.3</i>	<i>9.2</i>
<i>InvestorForce All DB ex-US Eq Net Median</i>	<i>-5.9</i>	<i>7.9</i>	<i>2.7</i>	<i>9.1</i>
<i>InvestorForce All DB ex-US Eq Net Rank</i>	<i>28</i>	<i>46</i>	<i>68</i>	<i>35</i>

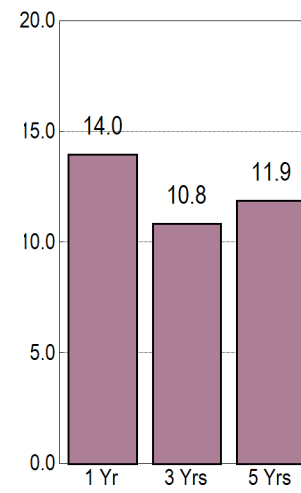


Current Allocation



Anzld. Std. Deviation

International Equity



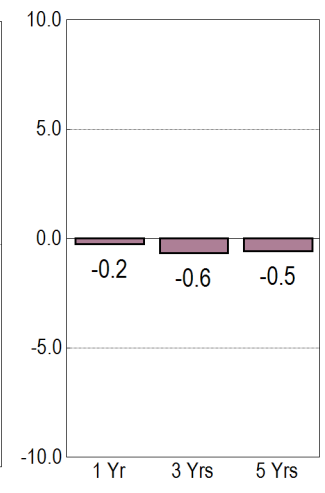
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International Equity



Information Ratio

International Equity



International Equity

As of March 31, 2019

International Equity Characteristics
vs MSCI ACWI ex USA

	Portfolio Q1-19	Index Q1-19
Characteristics		
Weighted Avg. Market Cap. (\$B)	59.9	64.4
Median Market Cap (\$B)	9.2	7.7
P/E Ratio	15.7	14.6
Yield	2.9	3.2
EPS Growth - 5 Yrs.	10.2	10.8
Price to Book	2.4	2.2
Beta (holdings; domestic)	1.0	1.0

International Equity Sector Distribution
vs MSCI ACWI ex USA

	Portfolio Q1-19	Index Q1-19
Sector Distribution		
Energy	5.8	7.4
Materials	4.9	7.6
Industrials	11.0	11.7
Consumer Discretionary	12.8	11.1
Consumer Staples	13.3	9.9
Health Care	7.6	8.4
Financials	18.3	21.7
Information Technology	9.3	8.4
Communication Services	10.2	7.0
Utilities	2.5	3.4
Real Estate	3.3	3.4

Top Holdings

SAMSUNG ELECTRONICS	1.6%
AIA GROUP	1.3%
TENCENT HOLDINGS	1.3%
CHINA MOBILE	1.2%
NESTLE 'R'	1.1%
HDFC BANK ADR 1:3	1.1%
TAIWAN SEMICON.SPN.ADR 1:5	1.1%
ALIBABA GROUP HLDG.SPN. ADR 1:1	0.9%
RELIANCE INDS.GDR 144A	0.9%
WH GROUP	0.9%

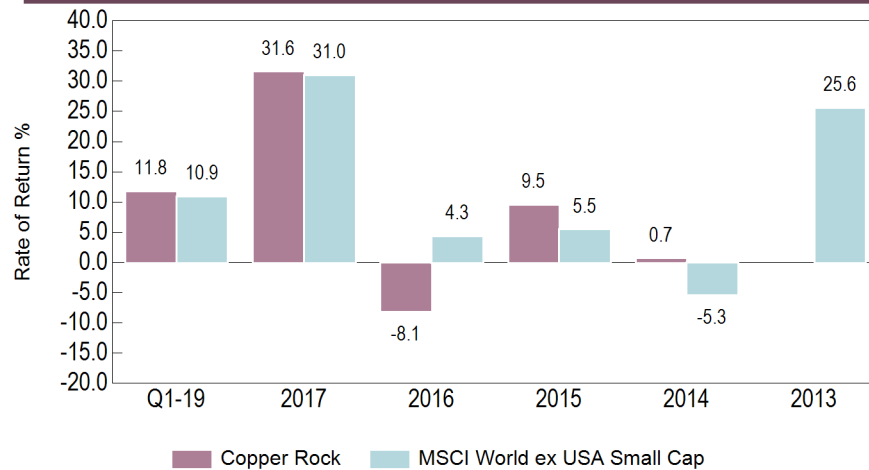
Best Performers

	Return %
SEA 'A' SPN.ADR 1:1	107.8%
FORTESCUE METALS GP.	79.7%
MERCADOLIBRE	73.4%
NEW ORIENTAL ED.& TECH. GP.ADS 1:1	64.4%
CTRIIP.COM INTL.ADR 8:1	61.5%
IQIYI ADS.1:7	60.9%
BEACH ENERGY	55.3%
ZALANDO	52.4%
MICRO FOCUS INTL.	51.3%
HITACHI CHEMICAL	48.2%

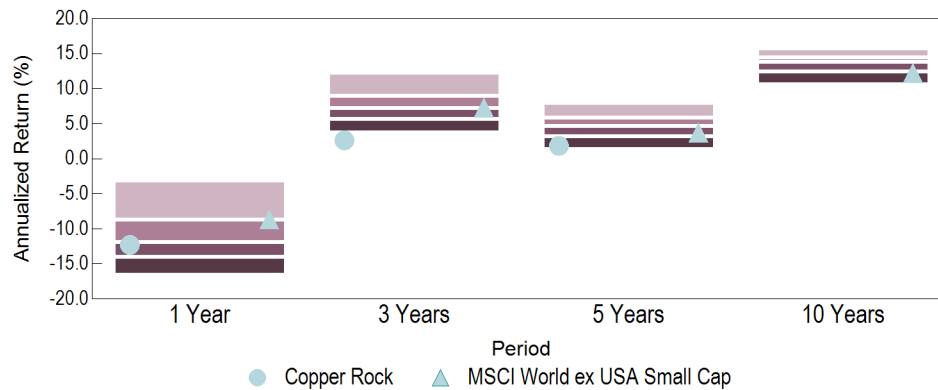
Worst Performers

	Return %
SWEDBANK A	-29.6%
ILIAD	-28.3%
TUI (LON)	-28.1%
BEZEQ ISRAELI TELECOMMUNICATION	-28.0%
ST BARBARA	-27.0%
EISAI	-26.6%
MATAHARI DEPARTMENT SOE.	-26.2%
WELCIA HOLDINGS	-24.6%
ORION ENGINEERED CARBONS	-24.2%
YAMAZAKI BAKING	-22.8%

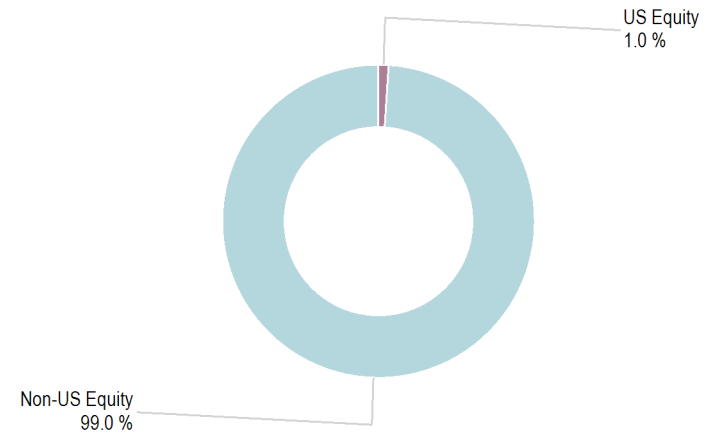
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Copper Rock	-12.3	2.6	1.8	--
MSCI World ex USA Small Cap	-8.7	7.3	3.7	12.2
eV EAFE Small Cap Equity Net Median	-11.9	7.3	4.7	13.9
eV EAFE Small Cap Equity Net Rank	58	97	93	--

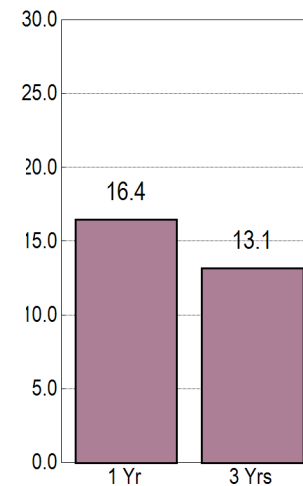


Current Allocation



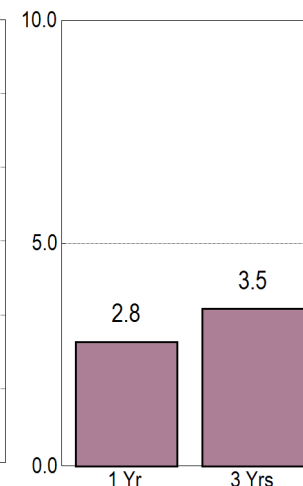
Anzld. Std. Deviation

Copper Rock



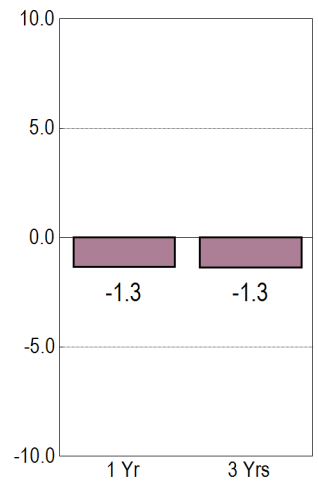
Tracking Error

Copper Rock



Information Ratio

Copper Rock

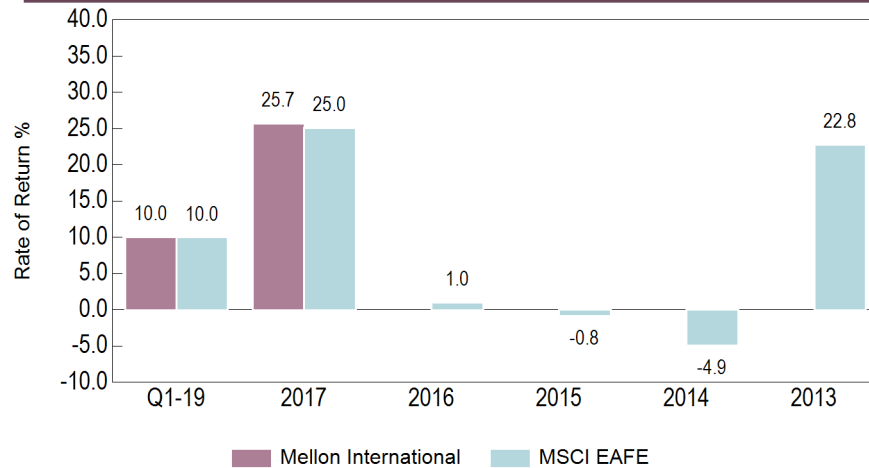


As of March 31, 2019

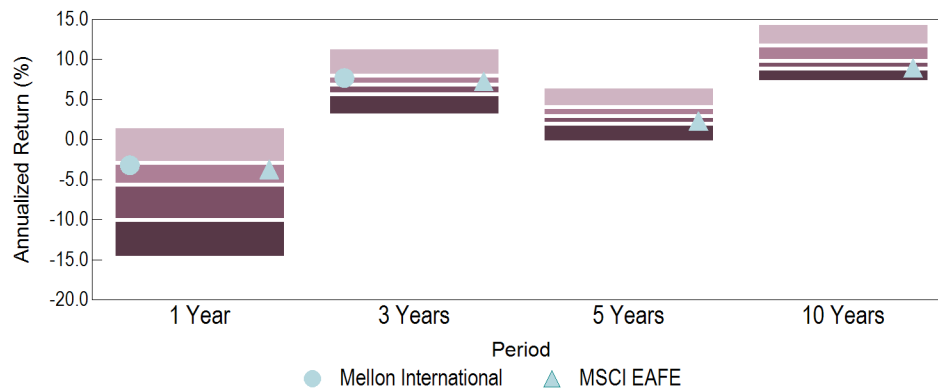
Account Information		Account Characteristics		Sector Distribution	
Account Name	Copper Rock	Portfolio	Index	Portfolio	Index
Account Structure	Commingled Fund	Q1-19	Q1-19	Q1-19	Q1-19
Investment Style	Active	Characteristics		Sector Distribution	
Inception Date	9/30/13	Weighted Avg.	3.2	Energy	4.6
Account Type	International Small Stocks	Market Cap. (\$B)	2.6	Materials	3.3
Benchmark	MSCI World ex USA Small Cap	Median Market Cap (\$B)	3.3	Industrials	20.4
Universe	eV EAFE Small Cap Equity Net	P/E Ratio	15.6	Consumer	9.9
		Yield	2.3	Discretionary	12.4
		EPS Growth - 5 Yrs.	17.2	Consumer Staples	9.1
		Price to Book	2.5	Health Care	11.4
		Beta (holdings; domestic)	1.0	Financials	9.1
				Information Technology	14.9
				Communication Services	5.9
				Utilities	4.6
				Real Estate	6.3
					12.4

Top Holdings		Best Performers		Worst Performers	
NIPPON SUISAN KAISHA	1.9%		Return %		Return %
MARUI GROUP	1.7%	BEACH ENERGY	55.3%	ST BARBARA	-27.0%
NIHON UNISYS	1.7%	LI NING	46.3%	ORION ENGINEERED CARBONS	-24.2%
BRITVIC	1.6%	KATITAS	45.9%	ORION	-18.1%
CHARTER HALL GROUP STAPLED UNITS	1.5%	TECHNOPRO HOLDINGS	44.6%	SUNRISE COMMUNICATIONS	-16.1%
CLEANAWAY WASTE MANAGEMENT	1.5%	PREMIER OIL	44.4%	HOKKAIDO ELEC.POWER	-15.8%
ALTEN	1.5%	SIMCORP	43.1%	SEGA SAMMY HDG.	-14.4%
STOREBRAND	1.4%	SOITEC	41.7%	BIC	-12.5%
BEACH ENERGY	1.4%	CHARTER HALL GROUP STAPLED UNITS	39.7%	KANDENKO	-10.9%
DECHRA PHARMACEUTICALS	1.4%	NIPPON SUISAN KAISHA	37.1%	ROHTO PHARMACEUTICAL	-5.6%
		CLEANAWAY WASTE MANAGEMENT	35.5%	LEROY SEAFOOD GROUP	-4.6%

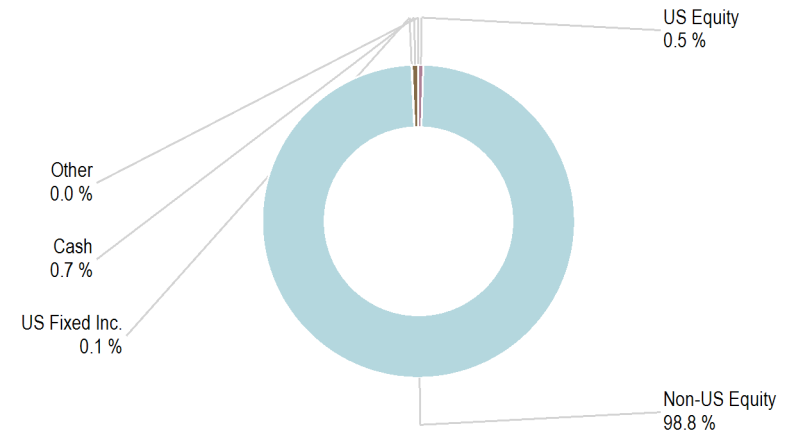
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Mellon International	-3.2	7.7	--	--
MSCI EAFE	-3.7	7.3	2.3	9.0
eV All EAFE Equity Net Median	-5.6	6.9	3.0	9.9
eV All EAFE Equity Net Rank	29	31	--	--

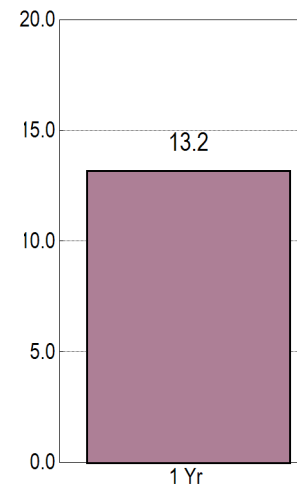


Current Allocation



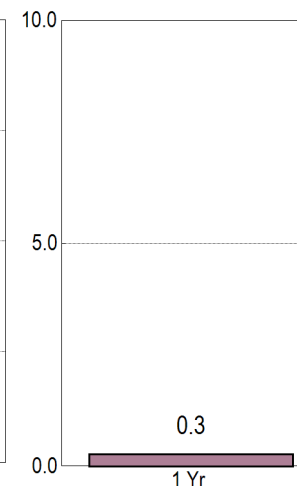
Anzld. Std. Deviation

Mellon International



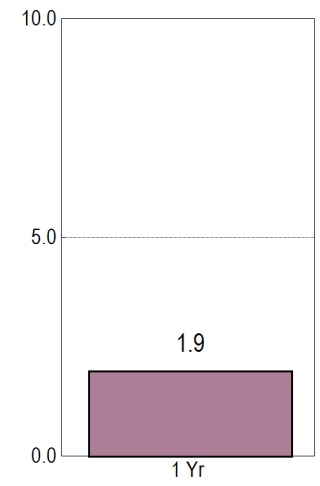
Tracking Error

Mellon International



Information Ratio

Mellon International



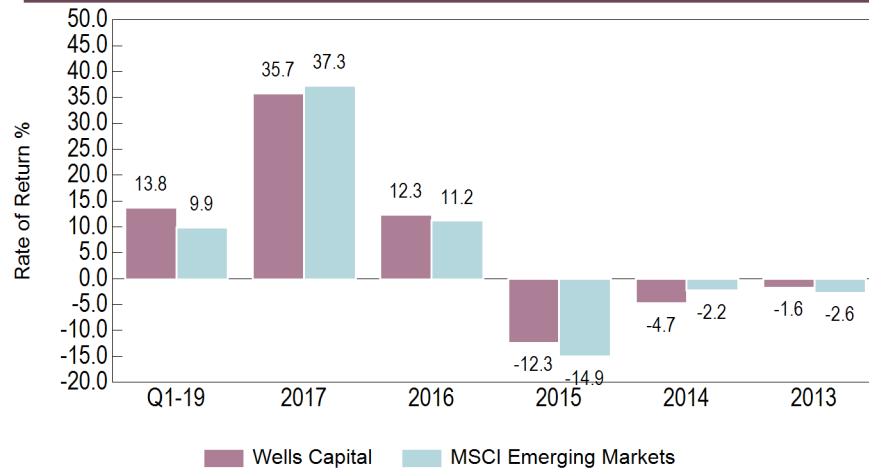
Mellon International

As of March 31, 2019

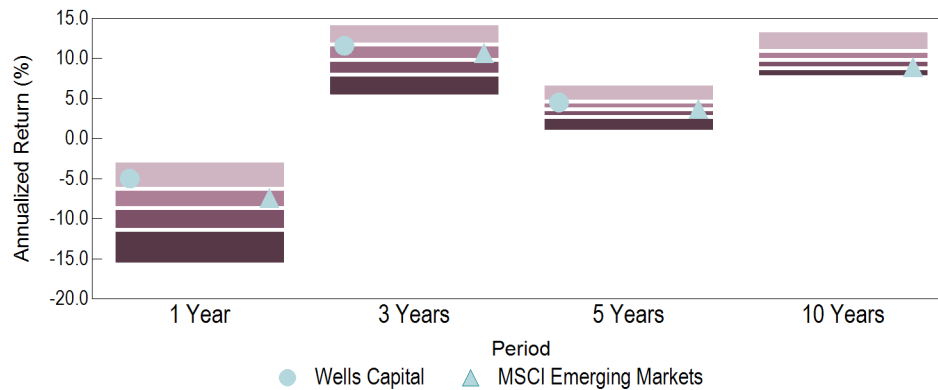
Account Information		Account Characteristics		Sector Distribution			
Account Name	Mellon International	Portfolio	Index	Portfolio	Index		
Account Structure	Commingled Fund	Q1-19	Q1-19	Q1-19	Q1-19		
Investment Style	Passive	Characteristics		Sector Distribution			
Inception Date	3/31/16	Weighted Avg.	58.1	58.8	Energy	5.8	5.8
Account Type	International	Market Cap. (\$B)			Materials	7.4	7.4
Benchmark	MSCI EAFE	Median Market Cap (\$B)	10.1	10.1	Industrials	14.3	14.3
Universe	eV All EAFE Equity Net	P/E Ratio	14.9	15.1	Consumer Discretionary	11.1	10.9
		Yield	3.5	3.4	Consumer Staples	11.3	11.9
		EPS Growth - 5 Yrs.	9.2	9.3	Health Care	11.1	11.3
		Price to Book	2.2	2.2	Financials	19.4	18.9
		Beta (holdings; domestic)	1.0	1.0	Information Technology	6.1	6.3
					Communication Services	5.4	5.4
					Utilities	3.6	3.8
					Real Estate	3.7	3.8

Top Holdings		Best Performers		Worst Performers	
NESTLE 'R'	2.0%		Return %		Return %
NOVARTIS 'R'	1.4%	FORTESCUE METALS GP.	79.7%	SWEDBANK A	-29.6%
ROCHE HOLDING	1.4%	ZALANDO	52.4%	ILIAD	-28.3%
HSBC HOLDINGS	1.2%	MICRO FOCUS INTL.	51.3%	TUI (LON)	-28.1%
ROYAL DUTCH SHELL A(LON)	1.0%	HITACHI CHEMICAL	48.2%	BEZEQ ISRAELI TELECOMMUNICATION	-28.0%
BP	1.0%	SHIMADZU	46.5%	EISAI	-26.6%
TOYOTA MOTOR	1.0%	SOFTBANK GROUP	46.1%	WELCIA HOLDINGS	-24.6%
TOTAL	1.0%	DAIICHI SANKYO	45.1%	YAMAZAKI BAKING	-22.8%
AIA GROUP	0.9%	ADYEN	44.3%	SUMITOMO DAINIPPON PHA.	-22.1%
ROYAL DUTCH SHELL B	0.9%	AKER BP	44.0%	TELEFONICA DTL.HLDG.	-19.5%
		NEXT	43.0%	OSRAM LICHT	-19.3%

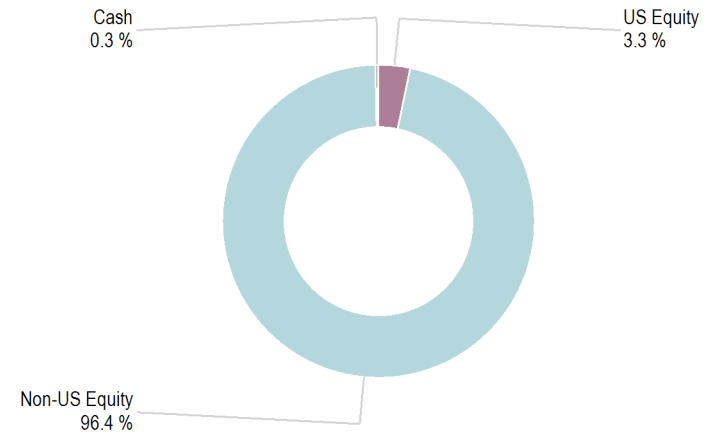
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Wells Capital	-5.0	11.6	4.5	--
MSCI Emerging Markets	-7.4	10.7	3.7	8.9
eV Emg Mkts Equity Net Median	-8.6	9.9	3.7	9.8
eV Emg Mkts Equity Net Rank	17	26	30	--

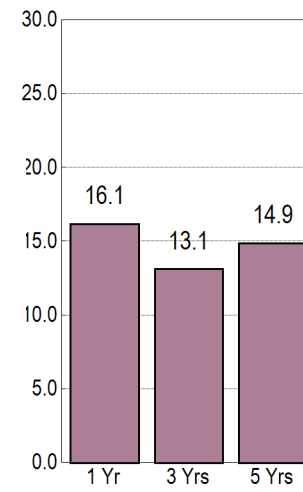


Current Allocation



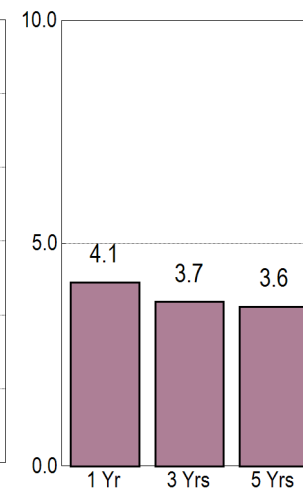
Anzld. Std. Deviation

Wells Capital



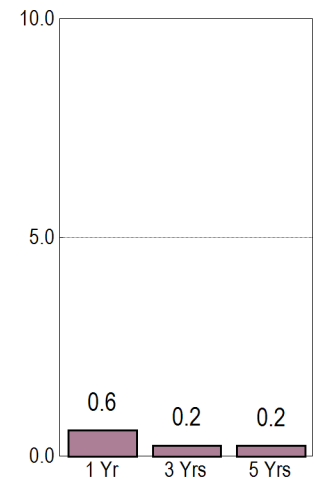
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Wells Capital



Information Ratio

Wells Capital

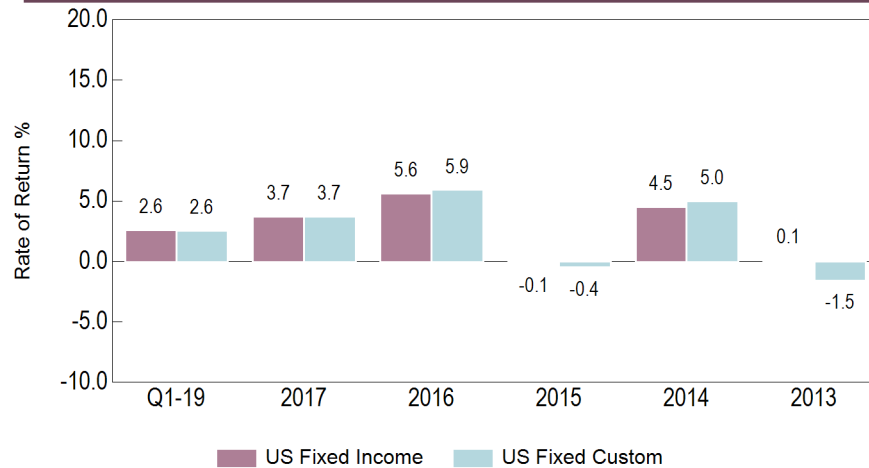


As of March 31, 2019

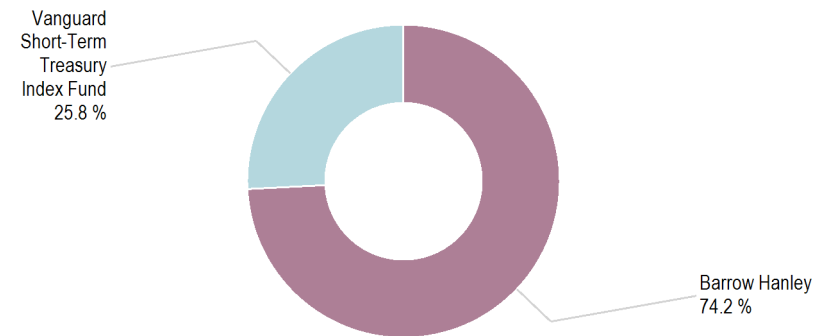
Account Information		Account Characteristics		Sector Distribution			
Account Name	Wells Capital	Portfolio	Index	Portfolio	Index		
Account Structure	Commingled Fund	Q1-19	Q1-19	Q1-19	Q1-19		
Investment Style	Active	Characteristics		Sector Distribution			
Inception Date	3/31/12	Weighted Avg.	81.4	84.9	Energy	6.1	8.1
Account Type	International Emerging Stocks	Market Cap. (\$B)			Materials	1.2	7.4
Benchmark	MSCI Emerging Markets	Median Market Cap (\$B)	10.2	5.8	Industrials	2.6	5.5
Universe	eV Emg Mkts Equity Net	P/E Ratio	17.6	13.3	Consumer Discretionary	16.5	13.3
		Yield	2.1	2.7	Consumer Staples	17.9	6.4
		EPS Growth - 5 Yrs.	9.6	14.3	Health Care	0.6	2.6
		Price to Book	2.6	2.4	Financials	19.6	24.3
		Beta (holdings; domestic)	1.0	1.1	Information Technology	12.6	14.6
					Communication Services	19.3	12.1
					Utilities	0.0	2.6
					Real Estate	1.7	3.1

Top Holdings		Best Performers		Worst Performers	
SAMSUNG ELECTRONICS	4.6%		Return %		Return %
TENCENT HOLDINGS	3.8%	SEA 'A' SPN.ADR 1:1	107.8%	MATAHARI DEPARTMENT SOE.	-26.2%
CHINA MOBILE	3.4%	MERCADOLIBRE	73.4%	SHOPRITE	-16.0%
HDFC BANK ADR 1:3	3.2%	NEW ORIENTAL ED.& TECH. GP.ADS 1:1	64.4%	LOJAS AMERICANAS PN REP1 PN	-14.9%
TAIWAN SEMICON.SPN.ADR 1:5	3.1%	CTRIIP.COM INTL.ADR 8:1	61.5%	KT ADR 2:1	-12.5%
ALIBABA GROUP HLDG.SPN. ADR 1:1	2.8%	IQIYI ADS.1:7	60.9%	PETROBRAS DISTRIBUIDORA ON	-10.3%
RELIANCE INDS.GDR 144A	2.6%	VIPSHOP HOLDINGS ADR 5:1	47.1%	ASTRA INTERNATIONAL	-10.1%
WH GROUP	2.4%	LI NING	46.3%	LINK NET PT	-7.5%
AIA GROUP	2.4%	THAI BEVERAGE PUBLIC	41.4%	SUN ART RETAIL GROUP	-4.4%
CHINA LIFE INSURANCE 'H'	2.2%	WH GROUP	38.9%	CEMEX ADR 1:10	-3.7%
		BANCOLOMBIA PF.SPN.ADR 1:4	34.0%	MULTIPLAN EMPE. IMOBS.ON	-3.7%

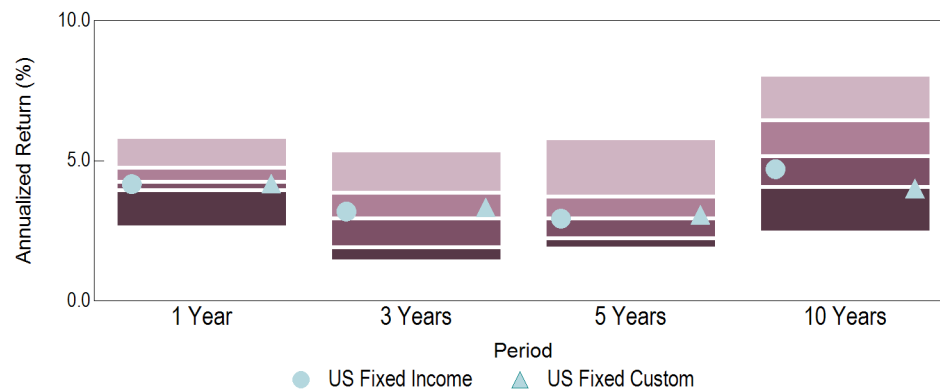
Return Summary



Current Allocation

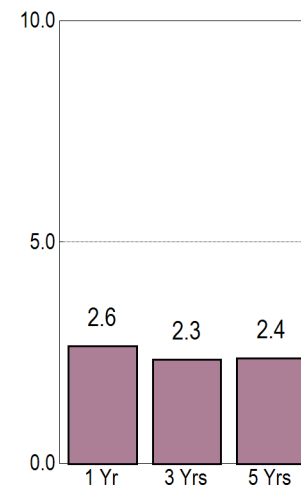


	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
US Fixed Income	4.2	3.2	2.9	4.7
<i>US Fixed Custom</i>	4.2	3.3	3.1	4.0
<i>InvestorForce All DB US Fix Inc Net Median</i>	4.3	3.0	2.9	5.2
<i>InvestorForce All DB US Fix Inc Net Rank</i>	59	44	52	64



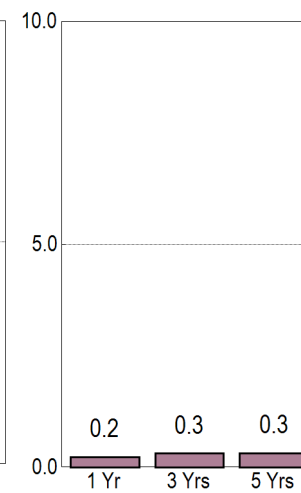
Anzld. Std. Deviation

US Fixed Income



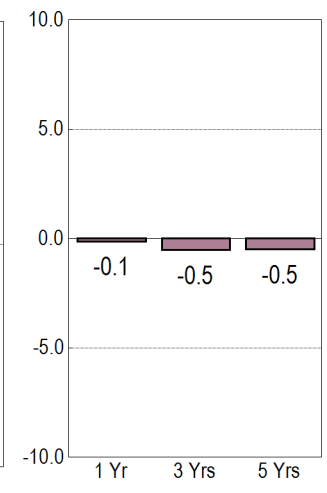
Tracking Error

US Fixed Income



Information Ratio

US Fixed Income



US Fixed Income

As of March 31, 2019

US Fixed Income Fixed Income Characteristics
vs. BBgBarc US Aggregate TR

	Portfolio	Index	Portfolio	Index
	Q1-19	Q1-19	Q4-18	Q4-18
Fixed Income Characteristics				
Yield to Maturity	2.84	2.93	3.19	3.26
Average Duration	4.86	5.82	4.97	5.87
Average Quality	AA	AA	AA	AA
Weighted Average Maturity	9.27	13.00	7.64	12.93

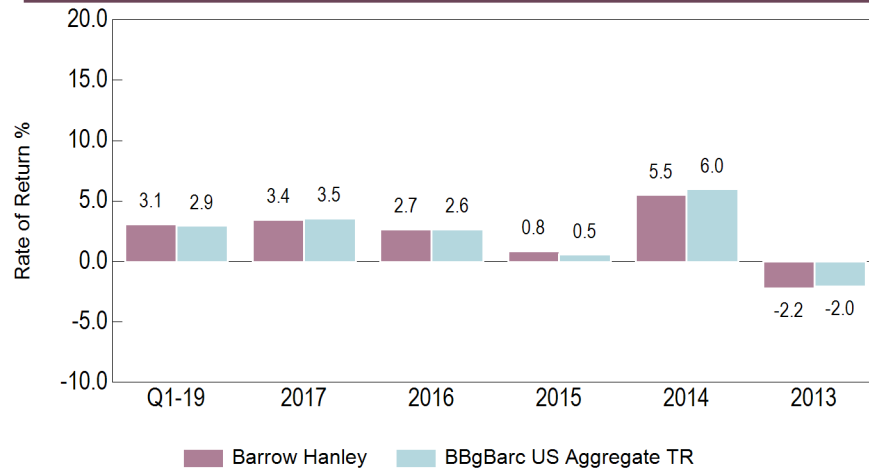
US Fixed Income Fixed Income Duration
vs. BBgBarc US Aggregate TR

	Portfolio	Index	Portfolio	Index
	Q1-19	Q1-19	Q4-18	Q4-18
Credit Quality Allocation				
AAA	73.06	72.45	70.18	72.81
AA	2.75	3.42	3.37	3.59
A	12.25	10.55	12.76	10.02
BBB	11.95	13.57	13.70	13.59

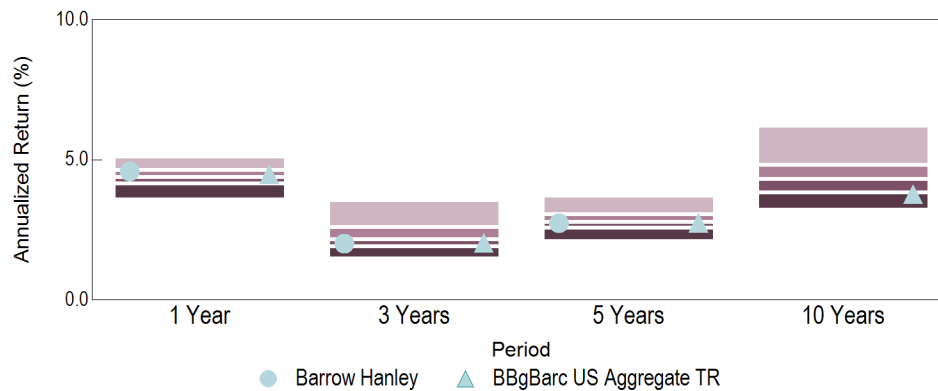
US Fixed Income Fixed Income Sector Allocation
vs. BBgBarc US Aggregate TR

	Portfolio	Index	Portfolio	Index
	Q1-19	Q1-19	Q4-18	Q4-18
US Sector Allocation				
UST/Agency	42.40	41.73	42.13	41.68
Corporate	26.47	24.70	29.41	24.31
MBS	25.64	29.78	22.52	30.21
ABS	3.64	0.50	4.01	0.52
Foreign	0.22	2.37	0.23	2.39
Muni	0.88	0.92	0.92	0.90
Cash	0.75	--	0.78	--

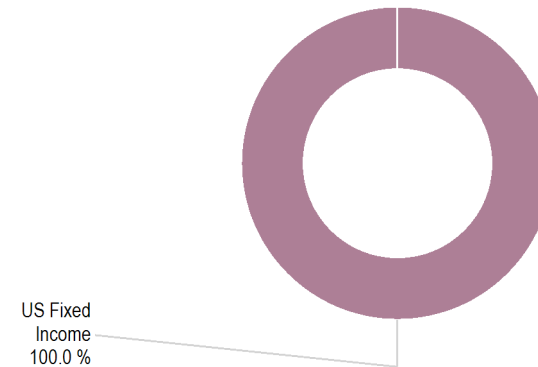
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Barrow Hanley	4.6	2.0	2.7	--
BBgBarc US Aggregate TR	4.5	2.0	2.7	3.8
eV US Core Fixed Inc Net Median	4.4	2.2	2.8	4.3
eV US Core Fixed Inc Net Rank	31	66	59	--

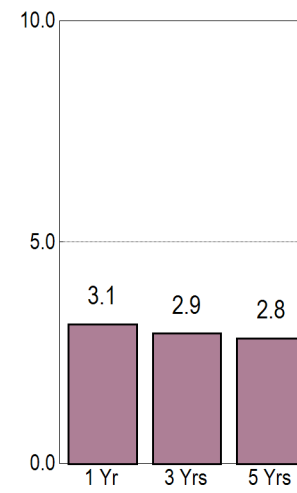


Current Allocation



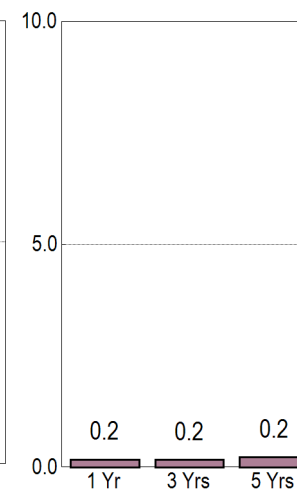
Anzld. Std. Deviation

Barrow Hanley



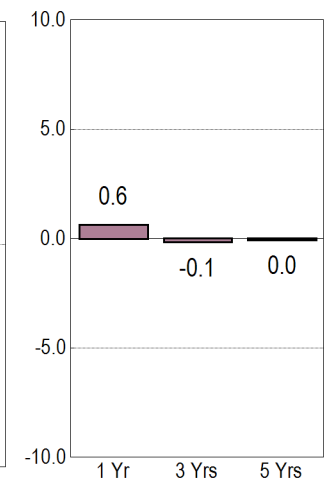
Tracking Error

Barrow Hanley



Information Ratio

Barrow Hanley



As of March 31, 2019

Account Information		Fixed Income Characteristics		Fixed Income Characteristics			
Account Name	Barrow Hanley	Portfolio	Index	Portfolio	Index		
Account Structure	Separate Account	Q1-19	Q1-19	Q1-19	Q1-19		
Investment Style	Active						
Inception Date	3/31/10	Fixed Income Characteristics		Credit Quality Allocation			
Account Type	US Fixed Income Core	Yield to Maturity	3.03	2.93	AAA	63.80	72.45
Benchmark	BBgBarc US Aggregate TR	Average Duration	5.88	5.82	AA	3.70	3.42
Universe	eV US Core Fixed Inc Net	Average Quality	AA	AA	A	16.50	10.55
		Weighted Average Maturity	9.27	13.00	BBB	16.00	13.57

Vanguard Short-Term Treasury Index Fund

As of March 31, 2019

Description:

The investment seeks to track the performance of a market-weighted government bond index with a short-term dollar-weighted average maturity.

The fund employs an indexing investment approach designed to track the performance of the Bloomberg Barclays US Treasury 1-3 Year Bond Index. This index includes fixed income securities issued by the U.S. Treasury (not including inflation-protected securities), all with maturities between 1 and 3 years. At least 80% of the fund's assets will be invested in bonds included in the index.

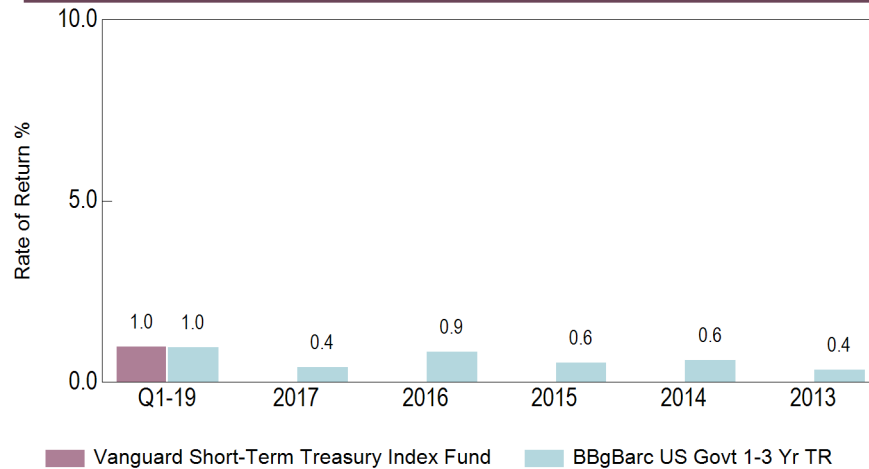
Portfolio Fund Information as of March 31, 2019		Top Holdings as of March 31, 2019		Fund Characteristics as of March 31, 2019	
Ticker	VSBIX	UNITED STATES TREASURY NOTES 1.25%	2.66%	Sharpe Ratio (3 Year)	
Morningstar Category	Short Government	UNITED STATES TREASURY NOTES 2.62%	2.43%	Average Duration	1.93
Average Market Cap (\$mm)		UNITED STATES TREASURY NOTES 1.38%	2.32%	Effective Duration	1.93
Net Assets (\$mm)	825.65	UNITED STATES TREASURY NOTES 2.12%	2.26%	Modified Duration	
% Assets in Top 10 Holdings	21.50	UNITED STATES TREASURY NOTES 2.5%	2.19%	Average Coupon	2.07%
Total Number of Holdings	94	UNITED STATES TREASURY NOTES 1.25%	2.03%	Average Effective Maturity	2.00
Manager Name	Joshua C. Barrickman	UNITED STATES TREASURY NOTES 2.88%	2.02%	R-Squared (3 Year)	
Manager Tenure	6	UNITED STATES TREASURY NOTES 1.75%	1.92%	Alpha (3 Year)	
Expense Ratio	0.05%	UNITED STATES TREASURY NOTES 3.5%	1.85%	Beta (3 Year)	
Closed to New Investors	No	UNITED STATES TREASURY NOTES 1.75%	1.83%		

Maturities as of March 31, 2019		Fixed Income Sectors as of March 31, 2019		Credit Quality as of March 31, 2019	
1 to 3 Years	98.68%	GOVERNMENT	99.71%	AAA	99.71%
3 to 5 Years	1.32%	MUNICIPAL	0.00%	AA	0.00%
5 to 7 Years	0.00%	CORPORATE	0.00%	A	0.00%
7 to 10 Years	0.00%	SECURITIZED	0.00%	BBB	0.29%
10 to 15 Years	0.00%	CASH & EQUIVALENTS	0.29%	BB	0.00%
15 to 20 Years	0.00%	DERIVATIVE	0.00%	B	0.00%
20 to 30 Years	0.00%			Below B	0.00%
Greater than 30 Years	0.00%			Not Rated	0.00%

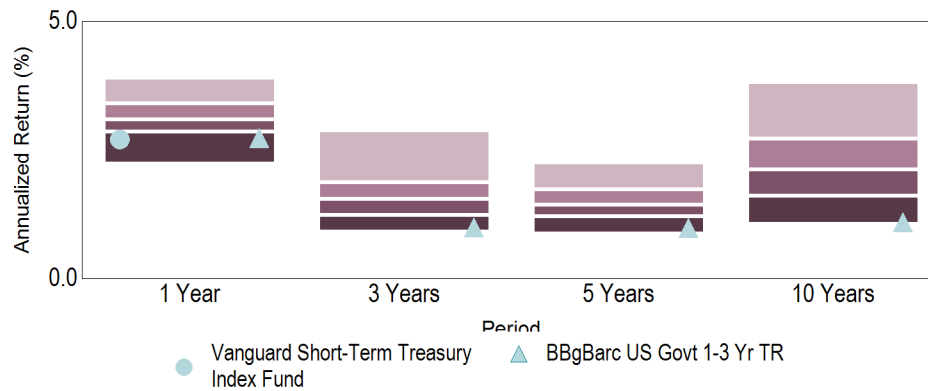
Vanguard Short-Term Treasury Index Fund

As of March 31, 2019

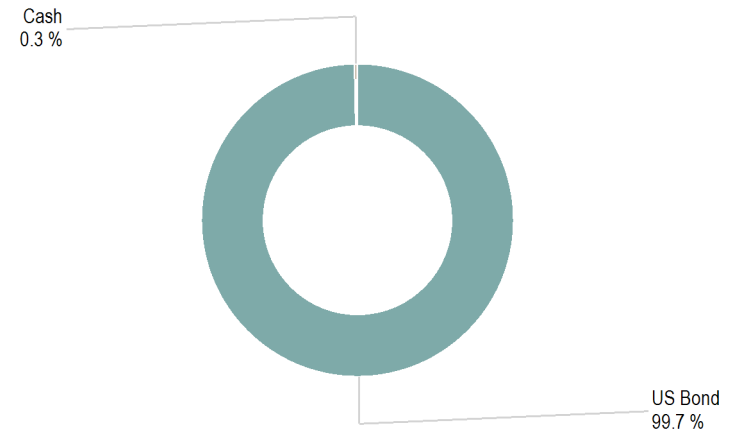
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Vanguard Short-Term Treasury Index Fund	2.7	--	--	--
BBgBarc US Govt 1-3 Yr TR	2.7	1.0	1.0	1.1
eV US Short Duration Fixed Inc Net Median	3.1	1.6	1.4	2.1
eV US Short Duration Fixed Inc Net Rank	84	--	--	--

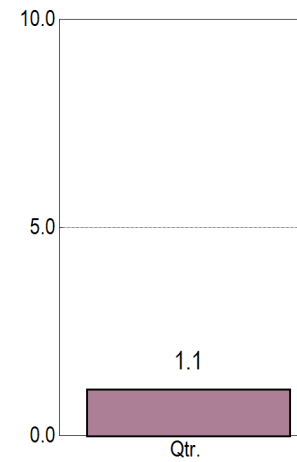


Mutual Fund Allocation as of March 31, 2019



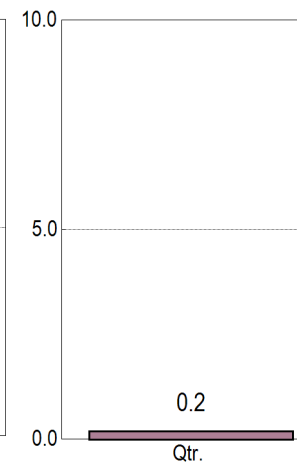
Anzld. Std. Deviation

Vanguard Short-Term Treasury Index Fund



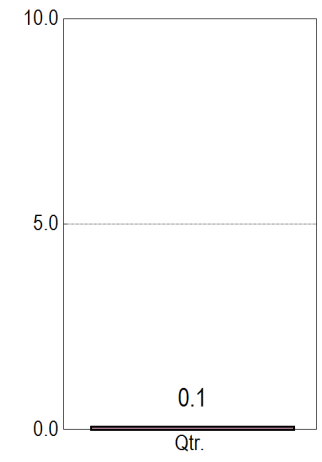
Tracking Error

Vanguard Short-Term Treasury Index Fund

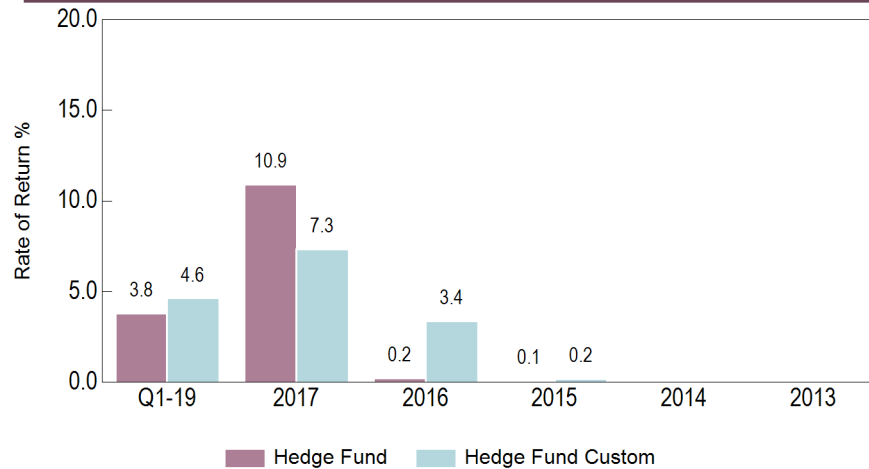


Information Ratio

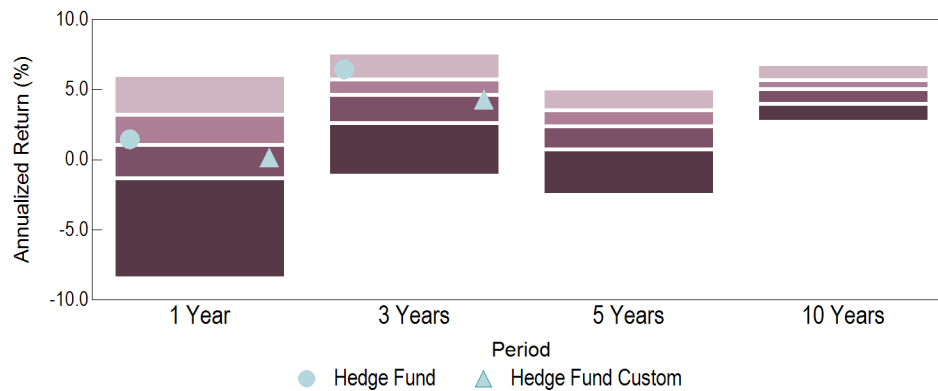
Vanguard Short-Term Treasury Index Fund



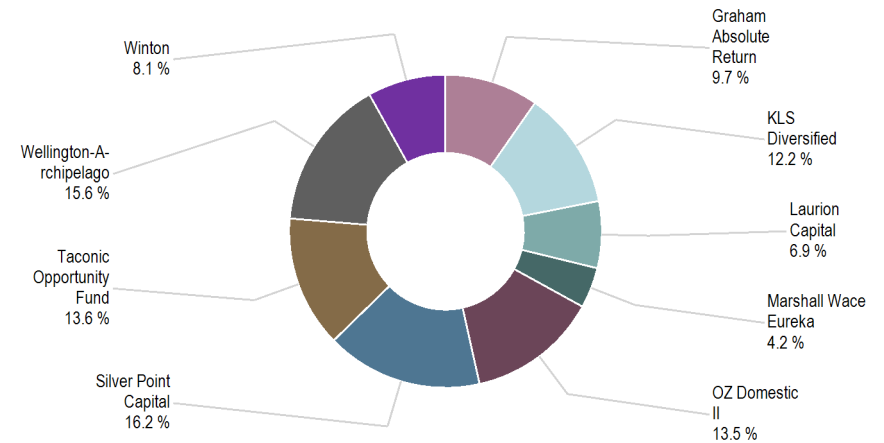
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Hedge Fund	1.5	6.4	--	--
<i>Hedge Fund Custom</i>	<i>0.2</i>	<i>4.3</i>	--	--
<i>InvestorForce All DB Hedge Funds Net Median</i>	<i>1.1</i>	<i>4.6</i>	<i>2.4</i>	<i>5.1</i>
<i>InvestorForce All DB Hedge Funds Net Rank</i>	<i>45</i>	<i>18</i>	--	--

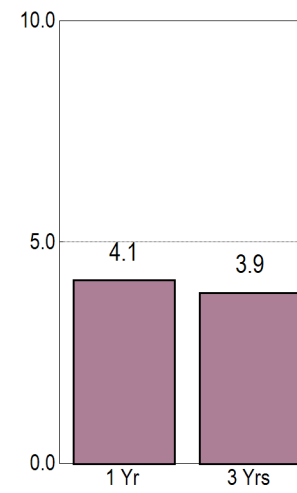


Current Allocation



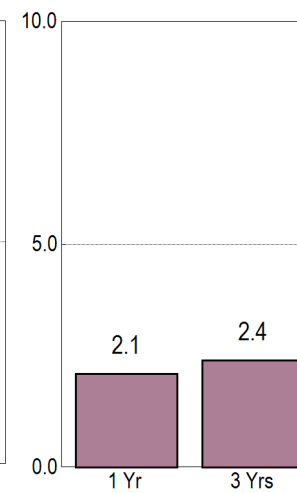
Anzld. Std. Deviation

Hedge Fund



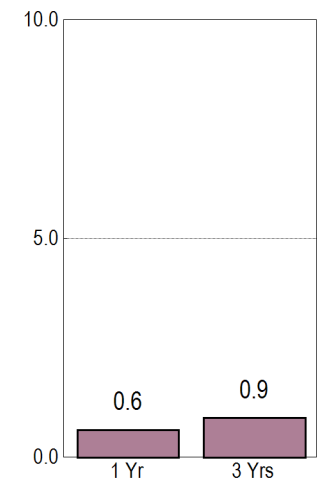
Tracking Error

Hedge Fund

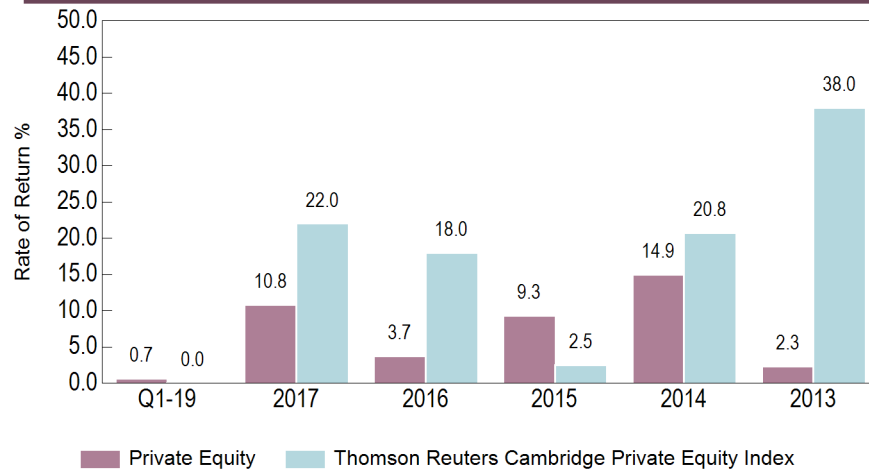


Information Ratio

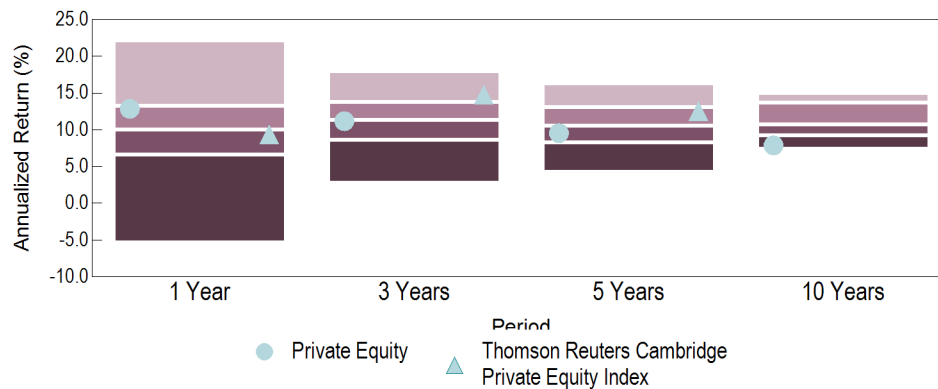
Hedge Fund



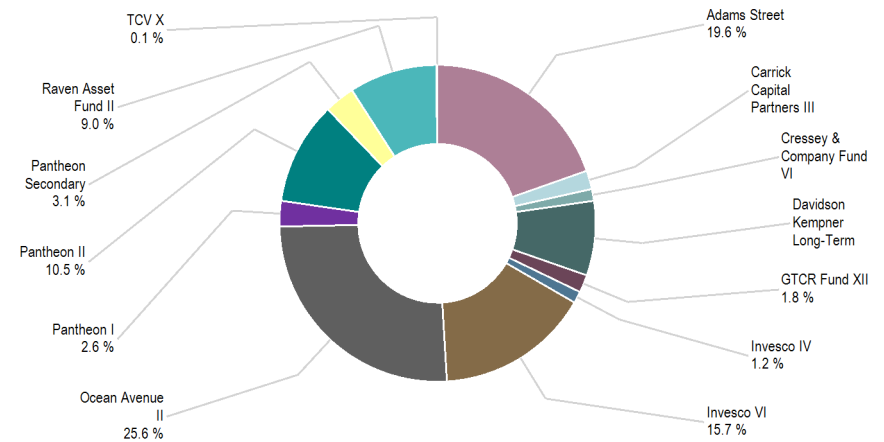
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Private Equity	12.8	11.2	9.5	7.9
Thomson Reuters Cambridge Private Equity Index	9.4	14.7	12.6	--
InvestorForce All DB Private Eq Net Median	10.0	11.4	10.6	10.8
InvestorForce All DB Private Eq Net Rank	29	53	62	95

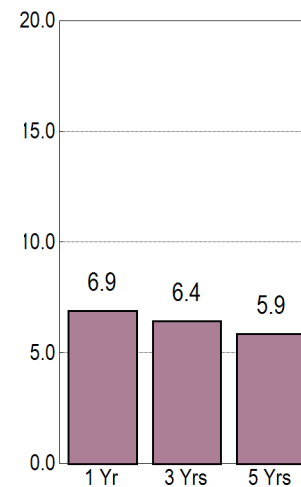


Current Allocation



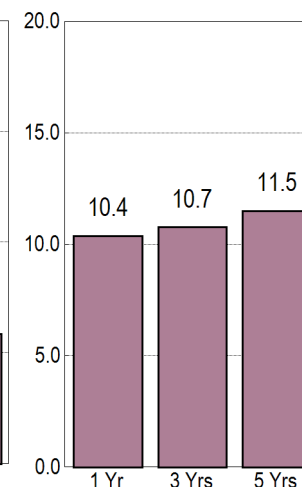
Anzld. Std. Deviation

Private Equity



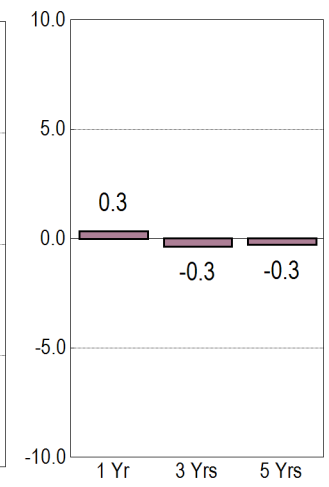
Tracking Error

Private Equity

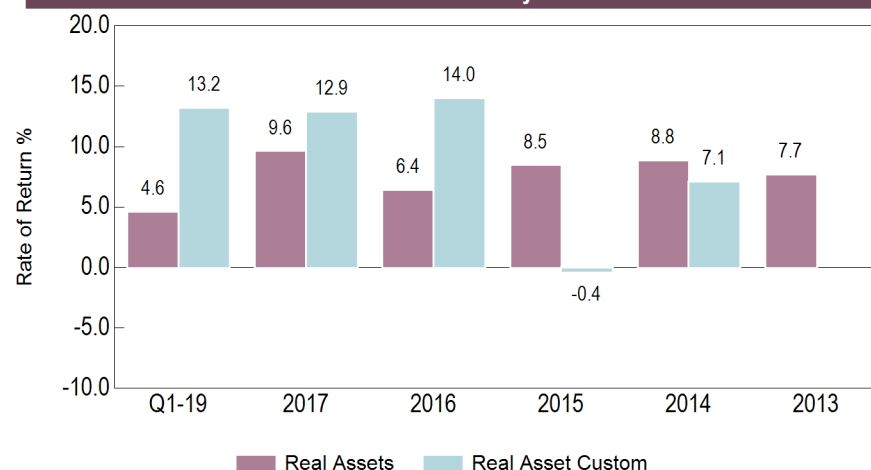


Information Ratio

Private Equity

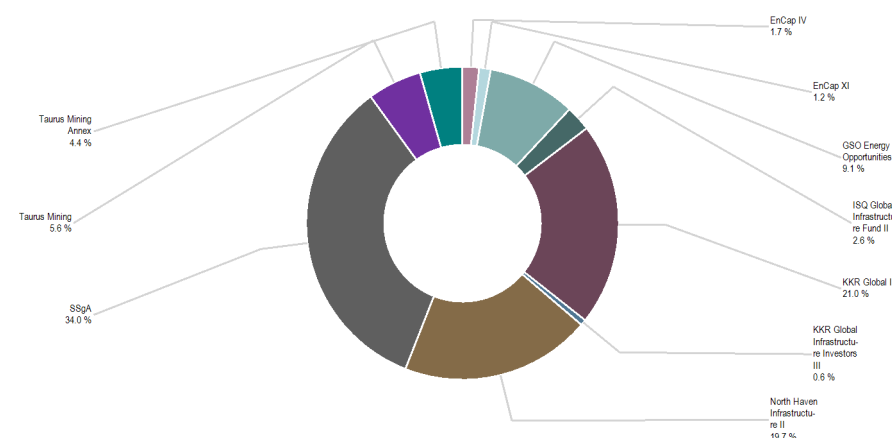


Return Summary



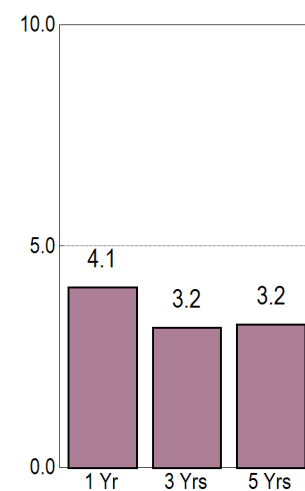
	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Real Assets	7.6	6.7	7.5	--
<i>Real Asset Custom</i>	<i>12.9</i>	<i>11.3</i>	<i>8.5</i>	<i>--</i>

Current Allocation



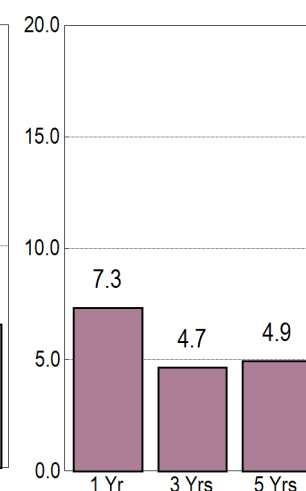
Anzld. Std. Deviation

Real Assets



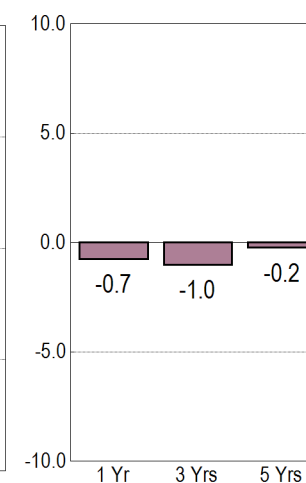
Tracking Error

Real Assets

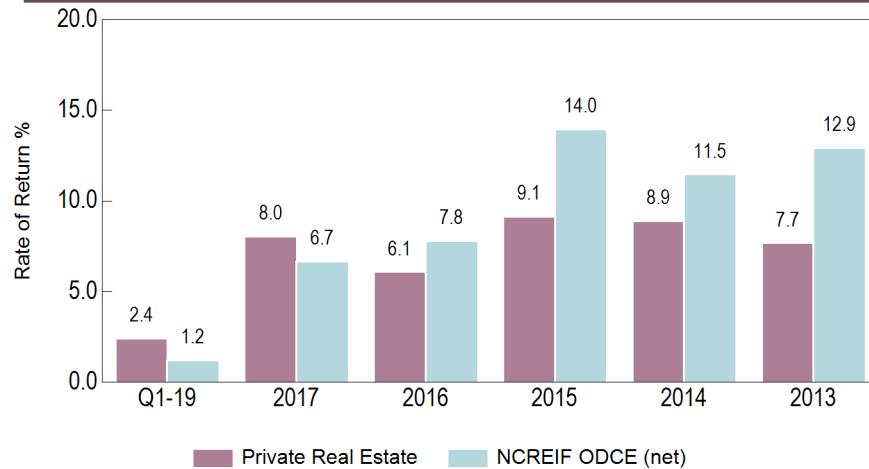


Information Ratio

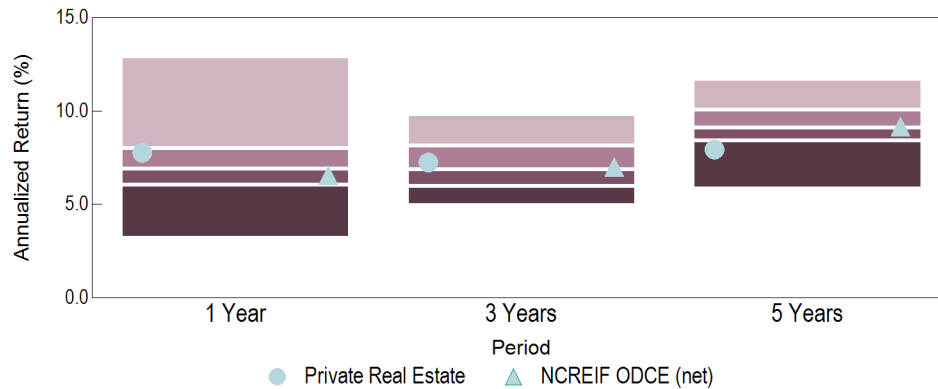
Real Assets



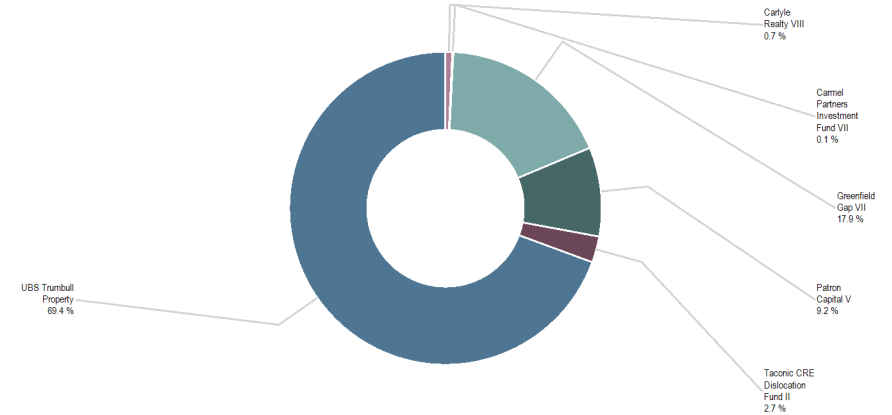
Return Summary



	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Private Real Estate	7.8	7.2	7.9	--
NCREIF ODCE (net)	6.6	7.0	9.2	7.7

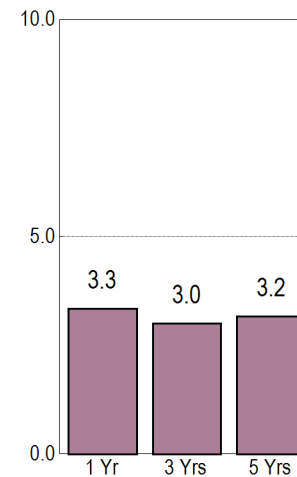


Current Allocation



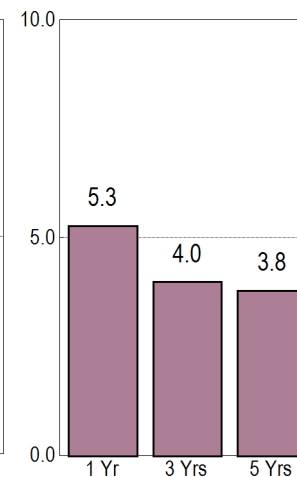
Anzld. Std. Deviation

Private Real Estate



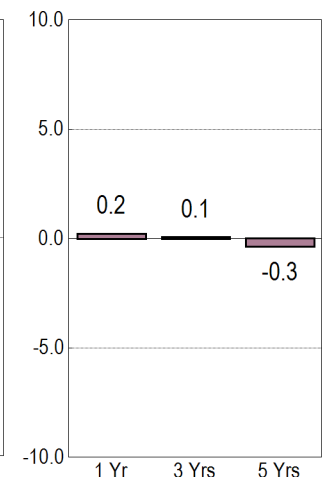
Tracking Error

Private Real Estate



Information Ratio

Private Real Estate



Disclaimer, Glossary, and Notes

WE HAVE PREPARED THIS QUARTERLY REPORT FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION.

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.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.

MEETING MATERIALS

Merced County Employees' Retirement Association

Performance Review

As of April 30, 2019



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

BOSTON
MASSACHUSETTS

CHICAGO
ILLINOIS

MIAMI
FLORIDA

PORTLAND
OREGON

SAN DIEGO
CALIFORNIA

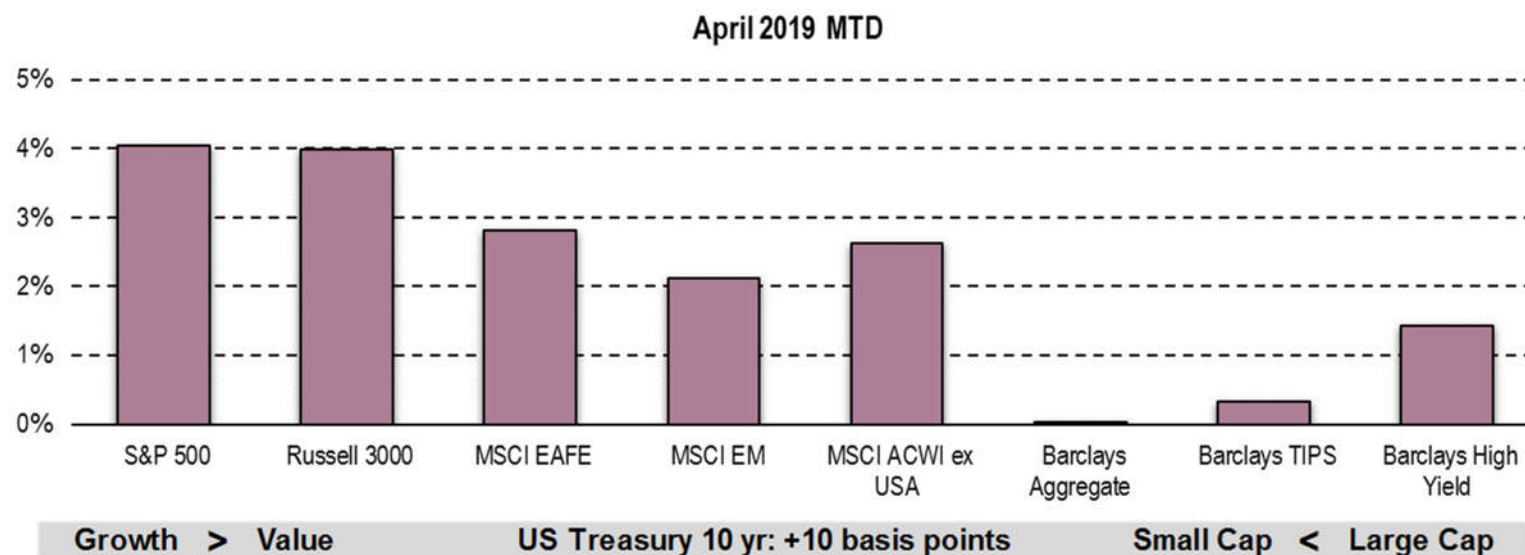
LONDON
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www.meketagroup.com

- 1. Performance Highlights As of April 30,2019**
- 2. Performance Report As of April 30, 2019**
- 3. Disclaimer, Glossary, and Notes**

Performance Highlights
As of April 30, 2019

Market Review and Preliminary Performance Summary for April 2019:



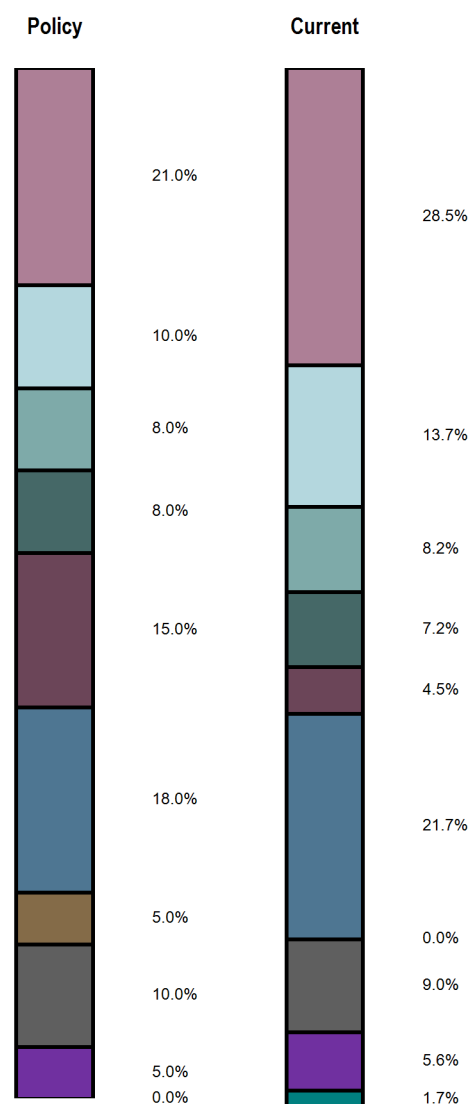
- April was another positive month for Global Equities, as overall, riskier assets outperformed.
- Major central banks continued to be dovish and Q1 U.S. GDP Growth estimates were better than expected.
- U.S. Treasury rates increased with the curve steepening, and Corporate spreads tightened.

As of April 30, 2019, total assets for the MCERA Portfolio stood at \$850.3 million.

- U.S. Equities drove positive results in the Fund, as this segment returned +3.9% for the month.
- Developed and Emerging Markets were also additive, generating returns of +2.6% and +3.1%, respectively.
- Fixed Income was flat for the month, at 0.0%, while Hedge Funds posted returns of +1.9%.

Performance Review
As of April 30, 2019

As of April 30, 2019

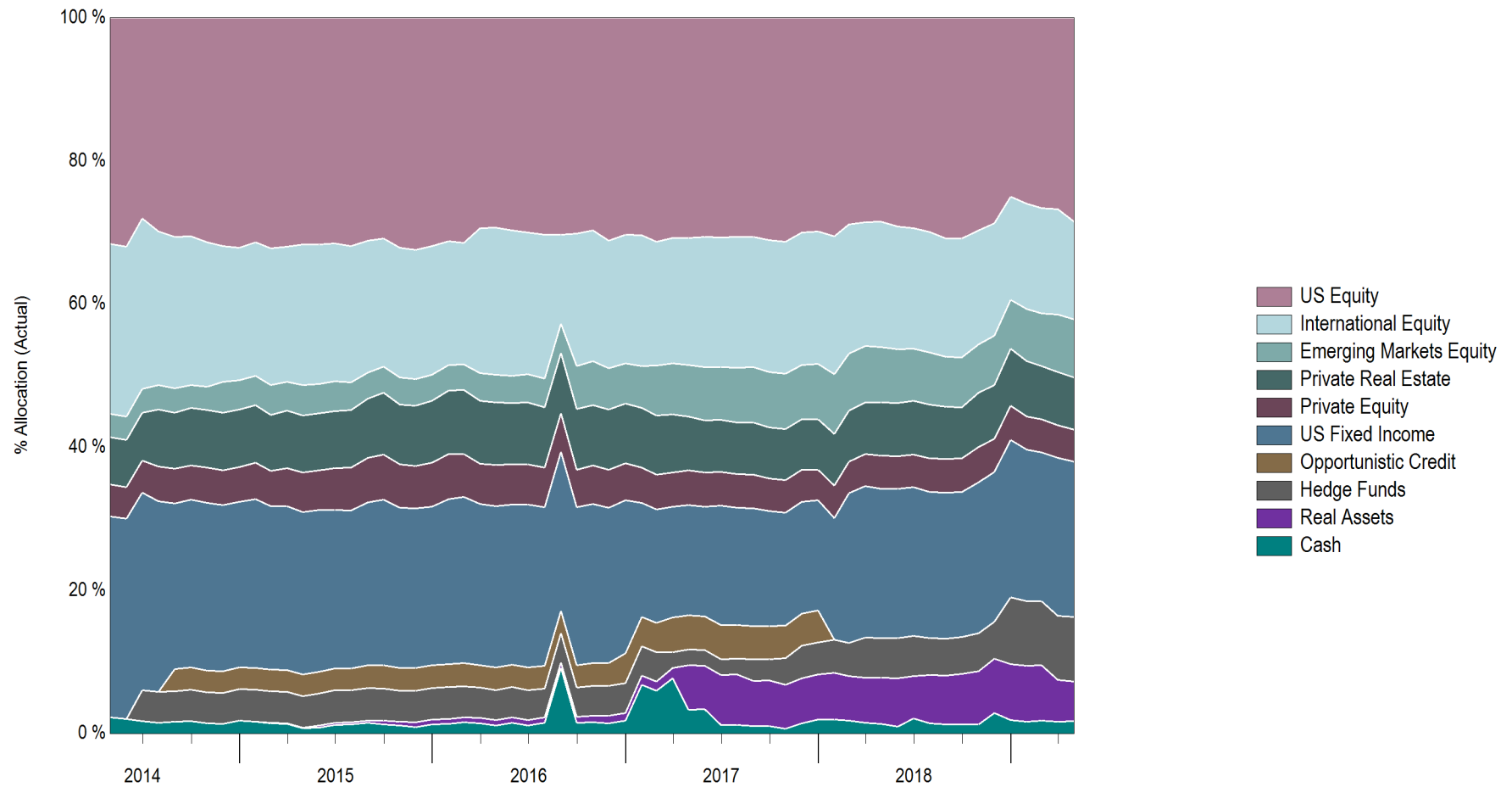


Allocation vs. Targets and Policy							
	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?	
US Equity	\$242,240,553	28.5%	21.0%	7.5%	15.0% - 26.0%	No	
International Equity	\$116,087,167	13.7%	10.0%	3.7%	5.0% - 15.0%	Yes	
Emerging Markets Equity	\$69,406,165	8.2%	8.0%	0.2%	4.0% - 12.0%	Yes	
Private Real Estate	\$61,547,604	7.2%	8.0%	-0.8%	6.0% - 10.0%	Yes	
Private Equity	\$38,323,410	4.5%	15.0%	-10.5%	5.0% - 20.0%	No	
US Fixed Income	\$184,391,687	21.7%	18.0%	3.7%	13.0% - 23.0%	Yes	
Opportunistic Credit	--	--	5.0%	-5.0%	3.0% - 7.0%	No	
Hedge Funds	\$76,311,288	9.0%	10.0%	-1.0%	5.0% - 15.0%	Yes	
Real Assets	\$47,246,931	5.6%	5.0%	0.6%	3.0% - 7.0%	Yes	
Cash	\$14,702,576	1.7%	0.0%	1.7%	0.0% - 5.0%	Yes	
Total	\$850,257,380	100.0%	100.0%				

Cash range displayed for illustrative purposes only.



Asset Allocation History
5 Years Ending April 30, 2019



As of April 30, 2019

Asset Class Performance Summary

	Market Value (\$)	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)*	850,257,380	100.0	1.9	4.0	9.7	4.4	8.7	6.3	9.6	8.0	Dec-94
Total Fund (Gross)*			1.9	4.1	9.7	4.6	9.0	6.6	9.9	8.1	
<i>Policy Index</i>			<i>1.4</i>	<i>2.8</i>	<i>8.0</i>	<i>3.6</i>	<i>8.8</i>	<i>6.5</i>	<i>10.9</i>	<i>5.9</i>	<i>Dec-94</i>
Total Fund w/o Alternatives (Net)	612,125,572	72.0	2.5	4.3	12.5	4.7	9.4	6.3	--	--	Dec-94
Total Fund w/o Alternatives (Gross)			2.6	4.6	12.6	5.0	9.7	6.7	--	--	
<i>Policy Index w/o AI</i>			<i>2.3</i>	<i>4.8</i>	<i>11.8</i>	<i>5.0</i>	<i>9.3</i>	<i>6.2</i>	<i>--</i>	<i>--</i>	<i>Dec-94</i>
US Equity (Net)	242,240,553	28.5	3.9	7.5	19.1	11.7	15.2	12.0	15.5	10.1	Dec-94
US Equity (Gross)			4.0	7.7	19.2	12.0	15.4	12.2	15.7	10.2	
<i>80% R1000 / 20% R2000</i>			<i>3.9</i>	<i>7.4</i>	<i>18.6</i>	<i>11.6</i>	<i>14.6</i>	<i>10.9</i>	<i>15.1</i>	<i>10.0</i>	<i>Dec-94</i>
International Equity (Net)	185,493,333	21.8	2.8	0.6	14.6	-3.3	8.4	2.6	8.6	5.2	Dec-98
International Equity (Gross)			2.8	0.9	14.7	-3.0	8.8	3.2	9.2	5.5	
<i>International Equity Custom</i>			<i>2.6</i>	<i>1.2</i>	<i>12.9</i>	<i>-3.4</i>	<i>8.9</i>	<i>3.5</i>	<i>8.1</i>	<i>4.4</i>	<i>Dec-98</i>
Developed International Equity (Net)	116,087,167	13.7	2.6	-1.3	13.2	-4.5	7.5	2.2	8.8	3.2	Jan-08
Developed International Equity (Gross)			2.6	-1.2	13.2	-4.4	7.7	2.6	9.3	3.7	
<i>MSCI EAFE</i>			<i>2.8</i>	<i>0.2</i>	<i>13.1</i>	<i>-3.2</i>	<i>7.2</i>	<i>2.6</i>	<i>8.0</i>	<i>2.4</i>	<i>Jan-08</i>
Emerging Markets Equity (Net)	69,406,165	8.2	3.1	4.6	17.3	-1.0	12.0	5.1	--	3.8	Apr-12
Emerging Markets Equity (Gross)			3.2	5.4	17.7	-0.1	13.0	6.0	--	4.8	
<i>MSCI Emerging Markets</i>			<i>2.1</i>	<i>2.7</i>	<i>12.2</i>	<i>-5.0</i>	<i>11.3</i>	<i>4.0</i>	<i>7.5</i>	<i>3.2</i>	<i>Apr-12</i>
US Fixed Income (Net)	184,391,687	21.7	0.0	4.1	2.5	4.7	2.8	2.8	4.6	5.3	Dec-94
US Fixed Income (Gross)			0.0	4.3	2.6	4.9	3.0	3.0	5.0	5.4	
<i>US Fixed Custom</i>			<i>0.1</i>	<i>4.3</i>	<i>2.6</i>	<i>4.9</i>	<i>3.0</i>	<i>2.9</i>	<i>4.0</i>	<i>5.6</i>	<i>Dec-94</i>
Private Real Estate (Net)	61,547,604	7.2	0.0	5.8	2.4	5.8	7.1	7.9	--	--	Mar-99
Private Real Estate (Gross)			0.0	5.8	2.4	5.8	7.3	8.6	8.9	8.7	
<i>NCREIF ODCE (net)</i>			<i>0.0</i>	<i>4.7</i>	<i>1.2</i>	<i>6.6</i>	<i>7.0</i>	<i>9.2</i>	<i>7.7</i>	<i>7.4</i>	<i>Mar-99</i>

Data prior to March 2018 provided by prior consultant



As of April 30, 2019

	Market Value (\$)	% of Portfolio	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity (Net)	38,323,410	4.5	0.0	6.1	0.7	6.1	11.2	9.2	7.9	7.9	Jun-05
Private Equity (Gross)			0.0	6.1	0.7	6.1	11.2	9.2	8.1	8.1	
<i>Thomson Reuters Cambridge Private Equity Index</i>			<i>0.0</i>	<i>3.8</i>	<i>0.0</i>	<i>9.4</i>	<i>16.9</i>	<i>13.2</i>	<i>--</i>	<i>--</i>	<i>Jun-05</i>
Hedge Fund (Net)	76,311,288	9.0	1.9	1.3	5.7	3.0	7.1	--	--	4.1	Jun-14
Hedge Fund (Gross)			1.9	1.5	5.8	3.2	7.3	--	--	4.1	
<i>Hedge Fund Custom</i>			<i>0.6</i>	<i>0.3</i>	<i>5.3</i>	<i>0.6</i>	<i>4.3</i>	<i>--</i>	<i>--</i>	<i>2.8</i>	<i>Jun-14</i>
Real Assets (Net)	47,246,931	5.6	0.0	5.3	4.6	5.6	6.5	7.4	--	--	Mar-99
Real Assets (Gross)			0.0	5.4	4.6	5.7	6.7	8.1	--	--	
<i>Real Asset Custom</i>			<i>0.6</i>	<i>10.5</i>	<i>13.9</i>	<i>11.8</i>	<i>10.4</i>	<i>8.4</i>	<i>--</i>	<i>--</i>	<i>Mar-99</i>
Private Infrastructure (Net)	19,879,846	2.3	0.0	4.5	0.3	4.5	8.8	--	--	6.4	Dec-14
Private Infrastructure (Gross)			0.0	4.5	0.3	4.5	8.8	--	--	6.4	
<i>S&P Global Infrastructure Net TR USD</i>			<i>1.2</i>	<i>7.0</i>	<i>15.2</i>	<i>6.9</i>	<i>7.3</i>	<i>4.4</i>	<i>--</i>	<i>4.4</i>	<i>Dec-14</i>
Private Natural Resources (Net)	10,795,985	1.3	0.0	7.9	1.2	7.9	15.3	--	--	16.9	Sep-15
Private Natural Resources (Gross)			0.0	7.9	1.2	7.9	15.3	--	--	16.9	
<i>S&P Global Natural Resources Index TR USD</i>			<i>0.0</i>	<i>-5.2</i>	<i>12.4</i>	<i>-4.8</i>	<i>9.5</i>	<i>1.3</i>	<i>4.4</i>	<i>14.1</i>	<i>Sep-15</i>
Cash (Net)	14,702,576	1.7	0.0	0.8	0.3	0.7	--	--	--	--	
Cash (Gross)			0.0	0.8	0.3	0.7	--	--	--	--	

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Real Assets includes State Street Real Asset NL Fund



As of April 30, 2019

Trailing Net Performance

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund(Net)*	850,257,380	100.0	--	1.9	4.0	9.7	4.4	8.7	6.3	9.6	8.0	Dec-94
<i>Policy Index</i>				1.4	2.8	8.0	3.6	8.8	6.5	10.9	5.9	Dec-94
Total Fund w/o Alternatives(Net)	612,125,572	72.0	72.0	2.5	4.3	12.5	4.7	9.4	6.3	--	--	Dec-94
<i>Policy Index w/o AI</i>				2.3	4.8	11.8	5.0	9.3	6.2	--	--	Dec-94
US Equity(Net)	242,240,553	28.5	39.6	3.9	7.5	19.1	11.7	15.2	12.0	15.5	10.1	Dec-94
<i>80% R1000 / 20% R2000</i>				3.9	7.4	18.6	11.6	14.6	10.9	15.1	10.0	Dec-94
Mellon Dynamic US Equity(Net)	94,464,127	11.1	39.0	3.9	10.3	20.5	13.9	16.9	14.1	--	17.5	Dec-12
<i>S&P 500</i>				4.0	10.1	18.2	13.5	14.9	11.6	15.3	14.5	Dec-12
Mellon Large Cap(Net)	111,385,069	13.1	46.0	4.0	9.8	18.6	13.4	14.8	--	--	14.6	Mar-16
<i>Russell 1000</i>				4.0	9.8	18.6	13.3	14.8	11.4	15.4	14.6	Mar-16
DFA Small Cap(Net)	18,249,114	2.1	7.5	4.2	-2.9	16.7	3.1	11.7	--	--	7.6	Jun-14
<i>Russell 2000</i>				3.4	-2.1	18.5	4.6	13.6	8.6	14.1	7.6	Jun-14
PanAgora(Net)	18,142,243	2.1	7.5	2.7	-6.0	17.4	2.1	12.2	8.6	--	9.2	Sep-13
<i>Russell 2000</i>				3.4	-2.1	18.5	4.6	13.6	8.6	14.1	8.8	Sep-13
International Equity(Net)	185,493,333	21.8	30.3	2.8	0.6	14.6	-3.3	8.4	2.6	8.6	5.2	Dec-98
<i>International Equity Custom</i>				2.6	1.2	12.9	-3.4	8.9	3.5	8.1	4.4	Dec-98
Developed International Equity(Net)	116,087,167	13.7	62.6	2.6	-1.3	13.2	-4.5	7.5	2.2	8.8	3.2	Jan-08
<i>MSCI EAFE</i>				2.8	0.2	13.1	-3.2	7.2	2.6	8.0	2.4	Jan-08
Mellon International(Net)	95,787,167	11.3	82.5	2.9	0.4	13.2	-2.9	7.7	--	--	8.5	Mar-16
<i>MSCI EAFE</i>				2.8	0.2	13.1	-3.2	7.2	2.6	8.0	8.0	Mar-16
Acadian ACWI ex U.S. Small Cap Equity(Net)	10,150,000	1.2	8.7	--	--	--	--	--	--	--	--	May-19

Developed International Equity and Emerging Markets Equity composites were only reported as one composite prior to March 2018.

Historical returns for the US Equity Composite prior to January 2012 and for the International Equity Composite prior to December 2010 are gross only.



As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Driehaus International Small Cap Growth(Net)	10,150,000	1.2	8.7	--	--	--	--	--	--	--	--	May-19
Emerging Markets Equity(Net)	69,406,165	8.2	37.4	3.1	4.6	17.3	-1.0	12.0	5.1	--	3.8	Apr-12
MSCI Emerging Markets				2.1	2.7	12.2	-5.0	11.3	4.0	7.5	3.2	Apr-12
Wells Capital(Net)	69,406,165	8.2	100.0	3.1	4.6	17.3	-1.0	12.0	5.1	--	3.5	Mar-12
MSCI Emerging Markets				2.1	2.7	12.2	-5.0	11.3	4.0	7.5	3.0	Mar-12
US Fixed Income(Net)	184,391,687	21.7	30.1	0.0	4.1	2.5	4.7	2.8	2.8	4.6	5.3	Dec-94
US Fixed Custom				0.1	4.3	2.6	4.9	3.0	2.9	4.0	5.6	Dec-94
Barrow Hanley(Net)	68,983,759	8.1	37.4	-0.1	4.5	2.9	5.2	1.8	2.5	--	3.3	Mar-10
BBgBarc US Aggregate TR				0.0	4.7	3.0	5.3	1.9	2.6	3.7	3.3	Mar-10
Vanguard Short-Term Treasury Index Fund(Net)	47,678,149	5.6	25.9	0.2	2.7	1.2	3.1	--	--	--	2.6	Feb-18
BBgBarc US Govt 1-3 Yr TR				0.2	2.7	1.2	3.1	1.1	1.0	1.1	2.7	Feb-18
Vanguard Total Bond Market Index Fund(Net)	67,729,779	8.0	36.7	--	--	--	--	--	--	--	--	May-19
Private Real Estate(Net)	61,547,604	7.2	7.2	0.0	5.8	2.4	5.8	7.1	7.9	--	--	Mar-99
NCREIF ODCE (net)				0.0	4.7	1.2	6.6	7.0	9.2	7.7	7.4	Mar-99
Greenfield Gap VII(Net)	11,073,596	1.3	18.0	0.0	9.4	4.0	9.4	12.2	--	--	12.9	Dec-14
Patron Capital V(Net)	5,703,497	0.7	9.3	0.0	6.5	5.6	6.5	17.2	--	--	15.7	Jan-16
UBS Trumbull Property(Net)	42,587,692	5.0	69.2	0.0	5.0	1.7	5.0	5.2	7.4	6.8	7.3	Mar-99
Carlyle Realty VIII(Net)	414,355	0.0	0.7	0.0	-28.7	-6.4	-28.7	--	--	--	-38.8	Dec-17

Historical returns for the US Fixed Income Composite prior to December 2010 and for Barrow Hanley prior to June 2010 are gross only.

All private markets performance and market values reflect a 12/31/2018 capital account balance unless otherwise noted.

Private Real Estate results prior to 1/1/2019 were included in the Real Assets composite. All results for the Private Real Estate composite that include the period prior to 1/1/2019 will reflect only the latest lineup of managers that Meketa received information for, therefore it may not reflect the entire Private Real Estate composite at that given time.



As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Taconic CRE Dislocation Fund II(Net)	1,691,598	0.2	2.7	0.0	--	-0.7	--	--	--	--	-0.7	Nov-18
Carmel Partners Investment Fund VII(Net)	76,866	0.0	0.1	0.0	--	--	--	--	--	--	0.0	Apr-19
Private Equity(Net)	38,323,410	4.5	4.5	0.0	6.1	0.7	6.1	11.2	9.2	7.9	7.9	Jun-05
<i>Thomson Reuters Cambridge Private Equity Index</i>				0.0	3.8	0.0	9.4	16.9	13.2	--	--	Jun-05
Adams Street(Net)	7,314,818	0.9	19.1	0.0	7.1	-1.5	7.1	12.1	11.2	10.4	6.8	Sep-05
Invesco IV(Net)	474,703	0.1	1.2	0.0	-19.1	0.0	-19.1	6.2	6.5	7.6	8.2	Jun-05
Invesco VI(Net)	5,976,760	0.7	15.6	0.0	5.3	0.0	5.3	12.0	20.4	--	11.7	Jun-13
Ocean Avenue II(Net)	9,730,272	1.1	25.4	0.0	13.8	8.0	13.8	21.7	--	--	12.3	Jun-14
Pantheon I(Net)	977,851	0.1	2.6	0.0	1.9	-3.0	1.9	6.4	4.3	5.2	3.5	Dec-05
Pantheon II(Net)	3,932,727	0.5	10.3	0.0	11.0	0.9	11.0	13.6	11.2	--	11.6	Dec-11
Pantheon Secondary(Net)	1,167,621	0.1	3.0	0.0	13.3	-4.2	13.3	5.6	2.7	1.3	3.7	Jun-07
Raven Asset Fund II(Net)	3,429,925	0.4	8.9	0.0	6.9	2.9	6.9	0.3	--	--	-1.2	Aug-14
Davidson Kempner Long-Term Distressed Opportunities Fund IV(Net)	3,095,578	0.4	8.1	0.0	15.1	2.8	15.1	--	--	--	14.6	Apr-18
GTCR Fund XII(Net)	696,498	0.1	1.8	0.0	-32.5	-32.5	--	--	--	--	-32.5	Jun-18
Carrick Capital Partners III(Net)	1,056,429	0.1	2.8	0.0	--	-7.0	--	--	--	--	-11.4	Aug-18

The market values for the following funds reflect a 9/30/2018 capital account balance: Invesco IV and Invesco VI

Adams Street includes Adams Street 2005, Adams Street 2007, and Adams Street 2011.

Historical returns for Invesco IV prior to April 2012 are gross only.

Pantheon I includes Pantheon US Fund VI and Pantheon Europe Fund IV.

Pantheon II includes Pantheon US Fund IX, Pantheon Asia Fund VI, and Pantheon Europe Fund VII.

Pantheon Secondary includes Pantheon GLO SEC III B.



As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Cressey & Company Fund VI(Net)	444,228	0.1	1.2	0.0	--	-11.2	--	--	--	--	-11.2	Jan-19
TCV X(Net)	26,000	0.0	0.1	0.0	--	--	--	--	--	--	0.0	Apr-19
Hedge Fund(Net)	76,311,288	9.0	9.0	1.9	1.3	5.7	3.0	7.1	--	--	4.1	Jun-14
<i>Hedge Fund Custom</i>				0.6	0.3	5.3	0.6	4.3	--	--	2.8	Jun-14
OZ Domestic II(Net)	10,460,571	1.2	13.7	3.1	5.5	12.6	7.6	9.9	--	--	6.4	Jun-14
Graham Absolute Return(Net)	7,461,819	0.9	9.8	3.1	2.0	6.6	2.1	--	--	--	3.8	Aug-17
Wellington-Archipelago(Net)	11,806,829	1.4	15.5	0.8	2.3	9.5	3.5	--	--	--	5.0	Aug-17
KLS Diversified(Net)	9,215,123	1.1	12.1	1.0	-1.5	1.5	2.4	--	--	--	2.2	Oct-17
Winton(Net)	6,150,342	0.7	8.1	1.1	-0.4	1.4	0.4	--	--	--	2.3	Oct-17
Marshall Wace Eureka(Net)	3,142,986	0.4	4.1	-0.2	-1.6	4.3	-0.2	--	--	--	3.1	Nov-17
Silver Point Capital(Net)	12,460,964	1.5	16.3	2.7	-0.1	4.8	0.3	--	--	--	3.0	Nov-17
Laurion Capital(Net)	5,341,065	0.6	7.0	2.9	--	4.5	--	--	--	--	7.8	Aug-18
Taconic Opportunity Fund(Net)	10,271,587	1.2	13.5	1.2	--	3.1	--	--	--	--	--	Dec-18
Real Assets(Net)	47,246,931	5.6	5.6	0.0	5.3	4.6	5.6	6.5	7.4	--	--	Mar-99
<i>Real Asset Custom</i>				0.6	10.5	13.9	11.8	10.4	8.4	--	--	Mar-99
SSgA(Net)	16,571,100	1.9	35.1	-0.1	0.4	8.9	1.3	--	--	--	4.1	Apr-17
<i>Real Asset NL Custom Blended Index</i>				0.0	0.6	9.0	1.8	--	--	--	4.3	Apr-17
Private Infrastructure(Net)	19,879,846	2.3	42.1	0.0	4.5	0.3	4.5	8.8	--	--	6.4	Dec-14
<i>S&P Global Infrastructure Net TR USD</i>				1.2	7.0	15.2	6.9	7.3	4.4	--	4.4	Dec-14
KKR Global II(Net)	10,268,249	1.2	51.7	0.0	6.3	0.3	6.3	9.2	--	--	9.8	Dec-14

As of April 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
North Haven Infrastructure II(Net)	8,035,760	0.9	40.4	0.0	4.6	0.0	4.6	9.3	--	--	5.9	May-15
ISQ Global Infrastructure Fund II(Net)	1,267,229	0.1	6.4	0.0	-28.0	5.7	--	--	--	--	-28.0	Jul-18
KKR Global Infrastructure Investors III(Net)	308,608	0.0	1.6	0.0	--	-10.9	--	--	--	--	-10.9	Jan-19
Private Natural Resources(Net)	10,795,985	1.3	22.9	0.0	7.9	1.2	7.9	15.3	--	--	16.9	Sep-15
<i>S&P Global Natural Resources Index TR USD</i>				<i>0.0</i>	<i>-5.2</i>	<i>12.4</i>	<i>-4.8</i>	<i>9.5</i>	<i>1.3</i>	<i>4.4</i>	<i>14.1</i>	<i>Sep-15</i>
EnCap XI(Net)	649,554	0.1	6.0	0.0	-14.0	-4.6	-14.0	--	--	--	-33.6	Jul-17
EnCap IV(Net)	827,735	0.1	7.7	0.0	-9.1	0.6	-9.1	--	--	--	-14.3	Feb-18
GSO Energy Opportunities(Net)	4,429,328	0.5	41.0	0.0	3.1	-1.8	3.1	15.6	--	--	16.3	Nov-15
Taurus Mining(Net)	2,729,061	0.3	25.3	0.0	15.0	4.9	15.0	14.6	--	--	17.6	Sep-15
Taurus Mining Annex(Net)	2,160,307	0.3	20.0	0.0	23.7	7.3	23.7	--	--	--	30.1	Jan-17
Cash(Net)	14,702,576	1.7	1.7	0.0	0.8	0.3	0.7	--	--	--	--	
Cash(Net)	10,309,546	1.2	70.1	0.1	1.3	0.5	1.2	1.1	0.8	--	--	Sep-03
Treasury Cash(Net)	4,393,030	0.5	29.9									

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Benchmark History

As of April 30, 2019

Total Fund		
1/1/2019	Present	21% US Equity Custom / 18% International Equity Custom / 23% US Fixed Custom / 10% Hedge Fund Custom / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net)
1/1/2017	12/31/2018	27% US Equity Custom / 23% International Equity Custom / 22% US Fixed Custom / 5% Hedge Fund Custom / 9% Thomson Reuters Cambridge Private Equity Index / 14% Real Asset Custom
7/1/2014	12/31/2016	22.7% Russell 1000 / 5.7% Russell 2000 / 23.6% International Equity Custom / 28.5% US Fixed Custom / 4.5% Hedge Fund Custom / 8% NCREIF ODCE (net) / 7% Cambridge Assoc. U.S. Private Equity Index
US Equity		
12/31/1994	Present	80% Russell 1000 / 20% Russell 2000
International Equity		
1/1/2019	Present	56% MSCI EAFE Gross / 44% MSCI Emerging Markets Gross
1/1/2017	12/31/2018	69.56% MSCI EAFE Gross / 30.44% MSCI Emerging Markets Gross
7/1/2013	12/31/2016	MSCI ACWI ex USA Gross
US Fixed Income		
3/1/2018	Present	77.27% BBgBarc US Aggregate TR / 22.73% BBgBarc US Govt 1-5 Yr TR
1/1/2017	2/28/2018	77.27% BBgBarc US Aggregate TR / 22.73% Credit Suisse Leveraged Loans
8/1/2014	12/31/2016	71.93% BBgBarc US Aggregate TR / 17.54% ICE BofAML US High Yield TR / 10.53% Credit Suisse Leveraged Loans
Hedge Fund		
7/1/2017	Present	100% HFRI Fund of Funds Composite Index
1/1/2015	6/30/2017	50% HFRI Fund of Funds Composite Index / 50% HFRI RV: Multi-Strategy Index
Real Assets		
1/1/2019	Present	50% S&P Global Natural Resources Index TR USD / 50% S&P Global Infrastructure TR USD
6/1/2013	12/31/2018	57.14% NCREIF ODCE (net) / 21.43% S&P Global Natural Resources Index TR USD / 21.43% S&P Global Infrastructure TR USD
SSgA		
4/30/2017	Present	25% Bloomberg Roll Select Commodities Index TR USD / 25% S&P Global LargeMidCap Commodity and Resources NR USD / 10% S&P Global Infrastructure TR USD / 15% DJ US Select REIT TR USD / 25% BBgBarc US TIPS TR

As of April 30, 2019

Annual Investment Expense Analysis

As Of April 30, 2019

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Total Fund w/o Alternatives		\$612,125,572		
US Equity		\$242,240,553		
Mellon Dynamic US Equity	0.30% of Assets	\$94,464,127	\$283,392	0.30%
Mellon Large Cap	0.04% of First 100.0 Mil, 0.02% Thereafter	\$111,385,069	\$42,277	0.04%
DFA Small Cap	0.35% of Assets	\$18,249,114	\$63,872	0.35%
PanAgora	0.80% of Assets	\$18,142,243	\$145,138	0.80%
International Equity		\$185,493,333		
Developed International Equity		\$116,087,167		
Mellon International	0.04% of Assets	\$95,787,167	\$38,315	0.04%
Acadian ACWI ex U.S. Small Cap Equity	0.99% of Assets	\$10,150,000	\$100,485	0.99%
Driehaus International Small Cap Growth	0.90% of Assets	\$10,150,000	\$91,350	0.90%
Emerging Markets Equity		\$69,406,165		
Wells Capital	0.90% of First 100.0 Mil, 0.85% Thereafter	\$69,406,165	\$624,655	0.90%
US Fixed Income		\$184,391,687		
Barrow Hanley	0.30% of First 50.0 Mil, 0.20% of Next 100.0 Mil, 0.15% Thereafter	\$68,983,759	\$187,968	0.27%
Vanguard Short-Term Treasury Index Fund	0.05% of Assets	\$47,678,149	\$23,839	0.05%
Vanguard Total Bond Market Index Fund	0.04% of Assets	\$67,729,779	\$23,705	0.04%
Private Real Estate		\$61,547,604		
Greenfield Gap VII		\$11,073,596		
Patron Capital V		\$5,703,497		
UBS Trumbull Property		\$42,587,692		
Carlyle Realty VIII		\$414,355		
Taconic CRE Dislocation Fund II		\$1,691,598		

As of April 30, 2019

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Carmel Partners Investment Fund VII		\$76,866		
Invesco IV		\$474,703		
Invesco VI		\$5,976,760		
Ocean Avenue II		\$9,730,272		
Pantheon I		\$977,851		
Pantheon II		\$3,932,727		
Pantheon Secondary		\$1,167,621		
Raven Asset Fund II		\$3,429,925		
Davidson Kempner Long-Term Distressed Opportunities Fund IV		\$3,095,578		
GTCR Fund XII		\$696,498		
Carrick Capital Partners III		\$1,056,429		
Cressey & Company Fund VI		\$444,228		
TCV X		\$26,000		
Hedge Fund		\$76,311,288		
OZ Domestic II	Performance-based 1.50 and 20.00	\$10,460,571	\$218,030	2.08%
Graham Absolute Return	Performance-based 1.75 and 20.00	\$7,461,819	\$177,423	2.38%
Wellington-Archipelago	Performance-based 1.00 and 20.00	\$11,806,829	\$140,208	1.19%
KLS Diversified	Performance-based 2.00 and 20.00	\$9,215,123	\$202,548	2.20%
Winton	Performance-based 0.90 and 20.00	\$6,150,342	\$70,483	1.15%
Marshall Wace Eureka	Performance-based 2.00 and 20.00	\$3,142,986	\$62,860	2.00%
Silver Point Capital	Performance-based 2.00 and 20.00	\$12,460,964	\$315,529	2.53%
Laurion Capital		\$5,341,065		
Taconic Opportunity Fund		\$10,271,587		
Real Assets		\$47,246,931		
SSgA	0.30% of First 50.0 Mil, 0.27% of Next 50.0 Mil, 0.25% Thereafter	\$16,571,100	\$49,713	0.30%

As of April 30, 2019

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Private Infrastructure		\$19,879,846		
KKR Global II		\$10,268,249		
North Haven Infrastructure II		\$8,035,760		
ISQ Global Infrastructure Fund II		\$1,267,229		
KKR Global Infrastructure Investors III		\$308,608		
Private Natural Resources		\$10,795,985		
EnCap XI		\$649,554		
EnCap IV		\$827,735		
GSO Energy Opportunities		\$4,429,328		
Taurus Mining		\$2,729,061		
Taurus Mining Annex		\$2,160,307		
Cash		\$14,702,576		
Cash		\$10,309,546		
Treasury Cash		\$4,393,030		

Disclaimer, Glossary, and Notes

WE HAVE PREPARED THIS QUARTERLY REPORT FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION.

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.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.

Merced County Employees' Retirement Association (MCERA)
RETIREMENT BOARD AGENDA ITEM

DATE: May 23, 2019

TO: MCERA Board of Retirement
FROM: Mark Harman, Fiscal Manager

SUBJECT: Adoption of California Government Code Section 31529.9

ITEM NUMBER: 3

ITEM TYPE: Discussion and Action

STAFF RECOMMENDATION:

1. Adopt by resolution California Government Code Section 31529.9, which will allow the MCERA Board of Retirement to pay all legal fees from system assets thereby removing all non-investment legal fees from the administrative cap and considering them non-administrative costs to the plan.

DISCUSSION:

For the past year, in preparation for the FY19-20 budget, staff have been researching the historical approach of the budgeting process, budgetary sections of the CERL, and budgetary practices at other CERL agencies. The subject of this particular discussion is regarding the result of staff's research regarding the budgetary treatment of MCERA's legal fees.

Historically, MCERA's approach was to separate legal fees between investment-related legal as non-administrative expenses, and non-investment legal fees as administrative costs. MCERA found in the course of its research that certain CERL systems, including Marin, Contra Costa, Imperial, San Bernardino, and others exclude all legal costs from the administrative cap described in CA Gov Code §31580.2. Staff felt the need to research this matter further from a legal perspective and reached out to counsel to opine on this matter.

The best mechanism to modify its practice to mirror other systems would be for the Board, by resolution, to adopt California Government Code Section 31529.9. By adopting California Government Code Section 31529.9, the MCERA Board of Retirement would allow payment of all legal fees from system assets.

By moving the remaining legal fees from administrative expenses to non-administrative expenses, MCERA would be moving the second largest cost driver from the administrative budget as well as reducing the amount budgeted under the administrative cap. This would remove \$300,000 year-over-year from the proposed FY19-20 administrative budget. Additionally, because of the uncertainty inherent to the costs related to the use of attorneys for various reasons, it would be in the best interest of the plan to remove such costs from administrative budget constraints by adoption of §31529.9.

**BOARD OF RETIREMENT
MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
RESOLUTION NO. 2019-6**

RESOLUTION TO ADOPT CALIFORNIA GOVERNMENT CODE SECTION 31529.9

THIS RESOLUTION, adopted by the Board of Retirement (Board) of the Merced County Employees' Retirement Association (MCERA), makes Government Code §31529.9 effective in Merced County and authorizes the Board to contract with attorneys in private practice using system assets.

WHEREAS, Government Code §31529 provides that the County Counsel is the attorney for the Board; and

WHEREAS, in addition to using County Counsel, the Board contracts with private counsel for specialized legal services including disability, litigation, tax, fiduciary and investment issues; and

WHEREAS, MCERA complies with Government Code §§31580, et seq. for purposes of establishing its administrative budget; and

WHEREAS, Government Code §31580.2 defines and establishes a limit for "costs of administration;" and

WHEREAS, Government Code §31529.9 provides that, notwithstanding Government Code §31580, the Board may pay reasonable costs for legal services using system assets, exempting such costs from "costs of administration."

NOW, THEREFORE, BE IT RESOLVED that the board hereby adopts this resolution making Government Code §31529.9 effective in Merced County.

ADOPTED: _____, 2019

Aye:

Nay:

Abstain:

Absent:

Darlene Ingersoll, Chair

ATTEST:

Kristen Santos, Plan Administrator

Merced County Employees' Retirement Association (MCERA)
RETIREMENT BOARD AGENDA ITEM

DATE: May 23, 2019

TO: MCERA Board of Retirement

FROM: Mark Harman, Fiscal Manager

SUBJECT: Proposed Administrative Budget and Non-Administrative Cost Projection for Fiscal Year 2019-2020.

ITEM NUMBER: 4

ITEM TYPE: Action

STAFF RECOMMENDATION:

1. Adopt the proposed Administrative budget recommendation for MCERA for Fiscal Year 2019-2020.
2. Adopt the new budgeting and projection process proposed by staff beginning with Fiscal Year 2019-2020.

DISCUSSION:

In preparation of the proposed budget, staff compared the current year budget (with the current year expenditures) to projected expenditures and projects for Fiscal Year 2019-2020 (FY19-20). Prior year budget numbers, as well as the proposed budget request for FY19-20, are reflected in the budget spreadsheet (attached). In FY18-19 the total expenditures to date of \$ 4,016,611 (as of April 30, 2019) are estimated to fall below the final budget approved by the Board of Retirement for the prior year.

Government Code Section 31580.2 within the County Employees' Retirement Law of 1937 (CERL) allows for expenditures of administrative services (costs other than software, hardware and computer technology consulting services, investment and actuarial costs) to be the greater of 21 basis points (.0021%) of the accrued actuarial liability of MCERA or a flat dollar amount of \$2,000,000. The accrued actuarial liability of MCERA as of the June 30, 2018 actuarial valuation was \$1.3019B of which 21 basis points (0.0021%) is \$2,734,034. Therefore, MCERA's administrative budget cannot exceed \$2,734,034, under the CERL.

MCERA has also proposed a change to its budgeting practice by removing the costs of legal fees from its administrative budget. This change was presented to the board at this meeting as an agenda item to adopt by Resolution Government Section Code 31529.9. Adoption of this resolution will result in all legal fees being excluded from the Administrative Budget as allowable by the CERL.

Review of the Current Year's Administrative Budget and Expenditures

In FY18-19 the total to date administrative expenditures of \$1,320,597 will fall below the budget approved by the Board. The reason for the reduction in actuals costs is due to salaries resulting from staff turnover/retirements.

Merced County Employees' Retirement Association (MCERA)

RETIREMENT BOARD AGENDA ITEM

Change to MCERA's Budgetary Practices

In evaluating the foundation for budgeting for MCERA, staff researched the CERL, and reviewed practices of other CERL systems. The conclusion that staff reached was that other systems do not generally try and budget for expenses that are excluded from the administrative cap such as investment fees, actuarial costs, legal expenses, and custodial costs. There are extreme difficulties in accurately predicting costs associated with investments because staff cannot predict how the markets will perform for the upcoming fiscal year. In years past, staff made attempts to project investment fees by reviewing past performance and adding a large (up to 20%) contingency. However, as the Board is well aware, past performance is not an indicator of upcoming market performance. Transparency of investment fees is very important to staff (and the Board), so an effort to be more transparent in reporting actual fees paid out on a monthly, quarterly and year end basis will be brought to the Board in a public meeting, highlighting these costs.

Information Systems costs are excluded from some systems' budgets, while other systems budget them for different reasons (usually due to having in-house IS departments). In both cases, such costs are excluded from the cap. MCERA's current practice is to budget for these expenses but exclude them from the administrative cap. Actual amounts paid will continue to be reported out in monthly and quarterly budget reports brought to the Board.

Additionally, in the past, MCERA has broken out legal costs between administrative and investment related costs. Based upon the advice of counsel and the resolution discussed earlier in the agenda to adopt California Government Section Code §31529.9, staff plans to remove the remaining legal costs from under the administrative cap and consider these costs to be non-administrative expenses starting in FY19-20. Again, actual costs will be reported monthly and quarterly to the Board.

Going forward, staff will request the Board of Retirement to approve an Administrative Budget and a separate Non-Administrative *projection* (not budget). Staff will improve the level of transparency and detail in reporting actuals for non-administrative items. This reporting will include quarter-over-quarter and year-over-year deltas for the sake of comparability, as well as to provide greater analytical value to the board. Administrative Budget reporting will continue to provide comparisons of actual expenses against the budget.

Administrative Budget

Fiscal Year 2019/2020 Proposed Budget Request

A total of \$1,861,393 is requested for administrative expenses in FY19-20. This is contingent upon the passage of a resolution to adopt California Government Code §31529.9. Below are the administrative budget items that had the largest changes compared to last fiscal year. Fiscal Year 2019-2020 budget includes cost reductions associated with realigning certain expenses, recognizing certain costs as non-administrative, historical costs of certain activities, and reclassifying legal costs to non-administrative expenses. The largest cost increases are related to salaries, County Cost

Merced County Employees' Retirement Association (MCERA)

RETIREMENT BOARD AGENDA ITEM

Allocation Plan, election expenses, staff development, and out of state travel.

Salaries & Benefits

Total proposed budget for Salaries and Benefits is \$1,225,000. Salaries include seven full-time staff budgeted at Step 5 within their classifications, and wages for an Office Assistant used for extra help (only able to work 25 hours per week). This amount includes keeping the vacant Retirement Officer position at the current salary level. Currently, the Plan Administrator is working with County Human Resources to "right size" this position to a benefits manager level classification in line with MCERA's Fiscal Manager classification. It is anticipated that the salary will decrease slightly for the vacant position, but until the County has signed off on this change, MCERA chose to be more conservative and keep the salary "as is".

Support Services

MCERA is supported by Merced County for operational, administrative and maintenance services. This includes building maintenance and ad hoc repairs, if needed. This amount is paid for through a cost allocation plan and the services are directly billed to MCERA. Due to increased reliance on the county during FY17-18, MCERA will realize a \$24,286 increase in the cost allocation plan during FY19-20. This increase has been budgeted accordingly.

Other vendors, outside of the County, support MCERA with janitorial services and grounds maintenance. While we expect increases of costs due to an increase in the minimum wage, we have not realized enough of an impact on costs during FY18-19 to justify a budget increase for grounds maintenance. We will closely monitor this line item for any adjustments for FY20-21. We have increased the budget by \$900 to cover minimum wage increases related to these expenses.

Staff has reduced the budget for Communications by \$1050 to bring this expense in line with historical actuals.

Staff has removed costs associated with MCERA's multifunction copier from the Administrative Budget and moved them to Software and Technology expense to correctly align the nature of these expenses. This will result in a reduction of \$5,000 from the administrative budget.

Fiduciary Education & Travel

Staff, trustees, and service providers to MCERA have a fiduciary responsibility to the fund. As such, it is imperative that continuous education be provided and is required for Trustees, per the CERL. Access to publications and professional educational conferences are required. The costs of Professional Memberships (NCPERS, SACRS and CALAPRS) are budgeted at the amount of \$4,500. Trustee and staff attendance and travel to these conferences and professional educational conferences is budgeted at \$55,000 for in-state and \$15,000 for out-of-state travel. Membership and attendance to these conferences continues to provide high quality education and access to pension and

Merced County Employees' Retirement Association (MCERA)

RETIREMENT BOARD AGENDA ITEM

investment information to Trustees and staff. MCERA subscribes to GASB, Pension & Investments Online and the Wall Street Journal.

Staff Development budget is increasing accordingly to \$10,000 to accommodate the costs of a Private Equity Accounting Course and Microsoft Excel Training for staff. This line item is essential for succession planning and process improvement work.

Building Maintenance and Office Expenses

MCERA staff have no plans in the current budget for any building improvements during FY19-20. Building maintenance costs are expected to remain stable and the budget will remain unchanged year-over-year.

Office expenses are expected to realize a significant decrease due to removing non-repeating costs from the budget that MCERA incurred in FY18-19, such as new chairs for both the MCERA Board Room and for staff. A reduction of \$10,000 is proposed for office expense.

Elections

Elections are budgeted at \$15,000, due to potential costs associated with running two elections for three seats (General Membership Seat and 2 Safety Seats).

MCERA's Administrative Budget per the CERL

In FY19-20, staff continue to exercise prudence in budgeting for administrative expenses by submitting a budget that is only 14 basis points (0.0014%) of MCERA's accrued actuarial liability and below the allotted legal amount, per the CERL. The proposed administrative budget is \$1,860,493.

Non-Administrative Projection:

Investment Expenses

Section 31596.1 of the CERL states: "the following expenses shall not be considered a cost of administration to the retirement system, but shall be considered as a reduction in earnings from those investments or a charge against the assets of the retirement system as determined by the Board." These expenses are reported in the Audited Financial Statements presented to the Board of Retirement in the Comprehensive Annual Financial Report.

- Actuarial Fees
- Investment Consultant Fees
- Attorney Fees - Directly related to an investment
- Investment Manager Fees
- Custodial Bank Fees

MCERA projects an increase in the Actuarial costs due the additional costs during FY19-20 that are associated with an actuarial experience study and an actuarial audit.

Merced County Employees' Retirement Association (MCERA)

RETIREMENT BOARD AGENDA ITEM

Additionally, MCERA may have need for additional costs that are unforeseen due to changes in legislation and ongoing and/or potential litigation.

Custodial Bank Fees and related costs were increased by \$10,000 to account for increases in fees due to Northern Trust's Short Term Investment Fund (STIF) income fees and BNY Mellon's class action handling fees (a residual fee from previous custodial bank services).

Investment Legal fees have increased to account for increased utilization of Nossaman to assist with handling investment-related legal activities. An additional \$24,000 was included in the projection to cover these additional costs.

Due to investment manager fees reducing in the prior year, MCERA is maintaining the prior year's budgeted number as next year's projection.

Non-Investment Legal Counsel & Services

Pending adoption of a Resolution Adopting Section 31529.9 of the CERL, this section's subsection 'b' states: "the board shall pay, from system assets, reasonable compensation for the legal services."

MCERA contracts with multiple specialized firms for legal counsel based on authority from the CERL in Section 31732. The estimated cost for Professional and Special Services - Legal Services of \$300,000 is maintained for the next fiscal year from the prior fiscal year due to no significant change in costs. In the new fiscal year, the proposed amount will be a projection rather than a budget to more realistically reflect the highly-variable nature of legal fees. These costs are proposed to be removed from the administrative budget and its associated cap to the non-administrative projection.

Technology

Section 31580.2 (b) of the CERL, states, "Expenditures for computer software, computer hardware, and computer technology consulting services in support of these computer products shall not be considered a cost of administration of the retirement system for the purposes of this section." Therefore, all technology-related expenses are excluded from the Administrative Budget.

Approximately \$305,000 is included in the projection for expenses associated with CPAS, Cognos, LexisNexis (a proprietary search tool required for public pension plans) and other software and hardware expenses.

The Professional and Special Services – Data Processing Projection of \$120,000 remains the same year over year as we have realized a reduction in utilization of county servers and IS services, but staff sees a value in using this projection as a placeholder.

Depreciation for all capitalized Software and Technology will be projected at \$242,778 for FY19-20.

LINE ITEM SUMMARY REPORT-APPROPRIATIONS-BUDGET UNIT - 76600 RETIREMENT ASSOCIATION
Administrative Budget, Fiscal Year 2019-2020

Unit #		Adopted 2018/2019	Expended as of 04/30/19	% Expended As of 04/30/19	Balance	Proposed Budget FY2019/2020	Line Item Changes from 2018/2019	% Change From Last Year	
10110	SALARIES/BENEFITS	1,178,153.89	789,700.46	67.03%	388,453.43	1,225,000.00	46,846.11	4%	A1
20600	COMMUNICATIONS -- <i>Phone Bill, Re-occurring Admin cost, Equip. charges by Comm Dept.</i>	5,050.00	3,136.32	62.11%	1,913.68	4,000.00	(1,050.00)	-21%	A2
20900	HOUSEHOLD EXPENSE -- <i>Bobs Community Pest Control, Geil Enterprises, ADT Security</i>	10,600.00	10,772.58	101.63%	(172.58)	11,500.00	900.00	8%	A3
21000	INSURANCE -- <i>Fiduciary/Building (The Hartford, Alliant Ins. Svc., CSAC Excess Ins.)</i>	85,000.00	79,292.00	93.28%	5,708.00	85,500.00	500.00	1%	A4
21001	INSURANCE GENERAL LIABILITY -- <i>paid through payroll</i>	3,072.00	2,447.62	79.68%	624.38	3,072.00	-	0%	
21200	MAINTENANCE OFFICE EQUIP. -- <i>Copy Machine & Copy charge. (Spriggs, Dataflow)</i>	5,000.00	6,068.17	121.36%	(1,068.17)	-	(5,000.00)	-100%	A5
21301	MAINT STRUCT IMPROVEMENT & GROUNDS -- <i>Yard Masters, DPW Blgs. Svcs. & AC/Heater repairs</i>	19,100.00	12,560.69	65.76%	6,539.31	19,100.00	-	0%	
21500	MEMBERSHIP -- <i>SACRS, CALAPRS, GFOA, & GASB</i>	6,500.00	5,860.00	90.15%	640.00	7,200.00	700.00	11%	A6
21700	OFFICE EXPENSE GENERAL -- <i>Office Depot, First Choice water, Petty cash, Supplies</i>	21,000.00	19,006.40	90.51%	1,993.60	11,000.00	(10,000.00)	-48%	A7
21710	OFFICE EXPENSE POSTAGE -- <i>FedEx, Mail Room Charges</i>	15,750.00	11,971.63	76.01%	3,778.37	15,750.00	-	0%	
21805	PROF & SPEC SERV AUDITS -- <i>Outside Auditor (Brown Armstrong) & Retirees Verification (Pension Benefit Info)</i>	55,000.00	43,275.58	78.68%	11,724.42	60,000.00	5,000.00	9%	A8
21808	PROF & SPEC SERV-BD ATTENDANCE FEE -- <i>Board Members</i>	12,000.00	7,900.00	65.83%	4,100.00	12,000.00	-	0%	
21811	PROF & SPEC SERV-COURT REPORTERS -- <i>Associated Reporters</i>	2,000.00	-	0.00%	2,000.00	2,000.00	-	0%	
21816	PROF & SPEC SERV-MEDICAL SERVICES -- <i>Disability Medical Advisors and Medical Exams</i>	80,000.00	3,730.80	4.66%	76,269.20	80,000.00	-	0%	
21834	PROF & SPEC SERV-LEGAL SERVICES -- <i>Disability Counsel & Litigation</i>	300,000.00	156,463.33	52.15%	143,536.67	-	(300,000.00)	-100%	A9
21872	PROF & SPEC SERV-INVESTIGATIONS -- <i>Sub-rosa</i>	1,000.00	-	0.00%	1,000.00	1,000.00	-	0%	
21900	PUBLICATIONS & LEGAL NOTICES-- <i>Merced Sun Star, Alliance, WSJ</i>	4,500.00	2,494.43	55.43%	2,005.57	4,500.00	-	0%	
22300	SPEC DEPT EXPENSE-OTHER	500.00	57.00	11.40%	443.00	500.00	-	0%	
22310	SPEC DEPT EXPENSE-ELECTION EXPENSE	5,000.00	-	0.00%	5,000.00	13,150.00	8,150.00	163%	A10
22327	SPEC DEPT EXP-COST ALLOCATION PLAN -- <i>Use of County Departments</i>	151,282.00	126,068.30	83.33%	25,213.70	175,568.00	24,286.00	16%	A11
22500	TRANSPORTATION & TRAVEL -- <i>Mail run (Staff mileage reimbursement)</i>	800.00	167.61	20.95%	632.39	400.00	(400.00)	-50%	A12
22505	STAFF DEVELOPMENT	4,000.00	120.00	0.00%	3,880.00	10,000.00	6,000.00	150%	A13
22515	TRANS & TRAVEL INSTATE -- <i>SACRS Conf., CALAPRS Various Roundtables</i>	55,000.00	17,032.58	30.97%	37,967.42	55,000.00	-	0%	
22516	TRANS & TRAVEL-OUT OF STATE	9,000.00	3,974.22	44.16%	5,025.78	15,000.00	6,000.00	67%	A14
22527	TRANS & TRAVEL-EXPENSE/CAR ALLOW -- <i>Manager stipend</i>	14,000.00	9,461.77	67.58%	4,538.23	12,500.00	(1,500.00)	-11%	A15
22600	UTILITIES -- <i>P G & E and City of Merced</i>	12,500.00	9,035.39	72.28%	3,464.61	15,000.00	2,500.00	20%	A16
	ADMINISTRATIVE DEPRECIATION EXPENSE	13,130.08	-	0.00%	13,130.08	14,403.15	1,273.07	10%	A17
	Total MCERA Administrative Budget	2,068,937.97	1,320,596.88	63.83%	748,341.09	1,853,143.15	(215,794.82)	-10%	

Notes to Administrative Budget:

Account	Note
A1 10110	Increase due to salary and step increase to step 5 (+\$46.8K).
A2 20600	Decrease due to truing up budgeted amount to better align with prior years' spending (-\$1.05K).
A3 20900	Budgeted increases for housekeeping - minimum wage increase of 8.33% factored in (+\$.09K).
A4 21000	Factors potential cost inflation (+\$.5K).
A5 21200	Costs associated with the Copier are to be moved to Software and Technology Expense (-\$5K).
A6 21500	Budgeted increases due to addition of new association memberships (NCPERS) and projected inflation (+\$.7k).
A7 21700	Reduction in budget due to reduction in expenses that are non-recurring (-\$10K).
A8 21805	Increased due to coverage for audit contingencies (+\$5K).
A9 21834	Legal Fees are being removed from Administrative Budget and treated as a non-administrative expense, subject to adoption \$31529.9 (-\$300K).
A10 22310	Budgeted increase of \$13.15k due to multiple board changes during FY 19-20 (+\$.15K).
A11 22327	Increase of cost allocation from previous FY (+24.2K).
A12 22500	Decrease due to truing up budgeted amount to better align with prior years' spending (-\$.5K).
A13 22505	Budget increased to cover cost of private equity accounting training (+6k).
A14 22516	Budget increased to accommodate more out-of-state travel for trips unrelated to investment due diligence (+\$6k).
A15 22527	Decrease due to truing up budgeted amount to better align with prior years' spending (-\$1.5K).
A16 22600	Factors potential energy inflation (+\$2.5k).
Administrative	
A17 Depreciation Exp	Increased due to added capitalized assets (new carpet) being depreciated (+1.2k).

AAL	1,301,919,000
Admin Cap %	0.0021
Administrative Cap	2,734,030
FY19-20 Administrative Budget	1,853,143.15
% of FY 19-20 Budget to AAL	0.0014

Budgetary Governance Notes:

- A. AB 609 amended §31580.2 and repealed §31580.3 of the Government Code, relating to county employees' retirement. Approved September 30, 2010
This Bill prohibits expenses for the costs of administration of the retirement system incurred in any year from exceeding the greater of 21/100 of 1% of the accrued actuarial liability (AAL) of the retirement system or \$2,000,000, as adjusted annually by a specified annual cost-of-living adjustment.
- B. MCERA's accrued actuarial liability (AAL) of the retirement system per the most recent valuation of June 30, 2018 is \$1.302 Billion.
- C. Based on the figure in Note B, the cap for FY-19-20 budget would be \$2,734,030. (\$1,301,919,000 * .0021)
- D. At \$1,880,471.15, MCERA's 2019/2020 administrative budget is set at 14/100 of 1% of the AAL and is within the limit as set forth above
- E. Administrative Budget is governed by §31580.2.
- F. No Capital Budget or Projection is available for next year as there are no capital projects planned.

Changes to methodology from Prior Year's Budget:

- A. Non-Administrative Expenses will now be subject to projection instead of a formal budget. Certain Non-Administrative expenses, such as ones associated with investments, cannot be reasonably budgeted. This change will better align MCERA with the CERL and practices at other CERL systems. These costs will be reported on an actualized basis on a monthly, quarterly, and annual basis. The costs will be compared to prior year and prior quarter costs.
- B. All Legal Expenses, subject to resolution adopting §31529.9, will be considered non-administrative costs outside of the administrative cap and budget, per the advice of counsel.

LINE ITEM SUMMARY REPORT-APPROPRIATIONS-BUDGET UNIT - 76600 RETIREMENT ASSOCIATION
Non-Administrative Projection, Fiscal Year 2019-2020

Unit #		Adopted 2018/2019	Expended as of 04/30/19	% Expended As of 04/30/19	Balance	Projected 2019/2020	Line Item Changes from 2018/2019	% Change From Last Year	
21800	PROFESSIONAL & SPECIAL SERVICES -- <i>Fund Managers/Consulting/Investment Legal</i>	3,400,000.00	2,233,592.84	65.69%	1,166,407.16	3,400,000.00	-	0%	
	Investment Expenses					2,312,000.00			
	Investment Legal					324,000.00			
	Investment Consultants					610,000.00			
	Investment Extras (due diligence travel, management expense fluctuations)					154,000.00			
21802	PROF & SPEC SERV-ACTUARIAL SERV -- <i>Cheiron Consultants, Segal</i>	175,000.00	37,443.04	21.40%	137,556.96	250,000.00	75,000.00	43%	P1
21812	PROF & SPEC SERV-DATA PROCESSING -- <i>Programming</i>	120,000.00	46,241.06	38.53%	73,758.94	120,000.00	-	0%	
21834	PROF & SPEC SERV-LEGAL SERVICES -- <i>Disability Counsel & Litigation</i>				-	300,000.00	300,000.00		P2
21840	PROF & SPEC SV-ADMINISTRATIVE SERV -- <i>Northern Trust, BNY Mellon, County Wire Fees</i>	115,000.00	87,965.20	76.49%	27,034.80	125,000.00	10,000.00	9%	P3
22350	SPEC DEPT EXP-SOFTWARE & TECHNOLOGY -- <i>CPAS/Payroll/Acct Program/LexisNexis/Copier</i>	250,000.00	252,569.69	101.03%	(2,569.69)	305,000.00	55,000.00	22%	P4
	NON-ADMINISTRATIVE DEPRECIATION EXPENSE	242,777.87	-	0.00%	242,777.87	242,777.87	-		
	Total Professional Budget (FY 18-19)/Projection (FY 19-20)	4,302,777.87	2,657,811.83	61.77%	1,644,966.04	4,742,777.87	440,000.00	10%	

Notes to Non-Administrative Projection

	Account	Note
P1	21802	Increased to cover Actuarial Experience Study and Audits of Actuarial Valuation and Experience Study (+\$75k).
P2	21834	Non-Investment Legal moved from Administrative Budget (+\$300K).
P3	21840	Increase to account for custodial expenses related to STIF income, class action handling (+\$10k).
P4	22350	Increase to cover for Lexis/Nexis, multifunction copier, unforeseen technology costs and possible CPAS projects and increases (+\$55k).

Non-Administrative Expenses are items that are not subject to the Administrative Cap under the CERL.