



# Quarterly Investment Performance Analysis

Wyoming State Treasurer's Office

Period Ended: March 31, 2017





## Memorandum

To	Wyoming State Loan and Investment Board
From	RVK, Inc.
Subject	Investment Performance Analysis – Summary of Contents
Date	March 31, 2017

To assist in your review of the Investment Performance Analysis for the quarter ended March 31, 2017, we have provided below an outline and summary of the information contained within each section of this report.

### MEMORANDUM – Investment Performance Analysis Commentary

- This two-page memo provides a written summary of significant observations regarding performance of the State's Funds and an overview of performance during the quarter for each of the State's asset classes.

#### TAB 1 – Market Environment

- This section is intended to review capital markets in general (i.e. not specific to Wyoming), and includes a written summary of events during the quarter, including economic influences and review of equity and bond markets as a whole. This section also includes various charts and exhibits displaying key characteristics of major market indices representing the broad range of available asset classes, including alternative investments such as absolute return and real estate. Also included is an asset class summary that describes the structure of each of the State's composites. Lastly, this section includes a review of the benchmarks referenced within the quarterly report.

#### TAB 2 – Performance Summary

- These seven pages provide the market value, asset allocation, and performance information for the State's investments in summary form. They are used as a stand-alone summary report for the regular SLIB meetings.

#### TAB 3 – Total Fund

- This section provides an overview of all of the State's investments, both permanent and non-permanent. Exhibits include an outline of the aggregate asset allocation – by manager, by investment fund, by asset class, and compared to peers. This section also includes Total Fund performance compared to other plan sponsors and highlights the risk and return profile of the State.

#### PORTLAND OFFICE

1211 SW 5th Avenue  
Suite 900  
Portland, Oregon 97204  
MAIN 503.221.4200

#### CHICAGO OFFICE

30 N LaSalle Street  
Suite 3900  
Chicago, Illinois 60602  
MAIN 312.445.3100

#### NEW YORK OFFICE

1 Penn Plaza  
Suite 2128  
New York, New York 10119  
MAIN 646.805.7075

**TAB 4 – Investment Funds**

- This section details the asset allocation versus target of each of the State's investment funds. In addition, a summary page highlighting the performance of each fund compared to the respective actual allocation index is included.

**TAB 5 – Total Equity**

- This section summarizes the State's allocation to traditional equity managers – both domestic and international – and details the performance of each manager versus both their corresponding benchmark as well as their direct peer universe. Attribution pages are also incorporated, which outline the allocation by sector (or region) for each sub-composite and the corresponding performance.

**TAB 6 – Alternative Assets**

- This section includes allocation and performance information for the State's alternative investments, which include real estate, absolute return, and private equity strategies.

**TAB 7 – Total Fixed Income**

- Similar to the equity section, this section summarizes the allocation to and performance of each of the State's fixed income managers, including the internally managed portfolio. Characteristics pages are also included for each sub-composite.

**TAB 8 – Cash and Cash Equivalents**

- This one-page summary outlines the performance of the State's cash portfolios compared to current T-Bill rates and a custom blended index for JP Morgan.

**Tab 9 – Investment Manager Profile Pages**

- This section contains a number of portfolio characteristic pages for the State's investment managers, including historical strategy performance prior to the State's investment. These pages include such characteristics as risk, upside/downside capture, market capitalization, allocation by sector and more.

**TAB 10 – Investment Policy Objective Review**

- The section provides a compliance check for the Total Fund, and for each individual manager portfolio, versus the guidelines and expectations outlined in the State's Master Investment Policy and Sub-Policies.

**APPENDIX**

- The appendix includes a glossary, providing definitions and other information on data included throughout the report, including financial terms and ratios, indices, and peers groups. The addendum page in the appendix includes important comments specific to Wyoming regarding market value, performance, and allocation information provided throughout the report.

# WYOMING STATE TREASURER’S OFFICE

*FIRST QUARTER 2017*

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## Memorandum

To	Wyoming State Loan and Investment Board
From	RVK, Inc.
Subject	Investment Performance Analysis Commentary
Date	March 31, 2017

Outlined below please find a summary of significant observations regarding performance of the State's Funds for the period ended March 31, 2017. We hope this summary will facilitate your review of our Investment Performance Analysis Report.

The Total Fund returned 2.5% during the first quarter as fixed income assets took in a modest gain while both US and non-US equities rallied. Long-term performance for the Total Fund remains strong, with the State earning returns of 5.3% and 4.9% per annum over the trailing seven- and ten-year periods.

The Total Fund outperformed its custom benchmark by 0.3% over the quarter as relative performance was bolstered by the State's fixed income portfolio structure. Equity markets produced strong gains during the first quarter of 2017, driven largely by continued positive expectations for US fiscal policy, as well as continued improvements in global economic growth and inflation, more broadly. The State has lower strategic exposure to equities relative to the All Master Trust Universe and subsequently underperformed the peer group in the first quarter. Relative to the Universe, the State continues to generate more return for each unit of risk exposure, with risk-adjusted returns ranking in the top 30% and 10% of all Plans over the trailing five- and ten-year time periods, respectively.

Absolute results were positive for the State's nine investment pools, with each outperforming their respective benchmarks during the quarter. The State's permanent funds with larger strategic allocations to equities and alternative investments generated higher absolute returns than the State's non-permanent funds, but slightly lower returns on a relative basis.

Short-term rates were impacted by the Fed's decision to raise the Fed Funds Rate by 25 basis points in March, while long-dated rates remained relatively unchanged. The Bloomberg US Aggregate Bond Index returned 0.8% over the first quarter, staying relatively flat compared to the drawdown of the previous quarter. The State's total fixed income portfolio (excluding convertibles) returned 1.3% for the quarter, outperforming the broad market index by 0.5%. Helped by a pick-up in export related growth and a stabilization in commodity prices, the State's emerging markets debt composite was the top contributor to relative performance during the first

**PORTLAND OFFICE**  
1211 SW 5th Avenue  
Suite 900  
Portland, Oregon 97204  
MAIN 503.221.4200

**CHICAGO OFFICE**  
30 N LaSalle Street  
Suite 3900  
Chicago, Illinois 60602  
MAIN 312.445.3100

**NEW YORK OFFICE**  
1 Penn Plaza  
Suite 2128  
New York, New York 10119  
MAIN 646.805.7075





quarter, returning 7.5%. Credit fixed income also contributed to relative performance, returning 1.5%, while core fixed income returned 0.8%, keeping pace with the broad market index.

US equity markets in the first quarter were driven by strong earnings growth and expectations for US fiscal policy. Almost all major US equity indices finished the quarter in positive territory, with the Russell 3000 Index returning 5.7% for the quarter—the lone exception was the Russell 2000 Value Index which returned -0.1%. The State's US equity composite returned 4.9% during the first quarter, trailing the broad market index. Epoch posted the strongest absolute and relative performance in the US equity portfolio, returning 7.5% and outperforming the Russell 3000 Index by 1.7%. Conversely, the State's small cap US equity manager, RBC, posted the weakest performance within the asset class, returning -1.1% and underperforming the Russell 2000 Index by 3.6%. The State Street All Cap tracked its custom index and underperformed the broad market index by 0.6%, returning 5.2%. Lazard matched the broad market index return of 5.7%.

International markets rallied over the quarter as improving economic fundamentals helped allay fears and reduce global uncertainty. The MSCI EAFE Index returned 7.2% and the MSCI Emerging Markets Index returned 11.4%, as international markets benefited from increased growth expectations and a modestly weaker dollar. The State's International Equity portfolio returned 7.9% during the quarter, keeping pace with the return of the broad market index. Fisher Investments outperformed its custom index by 0.8%, returning 8.7%. Manning & Napier trailed the MSCI ACW Ex US Index by 1.7% with equity selection serving as the primary driver of underperformance. Arrowstreet, the State's global equity manager, returned 8.8% and outperformed the MSCI ACW Index by 1.9%, with stock selection in the US driving outperformance.

Core real estate continued a trend of delivering modest, positive returns despite a few signs of softening in the market such as more favorable lease terms and concessions. Core real estate investors entered 2017 with continued expectations that income returns would make up the majority of total returns, and in the first quarter these expectations were correct as income made up 1.1% of the 1.8% return posted by the NCREIF ODCE Index. Between the State's two core real estate managers, Clarion and UBS, returns were 2.6% and 1.2% respectively. The PAAMCO - Jackalope Fund (currently the State's single absolute return manager) returned 2.0% during the quarter, underperforming the 2.2% earned by the HFN FOF Multi-Strat Index.

## First Quarter Economic Environment

### Key Economic Indicators

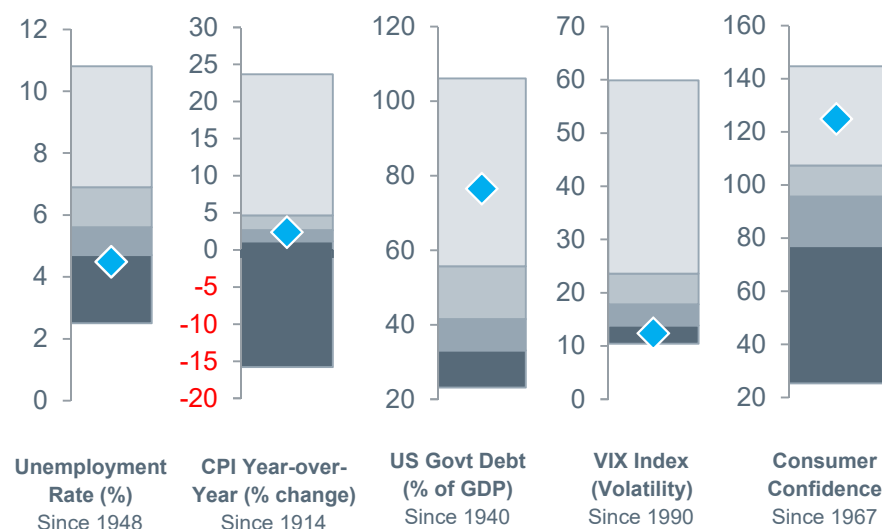
Global risk assets rallied during the first quarter of 2017, driven largely by continued positive expectations for US fiscal policy, as well as continued improvements in global economic growth and inflation, more broadly. Duration sensitive assets, however, traded with less conviction and direction, as sovereign debt yields of developed economies ended the quarter relatively unchanged.

Globally, commodities were mixed, but traded down as a broad category, and the dollar weakened against a trade weighted basket of currencies. Oil prices declined during the quarter, as increased US shale production offset production cuts announced by OPEC in November of last year. In the US, the new administration provided few details regarding proposed pro-growth policies, which may include infrastructure spending, tax reform, and easing of regulations. Nevertheless, elevated valuations in domestic equity markets suggested that investors anticipate positive changes and are comfortable with near-term equity risk.

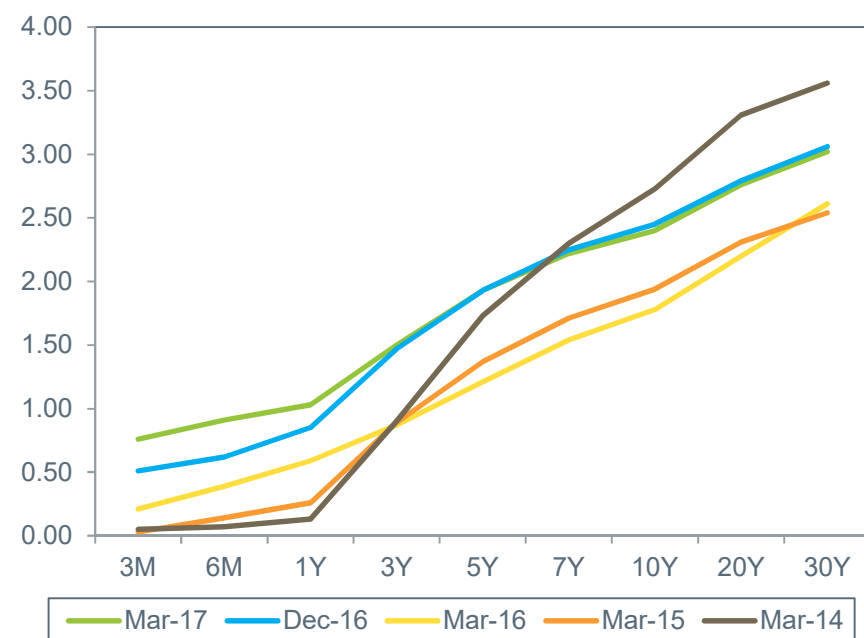
Economic Indicators	Mar-17	Dec-16	Mar-16	Mar-14	20 Yr
Federal Funds Rate (%)	0.82 ▲	0.55	0.25	0.06	2.29
Breakeven Infl. - 1 Yr (%)	2.06 ▲	1.27	2.10	1.79	N/A
Breakeven Infl. - 10 Yr (%)	1.98 ▲	1.97	1.63	2.14	N/A
CPI YoY (Headline) (%)	2.4 ▲	2.1	0.9	1.5	2.2
Unemployment Rate (%)	4.5 ▼	4.7	5.0	6.7	6.0
Real GDP YoY (%)	1.9 ▼	2.0	1.6	1.6	2.3
PMI - Manufacturing	57.20 ▲	54.50	51.70	55.00	52.24
USD Total Wtd Idx	94.01 ▼	95.76	89.73	76.63	86.89
WTI Crude Oil per Barrel (\$)	50.6 ▼	53.7	38.3	101.6	56.4
Gold Spot per Oz (\$)	1,249.4 ▲	1,152.3	1,232.7	1,284.0	795.0

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	6.07	6.07	17.17	13.30	7.51
Russell 2000	2.47	2.47	26.22	12.35	7.12
MSCI EAFE (Net)	7.25	7.25	11.67	5.83	1.05
MSCI EAFE SC (Net)	7.97	7.97	10.99	9.20	3.03
MSCI Emg Mkts (Net)	11.44	11.44	17.21	0.81	2.72
Bloomberg US Agg Bond	0.82	0.82	0.44	2.34	4.27
BofA ML 3 Mo US T-Bill	0.10	0.10	0.36	0.14	0.68
NCREIF ODCE (Gross)	1.77	1.77	8.34	11.98	5.59
Wilshire US REIT	0.03	0.03	1.98	9.76	4.42
HFRI FOF Comp	2.39	2.39	6.23	3.22	1.24
Bloomberg Cmdty (TR)	-2.33	-2.33	8.69	-9.54	-6.22

## Key Economic Indicators



## Treasury Yield Curve (%)



### First Quarter Review

#### Broad Market

The first quarter was marked by strong S&P earnings growth and continued muted volatility. Specifically, the year-over-year earnings growth rate for the S&P 500 was estimated at 9.2% by FactSet, which would mark the highest growth rate since 2011. Combining this with lower levels of stock correlation and investor comfort with market risks led to an environment where active manager performance generally improved over the quarter.

#### Market Cap

Large cap stocks outpaced small cap stocks this quarter, with the Russell 1000 Index returning 6.0% while the Russell 2000 Index returned 2.5%.

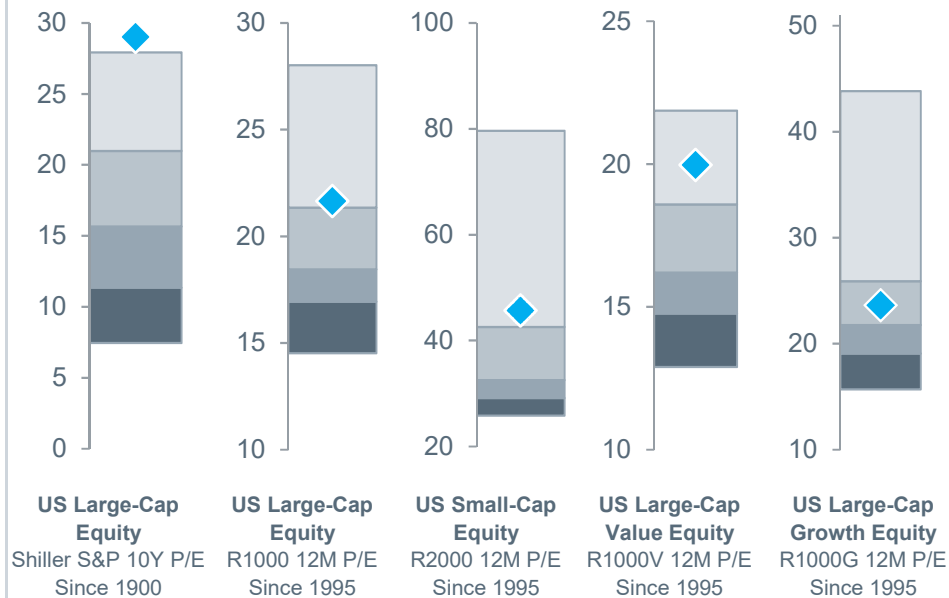
#### Style and Sector

In the first quarter of 2017, growth significantly outperformed value while the technology and consumer discretionary were the top performing sectors.

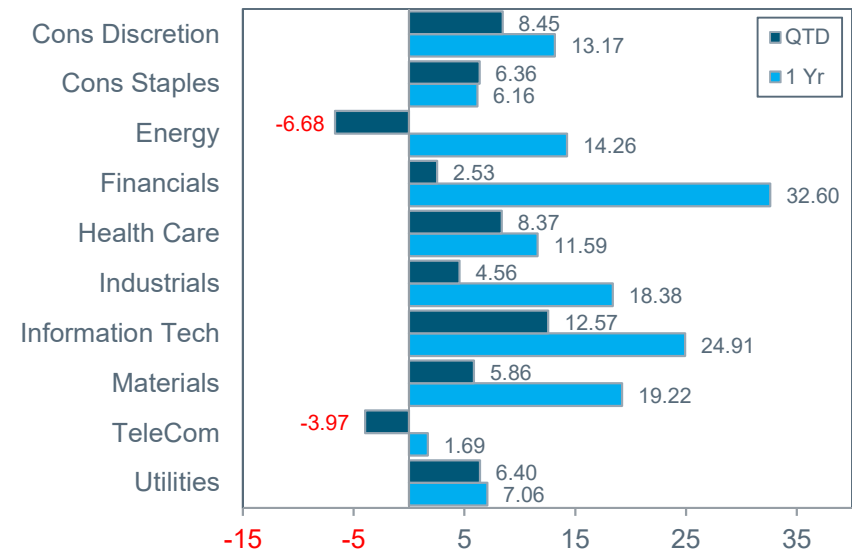
### Style and Capitalization Market Performance (%)



### Valuations



### S&P 500 Index Sector Performance (%)





## First Quarter Review

## Broad Market

Underpinning the positive international equity performance was the expectation, supported by improving economic fundamentals, that the global economy is on more stable footing than previously believed. This was especially true in the UK, where recent economic data showed a steady expansion in the face of potentially leaving the EU Common Market.

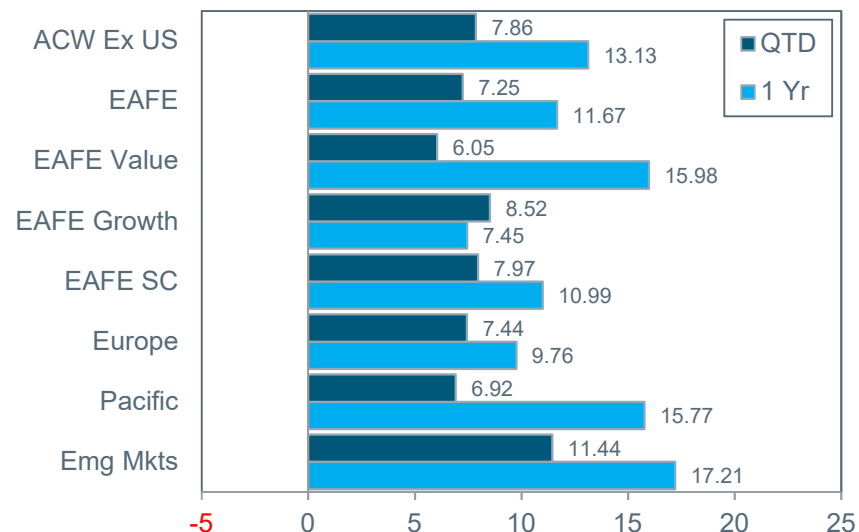
## Region

From a regional standpoint, emerging markets outperformed developed markets with India, Korea, and Mexico all posting mid-teen returns for the quarter. Conversely, commodity sensitive economies such as Canada and Norway lagged notably, posting slightly positive returns for the quarter.

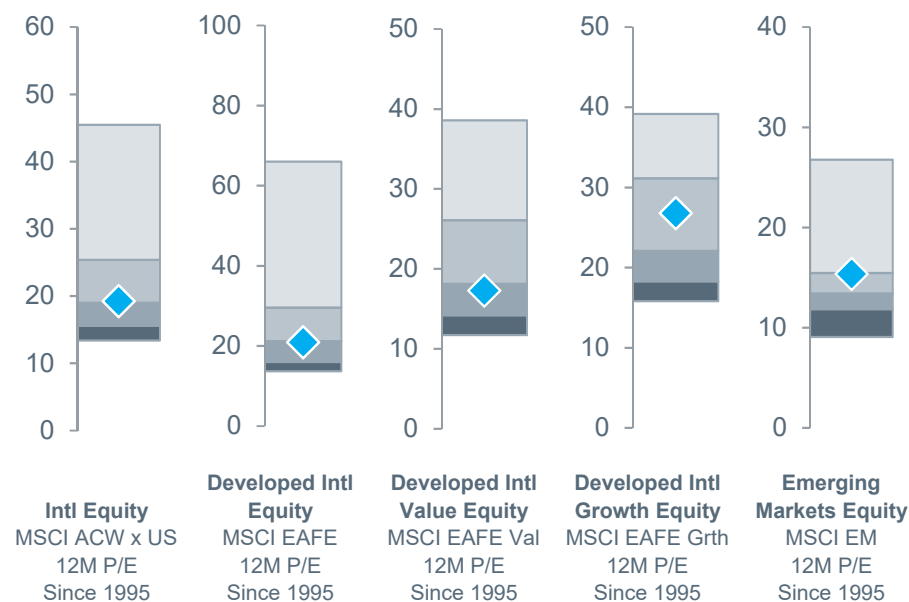
## Market Cap &amp; Style

In developed markets, small cap modestly outperformed large cap (8.0% vs. 7.3%) while growth outpaced value, with the EAFE Growth Index returning 8.5% vs. 6.1% for the EAFE Value Index.

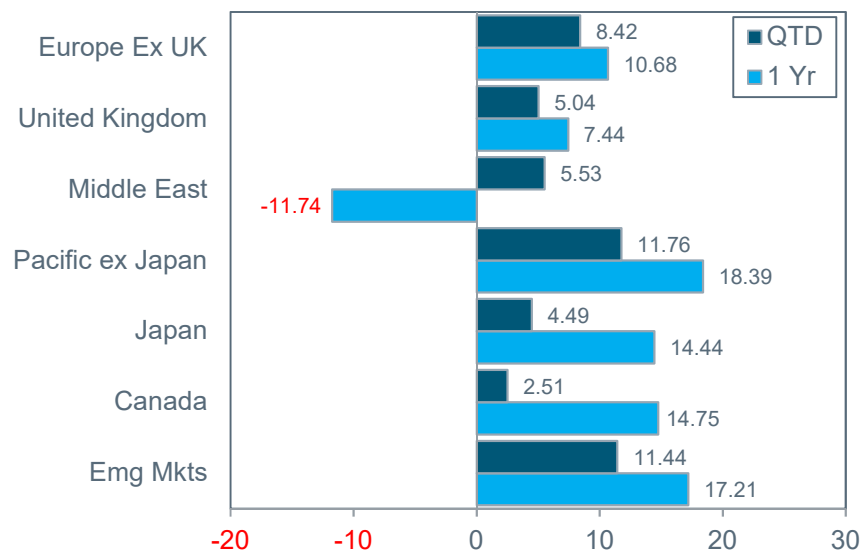
## MSCI Style and Capitalization Market Performance (%)



## Valuations



## MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

All returns are shown net of foreign taxes on dividends.

## First Quarter Review

## Broad Market

Short-dated global rates continued to be impacted by global central bank policy actions, while longer-dated rates reacted to broader economic developments and expectations for continued, albeit modest, improvements in global growth.

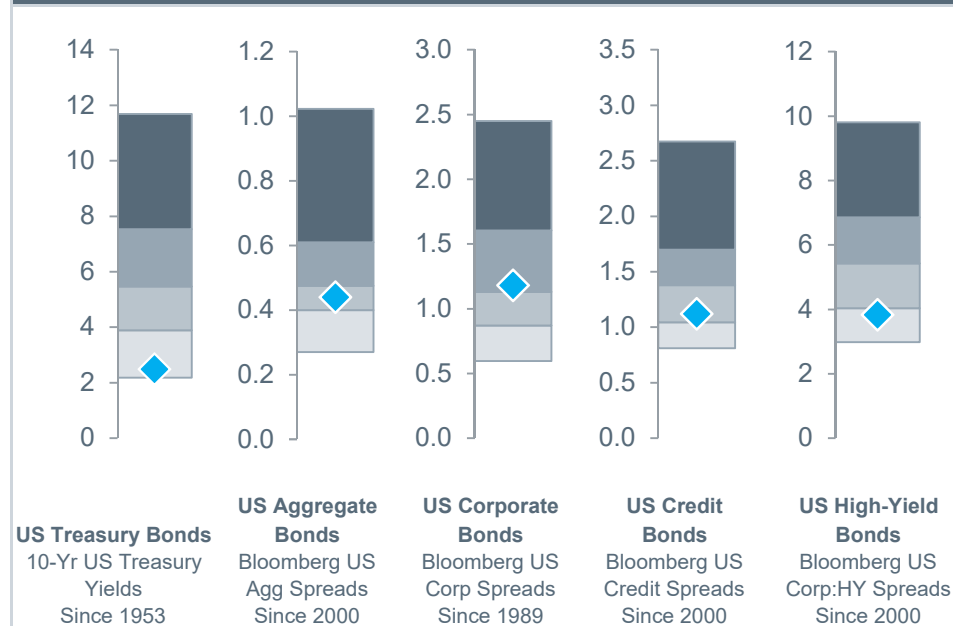
## Credit Market

US credit markets outpaced US treasuries, returning 1.2% vs. 0.7% during the first quarter.

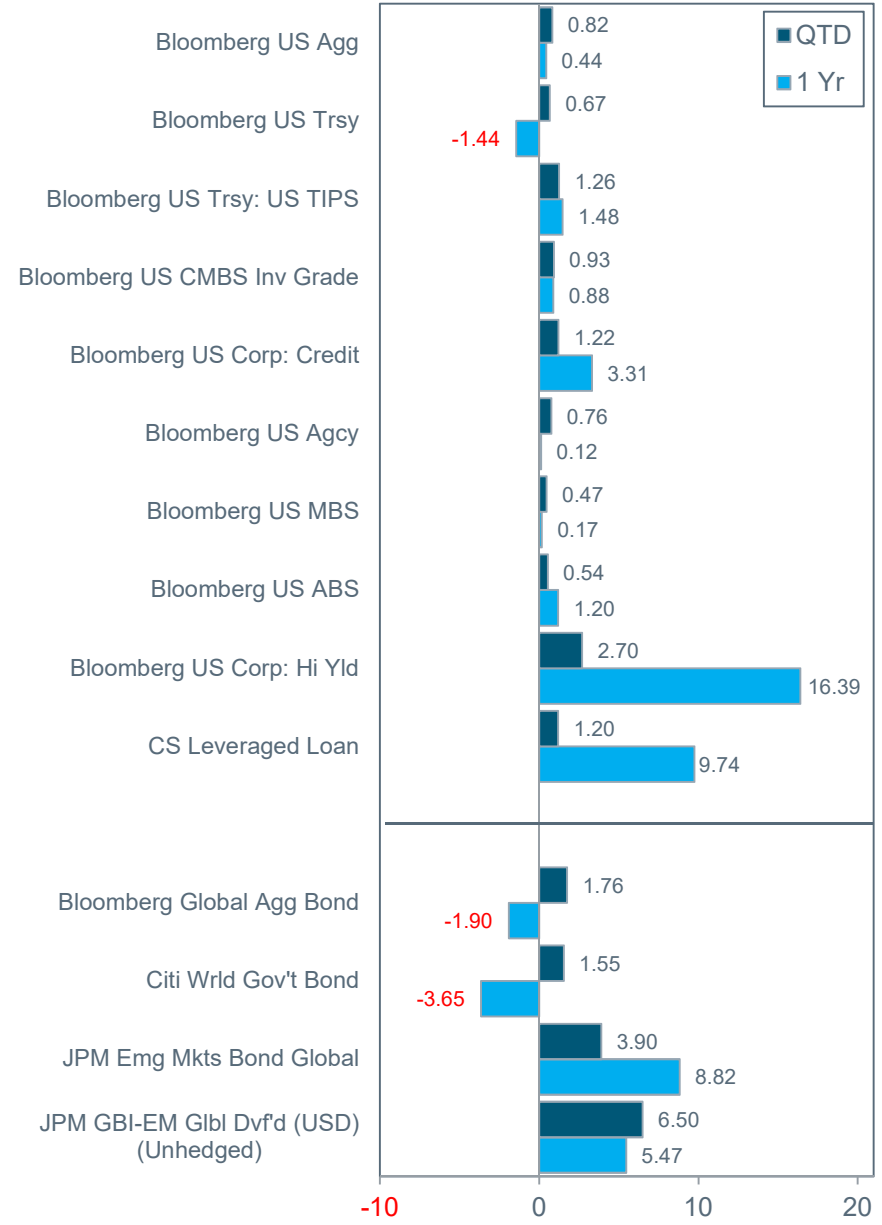
## International

Upcoming elections in several European countries drove an uptick in volatility for rates markets, despite the steady improvement in economic data. The Citigroup World Government Bond Index (Unhedged) returned 1.6% for the quarter, while the hedged version of the index finished the quarter flat. The JPMorgan EMBI Global Diversified Index, which measures hard currency emerging markets debt, returned 3.9%.

## Valuations



## Fixed Income Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.

### First Quarter Review - Absolute Return

#### General Market - Hedge Funds

Hedge fund strategies provided solid returns during the quarter, as most managers benefitted from lower correlations, less direct monetary policy involvement amidst no measureable changes in fiscal policy, and continued strong equity and credit performance as a result of positive investor sentiment. Generally, risk appetite appears to be improving across the broader hedge fund industry, as evidenced by rising levels of gross exposure across long/short equity, multi-strategy, and macro hedge fund strategies.

#### General Market - Global Tactical Asset Allocation (GTAA)

Most GTAA managers outperformed an undiversified and static 60/40 portfolio of US large cap equity and US fixed income. Managers that held to disciplined value-oriented processes, especially those with fewer constraints on emerging market allocations, outperformed peers. US-oriented strategies, especially those with biases toward income-oriented exposures, moderately underperformed both traditional long-oriented GTAA managers and a static 60/40 allocation.

### First Quarter Review - Real Assets

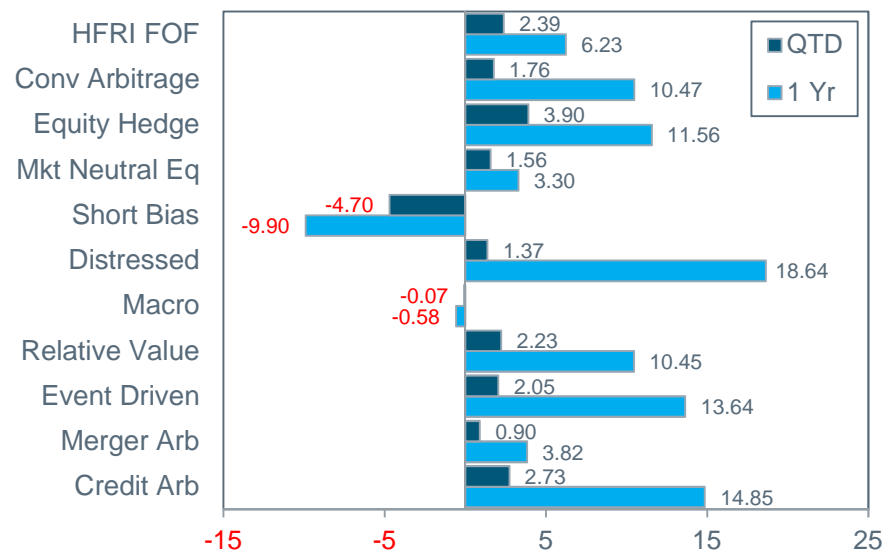
#### General Market - Diversified Inflation Strategies (DIS)

Inflation sensitive markets provided divergent performance in a quarter characterized by little change to long-term inflation expectations. This was evidenced by the breakeven inflation markets, as measured by the difference between nominal Treasuries and TIPS, ending the quarter largely unchanged.

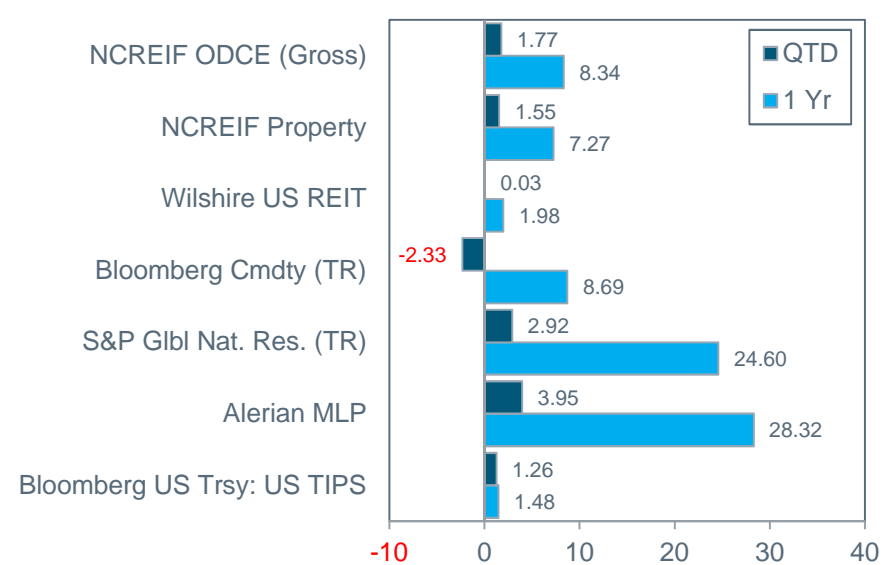
#### General Market - Real Estate

Despite a few modest signs of softening in the market, such as more favorable lease terms and concessions, the residential and commercial real estate markets continued to be supported by a generally positive outlook for US economic growth. Core real estate investors entered 2017 with continued expectations that income returns would represent the majority of the total return, as opposed to prior years where capital appreciation returns were the primary driver. As evidence, the Core index, NCREIF-ODCE, returned 1.8% during the quarter with income returns accounting for 1.1%.

### HFRI Hedge Fund Performance (%)



### Real Asset Performance (%)



# Annual Asset Class Performance

As of March 31, 2017

Calendar Year Performance												Annualized Statistics (01/2006 - 03/2017)			
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	CYTD (As of 3/17)		Return	Standard Deviation	Sharpe Ratio
Best ↑ ↓ Worst	18.85	5.24	49.13	26.86	15.99	16.83	38.82	13.89	15.01	21.31	7.86	US Equity Custom Index - US All Cap	8.08	14.51	0.53
	18.11	3.06	45.12	20.73	14.27	16.76	32.39	13.69	13.33	12.74	6.91	S&P 500 Index - US Large Cap	8.11	14.49	0.53
	15.97	-5.22	34.63	16.77	11.34	16.34	32.39	12.50	5.49	11.96	6.50	Russell 2000 Index - US Small Cap	8.10	19.32	0.44
	15.83	-6.46	32.46	16.36	7.84	16.13	24.96	11.81	1.38	10.69	6.07	MSCI ACW Index - Global	5.54	16.18	0.35
	11.66	-10.01	27.18	15.68	3.49	16.00	22.80	11.13	0.55	10.44	5.74	International Equity Custom Index - International	2.95	17.79	0.19
	11.63	-20.47	26.46	15.06	2.11	16.00	21.32	9.42	0.48	9.94	5.30	Cambridge US PE Index - Private Equity	11.24	9.92	1.02
	9.91	-22.61	26.46	15.06	2.11	14.96	15.29	5.97	0.18	8.77	2.47	NCREIF ODCE Index - Core Real Estate	6.74	8.67	0.67
	6.97	-23.62	21.98	13.11	0.66	14.19	13.94	4.89	-1.24	8.13	2.20	NCREIF Property Index - Value-Added Real Estate	7.75	6.46	1.02
	5.49	-33.79	13.30	12.67	-1.75	10.94	10.99	4.16	-1.47	7.97	1.77	HFN FOF Multi-Strat Index - ARS	1.94	5.12	0.18
	5.49	-35.73	9.72	10.82	-4.18	10.77	9.10	3.03	-2.36	7.86	1.55	BofA ML All Cnvrts Index (All Qual) - Convertibles	7.32	12.21	0.55
	5.36	-37.00	5.93	9.28	-5.18	10.54	4.22	2.95	-3.24	4.50	1.49	Bloomberg US Agg Bond Index - Fixed Income	4.32	3.21	0.98
	4.53	-37.00	1.17	6.54	-5.55	4.80	0.12	0.18	-4.41	2.65	0.82	Credit Custom Index - Fixed Income	5.57	6.96	0.64
	2.76	-42.19	-16.86	4.77	-7.35	4.21	-2.02	-3.87	-5.66	0.38	0.12	JPM GBI-EM Gbl Dvf'd Index (USD) - EMD	5.28	12.84	0.38
	-1.57	-43.06	-29.76	0.73	-13.71	0.26	-8.98	-5.72	-14.92	0.14	0.00	JP Morgan Cash Custom Index - Cash Equiv	1.52	0.60	1.42

The Cambridge US Private Equity Index is shown for informational purposes only. Due to availability of data, current quarter performance assumes a 0.00% return. Calculations are based on a quarterly periodicity.

## ASSET CLASS SUMMARY

**US Equity:** The **US Equity** structure employs a core-satellite approach, which gains passive, low-cost beta exposure at its core and active management only where the highest conviction strategies can add value – All Cap and Small Cap Equity. The core component of the portfolio utilizes passive management coupled with low beta, minimum volatility strategies that are intended to outperform a market-capitalization weighted index at a similar absolute risk level. Active management in the All Cap space provides investment managers the flexibility to adjust for valuations across market capitalizations. The single active Small Cap investment manager utilizes fundamental stock analysis in a market segment that has historically provided a return premium relative to larger companies.

**Global Equity:** The **Global Equity** portfolio employs active management, and provides the investment manager the flexibility to overweight the portfolio towards US or International markets based on respective valuations. The portfolio is optimized to balance exposure to style and size factors in order to generate alpha primarily through stock selection.

**International Equity:** The **International Equity** structure follows an ACWI Ex US approach, which offers coverage of the broad international equity market, including developed and emerging markets. The International Equity portfolio is comprised of both passive and active management styles. The mix of passive and active management helps to minimize costs, while striving to maximize the probability of alpha generation at a similar absolute risk level.

**Private Equity:** The **Private Equity** asset class has primarily been accessed through fund of funds and customized fund of one structures. Investments also include exposure to direct co-investments and secondaries. Recent commitments within this asset class have added global diversification to the portfolio.

**Real Estate:** The **Real Estate** portfolio currently consists of Core and Non-Core Real Estate investments. The overall asset class structure has remained relatively conservative with regard to asset types and the use of financial leverage. Core Real Estate has historically been focused on diversified US markets, while Non-Core Real Estate investments allow the portfolio to take advantage of real estate market fundamentals. Recent commitments within Non-Core Real Estate have added global diversification through European-focused investments.

**Absolute Return:** The **Absolute Return** structure historically consisted of multi-Hedge Fund of Fund investments. In 2015, the portfolio began a transition to a core-satellite approach, utilizing a single Fund of Fund manager and satellite direct Hedge Funds. An increase in the use of direct Hedge Funds is anticipated to lower external management expenses and allow for greater control over the program.

**Convertible Bonds:** The **Convertible Bonds** portfolio consists of a single, specialized investment manager within the fixed income portfolio. The portfolio focuses on convertible issuers that demonstrate the ability to improve fundamental characteristic and attempts to participate in the majority the upside, while limiting the downside of the underlying equity to nearly half.

**Fixed Income:** The **Fixed Income** employs a core-satellite approach. Serving as “the anchor” to the portfolio, Core Fixed Income aims to preserve capital, by providing relatively “safe” investments and stable income. The Internally Managed Portfolio also provides liquidity and safety of capital. Treasury Inflation Protected Securities (“TIPS”) provide passive protection against expected changes in inflation. The satellite portfolios serve as dedicated specialists. Credit Fixed Income provides diversification from traditional fixed income investments and the potential for enhanced return. The custom credit portfolios are largely driven by allocations to bank loans, high yield fixed income securities, and investment grade credit. Investments in Emerging Market Debt (Local Currency) diversify US Dollar exposure and provide opportunities to capitalize on global growth trends. Opportunistic Fixed Income is employed to capitalize on severe market dislocations, such as European Debt.



## INDEX GLOSSARY

**Total Equity Custom Index:** The **Total Equity Custom Index** consists of the MSCI World Index through July 2010 and the MSCI All Country World Index thereafter.

**MSCI World:** The **MSCI World Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. The index consists of the following developed market countries: *Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.*

**MSCI ACW:** The **MSCI All Country World Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The index consists of the 23 developed countries that make up the MSCI World Index as well as the following emerging market countries: *Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey, and United Arab Emirates.*

**US Equity Custom Index:** The **US Equity Custom Index** consists of the S&P 500 Index (Cap Wtd) through September 2014 and the Russell 3000 Index thereafter.

**S&P 500:** The **S&P 500 Index (Cap Wtd)** is a commonly recognized, market-capitalization weighted index of 500 widely held equity securities designed to measure broad US equity performance.

**Russell 3000:** The **Russell 3000 Index** is a market-capitalization weighted index of 3,000 widely held equity securities designed to measure performance of the entire U.S. stock market.

**State Street All Cap Custom Index:** The **State Street All Cap Custom Index** consists of 69% Russell 3000 Index, 24% FTSE RAFI US 1000 Index, and 7% MSCI USA Minimum Volatility Index.

**Russell 2000:** The **Russell 2000 Index** measures the performance of the small-cap segment of the US equity market. It includes approximately 2,000 of the smallest securities by market cap from the Russell 3000 Index.

**International Equity Custom Index:** The **International Equity Custom Index** consists of the MSCI EAFE Index through July 2010 and the MSCI ACW Ex US Index thereafter.

**MSCI EAFE:** The **MSCI EAFE (Europe, Australasia, Far East) Index** is designed to measure equity market performance of 21 developed countries, excluding the US & Canada: *Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.*

**MSCI ACW Ex US:** The **MSCI ACW (All Country World) Ex US Index** consists of the same countries that make up the MSCI ACW Index, excluding the United States.

**FTSE All World Ex US:** The **FTSE All World Ex US Index** is a free float-adjusted market capitalization weighted index that is comprised of large- and mid-cap stocks providing coverage of Developed and Emerging Markets excluding the US. The index is derived from the FTSE Global Equity Index Series (GEIS), which covers 98% of the world's investable market capitalization.

**NCREIF ODCE:** The **NCREIF ODCE (Open End Diversified Core) Index** is an index of investment returns reporting on both a historical and current basis the results of 16 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NCREIF ODCE Index is capitalization-weighted and performance is time-weighted.

**NCREIF Property:** The **NCREIF Property Index** prepared by the National Council of Real Estate Investment Fiduciaries is a quarterly time series composite return measure for over 6,000 individual commercial real estate properties acquired in the private market for investment purposes. Total performance represents returns from appreciation and income, and includes multi-family, office, retail, and industrial properties.

**HFN FOF Multi Strat:** The **HFN FOF (Fund of Funds) Multi-Strategy Index** average is created by HedgeFund.net and contains over 1,600 funds of hedge funds that are each invested in multiple investment strategies.

**BofA ML All Convertibles:** The **BofA Merrill Lynch All Convertibles Index (All Qualities)** is a market capitalization-weighted index of domestic corporate convertible securities that are convertible to common stock.

**Bloomberg US Agg Bond:** The **Bloomberg US Aggregate Bond Index** covers the US dollar-denominated, investment-grade, fixed-rate, taxable bond market of SEC-registered securities: US Treasury and agency bonds, domestic corporate debt, and mortgage-backed securities.

**Credit Custom Index:** The **Credit Custom Index** consists of 20% Bloomberg US Credit Index, 20% BofA Merrill Lynch US High Yield Master II Constrained Index, and 60% S&P/LSTA Leveraged Loan Index.

**CS Western European Hi Yld:** The **Credit Suisse Western European High Yield Index** is designed to mirror the investable universe of the Western European high yield debt market. The index includes issues denominated in \$US and Western European currencies.

**JPMorgan GBI-EM Gbl Dvf'd:** The **JPMorgan GBI-EM Global Diversified Total Return Index (Unhedged)** is a global emerging markets index that consist or regularly traded, liquid fixed-rate, domestic currency government bonds.

**Bloomberg US Trsy: US TIPS:** The **Bloomberg US Treasury: US TIPS Index** is an unmanaged index that consists of inflation-protected securities issued by the U.S. Treasury.

**Bloomberg US Govt: Int Trm Bond:** The **Bloomberg US Gov't Intermediate Term Bond Index** covers public US government obligations with remaining maturities of between one and ten years.

**Bloomberg US Gov't/Credit Bond:** The **Bloomberg US Gov't/Credit Bond Index** covers the non-securitized component of the US Aggregate Index. It includes investment grade, US dollar denominated, fixed-rate Treasuries, government-related and corporate securities.

**BofA ML 3 Mo US T-Bill:** The **BofA Merrill Lynch 3-Month US T-Bill Index** consists of newly issued 90-day Treasury bills.

**JP Morgan Blended Index:** The **JP Morgan Blended Index** consists of an equal-weighted allocation to the BofA ML 1-3 Year US Treasury Index, BofA ML 1-3 Year Agencies Index, and BofA ML 0-3 Year Weighted Average Life Mortgage Index.

**Wyoming State Treasurer's Office**  
**Investment Performance**  
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**Investment Policy:**

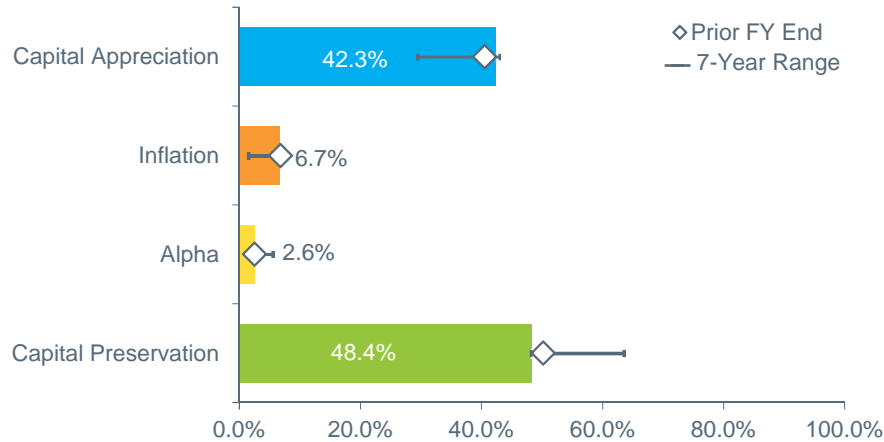
It is the investment policy for the State Loan and Investment Board to invest public funds of the State of Wyoming in a manner that strives for maximum safety, provides adequate liquidity to meet all operating requirements, and achieves the highest possible investment return consistent with the primary objectives of safety and liquidity.

**Investment Objectives and Priorities:**

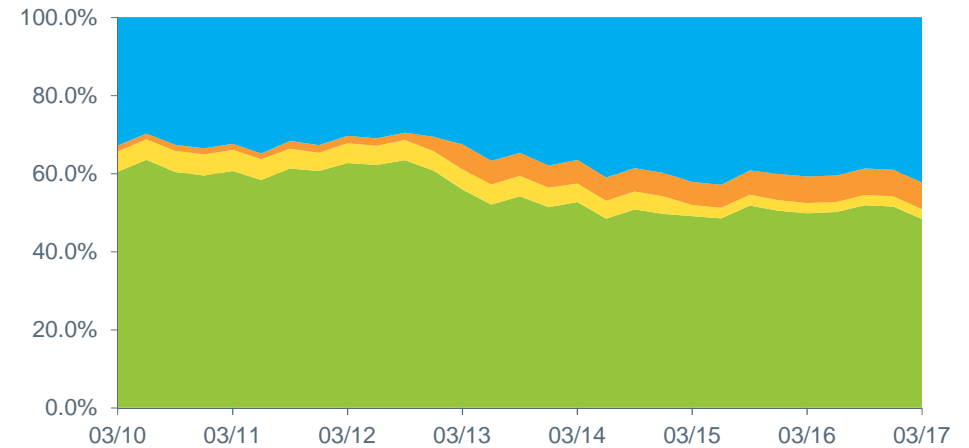
All available funds shall be invested with the following objectives and priorities:

- a) Safety of principal. Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio.
- b) Liquidity requirements of anticipated and unanticipated expenditures.
- c) Yield.
- d) Recognition of differing objectives and needs of various fund portfolios.
- e) Conformance with State law and other pertinent legal restrictions.
- f) Maximization of the total rate of return on investment consistent with the foregoing objectives.
- g) Diversification by asset type, security, and investment manager in order to smooth the volatility of quarterly returns.

**Current Asset Allocation:**



**Historical 7-Year Asset Allocation:**



**Historical Performance:**

	Total Investment Value	Fiscal Year Ending 06/30/16 Market Value	Current Market Value	% of MV	QTD Return	FYTD Return	1 Year Return	3 Year Return	5 Year Return	10 Year Return
<b>Wyoming State Total Fund</b>	<b>\$19,540.13</b>	<b>\$19,580.94</b>	<b>\$20,266.04</b>	<b>100.0%</b>	<b>2.49%</b>	<b>3.99%</b>	<b>5.90%</b>	<b>3.84%</b>	<b>4.62%</b>	<b>4.87%</b>
<i>Wyoming State Actual Allocation Index</i>					2.21%	3.08%	5.01%	3.74%	4.40%	4.38%
<b>Permanent Funds</b>	<b>\$13,634.85</b>	<b>\$13,604.49</b>	<b>\$14,386.05</b>	<b>71.0%</b>	<b>2.82%</b>	<b>5.40%</b>	<b>7.29%</b>	<b>4.29%</b>	<b>5.61%</b>	<b>5.20%</b>
<b>Non-Permanent Funds</b>	<b>\$5,905.29</b>	<b>\$5,976.45</b>	<b>\$5,879.99</b>	<b>29.0%</b>	<b>1.04%</b>	<b>0.13%</b>	<b>2.08%</b>	<b>2.38%</b>	<b>2.26%</b>	<b>4.02%</b>

Note[1]: Performance shown is gross of fees with the exception of convertible bonds and absolute return, which are shown net of fees.

Note[2]: Pooled investment performance and market values shown reflect State Agency participation and are calculated on a capital-weighted basis using beginning-period allocations.

Note[3]: Thematic allocations shown exclude Public Purpose Investments.

Note[4]: The Wyoming State Actual Allocation Index is calculated using beginning-month asset class weights applied to the appropriate asset class benchmark return.

Note[5]: Market Value and Total Investment Value are shown in (\$) Millions.

**Wyoming State Treasurer's Office**  
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	Total Investment Value	Fiscal Year Ending 06/30/16 Market Value	Current Market Value	% of MV	QTD Return	FYTD Return	1 Year Return	3 Year Return	5 Year Return	10 Year Return
<b>Allocation by Fund</b>										
<b>Wyoming State Total Fund</b>	<b>\$19,540,134,487</b>	<b>\$19,580,942,482</b>	<b>\$20,266,039,913</b>	<b>100.0%</b>	<b>2.49%</b>	<b>3.99%</b>	<b>5.90%</b>	<b>3.84%</b>	<b>4.62%</b>	<b>4.87%</b>
<i>Wyoming State Actual Allocation Index</i>					2.21%	3.08%	5.01%	3.74%	4.40%	4.38%
<b>Investment Funds:</b>										
Permanent Mineral Trust	\$7,250,497,623	\$7,319,388,150	\$7,684,969,507	37.9%	2.92%	5.82%	7.68%	4.41%	5.84%	5.03%
Common School Perm Land Fund	\$3,619,827,534	\$3,520,306,569	\$3,835,405,670	18.9%	2.94%	5.87%	7.79%	4.53%	5.93%	5.27%
Permanent Land Fund	\$177,413,052	\$183,645,989	\$187,920,344	0.9%	2.75%	5.45%	7.33%	4.32%	5.68%	4.88%
University Permanent Land Fund	\$20,016,544	\$20,703,886	\$21,584,210	0.1%	3.10%	6.27%	8.16%	4.59%	5.90%	4.81%
Hathaway Scholarship	\$554,610,381	\$566,842,582	\$583,129,680	2.9%	2.85%	4.98%	6.81%	4.15%	5.23%	N/A
Higher Education	\$114,613,335	\$116,902,439	\$120,296,350	0.6%	2.86%	5.03%	6.85%	4.12%	5.23%	N/A
Workers Compensation Fund	\$1,897,868,295	\$1,876,698,222	\$1,952,739,569	9.6%	2.22%	3.12%	5.08%	3.51%	4.31%	5.38%
Tobacco Settlement Trust*	\$84,423,492	\$85,066,363	\$83,854,315	0.4%	1.16%	0.07%	2.25%	2.71%	2.63%	4.62%
State Agency Pool*	\$5,820,864,232	\$5,891,388,282	\$5,796,140,268	28.6%	1.04%	0.13%	2.08%	2.37%	2.25%	4.01%
<b>Asset Class Performance:</b>										
US Equity	\$1,850,814,984	\$2,534,718,593	\$2,240,490,146	11.1%	4.85%	14.78%	17.56%	9.89%	13.30%	8.16%
US Equity Custom Index					5.74%	15.04%	18.07%	10.24%	13.22%	7.47%
Global Equity	\$379,181,793	\$420,502,692	\$419,530,434	2.1%	8.81%	15.43%	17.86%	N/A	N/A	N/A
MSCI ACW					6.91%	13.92%	15.04%	2.00%	8.37%	4.00%
International Equity	\$1,479,319,098	\$1,634,158,908	\$1,578,542,239	7.8%	7.88%	13.01%	11.98%	0.54%	4.50%	1.73%
International Equity Custom Index					7.86%	13.87%	13.13%	0.56%	4.36%	0.49%
Private Equity	\$413,982,230	\$548,748,650	\$574,905,006	2.8%			See Note[6]			
S&P 500 + 5%					7.37%	18.63%	23.03%	15.89%	18.97%	12.88%
Core Real Estate	\$0	\$579,954,388	\$593,110,283	2.9%	1.94%	5.41%	7.40%	11.74%	11.36%	5.24%
NCREIF ODCE					1.77%	6.07%	8.34%	11.79%	11.98%	5.59%
Value-Added Real Estate	\$270,103,172	\$263,942,467	\$272,129,294	1.3%			See Note[6]			
NCREIF Property					1.55%	5.13%	7.27%	10.58%	10.69%	6.72%
Absolute Return	\$499,635,960	\$487,241,646	\$506,003,104	2.5%	2.04%	5.40%	5.87%	0.85%	4.07%	N/A
HFN FOF Multi-Strat					2.20%	5.33%	5.72%	1.11%	2.93%	0.94%
Convertible Bonds	\$486,668,624	\$463,609,807	\$511,683,757	2.5%	5.10%	12.11%	14.72%	3.98%	8.49%	7.98%
BofA ML All Quality Convertible					5.30%	13.99%	18.14%	5.68%	9.92%	6.71%
Fixed Income	\$11,614,782,933	\$11,284,315,916	\$11,531,092,282	56.9%	1.32%	-0.09%	2.10%	2.75%	2.43%	4.60%
Bloomberg US Aggregate					0.82%	-1.73%	0.44%	2.68%	2.34%	4.27%
Public Purpose Investments	\$804,494,531	\$368,221,857	\$804,494,531	4.0%	N/A	N/A	N/A	N/A	N/A	N/A
Cash Equivalents	\$1,233,543,903	\$995,527,557	\$1,234,058,836	6.1%	0.19%	0.33%	0.51%	0.42%	0.34%	1.14%
JP Morgan Cash Custom Index					0.12%	0.16%	0.32%	0.27%	0.24%	1.08%

\* Denotes Non-Permanent Fund.

Note[1]: Performance shown is gross of fees with the exception of convertible bonds and absolute return, which are shown net of fees. Investment performance is calculated on invested assets only.

Note[2]: Pooled investment performance and market values shown reflect State Agency participation and are calculated on a capital-weighted basis using beginning-period allocations.

Note[3]: US Equity Custom Index consists of S&P 500 (Cap Wtd) through September 2014 and the Russell 3000 thereafter.

Note[4]: International Equity Custom Index consists of MSCI EAFE (Gross) through July 2010 and the MSCI ACW Ex US (Net) thereafter.

Note[5]: Market values for non-core real estate and private equity are as of the most recent valuation, adjusted for subsequent cash flows. Investment (Cost) Values are not lagged.

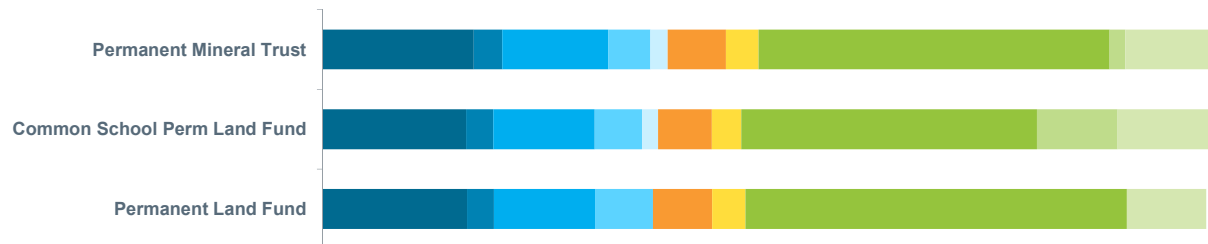
Note[6]: Performance for Private Equity and Value-Added Real Estate investments is calculated on an IRR basis. For further analysis, please refer to the supplementary alternatives performance report.

Note[7]: Cash Equivalents performance includes Extended Cash performance.

Note[8]: Market values shown for Public Purpose Investments reflect cost value of the investments.

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	Total Investment Value	Fiscal Year Ending 06/30/16 Market Value	Current Market Value	% of MV	QTD Return	FYTD Return	1 Year Return	3 Year Return	5 Year Return	10 Year Return
<b>Wyoming State Total Fund</b>	<b>\$19,540,134,487</b>	<b>\$19,580,942,482</b>	<b>\$20,266,039,913</b>	<b>100.0%</b>	<b>2.49%</b>	<b>3.99%</b>	<b>5.90%</b>	<b>3.84%</b>	<b>4.62%</b>	<b>4.87%</b>
<b>Investment Funds:</b>										
<b>Permanent Mineral Trust</b>	<b>\$7,250,497,623</b>	<b>\$7,319,388,150</b>	<b>\$7,684,969,507</b>	<b>100.0%</b>	<b>2.92%</b>	<b>5.82%</b>	<b>7.68%</b>	<b>4.41%</b>	<b>5.84%</b>	<b>5.03%</b>
US Equity	\$1,066,339,386	\$1,483,099,091	\$1,289,367,840	16.8%						
Global Equity	\$218,517,668	\$244,334,347	\$241,659,167	3.1%						
International Equity	\$851,222,776	\$982,796,356	\$904,193,666	11.8%						
Private Equity	\$258,142,701	\$367,863,224	\$360,763,877	4.7%						
Real Estate	\$451,787,122	\$484,533,627	\$496,875,751	6.5%						
Absolute Return	\$275,796,426	\$268,955,183	\$279,311,423	3.6%						
Convertible Bonds	\$137,484,327	\$131,199,233	\$144,803,918	1.9%						
Fixed Income	\$3,012,048,907	\$2,668,791,794	\$2,992,420,439	38.9%						
Public Purpose Investments	\$135,153,658	\$158,413,120	\$135,153,658	1.8%						
Cash (invested in State Agency Pool)	\$844,004,653	\$529,402,175	\$840,419,766	10.9%						
Actual Allocation Index					2.90%	5.16%	7.13%	4.35%	5.63%	4.39%
<b>Common School Perm Land Fund</b>	<b>\$3,619,827,534</b>	<b>\$3,520,306,569</b>	<b>\$3,835,405,670</b>	<b>100.0%</b>	<b>2.94%</b>	<b>5.87%</b>	<b>7.79%</b>	<b>4.53%</b>	<b>5.93%</b>	<b>5.27%</b>
US Equity	\$503,373,541	\$699,897,943	\$610,005,465	15.9%						
Global Equity	\$104,588,239	\$115,865,043	\$115,664,009	3.0%						
International Equity	\$404,795,741	\$423,459,193	\$432,715,991	11.3%						
Private Equity	\$145,695,616	\$170,918,140	\$200,945,475	5.2%						
Real Estate	\$209,059,985	\$222,891,918	\$229,009,138	6.0%						
Absolute Return	\$124,156,282	\$121,075,876	\$125,737,956	3.3%						
Convertible Bonds	\$65,130,000	\$61,554,265	\$67,937,125	1.8%						
Fixed Income	\$1,265,512,226	\$1,153,304,849	\$1,257,803,625	32.8%						
Public Purpose Investments	\$343,359,738	\$18,359,738	\$343,359,738	9.0%						
Cash (invested in State Agency Pool)	\$454,156,166	\$532,979,605	\$452,227,150	11.8%						
Actual Allocation Index					2.92%	5.23%	7.26%	4.50%	5.68%	4.44%
<b>Permanent Land Fund</b>	<b>\$177,413,052</b>	<b>\$183,645,989</b>	<b>\$187,920,344</b>	<b>100.0%</b>	<b>2.75%</b>	<b>5.45%</b>	<b>7.33%</b>	<b>4.32%</b>	<b>5.68%</b>	<b>4.88%</b>
US Equity	\$25,021,683	\$37,321,784	\$30,140,049	16.0%						
Global Equity	\$5,082,421	\$6,297,545	\$5,605,762	3.0%						
International Equity	\$19,692,590	\$22,998,941	\$21,081,141	11.2%						
Private Equity	\$9,311,545	\$8,809,558	\$12,053,770	6.4%						
Real Estate	\$11,232,306	\$11,998,019	\$12,313,933	6.6%						
Absolute Return	\$6,878,080	\$6,707,452	\$6,965,726	3.7%						
Convertible Bonds	\$3,549,159	\$3,363,954	\$3,712,779	0.0%						
Fixed Income	\$80,053,110	\$69,119,573	\$79,525,501	42.3%						
Cash (invested in State Agency Pool)	\$16,592,158	\$17,029,164	\$16,521,684	8.8%						
Actual Allocation Index					2.69%	4.72%	6.71%	4.26%	5.47%	4.20%

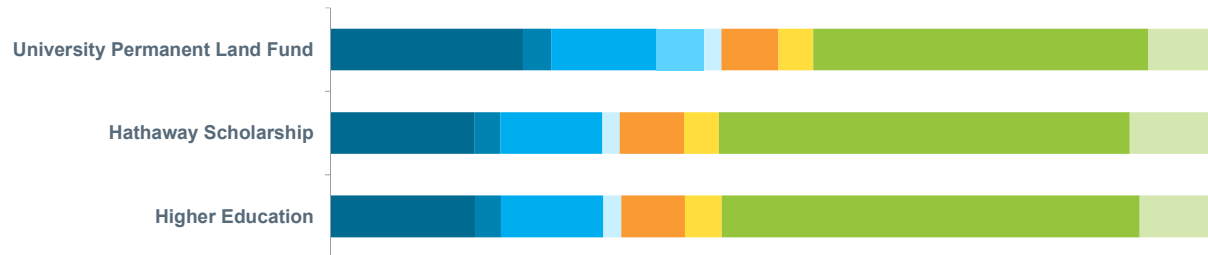


Note[1]: Performance shown is gross of fees with the exception of convertible bonds and absolute return, which are shown net of fees.  
Note[2]: Pooled investment performance and market values shown reflect State Agency participation.  
Note[3]: Pooled investment and Actual Allocation Index performance is calculated on a capital-weighted basis using beginning-period allocations.  
Note[4]: Market values shown for Public Purpose Investments reflect cost value of the investments.



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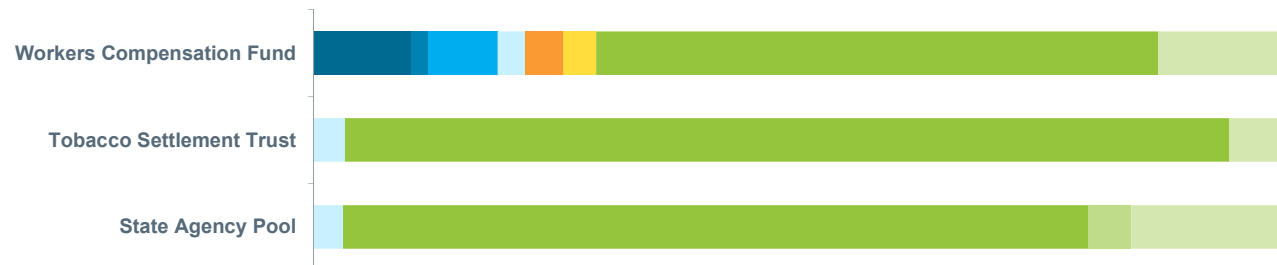
	Total Investment Value	Fiscal Year Ending 06/30/16 Market Value	Current Market Value	% of MV	QTD Return	FYTD Return	1 Year Return	3 Year Return	5 Year Return	10 Year Return
<b>Investment Funds:</b>										
<b>University Permanent Land Fund</b>	<b>\$20,016,544</b>	<b>\$20,703,886</b>	<b>\$21,584,210</b>	<b>100.0%</b>	<b>3.10%</b>	<b>6.27%</b>	<b>8.16%</b>	<b>4.59%</b>	<b>5.90%</b>	<b>4.81%</b>
US Equity	\$3,684,962	\$4,848,125	\$4,652,221	21.6%						
Global Equity	\$617,884	\$699,803	\$683,580	3.2%						
International Equity	\$2,344,950	\$2,663,286	\$2,554,973	11.8%						
Private Equity	\$832,368	\$1,157,729	\$1,141,884	5.3%						
Real Estate	\$1,319,309	\$1,348,693	\$1,377,827	6.4%						
Absolute Return	\$834,425	\$813,729	\$845,062	3.9%						
Convertible Bonds	\$396,770	\$380,839	\$420,330	1.9%						
Fixed Income	\$8,155,696	\$7,459,647	\$8,085,929	37.5%						
Cash (invested in State Agency Pool)	\$1,830,179	\$1,332,034	\$1,822,405	8.4%						
Actual Allocation Index					3.07%	5.73%	7.76%	4.59%	5.77%	4.36%
<b>Hathaway Scholarship</b>	<b>\$554,610,381</b>	<b>\$566,842,582</b>	<b>\$583,129,680</b>	<b>100.0%</b>	<b>2.85%</b>	<b>4.98%</b>	<b>6.81%</b>	<b>4.15%</b>	<b>5.23%</b>	<b>N/A</b>
US Equity	\$77,724,267	\$97,931,710	\$94,255,089	16.2%						
Global Equity	\$15,109,173	\$16,005,407	\$16,789,663	2.9%						
International Equity	\$61,303,395	\$62,825,029	\$66,496,382	11.4%						
Real Estate	\$35,186,028	\$41,278,762	\$42,064,637	7.2%						
Absolute Return	\$22,366,808	\$21,812,090	\$22,651,975	3.9%						
Convertible Bonds	\$10,710,409	\$10,332,572	\$11,404,007	2.0%						
Fixed Income	\$270,992,912	\$266,929,137	\$268,510,557	46.0%						
Cash (invested in State Agency Pool)	\$61,217,389	\$49,727,874	\$60,957,370	10.5%						
Actual Allocation Index					2.82%	4.27%	6.20%	4.18%	5.08%	N/A
<b>Higher Education</b>	<b>\$114,613,335</b>	<b>\$116,902,439</b>	<b>\$120,296,350</b>	<b>100.0%</b>	<b>2.86%</b>	<b>5.03%</b>	<b>6.85%</b>	<b>4.12%</b>	<b>5.23%</b>	<b>N/A</b>
US Equity	\$16,076,756	\$20,322,672	\$19,473,398	16.2%						
Global Equity	\$3,165,925	\$3,354,170	\$3,518,523	2.9%						
International Equity	\$12,687,105	\$13,368,396	\$13,785,522	11.5%						
Real Estate	\$7,388,917	\$8,445,016	\$8,597,122	7.1%						
Absolute Return	\$4,890,998	\$4,769,714	\$4,953,374	4.1%						
Convertible Bonds	\$2,248,679	\$2,175,424	\$2,401,004	2.0%						
Fixed Income	\$56,868,679	\$55,585,491	\$56,329,070	46.8%						
Cash (invested in State Agency Pool)	\$11,286,276	\$8,881,556	\$11,238,337	9.3%						
Actual Allocation Index					2.83%	4.31%	6.23%	4.15%	5.07%	N/A



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	Total Investment Value	Fiscal Year Ending 06/30/16 Market Value	Current Market Value	% of MV	QTD Return	FYTD Return	1 Year Return	3 Year Return	5 Year Return	10 Year Return
<b>Investment Funds:</b>										
<b>Workers Compensation Fund</b>	<b>\$1,897,868,295</b>	<b>\$1,876,698,222</b>	<b>\$1,952,739,569</b>	<b>100.0%</b>	<b>2.22%</b>	<b>3.12%</b>	<b>5.08%</b>	<b>3.51%</b>	<b>4.31%</b>	<b>5.38%</b>
US Equity	\$158,594,388	\$191,297,268	\$192,596,084	9.9%						
Global Equity	\$32,100,483	\$33,946,376	\$35,609,730	1.8%						
International Equity	\$127,272,541	\$126,047,707	\$137,714,566	7.1%						
Real Estate	\$61,736,766	\$73,400,821	\$75,001,170	3.8%						
Absolute Return	\$64,712,941	\$63,107,601	\$65,537,587	3.4%						
Convertible Bonds	\$53,256,782	\$50,766,744	\$56,030,994	2.9%						
Fixed Income	\$1,129,845,065	\$1,144,483,919	\$1,121,048,411	57.4%						
Cash (invested in State Agency Pool)	\$270,349,329	\$193,647,787	\$269,201,028	13.8%						
Actual Allocation Index					2.14%	2.23%	4.26%	3.56%	4.18%	5.01%
<b>Tobacco Settlement Trust</b>	<b>\$84,423,492</b>	<b>\$85,066,363</b>	<b>\$83,854,315</b>	<b>100.0%</b>	<b>1.16%</b>	<b>0.07%</b>	<b>2.25%</b>	<b>2.71%</b>	<b>2.63%</b>	<b>4.62%</b>
Convertible Bonds	\$2,536,499	\$2,402,216	\$2,651,313	3.2%						
Fixed Income	\$76,401,057	\$77,557,166	\$75,740,367	90.3%						
Cash (invested in State Agency Pool)	\$5,485,936	\$5,106,982	\$5,462,635	6.5%						
Actual Allocation Index					0.95%	-1.26%	0.96%	2.75%	2.44%	4.31%
<b>State Agency Pool</b>	<b>\$5,820,864,232</b>	<b>\$5,891,388,282</b>	<b>\$5,796,140,268</b>	<b>100.0%</b>	<b>1.04%</b>	<b>0.13%</b>	<b>2.08%</b>	<b>2.37%</b>	<b>2.25%</b>	<b>4.01%</b>
Convertible Bonds	\$164,348,076	\$164,151,042	\$172,875,340	3.0%						
Fixed Income	\$4,443,846,821	\$4,759,958,151	\$4,410,195,187	76.1%						
Public Purpose Investments	\$253,479,308	\$156,013,708	\$253,479,308	4.4%						
Cash Equivalents	\$959,190,027	\$811,265,380	\$959,590,434	16.6%						
Actual Allocation Index					0.85%	-1.06%	0.92%	2.41%	2.10%	3.77%



Note[1]: Performance shown is gross of fees with the exception of convertible bonds and absolute return, which are shown net of fees.  
Note[2]: Pooled investment performance and market values shown reflect State Agency participation.  
Note[3]: Pooled investment and Actual Allocation Index performance is calculated on a capital-weighted basis using beginning-period allocations.  
Note[4]: Market values shown for Public Purpose Investments reflect cost value of the investments.

**Wyoming State Treasurer's Office**  
**Investment Performance - Total Performance**  
March 31, 2017

Allocation by  
Asset Class

	Total Investment Value	Fiscal Year Ending 06/30/16 Market Value	Current Market Value	% of MV	QTD Return	FYTD Return	1 Year Return	3 Year Return	5 Year Return	10 Year Return
<b>Wyoming State Total Fund</b>	<b>\$19,540,134,487</b>	<b>\$19,580,942,482</b>	<b>\$20,266,039,913</b>	<b>100.0%</b>	<b>2.49%</b>	<b>3.99%</b>	<b>5.90%</b>	<b>3.84%</b>	<b>4.62%</b>	<b>4.87%</b>
<i>Wyoming State Actual Allocation Index</i>					2.21%	3.08%	5.01%	3.74%	4.40%	4.38%
<b>US Equity</b>										
State Street All Cap	\$1,188,502,548	\$1,606,439,549	\$1,448,765,091		5.18%	14.31%	17.74%	N/A	N/A	N/A
State Street All Cap Custom Index					5.17%	14.40%	17.85%	9.81%	13.37%	7.83%
Russell 3000					5.74%	15.04%	18.07%	9.76%	13.18%	7.54%
Epoch	\$219,989,195	\$301,028,792	\$264,615,050		7.46%	19.22%	19.81%	N/A	N/A	N/A
Lazard	\$274,251,382	\$316,222,932	\$323,656,090		5.70%	11.11%	10.81%	N/A	N/A	N/A
Russell 3000					5.74%	15.04%	18.07%	9.76%	13.18%	7.54%
UW Portfolio Management Program	\$1,000,000	\$1,226,429	\$1,361,977		5.78%	12.93%	15.64%	9.63%	10.94%	3.83%
S&P 500					6.07%	14.36%	17.17%	10.37%	13.30%	7.51%
RBC	\$167,071,858	\$309,800,892	\$202,091,938		-1.14%	19.92%	24.89%	N/A	N/A	N/A
Russell 2000					2.47%	21.60%	26.22%	7.22%	12.35%	7.12%
<b>Total US Equity</b>	<b>\$1,850,814,984</b>	<b>\$2,534,718,593</b>	<b>\$2,240,490,146</b>	<b>11.1%</b>						
<b>Global Equity</b>										
Arrowstreet	\$379,181,793	\$420,502,692	\$419,530,434		8.81%	15.43%	17.86%	N/A	N/A	N/A
MSCI ACW					6.91%	13.92%	15.04%	5.08%	8.37%	4.00%
<b>Total Global Equity</b>	<b>\$379,181,793</b>	<b>\$420,502,692</b>	<b>\$419,530,434</b>	<b>2.1%</b>						
<b>International Equity</b>										
Internal International Equity Portfolio	\$135,000,000	\$137,322,341	\$151,872,423		8.43%	13.58%	13.95%	N/A	N/A	N/A
FTSE All World Ex US					7.80%	13.97%	13.28%	1.01%	N/A	N/A
Northern Trust	\$758,671,704	\$830,396,036	\$801,263,177		7.90%	13.49%	12.95%	0.64%	4.47%	N/A
MSCI ACW Ex US					7.86%	13.87%	13.13%	0.56%	4.36%	1.35%
Fisher Investments	\$360,153,138	\$434,030,423	\$397,561,560		8.67%	15.43%	13.09%	2.07%	5.09%	3.19%
MSCI ACW Ex US [4]					7.86%	13.87%	13.13%	0.56%	4.36%	0.49%
Manning & Napier	\$225,494,255	\$232,366,417	\$227,803,046		6.14%	6.86%	5.74%	-1.78%	3.82%	N/A
MSCI ACW Ex US					7.86%	13.87%	13.13%	0.56%	4.36%	1.35%
The Boston Company	\$0	\$43,692	\$42,033		N/A	N/A	N/A	N/A	N/A	N/A
<b>Total International Equity</b>	<b>\$1,479,319,098</b>	<b>\$1,634,158,908</b>	<b>\$1,578,542,239</b>	<b>7.8%</b>						
<b>Private Equity</b>										
Access Venture Partners II	\$7,423,423	\$16,106,456	\$14,734,664				See Note[6]			
Cheyenne Capital Fund, L.P.	\$195,829,604	\$332,535,519	\$316,599,211				See Note[6]			
Hamilton Lane Nowood Fund, L.P.	\$95,529,202	\$79,738,382	\$95,809,371				See Note[6]			
Neuberger Berman Sauger Fund, L.P.	\$115,200,000	\$120,368,293	\$147,761,760				See Note[6]			
S&P 500 + 5%					7.37%	18.63%	23.03%	15.89%	18.97%	12.88%
<b>Total Private Equity</b>	<b>\$413,982,230</b>	<b>\$548,748,650</b>	<b>\$574,905,006</b>	<b>2.8%</b>						
<b>Real Estate</b>										
Clarion Lion	\$266,303,630	\$311,493,040	\$321,396,894		2.61%	6.30%	8.40%	12.90%	12.31%	4.58%
UBS Trumbull	\$241,303,630	\$268,461,348	\$271,713,389		1.15%	4.37%	6.23%	10.06%	10.04%	5.70%
NCREIF ODCE					1.77%	6.07%	8.34%	11.79%	11.98%	5.59%
<b>Core Real Estate</b>	<b>\$507,607,260</b>	<b>\$579,954,388</b>	<b>\$593,110,283</b>	<b>2.9%</b>						
Cornerstone	\$9,865,924	\$10,510,386	\$10,165,690				See Note[6]			
Heitman	\$2,014,463	\$3,126,487	\$357,677				See Note[6]			
M&G	\$89,801,970	\$79,003,829	\$74,367,747				See Note[6]			
Northwood	\$108,488,035	\$114,627,932	\$117,735,541				See Note[6]			
SC Capital	\$14,815,679	\$0	\$15,085,385				See Note[6]			
TA Realty	\$9,487,044	\$8,600,683	\$7,420,648				See Note[6]			
WestRiver	\$35,630,057	\$48,073,150	\$46,996,606				See Note[6]			
NCREIF Property					1.55%	5.13%	7.27%	10.58%	10.69%	6.72%
<b>Value-Added Real Estate</b>	<b>\$270,103,172</b>	<b>\$263,942,467</b>	<b>\$272,129,294</b>	<b>1.3%</b>						
<b>Total Real Estate</b>	<b>\$777,710,432</b>	<b>\$843,896,855</b>	<b>\$865,239,577</b>	<b>4.3%</b>						

Note[1]: Returns are stated in traditional total return terms and do not specify realized income.

Note[2]: State Street All Cap Custom Index consists of 69% R 3000, 24% FTSE RAFI US 1000, 7% MSCI USA Minimum Volatility.

Note[3]: Market value shown for The Boston Company represents residual assets and subsequent transactions from the liquidation process.

Note[4]: Fisher Index consists of MSCI EAFE (Gross) through July 2010 and the MSCI ACW Ex US (Net) thereafter.

Note[5]: Market values for non-core real estate and private equity are as of the most recent valuation, adjusted for subsequent cash flows. Investment (Cost) Values are not lagged.

Note[6]: Performance for Private Equity and Value-Added Real Estate investments is calculated on an IRR basis. For further analysis, please refer to the supplementary alternatives report.

Note[7]: Market values for M&G are converted from British Pounds using the noon New York City Federal exchange rate. Cost values are converted using the 5pm London WM Benchmark rate.

**Wyoming State Treasurer's Office**  
**Investment Performance - Total Performance**  
March 31, 2017

Allocation by  
Asset Class

	Total Investment Value	Fiscal Year Ending 06/30/16 Market Value	Current Market Value	% of MV	QTD Return	FYTD Return	1 Year Return	3 Year Return	5 Year Return	10 Year Return
<b>Absolute Return</b>										
PAAMCO - Jackalope Fund HFN FOF Multi-Strat	\$499,635,960	\$487,241,646	\$506,003,104		2.04% 2.20%	5.40% 5.33%	5.87% 5.72%	0.15% 1.11%	4.25% 2.93%	N/A 0.94%
<b>Total Absolute Return</b>	<u>\$499,635,960</u>	<u>\$487,241,646</u>	<u>\$506,003,104</u>	2.5%						
<b>Convertible Bonds</b>										
Allianz Global Investors BofA ML All Quality Convertible	\$486,668,624	\$463,609,807	\$511,683,757	2.5%	5.10% 5.30%	12.11% 13.99%	14.72% 18.14%	3.98% 5.68%	8.49% 9.92%	7.98% 6.71%
<b>Fixed Income</b>										
C.S. McKee	\$1,263,423,302	\$742,609,857	\$1,255,473,326		0.74%	-1.35%	0.35%	2.78%	N/A	N/A
JP Morgan Core	\$2,134,567,002	\$2,216,270,385	\$2,139,598,376		0.94%	-1.79%	0.30%	3.01%	N/A	N/A
Neuberger Berman Core	\$0	\$1,095,704,082	\$1,689,913		N/A	N/A	N/A	N/A	N/A	N/A
PIMCO Core	\$2,187,107,459	\$2,283,975,663	\$2,200,564,054		1.01%	-1.10%	1.19%	3.00%	N/A	N/A
Wells Capital Bloomberg US Aggregate	\$0	\$736,011,381	\$20,639,055		N/A 0.82%	N/A -1.73%	N/A 0.44%	N/A 2.68%	N/A 2.34%	N/A 4.27%
Neuberger Berman Credit	\$934,289,592	\$580,809,909	\$936,580,077		1.10%	4.57%	7.18%	3.69%	N/A	N/A
Seix Credit Custom Index	\$943,160,037	\$600,644,647	\$962,636,239		1.65% 1.49%	6.07% 5.90%	10.23% 9.74%	4.17% 3.80%	N/A 4.87%	N/A 5.35%
Grosvenor Silvery Lupine Fund CS Western European HY	\$282,110,000	\$319,292,351	\$328,374,955		2.83% 2.40%	9.27% 9.37%	11.51% 11.65%	N/A 5.65%	N/A 8.31%	N/A 7.88%
Investec	\$297,714,010	\$210,823,651	\$209,303,773		8.02%	3.73%	6.64%	-2.70%	N/A	N/A
Stone Harbor JPM GBI-EM Gbl Dvf'd	\$297,712,381	\$203,282,648	\$200,547,916		7.04% 6.50%	2.97% 2.69%	5.62% 5.47%	-3.19% -2.68%	N/A -1.62%	N/A 4.10%
State Street TIPS Bloomberg US Trsy: US TIPS (Series B)	\$726,735,359	\$725,958,669	\$717,808,388		1.11% 1.37%	-0.44% -0.26%	1.43% 1.54%	2.17% 2.19%	N/A 1.04%	N/A 4.31%
Internal Fixed Income Portfolio Bloomberg US Gov't: Int. Term Bond Index [7]	\$2,547,963,790	\$479,413,195	\$2,557,830,106		1.02% 0.54%	-0.05% -1.89%	-0.02% -0.67%	2.31% 1.55%	1.64% 1.23%	3.15% 3.24%
WAMCO Core Plus	\$0	\$98,464	\$0		N/A	N/A	N/A	N/A	N/A	N/A
MacKay Shields	\$0	\$1,089,421,013	\$46,101		N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Fixed Income</b>	<u>\$11,614,782,933</u>	<u>\$11,284,315,916</u>	<u>\$11,531,092,282</u>	56.9%						
<b>Public Purpose Investments</b>	<u>\$804,494,531</u>	<u>\$368,221,857</u>	<u>\$804,494,531</u>	4.0%	N/A	N/A	N/A	N/A	N/A	N/A
<b>Cash &amp; Cash Equivalents</b>										
JP Morgan Cash Composite JP Morgan Cash Custom Index	<u>\$1,233,543,903</u>	<u>\$995,527,557</u>	<u>\$1,234,058,836</u>	6.1%	0.19% 0.12%	0.33% 0.16%	0.51% 0.32%	0.42% 0.27%	0.34% 0.24%	1.14% 1.08%

Note[1]: Performance shown is gross of fees with the exception of absolute return and convertible bonds, which are shown net of fees.

Note[2]: Returns are stated in traditional total return terms and do not specify realized income.

Note[3]: Market values shown for WAMCO Core Plus and MacKay Shields represent residual assets and subsequent transactions from the liquidation process.

Note[4]: The Credit Custom Index consists of 20% Bloomberg US Credit, 20% BofA ML US HY Master II Constrained, 60% S&P/LSTA Leveraged Loan.

Note[5]: Internal Fixed Income Portfolio performance excludes distressed securities taken in from dismissed managers (market value includes distressed securities).

Note[6]: Internal Fixed Income Portfolio Index consists of the Bloomberg US Gov't: Int. Term Bond Index; prior to December 2009 the index consisted of the Bloomberg US Gov't/Credit Bond Index.

Note[7]: Market values shown for Public Purpose Investments reflect cost value of the investments.

**Wyoming State Treasurer's Office**  
**Asset Allocation, Performance & Schedule of Investable Assets**

**As of March 31, 2017**

Asset Allocation & Performance			
	Allocation		Performance (%)
	Market Value (\$)	%	FYTD
<b>Total Fund</b>	<b>20,266,039,913</b>	<b>100.00</b>	<b>3.99</b>
<b>US Equity Composite</b>	<b>2,240,490,146</b>	<b>11.06</b>	<b>14.78</b>
State Street All Cap	1,448,765,091	7.15	14.31
Epoch	264,615,050	1.31	19.22
Lazard	323,656,090	1.60	11.11
UW Portfolio Mgmt Program	1,361,977	0.01	12.93
RBC	202,091,938	1.00	19.92
<b>Global Equity Composite</b>	<b>419,530,434</b>	<b>2.07</b>	<b>15.43</b>
Arrowstreet	419,530,434	2.07	15.43
<b>Int'l Equity Composite</b>	<b>1,578,542,239</b>	<b>7.79</b>	<b>13.01</b>
Internal International Equity Portfolio	151,872,423	0.75	13.58
Northern Trust	801,263,177	3.95	13.49
Fisher Investments	397,561,560	1.96	15.43
Manning & Napier	227,803,046	1.12	6.86
The Boston Company	42,033	0.00	N/A
<b>Private Equity Composite</b>	<b>574,905,006</b>	<b>2.84</b>	<b>N/A</b>
Access Venture Partners II	14,734,664	0.07	N/A
Cheyenne Equity Capital Fund, L.P.	316,599,211	1.56	N/A
Hamilton Lane Nowood Fund, L.P.	95,809,371	0.47	N/A
Neuberger Berman Sauger Fund, L.P.	147,761,760	0.73	N/A
<b>Real Estate Composite</b>	<b>865,239,577</b>	<b>4.27</b>	<b>N/A</b>
Clarion Lion	321,396,894	1.59	6.30
UBS Trumbull	271,713,389	1.34	4.37
Cornerstone	10,165,690	0.05	N/A
Heitman	357,677	0.00	N/A
M&G	74,367,747	0.37	N/A
Northwood	117,735,541	0.58	N/A

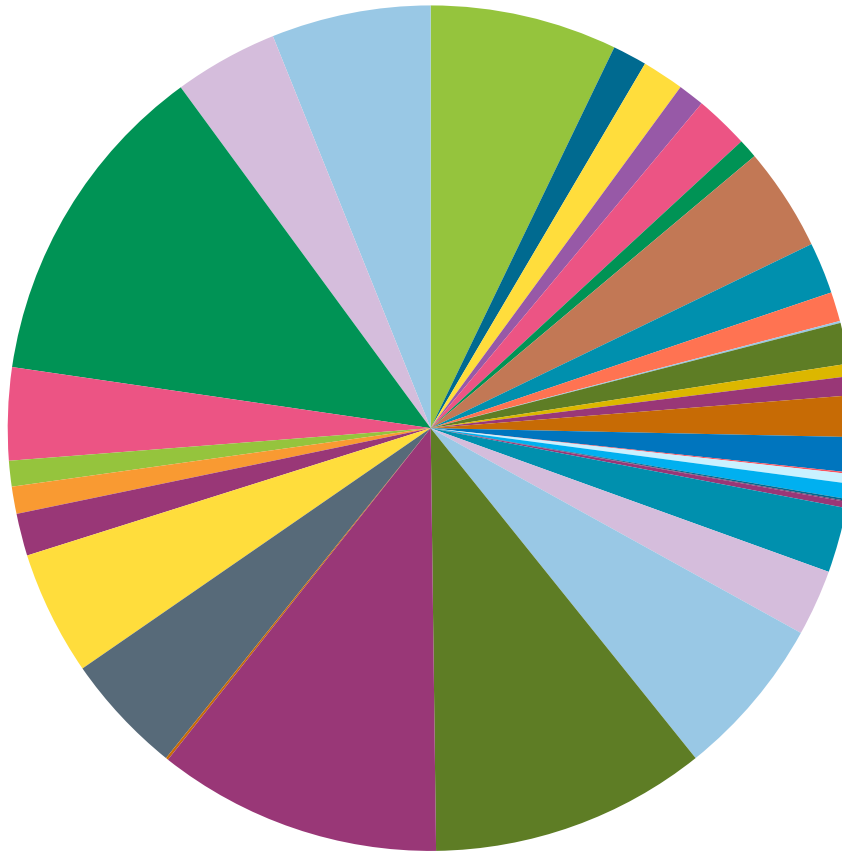
Asset Allocation & Performance			
	Allocation		Performance (%)
	Market Value (\$)	%	FYTD
SC Capital	15,085,385	0.07	N/A
TA Associates Realty	7,420,648	0.04	N/A
WestRiver	46,996,606	0.23	N/A
<b>Absolute Return Composite</b>	<b>506,003,104</b>	<b>2.50</b>	<b>5.40</b>
PAAMCO - Jackalope Fund	506,003,104	2.50	5.40
<b>Convertible Bonds Composite</b>	<b>511,683,757</b>	<b>2.52</b>	<b>12.67</b>
Allianz Global Investors	511,683,757	2.52	12.67
<b>Total Fixed Income Composite</b>	<b>11,531,092,282</b>	<b>56.90</b>	<b>-0.09</b>
C.S. McKee	1,255,473,326	6.19	-1.35
JP Morgan Core	2,139,598,376	10.56	-1.79
Neuberger Berman Core	1,689,913	0.01	N/A
PIMCO Core	2,200,564,054	10.86	-1.10
Wells Capital	20,639,055	0.10	N/A
Neuberger Berman Credit	936,580,077	4.62	4.57
Seix	962,636,239	4.75	6.07
Grosvenor Silvery Lupine Fund	328,374,955	1.62	9.27
Investec	209,303,773	1.03	3.73
Stone Harbor	200,547,916	0.99	2.97
State Street TIPS	717,808,388	3.54	-0.44
Internal Fixed Income Portfolio	2,557,830,106	12.62	-0.05
MacKay Shields	46,101	0.00	N/A
<b>Cash Equivalents</b>	<b>1,234,058,836</b>	<b>6.09</b>	<b>0.33</b>
Public Purpose Investments	804,494,531	3.97	N/A

Schedule of Investable Assets - Total Fund Composite Ex Public Purpose Investments						
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value
<b>FYTD</b>	<b>19,212,720,624</b>	<b>-507,479,730</b>	<b>756,304,487</b>	<b>19,461,545,382</b>	<b>3.99</b>	<b>103.99</b>

Allocations may not sum up to 100% exactly due to rounding. Performance is gross of fees, except for the convertible bond portfolio and absolute return, which are net of fees. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. For additional information, please see the Glossary. Wyoming State Treasurer's Office fiscal year ends on June 30th. Market value for MacKay Shields represent residual assets and subsequent transactions from the liquidation process.



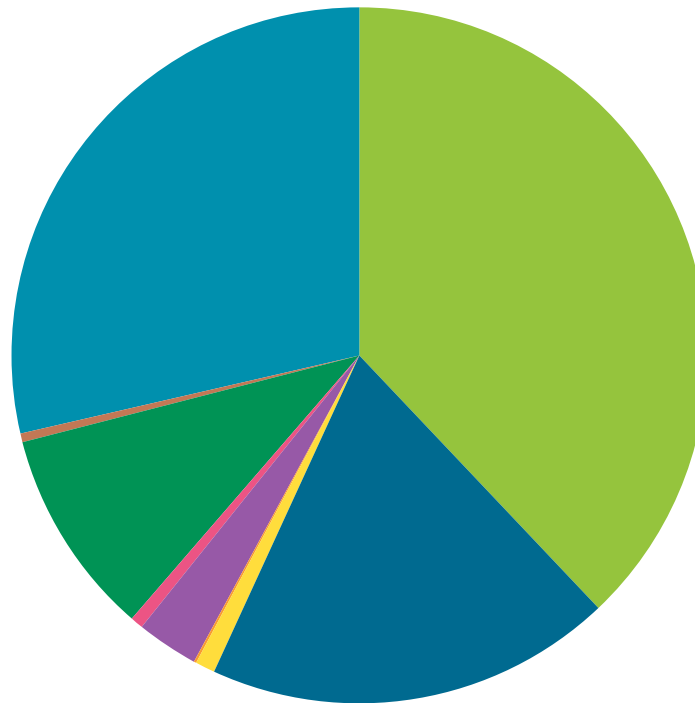
March 31, 2017 : \$20,266,039,913



	Market Value (\$)	Allocation (%)
State Street All Cap	1,448,765,091	7.15
Epoch	264,615,050	1.31
Lazard	323,656,090	1.60
UW Portfolio Mgmt Program	1,361,977	0.01
RBC	202,091,938	1.00
Arrowstreet	419,530,434	2.07
Internal International Equity Portfolio	151,872,423	0.75
Northern Trust	801,263,177	3.95
Fisher Investments	397,561,560	1.96
Manning & Napier	227,803,046	1.12
The Boston Company	42,033	0.00
Access Venture Partners II	14,734,664	0.07
Cheyenne Equity Capital Fund, L.P.	316,599,211	1.56
Hamilton Lane Nowood Fund, L.P.	95,809,371	0.47
Neuberger Berman Sauger Fund, L.P.	147,761,760	0.73
Clarion Lion	321,396,894	1.59
UBS Trumbull	271,713,389	1.34
Cornerstone	10,165,690	0.05
Heitman	357,677	0.00
M&G	74,367,747	0.37
Northwood	117,735,541	0.58
SC Capital	15,085,385	0.07
TA Associates Realty	7,420,648	0.04
WestRiver	46,996,606	0.23
PAAMCO - Jackalope Fund	506,003,104	2.50
Allianz Global Investors	511,683,757	2.52
C.S. McKee	1,255,473,326	6.19
JP Morgan Core	2,139,598,376	10.56
Neuberger Berman Core	1,689,913	0.01
PIMCO Core	2,200,564,054	10.86
Wells Capital	20,639,055	0.10
Neuberger Berman Credit	936,580,077	4.62
Seix	962,636,239	4.75
Grosvenor Silvery Lupine Fund	328,374,955	1.62
Investec	209,303,773	1.03
Stone Harbor	200,547,916	0.99
State Street TIPS	717,808,388	3.54
Internal Fixed Income Portfolio	2,557,830,106	12.62
WAMCO Core Plus	-	0.00
MackKay Shields	46,101	0.00
Public Purpose Investments	804,494,531	3.97
JP Morgan Cash Composite	1,234,058,836	6.09

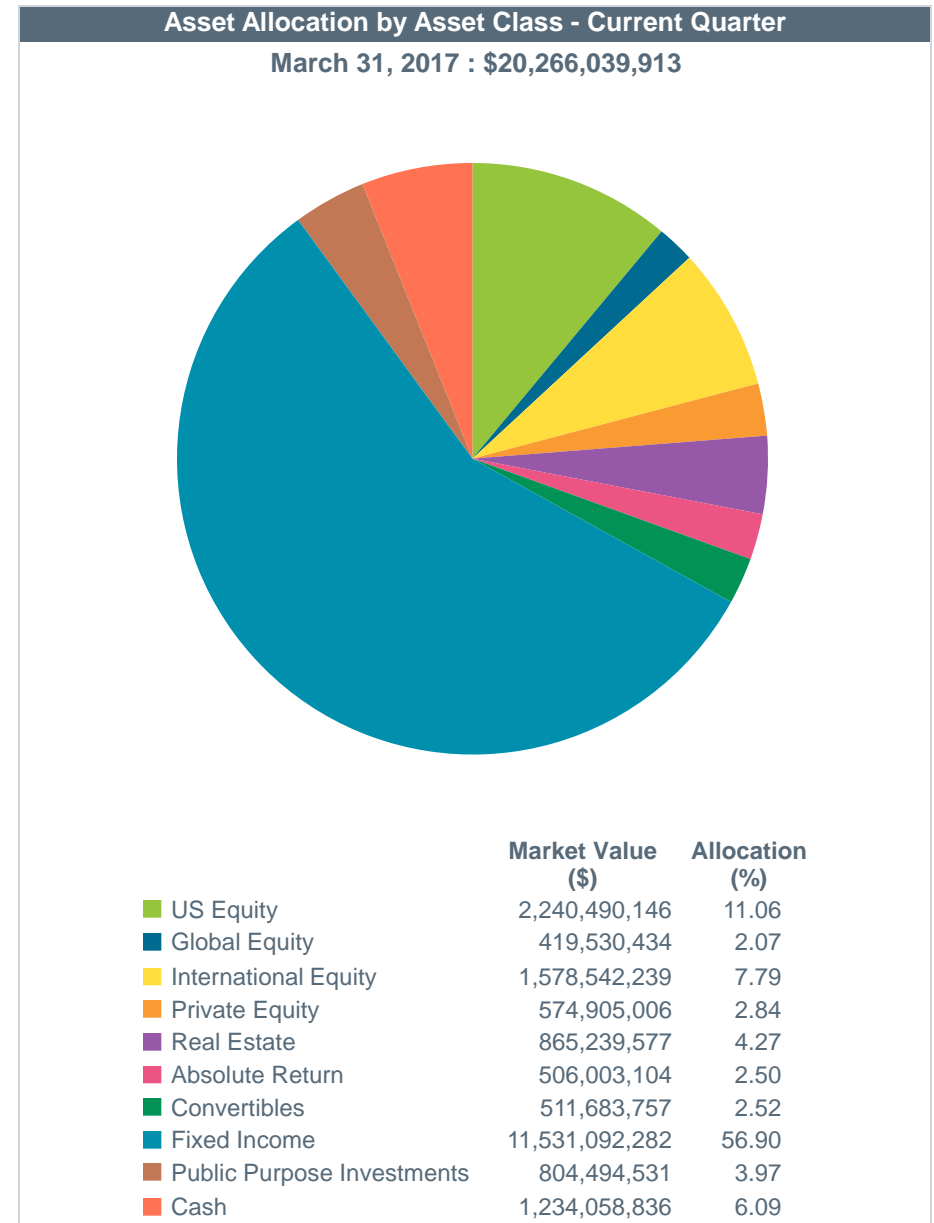
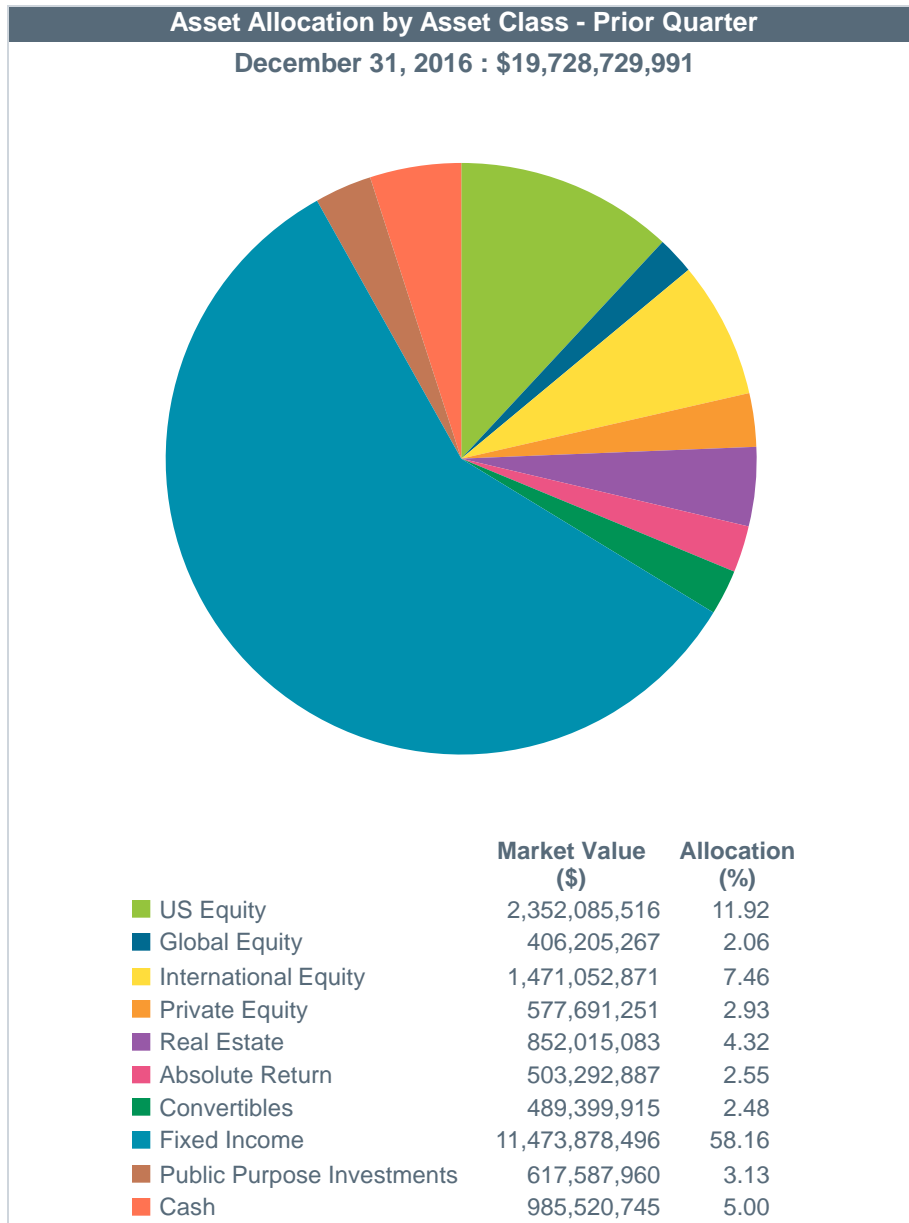
Allocations shown may not sum up to 100% exactly due to rounding.

March 31, 2017 : \$20,266,039,913

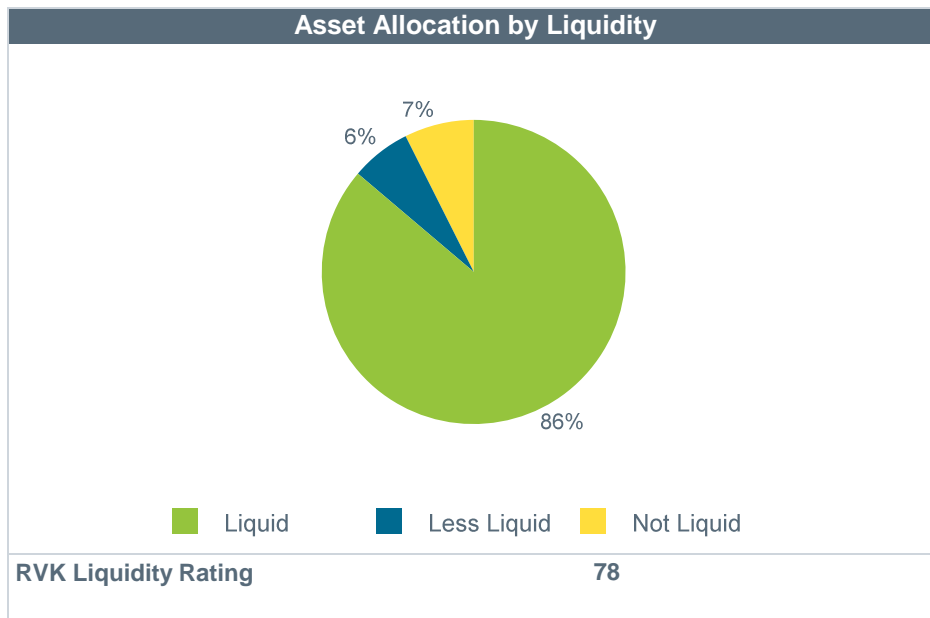
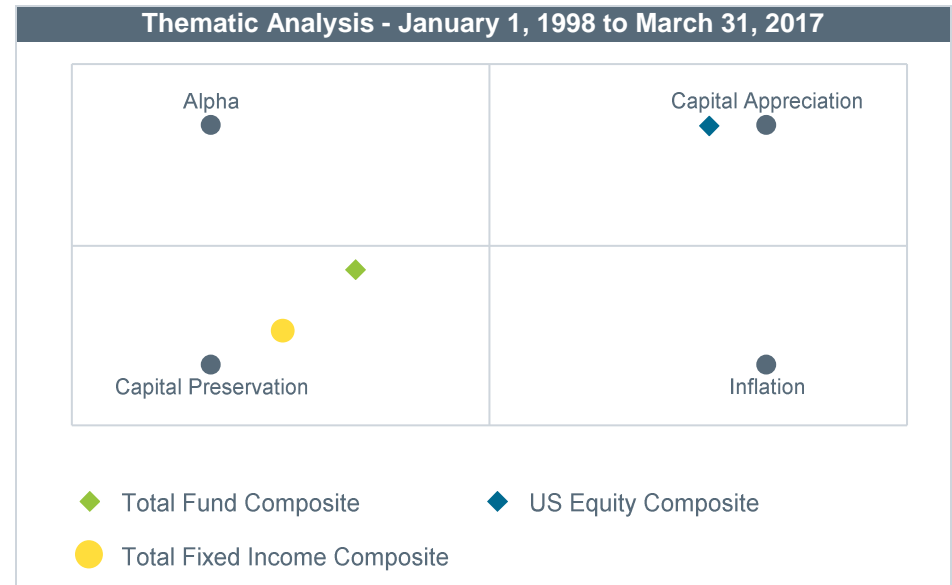
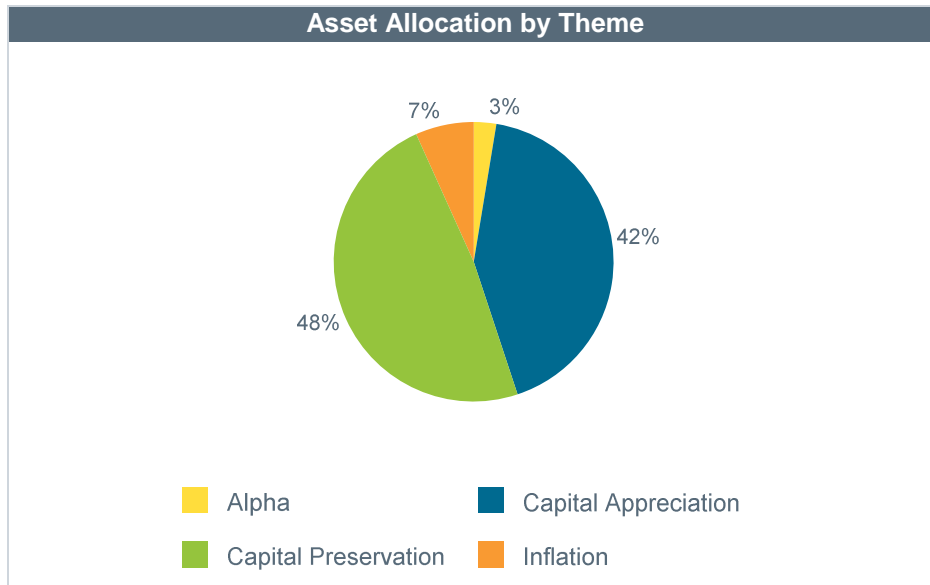


	Market Value (\$)	Allocation (%)
Permanent Mineral Trust	7,684,969,507	37.92
Common School PLF	3,835,405,670	18.93
Permanent Land Fund	187,920,344	0.93
University Permanent Land Fund	21,584,210	0.11
Hathaway Scholarship	583,129,680	2.88
Higher Education	120,296,350	0.59
Workers Compensation Fund	1,952,739,569	9.64
Tobacco Settlement Trust	83,854,315	0.41
State Agency Pool	5,796,140,268	28.60

Allocations shown may not sum up to 100% exactly due to rounding.



Allocations shown may not sum up to 100% exactly due to rounding.



**Correlation Matrix - 10 Years**

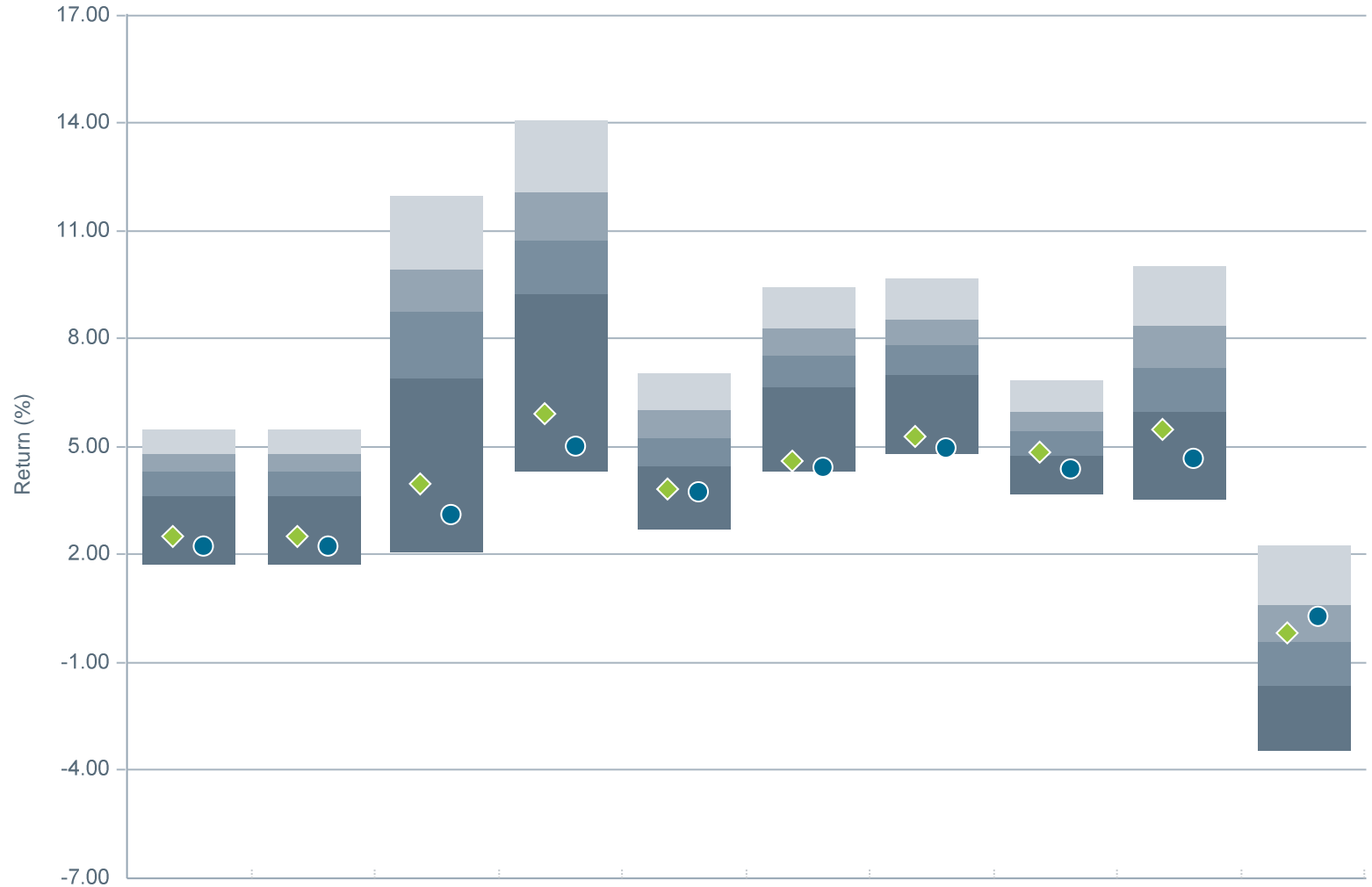
	A	B	C	D
A	1.00			
B	0.56	1.00		
C	-0.39	-0.27	1.00	
D	0.45	0.84	-0.02	1.00

A = HFRI EH: Eq Mkt Neut Index (Alpha)  
 B = MSCI ACW Index (USD) (Gross) (Capital Appreciation)  
 C = Bloomberg US Gov't Bond Index (Capital Preservation)  
 D = Real Return Custom Index (Inflation)

Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding these metrics. Allocations may not sum to 100% exactly due to rounding.

Wyoming State Treasurer's Office  
All Master Trust - Total Fund  
Plan Sponsor Peer Group Analysis

As of March 31, 2017



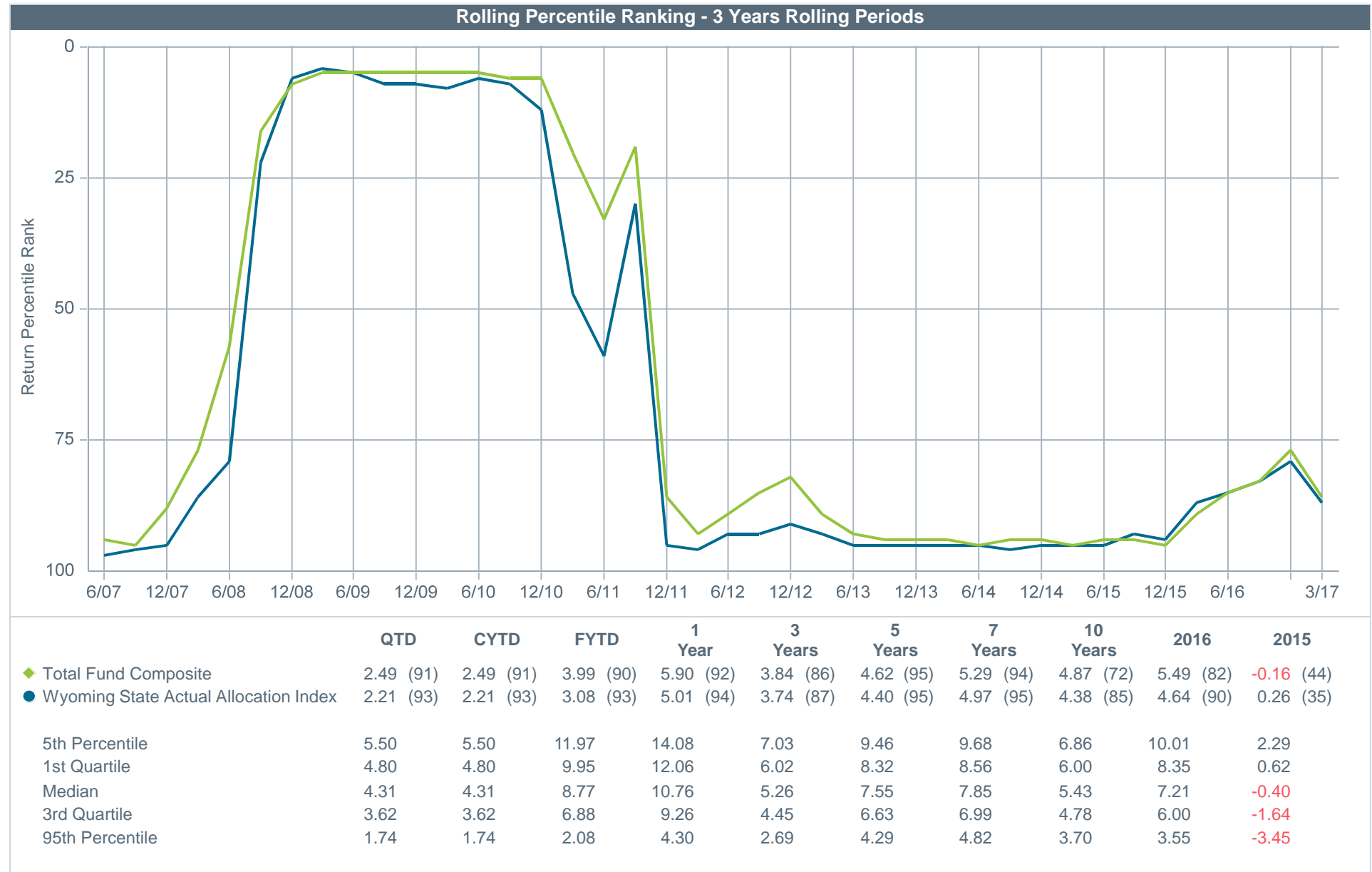
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015
◆ Total Fund Composite	2.49 (91)	2.49 (91)	3.99 (90)	5.90 (92)	3.84 (86)	4.62 (95)	5.29 (94)	4.87 (72)	5.49 (82)	-0.16 (44)
● Wyoming State Actual Allocation Index	2.21 (93)	2.21 (93)	3.08 (93)	5.01 (94)	3.74 (87)	4.40 (95)	4.97 (95)	4.38 (85)	4.64 (90)	0.26 (35)
Median	4.31	4.31	8.77	10.76	5.26	7.55	7.85	5.43	7.21	-0.40
Population	1,548	1,548	1,500	1,488	1,386	1,266	1,200	924	2,309	2,242

Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.  
Wyoming State Treasurer's Office fiscal year ends on June 30th.



Wyoming State Treasurer's Office  
All Master Trust - Total Fund  
Rolling Percentile Ranking and Plan Sponsor Peer Group Analysis

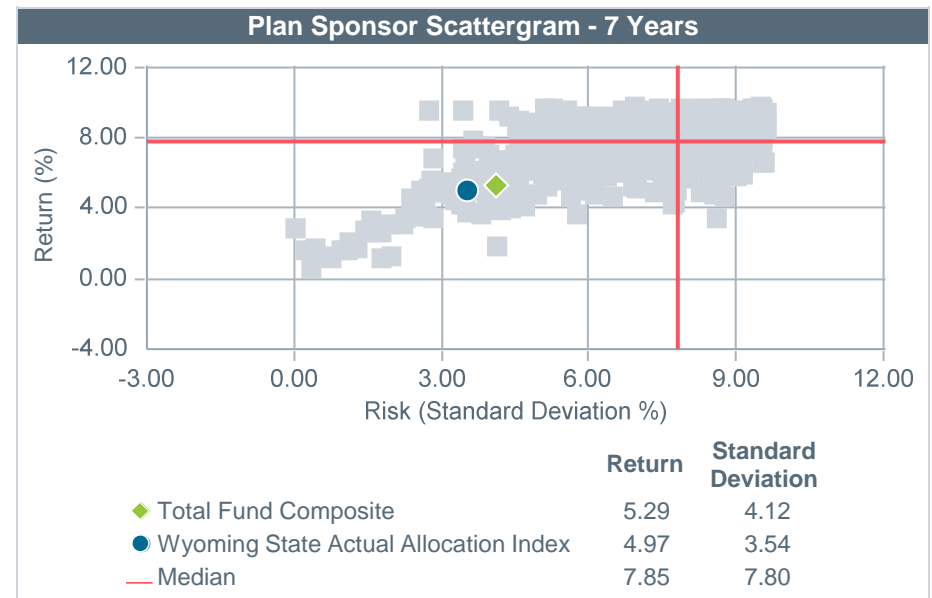
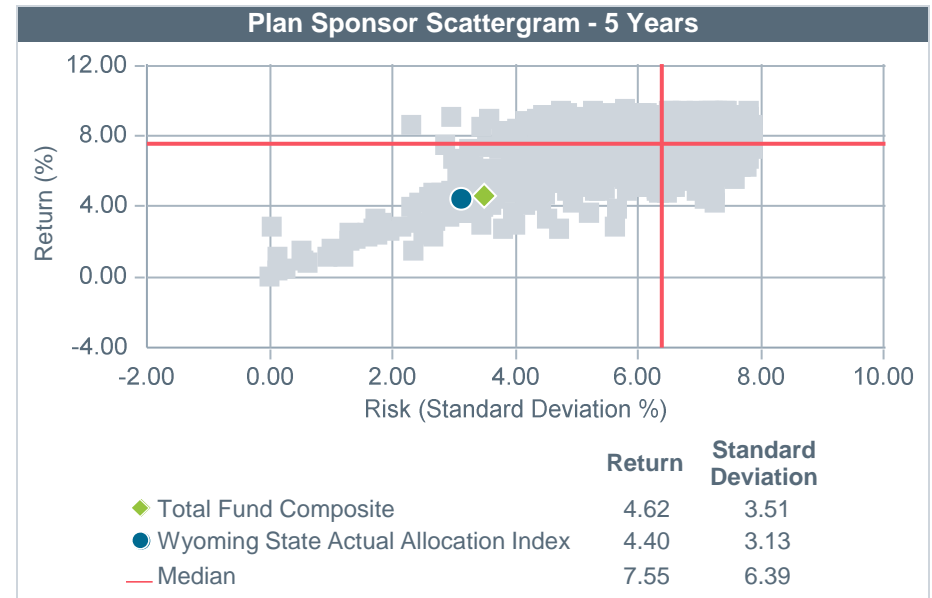
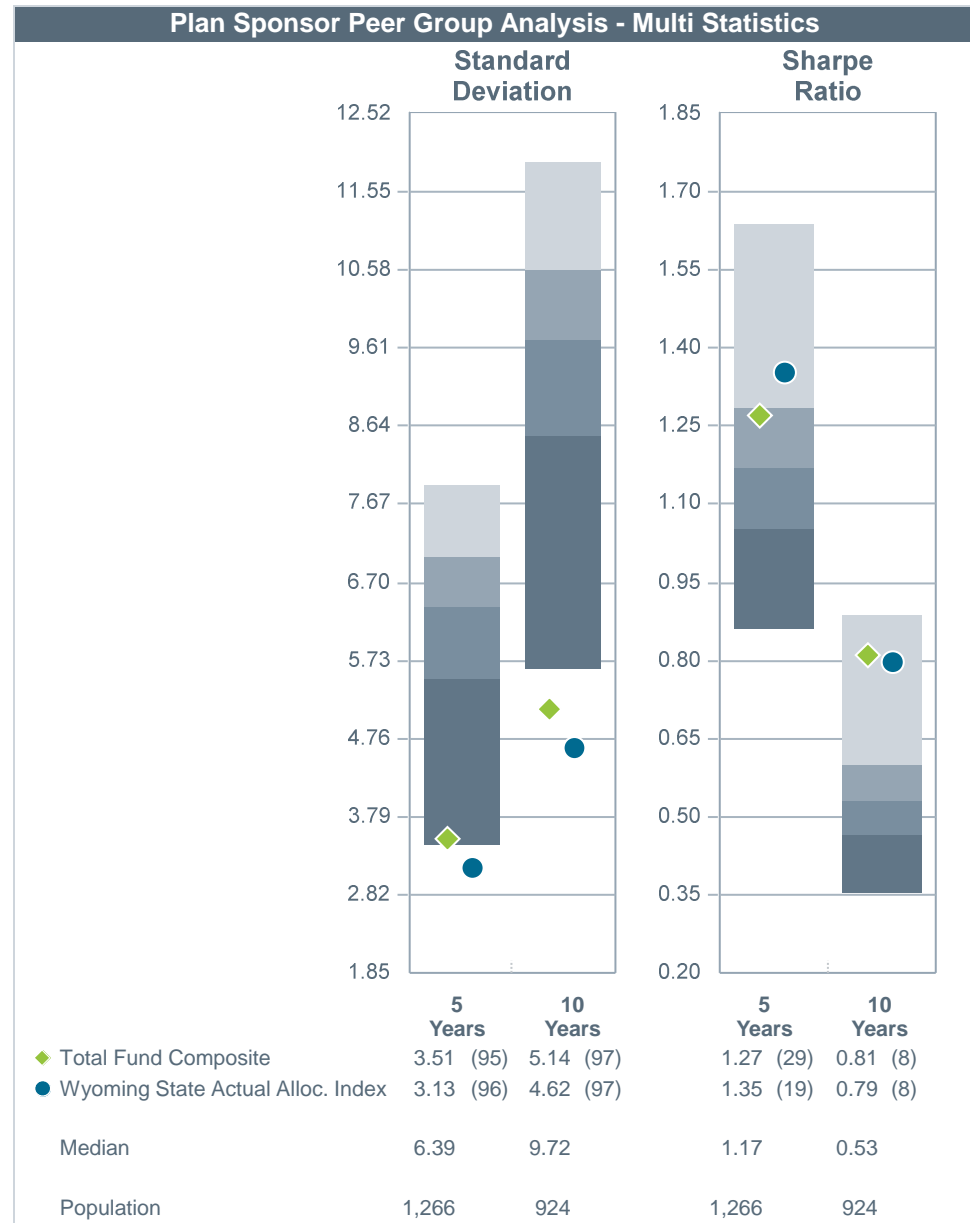
As of March 31, 2017



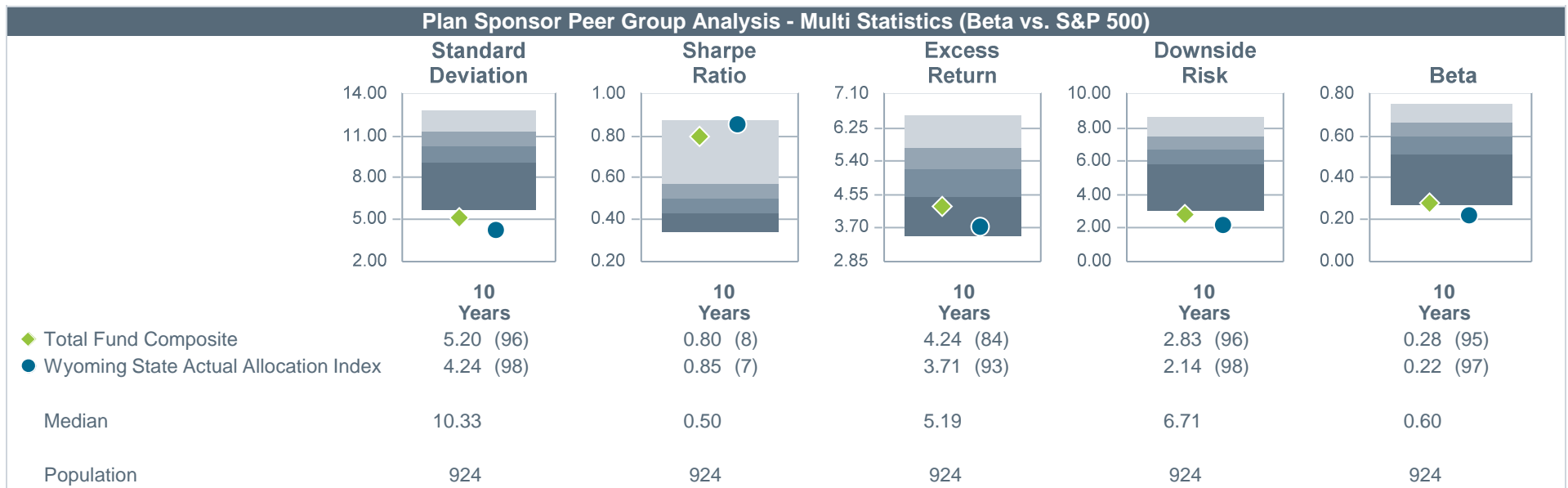
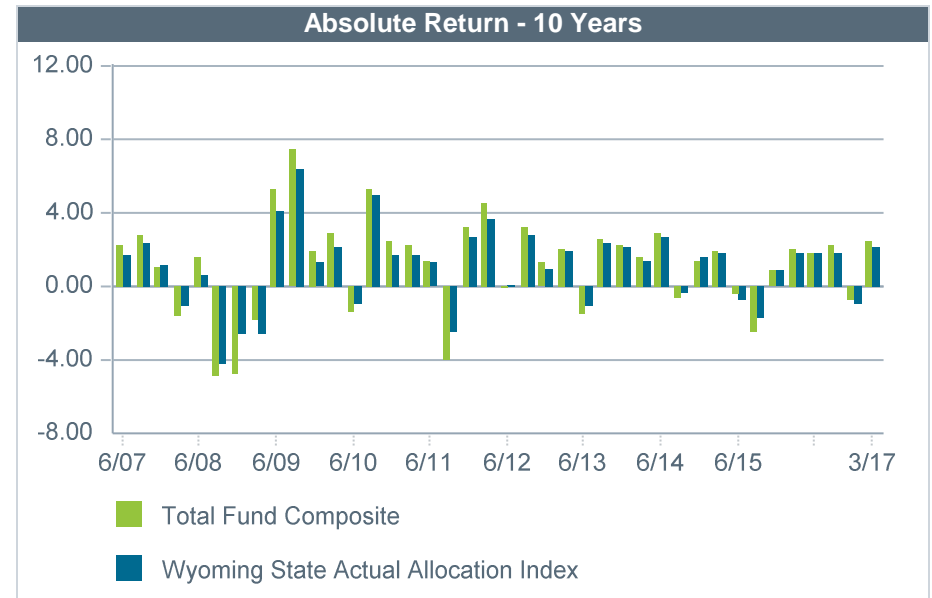
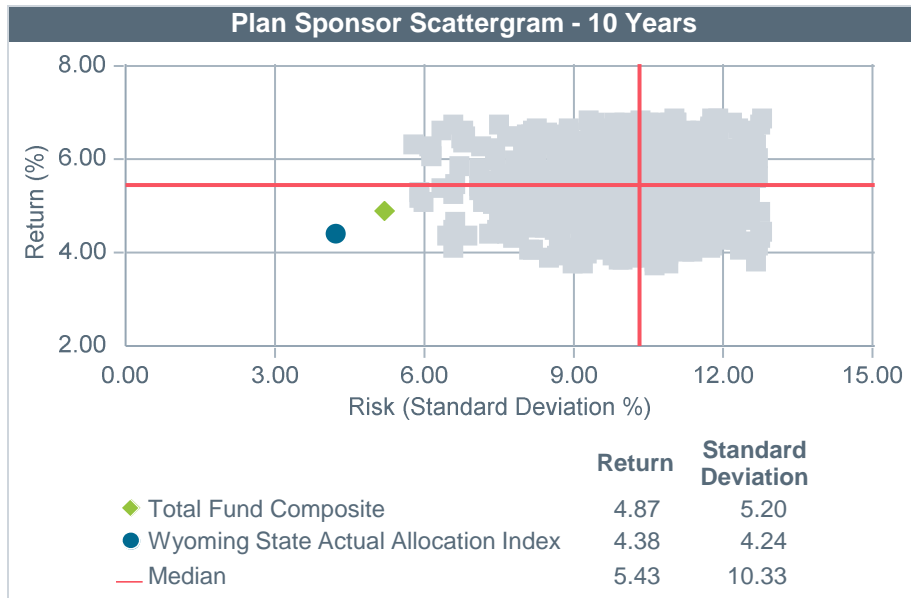
Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.  
Wyoming State Treasurer's Office fiscal year ends on June 30th.

Wyoming State Treasurer's Office  
Total Fund Composite vs. All Master Trust - Total Fund  
Plan Sponsor Peer Group Scattergram and Multi Statistics

As of March 31, 2017



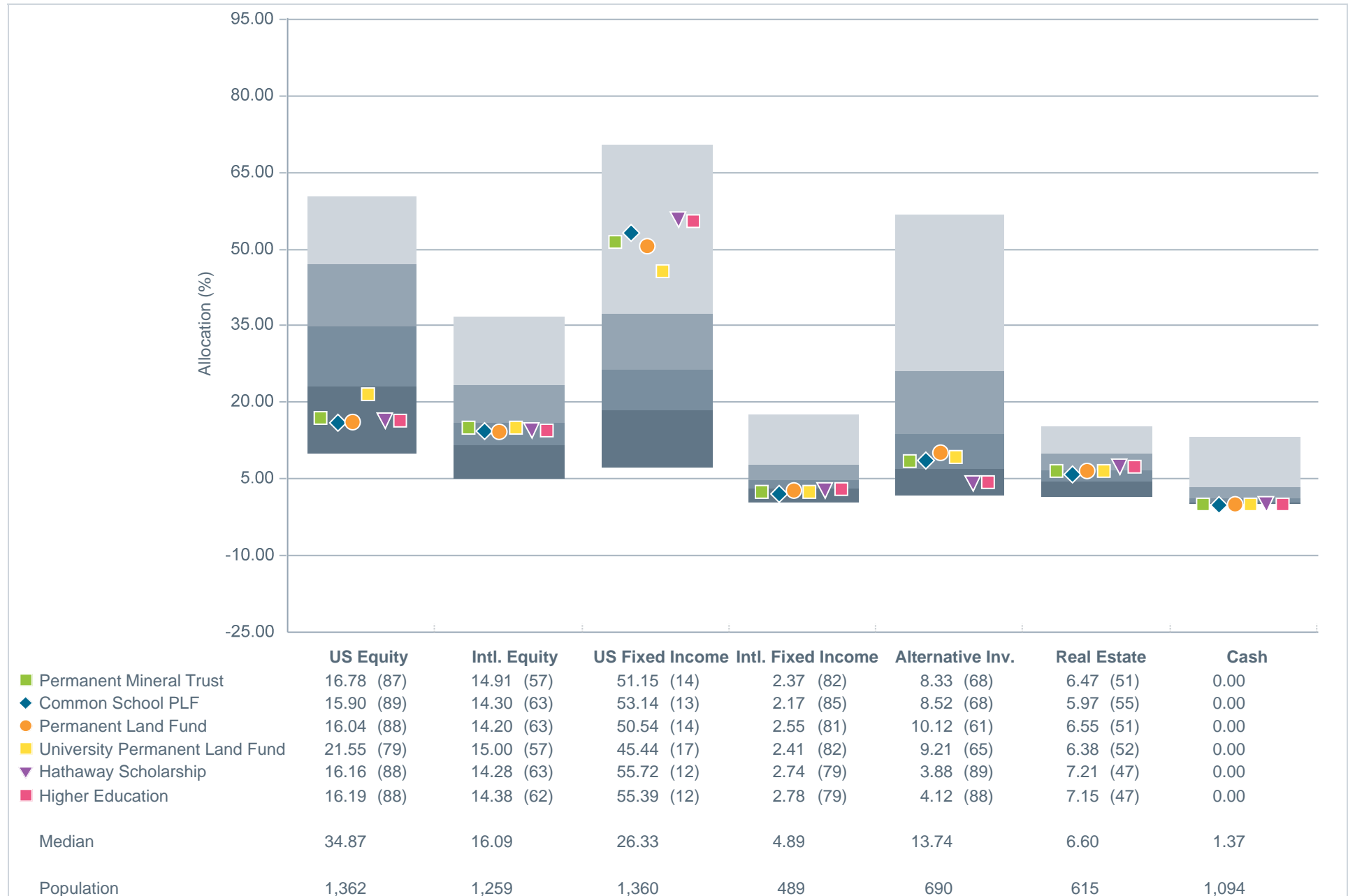
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

Wyoming State Treasurer's Office  
All Master Trust - Total Fund  
Plan Sponsor TF Asset Allocation

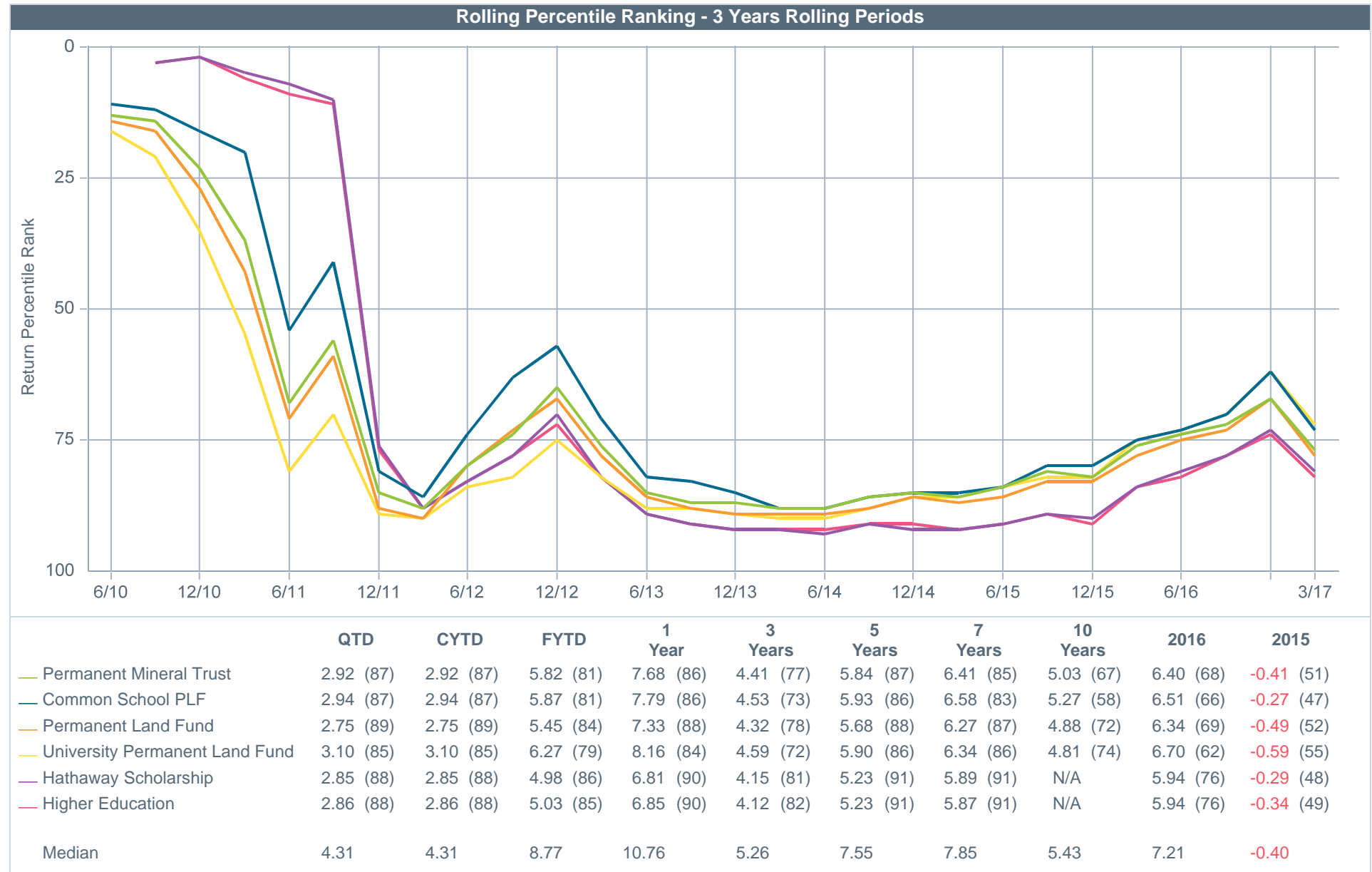
As of March 31, 2017



Parentheses contain percentile ranks. Intl. Equity Allocation shown includes Global Equity. US Fixed Income allocation shown includes Convertibles and Cash (inv. in SAP).

Wyoming State Treasurer's Office  
All Master Trust - Total Fund  
Rolling Percentile Ranking and Plan Sponsor Peer Group Analysis

As of March 31, 2017



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.  
Wyoming State Treasurer's Office fiscal year ends on June 30th.

Wyoming State Treasurer's Office  
Permanent Mineral Trust  
Total Fund Characteristics

As of March 31, 2017

### Investment Pool Profile

**Fund Type:** Permanent Fund

**Main Objective:** Produce maximized long-term investment income and capital gains while providing appropriate liquidity

**Primary Investment Goal:** Capital appreciation, total return, and protection against inflation

**Long-Term Return Expectation:** CPI + 4%

**Spending Policy:** 5% of the five-year rolling average market value, calculated on the first day of the fiscal year

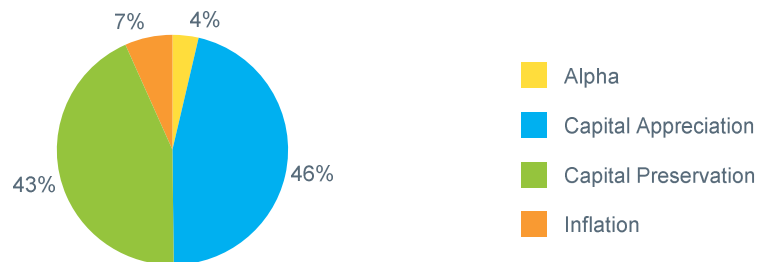
**Funding Source:** Constitutional and statutory mineral severance tax revenues, and occasional direct legislative appropriations

**Liquidity Constraints:** The corpus cannot be spent but only invested for income and capital gains

**Maximum Equity Allocation:** 55%

**Current Target Equity Allocation:** 50%

### Asset Allocation by Theme



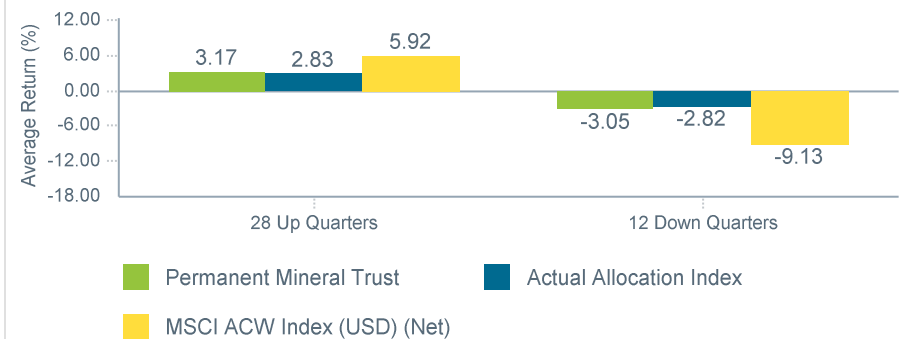
### MPT Stats

	5 Years	10 Years
Maximum Return	3.98	8.80
Minimum Return	-4.03	-8.83
Standard Deviation	4.01	7.49
vs. S&P 500 Index (Cap Wtd)		
Beta	0.40	0.43
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.41	0.60

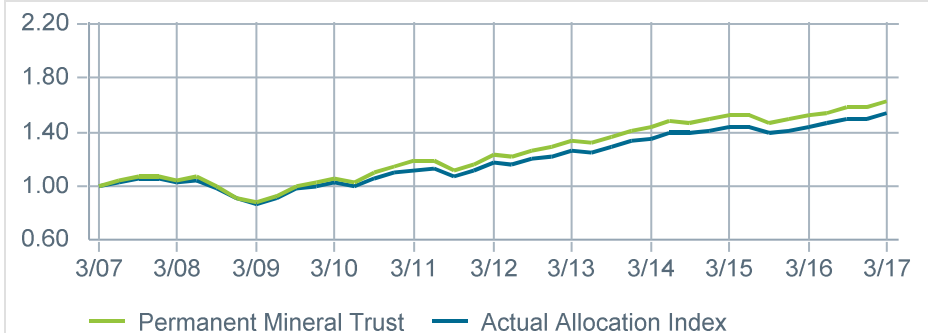
### Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Permanent Mineral Trust	7,684,970	100.00	-	100.00	-
US Equity	1,289,368	16.78	13.15	16.40	19.65
Global Equity	241,659	3.14	2.35	3.10	3.85
International Equity	904,194	11.77	9.00	11.50	14.00
Private Equity	360,764	4.69	2.00	4.00	6.00
Real Estate	496,876	6.47	4.50	7.50	10.50
Absolute Return	279,311	3.63	4.50	7.50	10.50
Convertibles	144,804	1.88	1.00	2.00	3.00
Fixed Income	2,992,420	38.94	40.00	45.00	50.00
Public Purpose Investments	135,154	1.76	0.00	0.00	0.00
Cash (inv. in SAP)	840,420	10.94	0.00	3.00	6.00

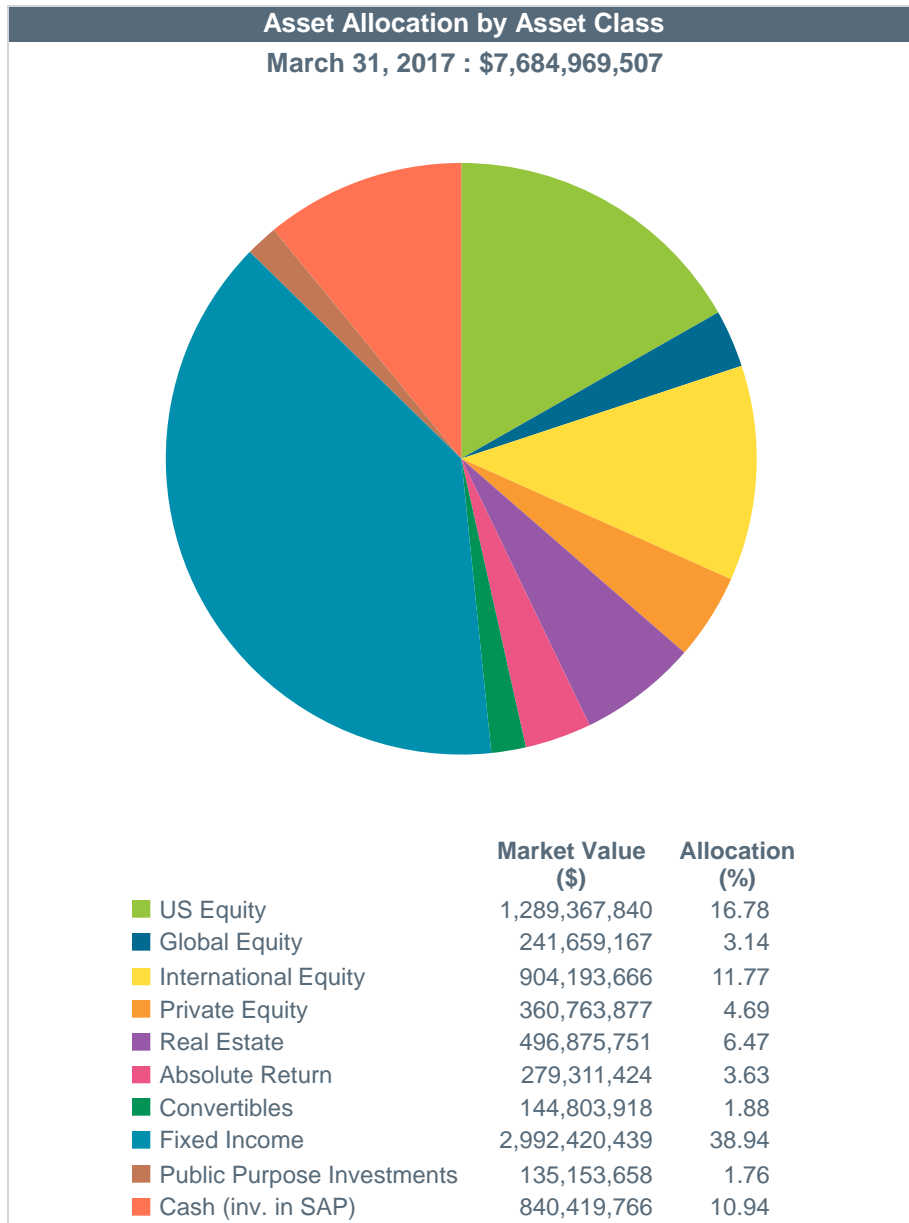
### Up/Down Markets - 10 Years



### Growth of \$1 - 10 Years

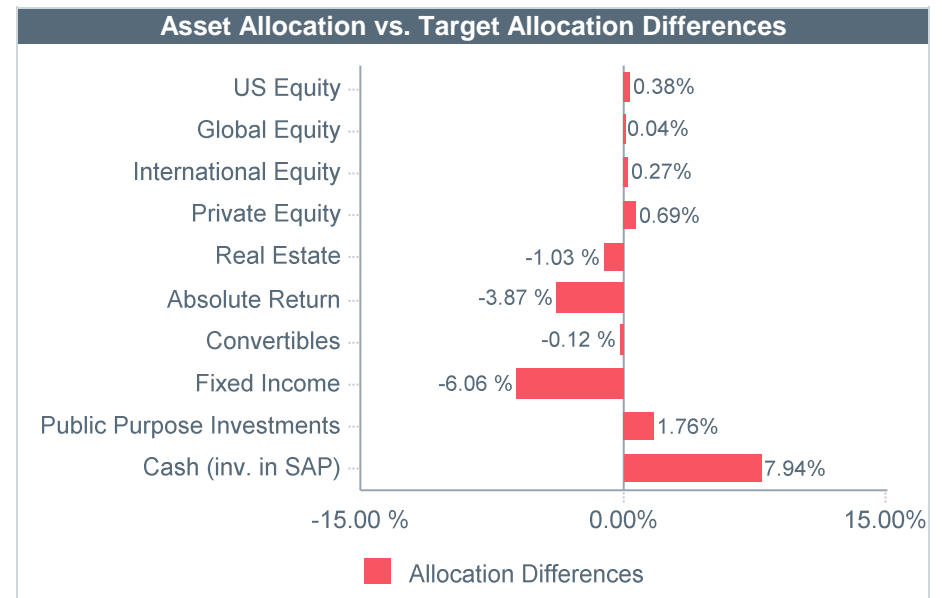


Performance shown is gross of fees. Calculations are based on quarterly periodicity.

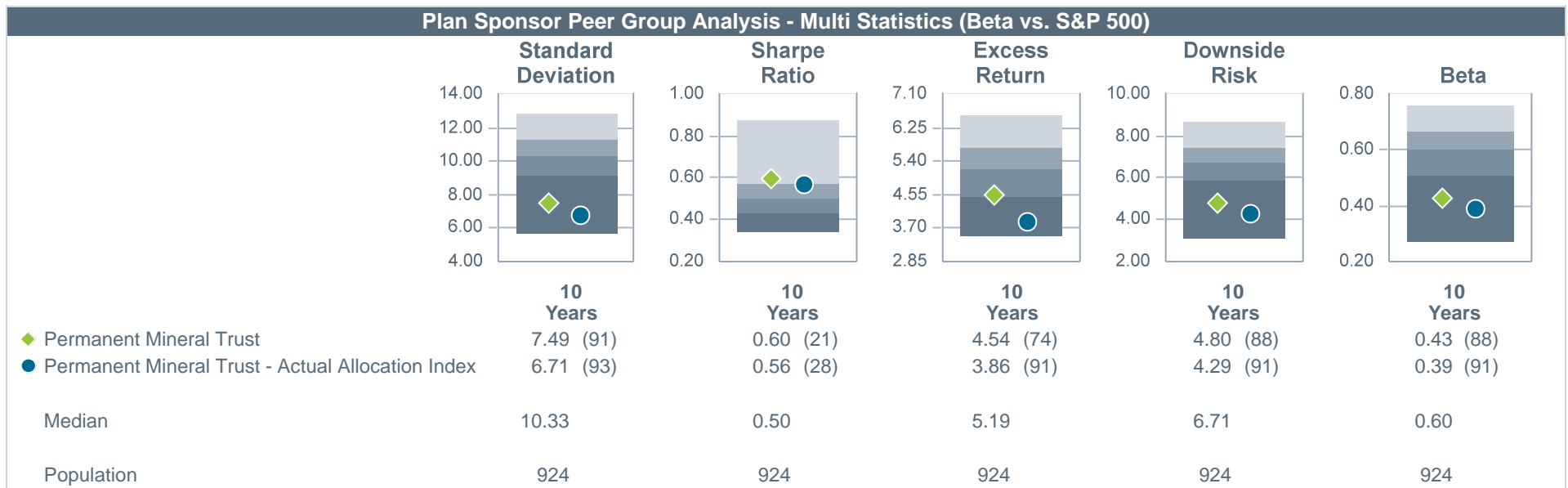
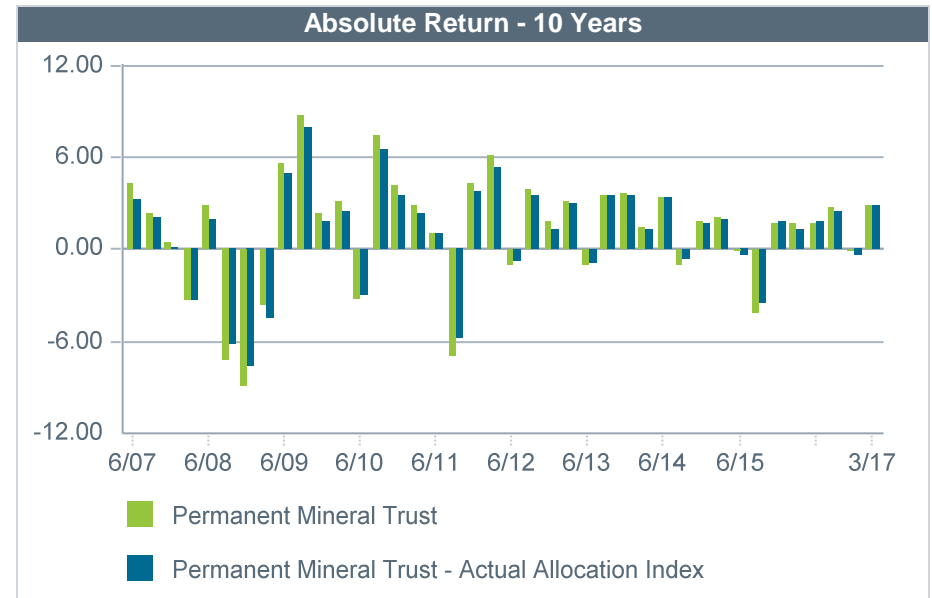
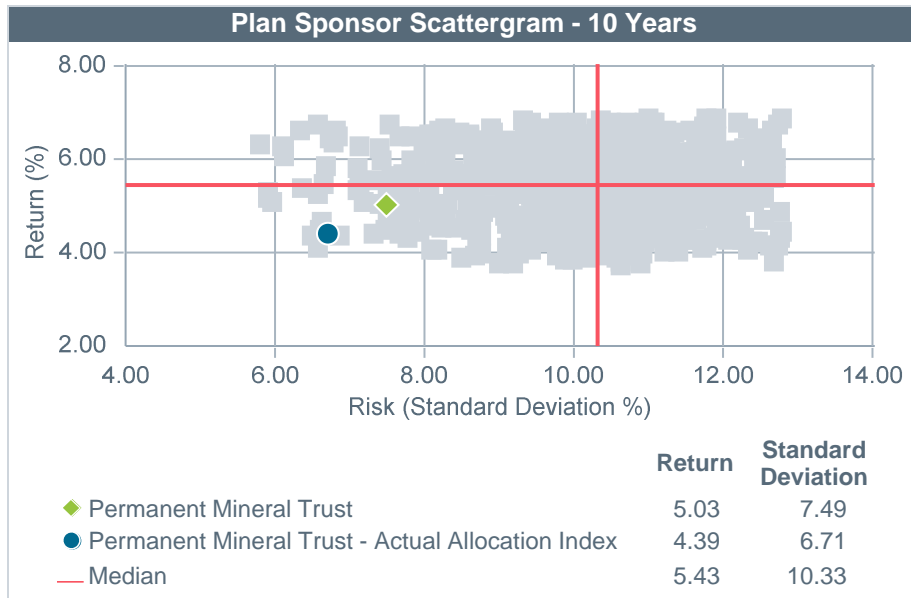


Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
US Equity	1,289,367,840	16.78	16.40
Global Equity	241,659,167	3.14	3.10
International Equity	904,193,666	11.77	11.50
Private Equity	360,763,877	4.69	4.00
Real Estate	496,875,751	6.47	7.50
Absolute Return	279,311,424	3.63	7.50
Convertibles	144,803,918	1.88	2.00
Fixed Income	2,992,420,439	38.94	45.00
Public Purpose Investments	135,153,658	1.76	0.00
Cash (inv. in SAP)	840,419,766	10.94	3.00
Total Fund	7,684,969,507	100.00	100.00







Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

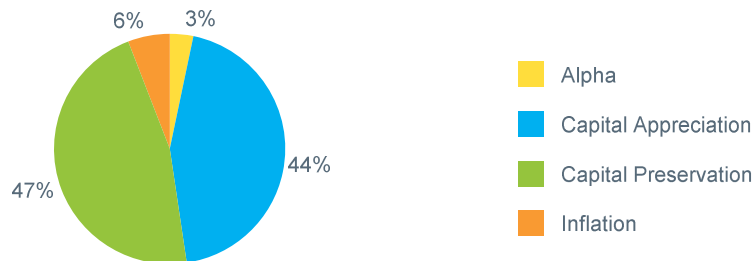
Wyoming State Treasurer's Office  
Common School Permanent Land Fund  
Total Fund Characteristics

As of March 31, 2017

Investment Pool Profile

**Fund Type:** Permanent Fund  
**Main Objective:** Produce maximized long-term investment income and capital gains while providing appropriate liquidity  
**Primary Investment Goal:** Capital appreciation, total return, and protection against inflation  
**Long-Term Return Expectation:** CPI + 4%  
**Spending Policy:** 5% of the five-year rolling average market value, calculated on the first day of the fiscal year  
**Funding Source:** Royalties, leases, fees and permits, and other revenue generated from State lands  
**Liquidity Constraints:** The corpus cannot be spent but only invested for income and capital gains  
**Maximum Equity Allocation:** 55%  
**Current Target Equity Allocation:** 50%

Asset Allocation by Theme



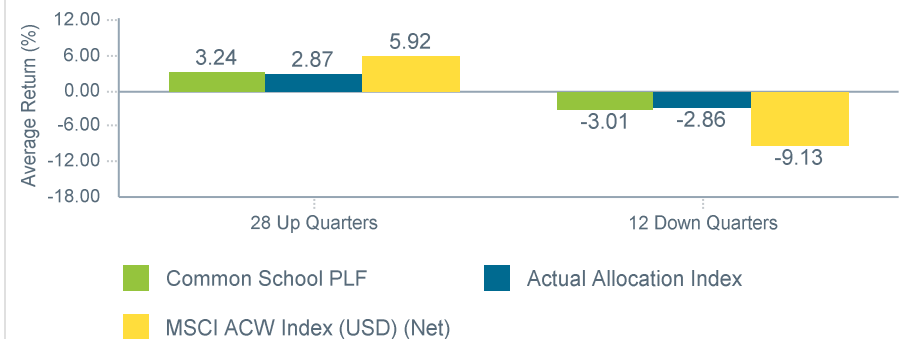
MPT Stats

	5 Years	10 Years
Maximum Return	3.96	8.83
Minimum Return	-3.80	-8.50
Standard Deviation	3.92	7.53
vs. S&P 500 Index (Cap Wtd)		
Beta	0.39	0.43
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.47	0.62

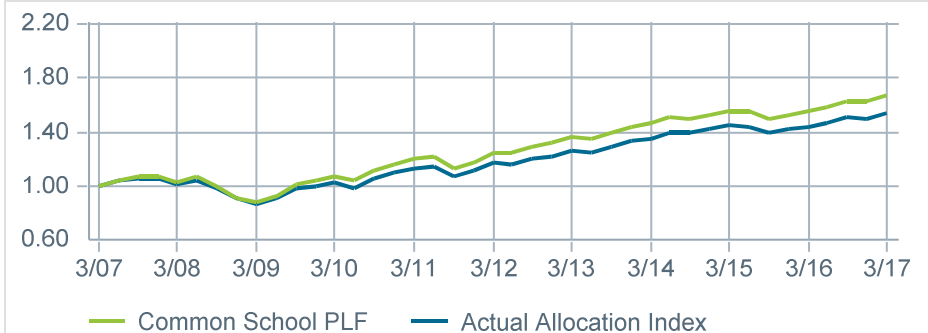
Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Common School PLF	3,835,406	100.00	-	100.00	-
US Equity	610,005	15.90	13.15	16.40	19.65
Global Equity	115,664	3.02	2.35	3.10	3.85
International Equity	432,716	11.28	9.00	11.50	14.00
Private Equity	200,945	5.24	2.00	4.00	6.00
Real Estate	229,009	5.97	4.50	7.50	10.50
Absolute Return	125,738	3.28	4.50	7.50	10.50
Convertibles	67,937	1.77	1.00	2.00	3.00
Fixed Income	1,257,804	32.79	40.00	45.00	50.00
Public Purpose Investments	343,360	8.95	0.00	0.00	0.00
Cash (inv. in SAP)	452,227	11.79	0.00	3.00	6.00

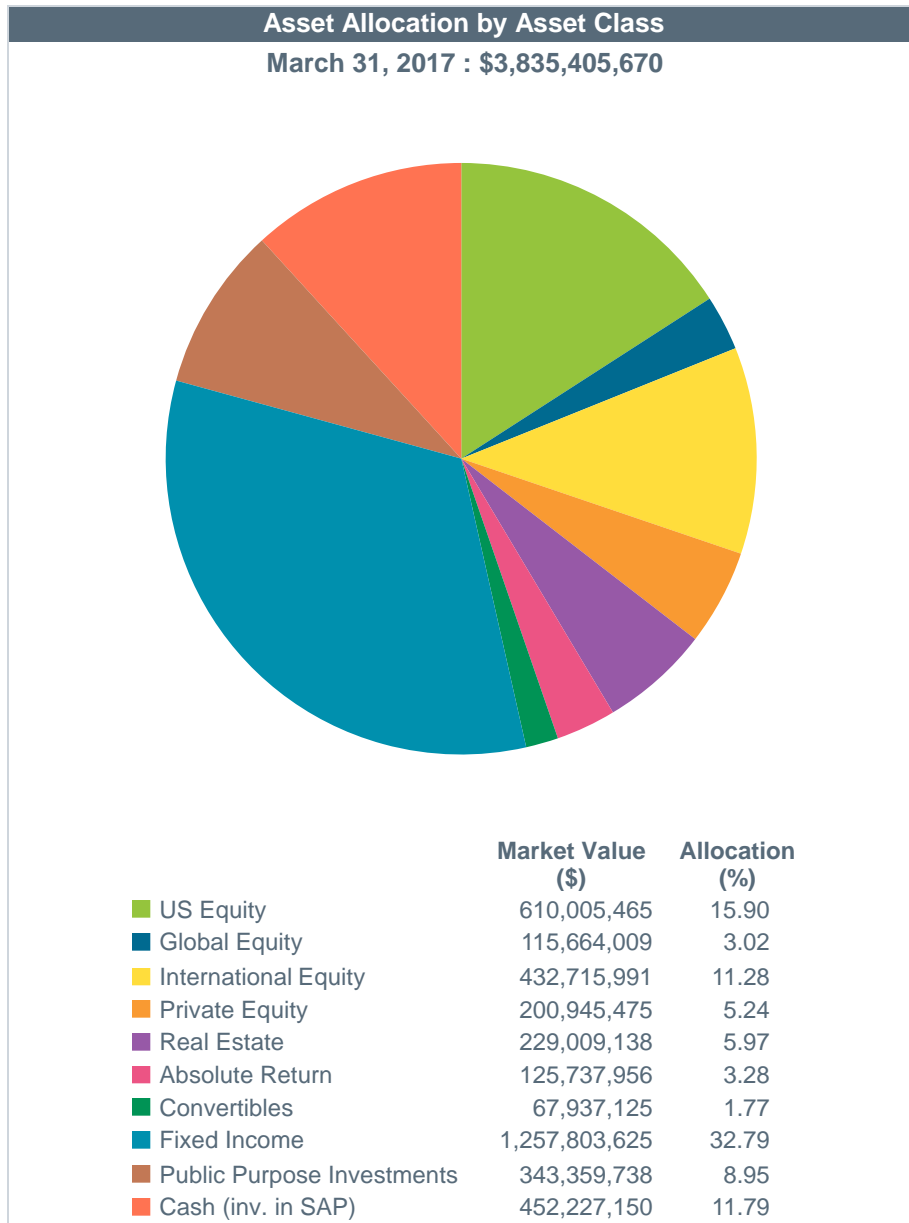
Up/Down Markets - 10 Years



Growth of \$1 - 10 Years

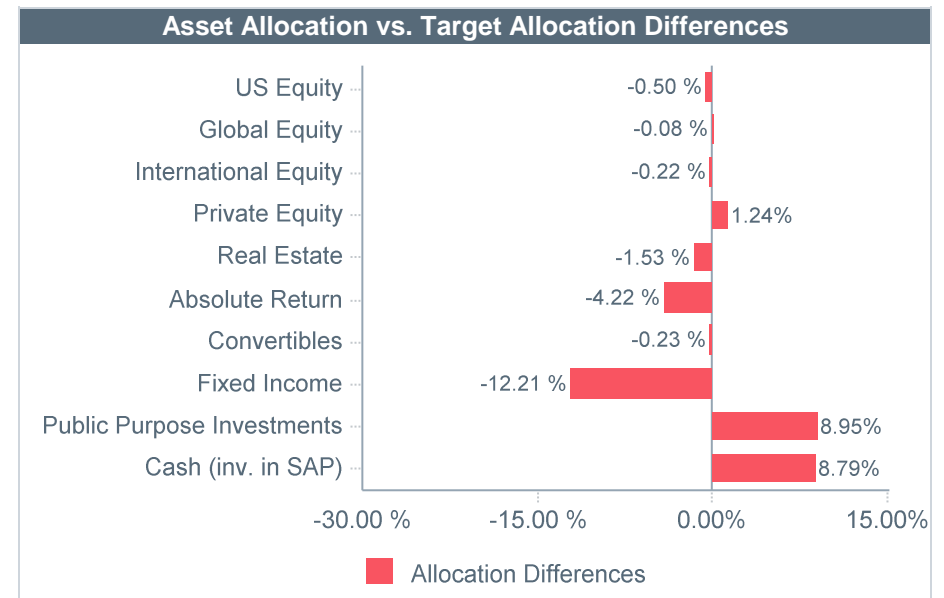


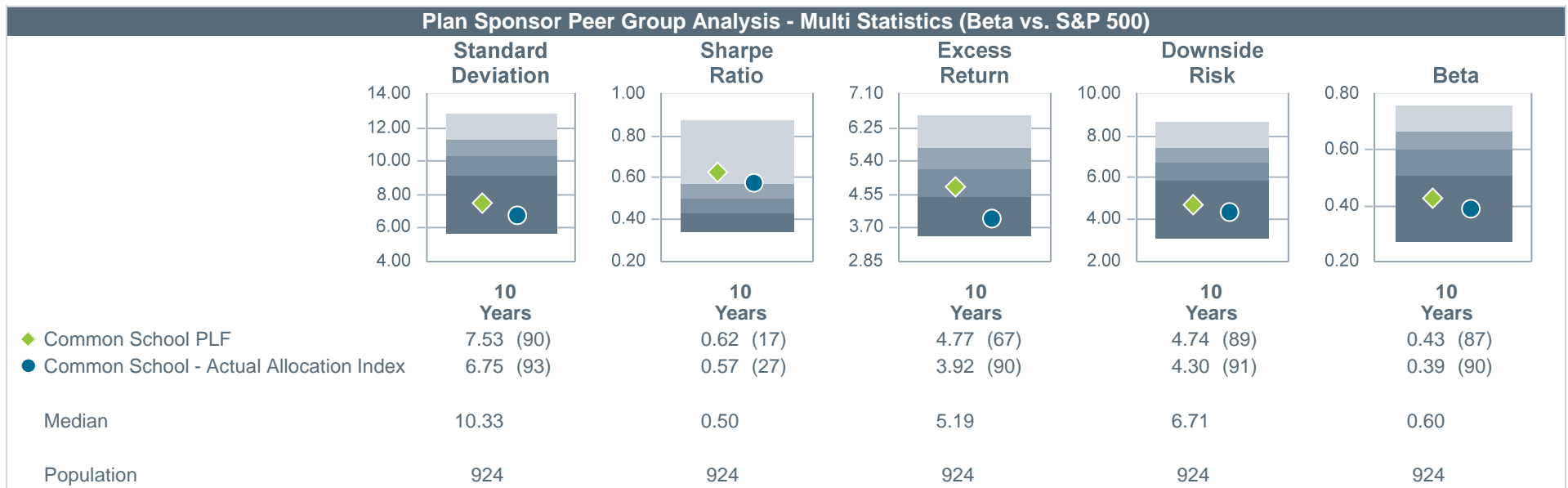
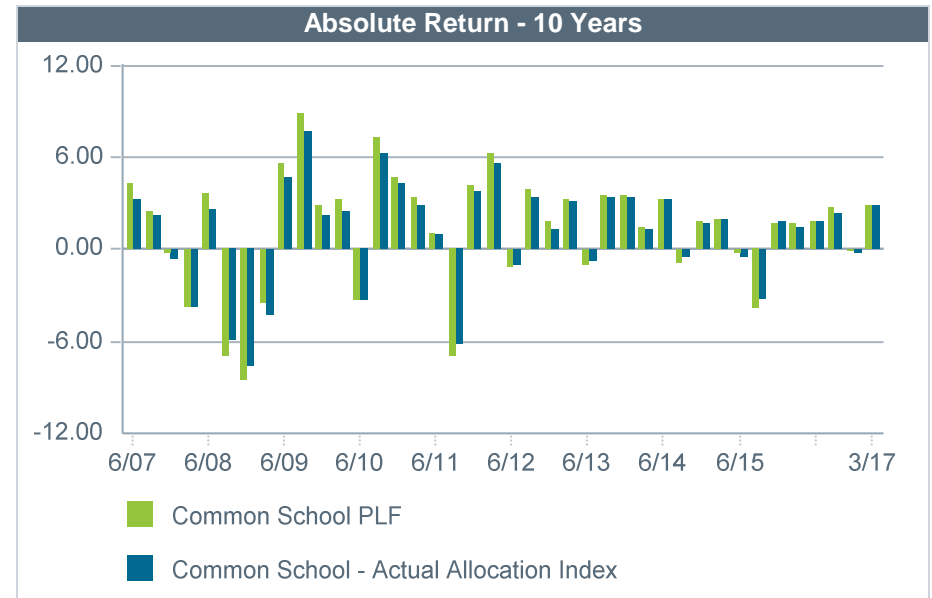
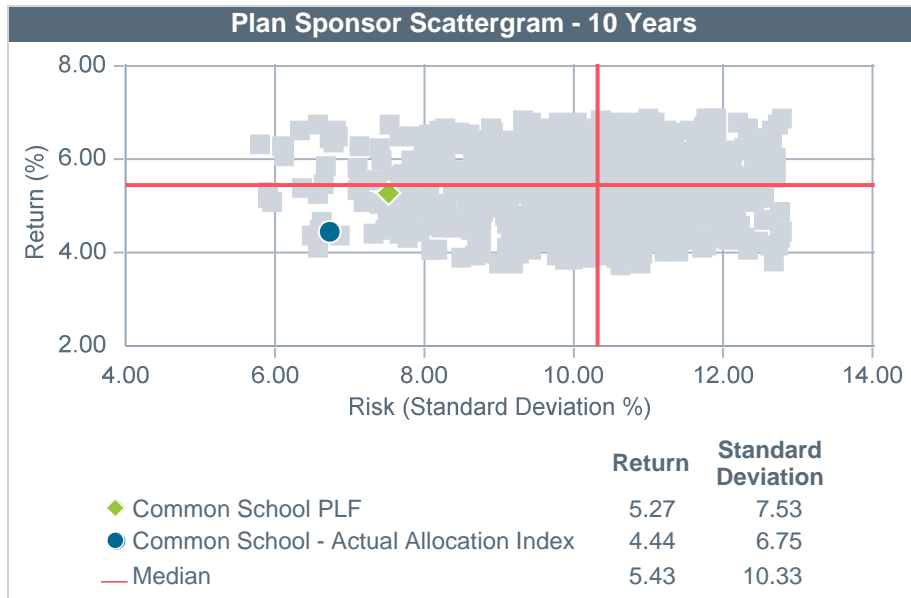
Performance shown is gross of fees. Calculations are based on quarterly periodicity.



Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
US Equity	610,005,465	15.90	16.40
Global Equity	115,664,009	3.02	3.10
International Equity	432,715,991	11.28	11.50
Private Equity	200,945,475	5.24	4.00
Real Estate	229,009,138	5.97	7.50
Absolute Return	125,737,956	3.28	7.50
Convertibles	67,937,125	1.77	2.00
Fixed Income	1,257,803,625	32.79	45.00
Public Purpose Investments	343,359,738	8.95	0.00
Cash (inv. in SAP)	452,227,150	11.79	3.00
Total Fund	3,835,405,670	100.00	100.00





Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

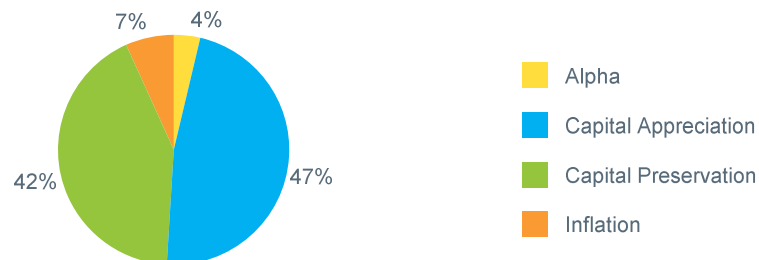
Wyoming State Treasurer's Office  
Permanent Land Fund  
Total Fund Characteristics

As of March 31, 2017

### Investment Pool Profile

**Fund Type:** Permanent Fund  
**Main Objective:** Produce maximized long-term investment income and capital gains while providing appropriate liquidity  
**Primary Investment Goal:** Capital appreciation, total return, and protection against inflation  
**Long-Term Return Expectation:** CPI + 4%  
**Funding Source:** Royalties, leases, fees and permits, and other revenue generated from State lands  
**Maximum Equity Allocation:** 55%  
**Current Target Equity Allocation:** 50%

### Asset Allocation by Theme



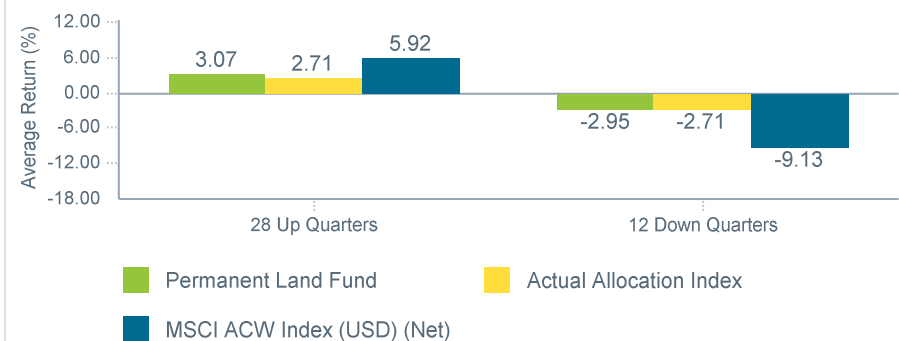
### MPT Stats

	5 Years	10 Years
Maximum Return	3.90	8.47
Minimum Return	-3.80	-8.45
Standard Deviation	3.87	7.22
vs. S&P 500 Index (Cap Wtd)		
Beta	0.38	0.41
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.43	1.08

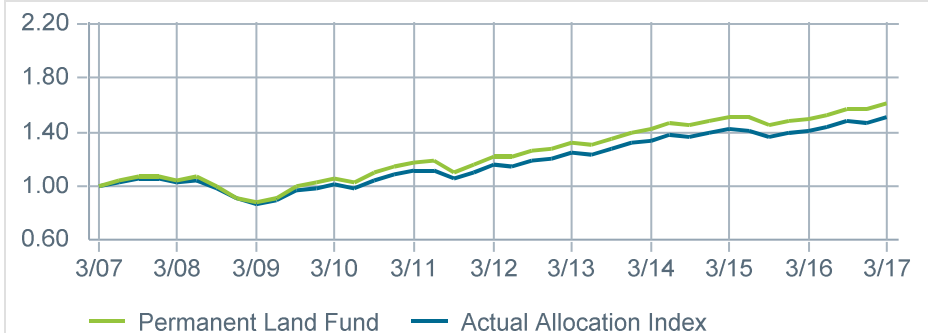
### Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Permanent Land Fund	187,920	100.00	-	100.00	-
US Equity	30,140	16.04	13.15	16.40	19.65
Global Equity	5,606	2.98	2.35	3.10	3.85
International Equity	21,081	11.22	9.00	11.50	14.00
Private Equity	12,054	6.41	2.00	4.00	6.00
Real Estate	12,314	6.55	4.50	7.50	10.50
Absolute Return	6,966	3.71	4.50	7.50	10.50
Convertibles	3,713	1.98	1.00	2.00	3.00
Fixed Income	79,526	42.32	38.00	43.00	48.00
Cash (inv. in SAP)	16,522	8.79	0.00	5.00	10.00

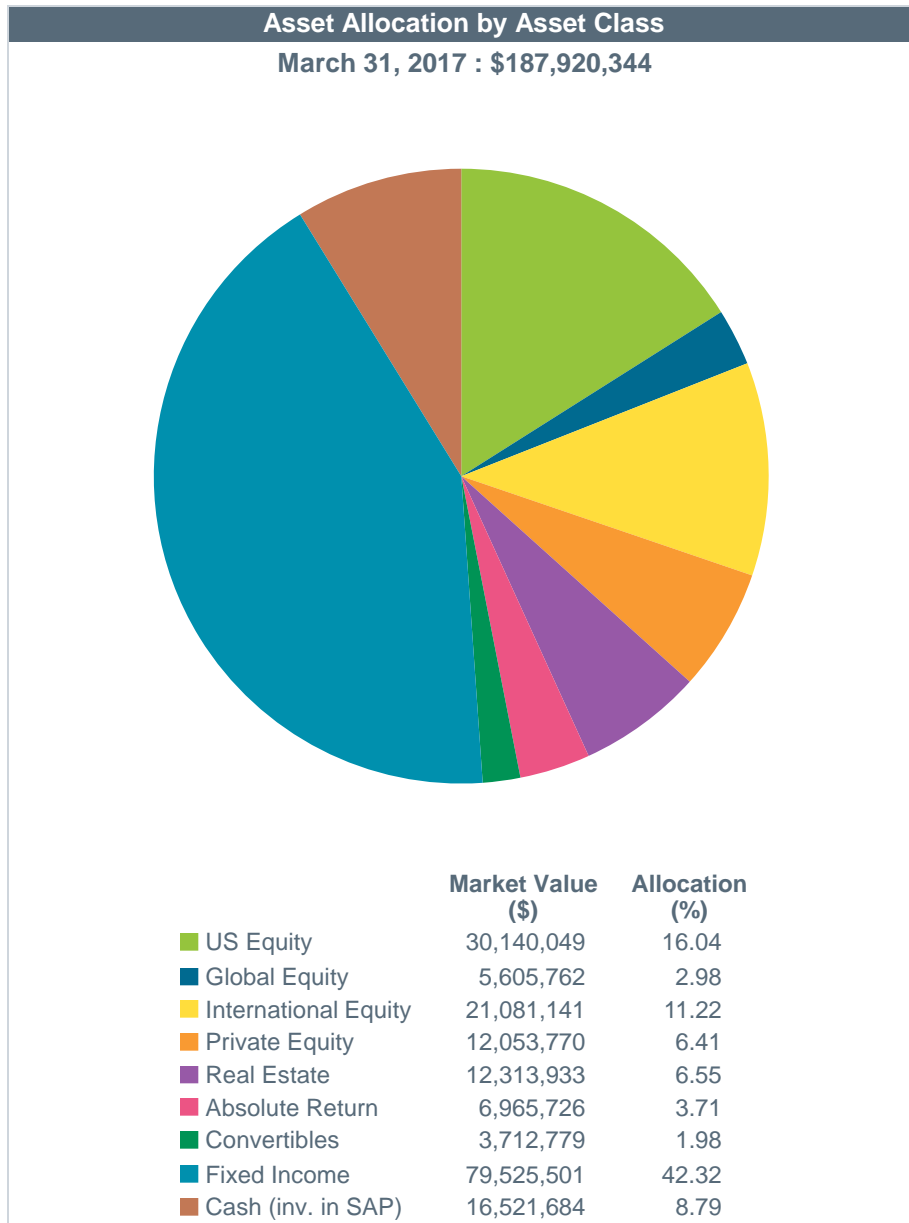
### Up/Down Markets - 10 Years



### Growth of \$1 - 10 Years

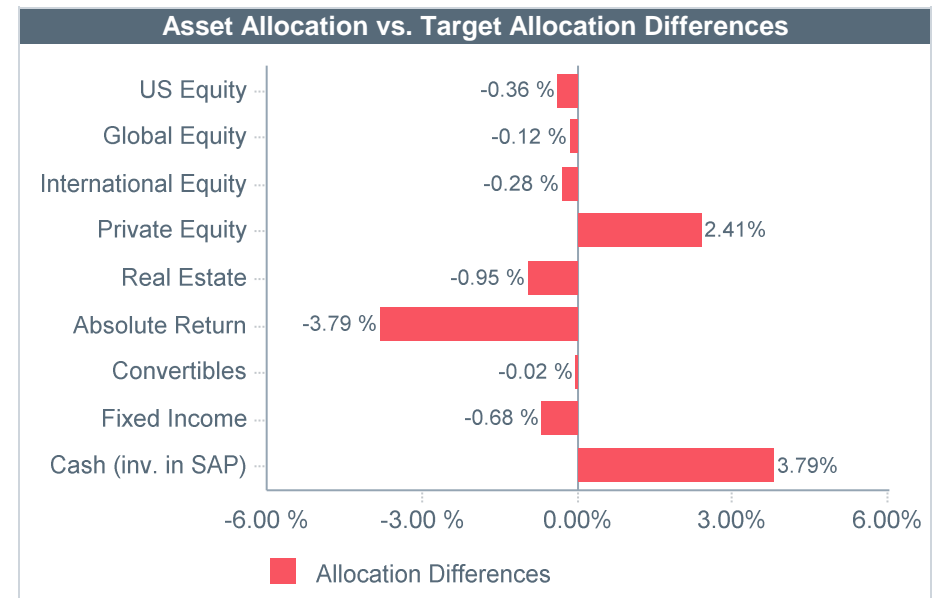


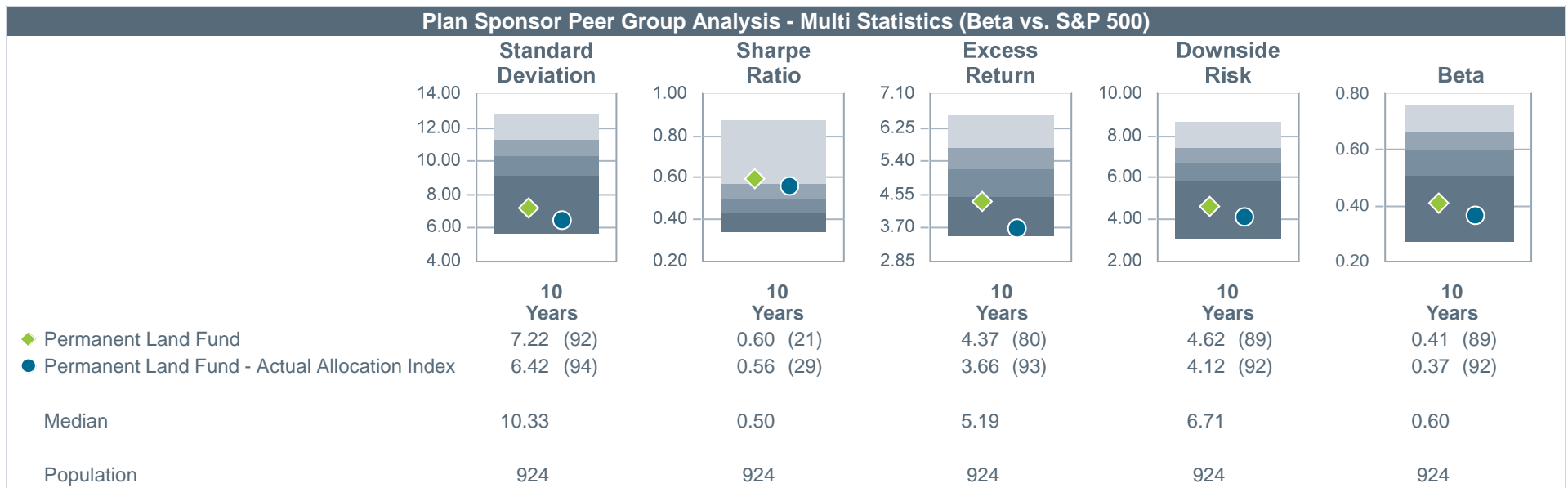
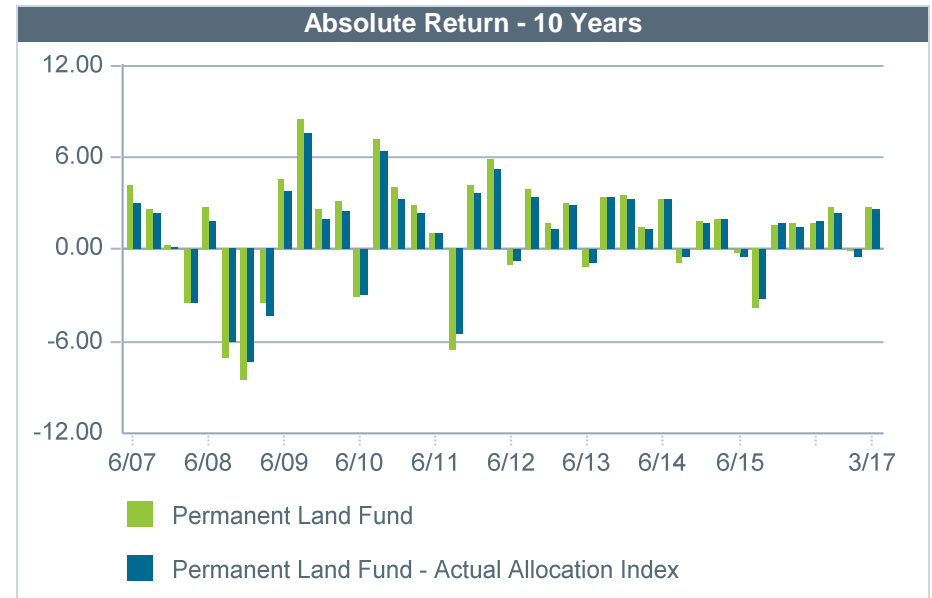
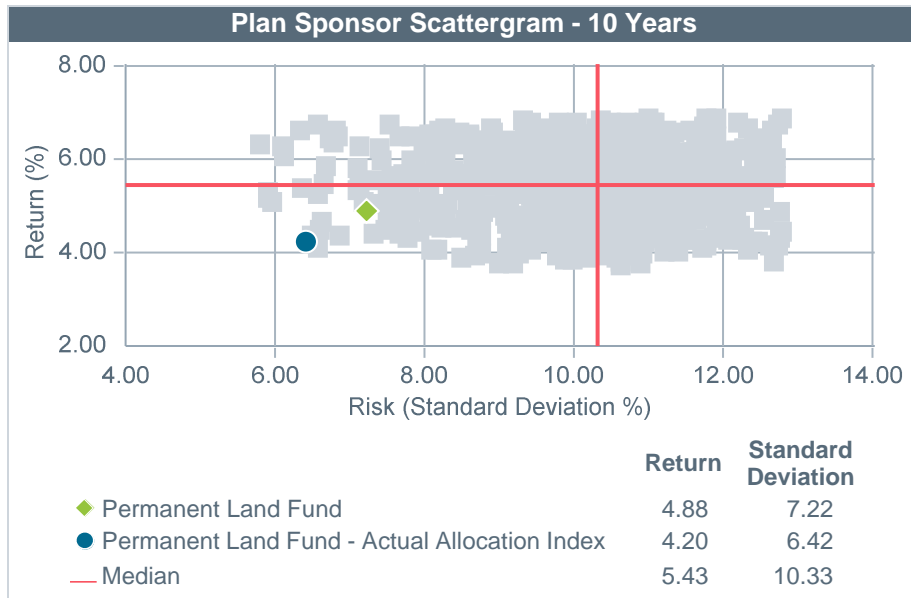
Performance shown is gross of fees. Calculations are based on quarterly periodicity.



Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
US Equity	30,140,049	16.04	16.40
Global Equity	5,605,762	2.98	3.10
International Equity	21,081,141	11.22	11.50
Private Equity	12,053,770	6.41	4.00
Real Estate	12,313,933	6.55	7.50
Absolute Return	6,965,726	3.71	7.50
Convertibles	3,712,779	1.98	2.00
Fixed Income	79,525,501	42.32	43.00
Cash (inv. in SAP)	16,521,684	8.79	5.00
Total Fund	187,920,344	100.00	100.00





Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



Wyoming State Treasurer's Office  
University Permanent Land Fund  
Total Fund Characteristics

As of March 31, 2017

### Investment Pool Profile

**Fund Type:** Permanent Fund

**Main Objective:** Produce maximized long-term investment income and capital gains while providing appropriate liquidity

**Primary Investment Goal:** Capital appreciation, total return, and protection against inflation

**Long-Term Return Expectation:** CPI + 4%

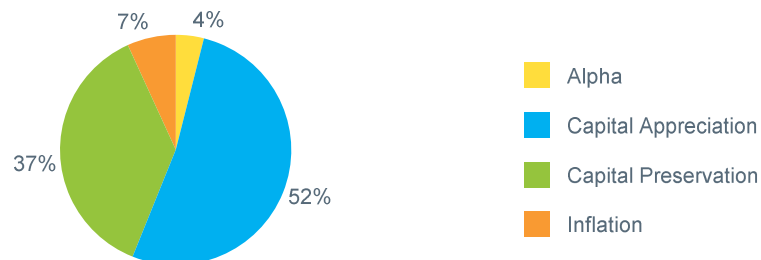
**Funding Source:** Royalties, leases, fees and permits, and other revenue generated from State lands

**Liquidity Constraints:** The corpus cannot be spent but only invested for income and capital gains

**Maximum Equity Allocation:** 55%

**Current Target Equity Allocation:** 50%

### Asset Allocation by Theme



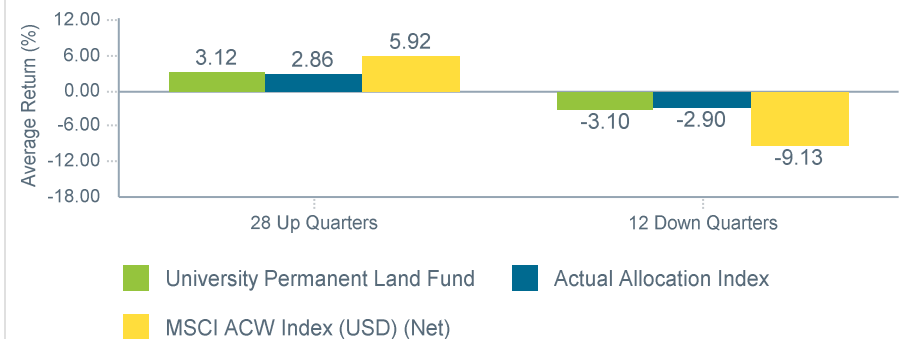
### MPT Stats

	5 Years	10 Years
Maximum Return	3.81	8.46
Minimum Return	-4.38	-9.51
Standard Deviation	4.07	7.53
vs. S&P 500 Index (Cap Wtd)		
Beta	0.41	0.43
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.41	0.57

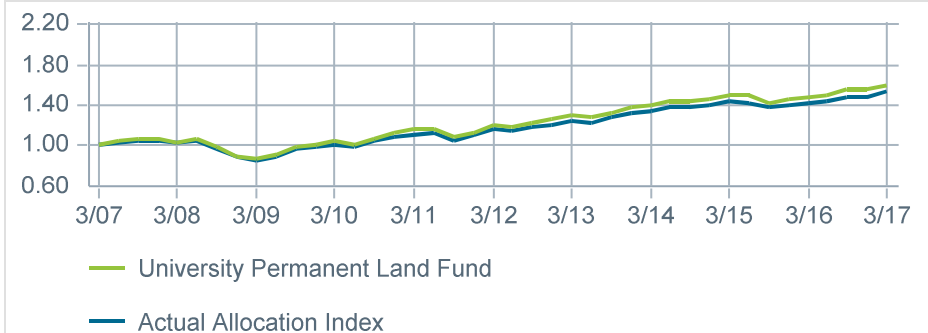
### Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
University Permanent Land Fund	21,584	100.00	-	100.00	-
US Equity	4,652	21.55	13.15	16.40	19.65
Global Equity	684	3.17	2.35	3.10	3.85
International Equity	2,555	11.84	9.00	11.50	14.00
Private Equity	1,142	5.29	2.00	4.00	6.00
Real Estate	1,378	6.38	4.50	7.50	10.50
Absolute Return	845	3.92	4.50	7.50	10.50
Convertibles	420	1.95	1.00	2.00	3.00
Fixed Income	8,086	37.46	38.00	43.00	48.00
Cash (inv. in SAP)	1,822	8.44	0.00	5.00	10.00

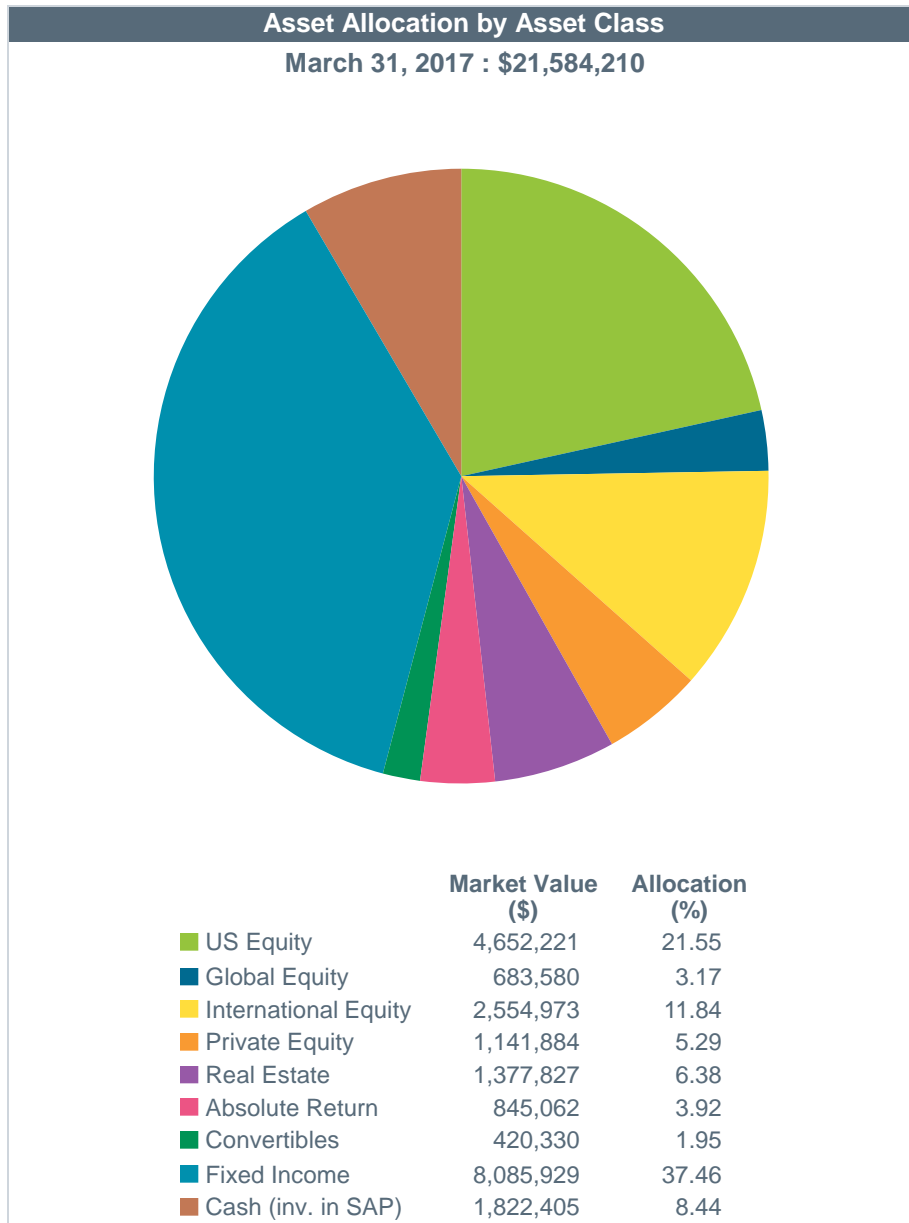
### Up/Down Markets - 10 Years



### Growth of \$1 - 10 Years

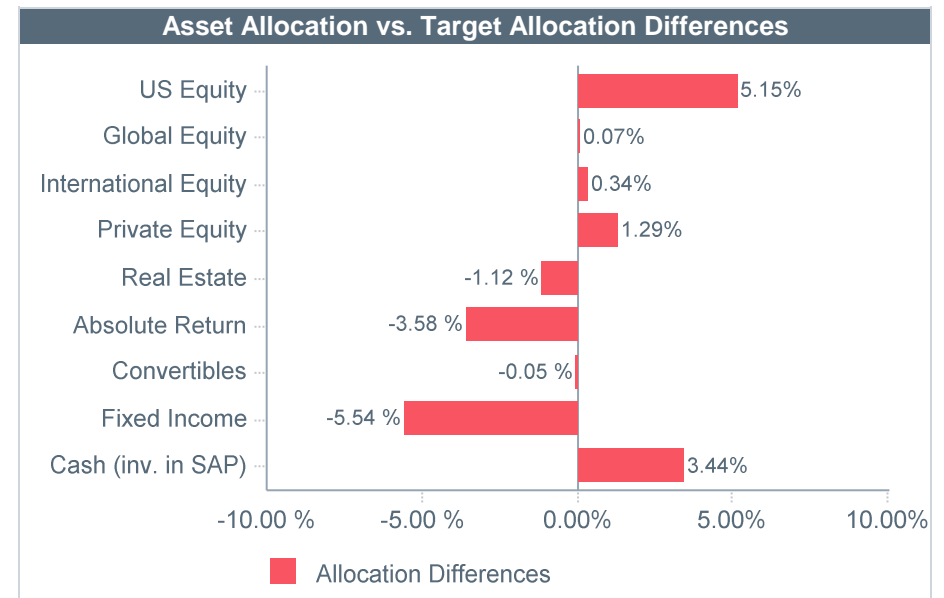


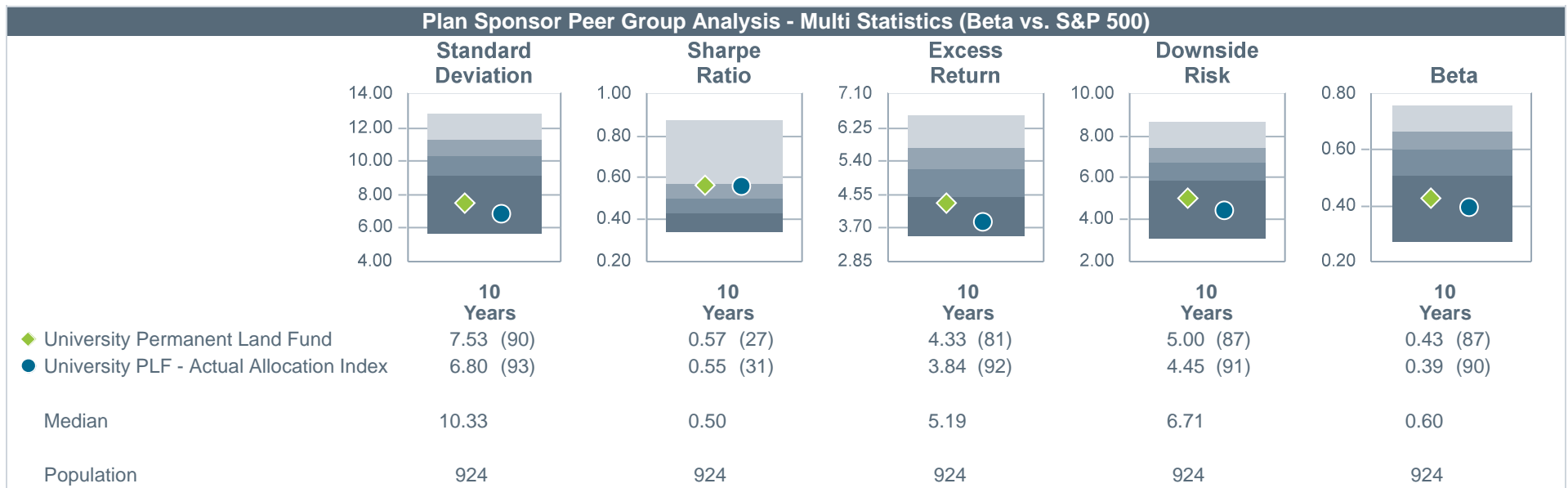
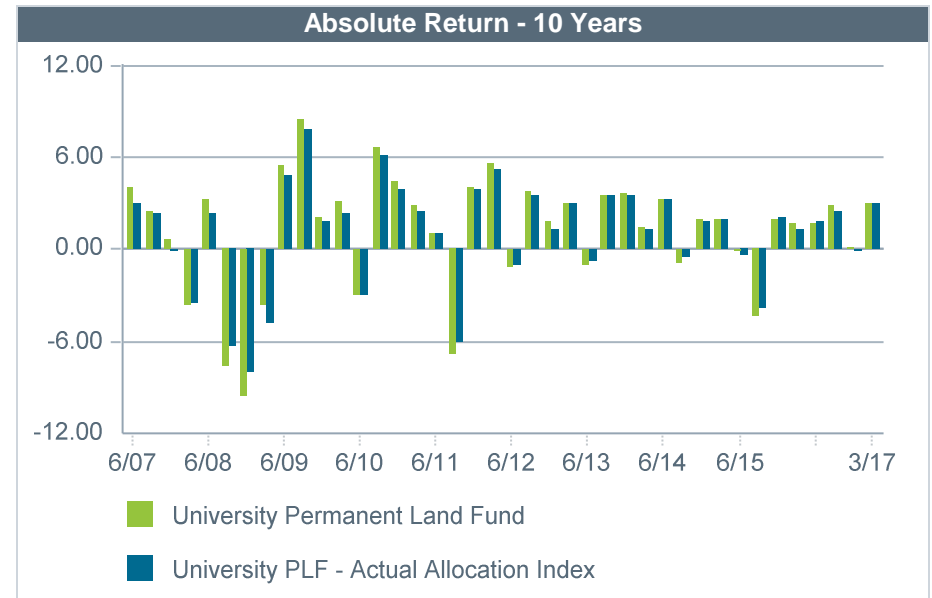
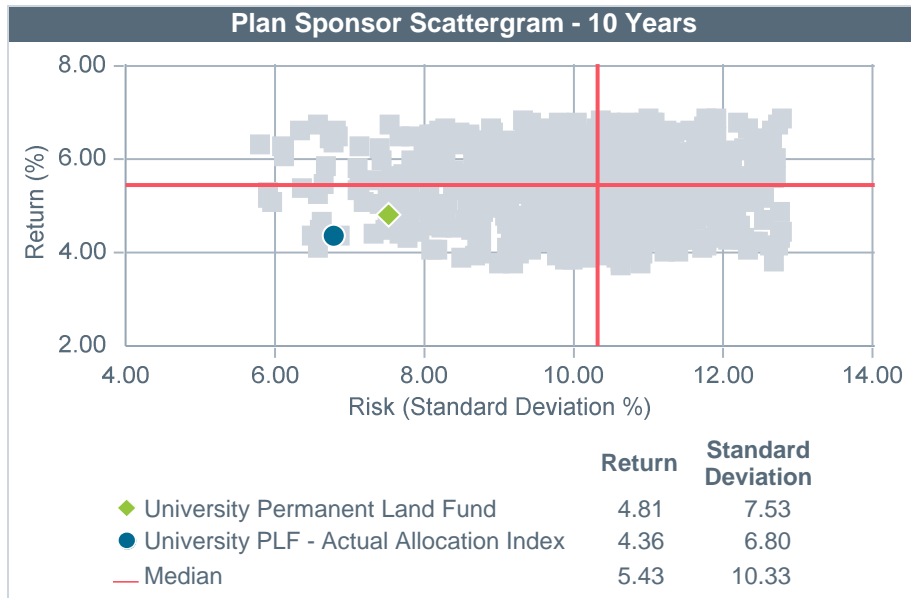
Performance shown is gross of fees. Calculations are based on quarterly periodicity.



Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
US Equity	4,652,221	21.55	16.40
Global Equity	683,580	3.17	3.10
International Equity	2,554,973	11.84	11.50
Private Equity	1,141,884	5.29	4.00
Real Estate	1,377,827	6.38	7.50
Absolute Return	845,062	3.92	7.50
Convertibles	420,330	1.95	2.00
Fixed Income	8,085,929	37.46	43.00
Cash (inv. in SAP)	1,822,405	8.44	5.00
Total Fund	21,584,210	100.00	100.00





Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

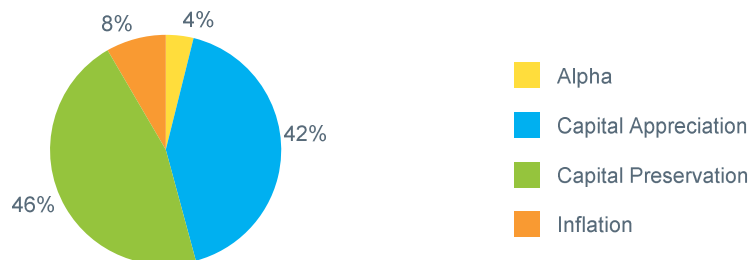
Wyoming State Treasurer's Office  
Hathaway Scholarship Endowment Fund  
Total Fund Characteristics

As of March 31, 2017

Investment Pool Profile

**Fund Type:** Permanent Fund  
**Main Objective:** Produce maximized long-term investment income and capital gains while providing appropriate liquidity  
**Primary Investment Goal:** Capital appreciation, total return, and protection against inflation  
**Long-Term Return Expectation:** CPI + 4%  
**Funding Source:** Federal mineral royalties  
**Liquidity Constraints:** The corpus cannot be spent but only invested for income and capital gains  
**Maximum Equity Allocation:** 55%  
**Current Target Equity Allocation:** 45%

Asset Allocation by Theme



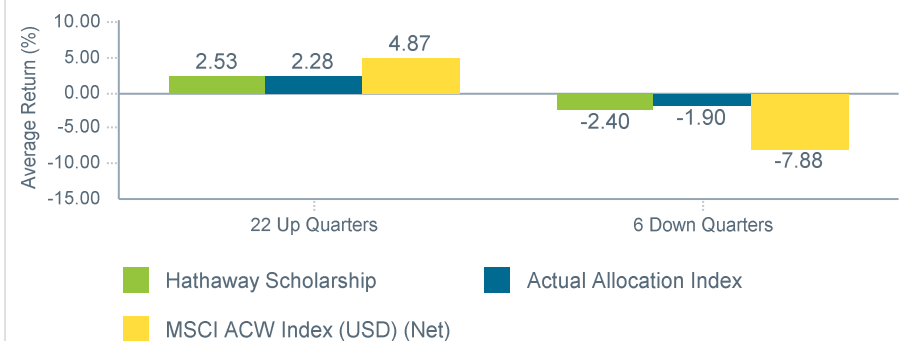
MPT Stats

	5 Years	7 Years
Maximum Return	3.76	6.89
Minimum Return	-3.20	-5.85
Standard Deviation	3.58	5.22
vs. S&P 500 Index (Cap Wtd)		
Beta	0.31	0.36
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.42	1.11

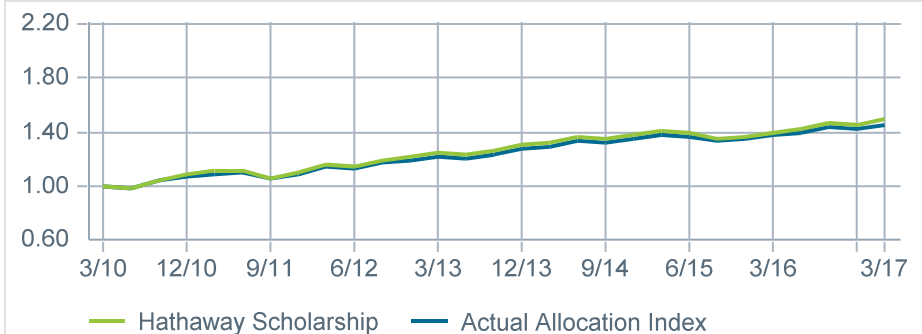
Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Hathaway Scholarship	583,130	100.00	-	100.00	-
US Equity	94,255	16.16	12.95	16.20	19.45
Global Equity	16,790	2.88	2.25	3.00	3.75
International Equity	66,496	11.40	8.70	11.20	13.70
Real Estate	42,065	7.21	4.30	7.30	10.30
Absolute Return	22,652	3.88	4.30	7.30	10.30
Convertibles	11,404	1.96	1.00	2.00	3.00
Fixed Income	268,511	46.05	43.00	48.00	53.00
Cash (inv. in SAP)	60,957	10.45	0.00	5.00	10.00

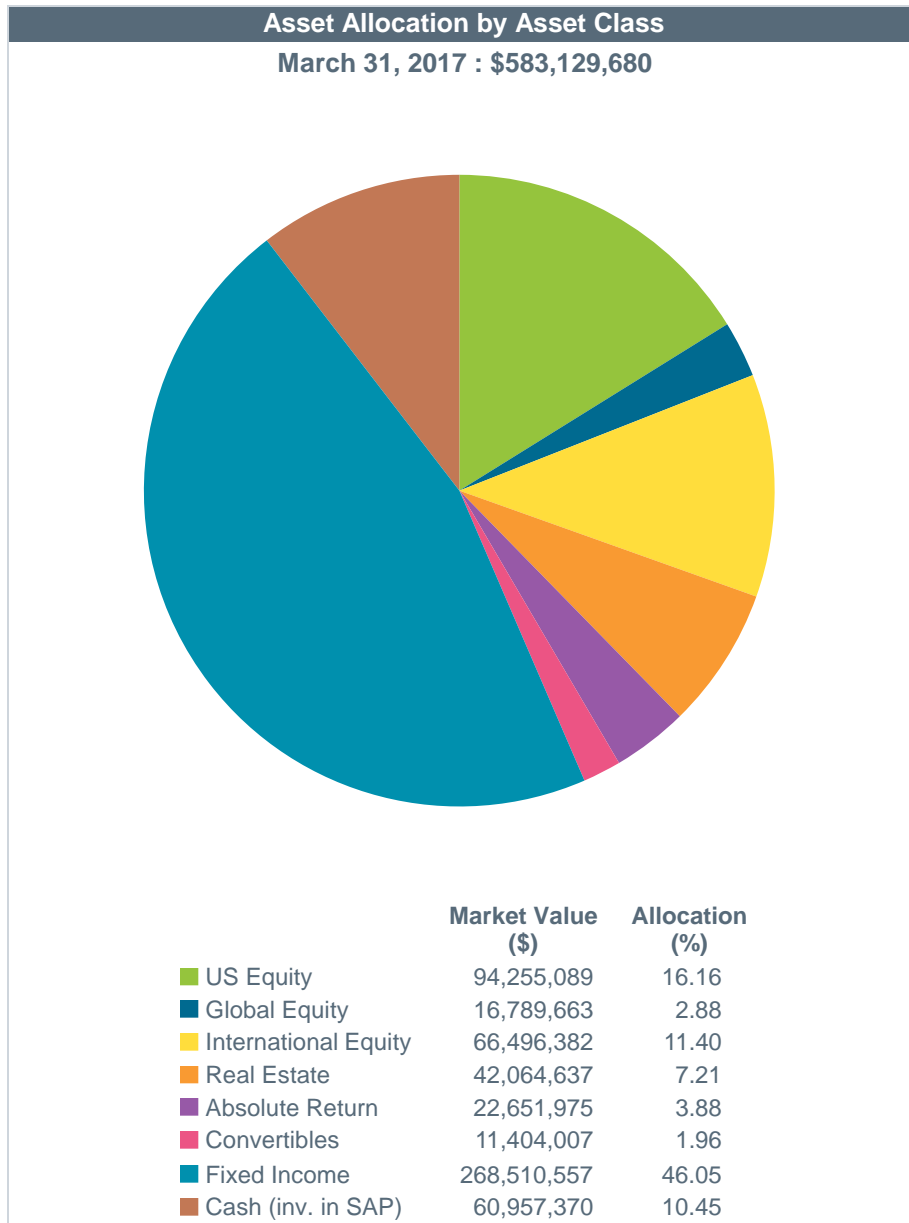
Up/Down Markets - 7 Years



Growth of \$1 - 7 Years

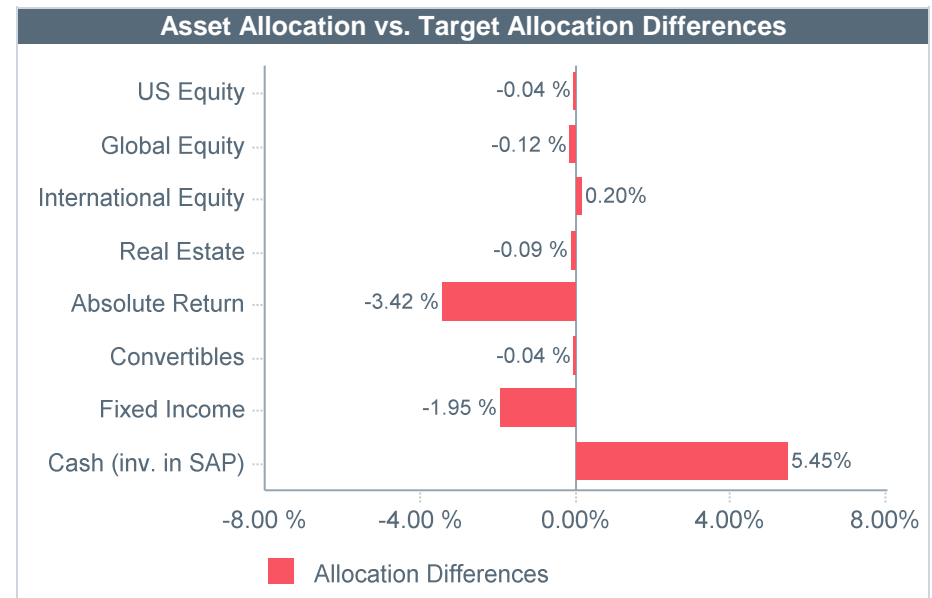


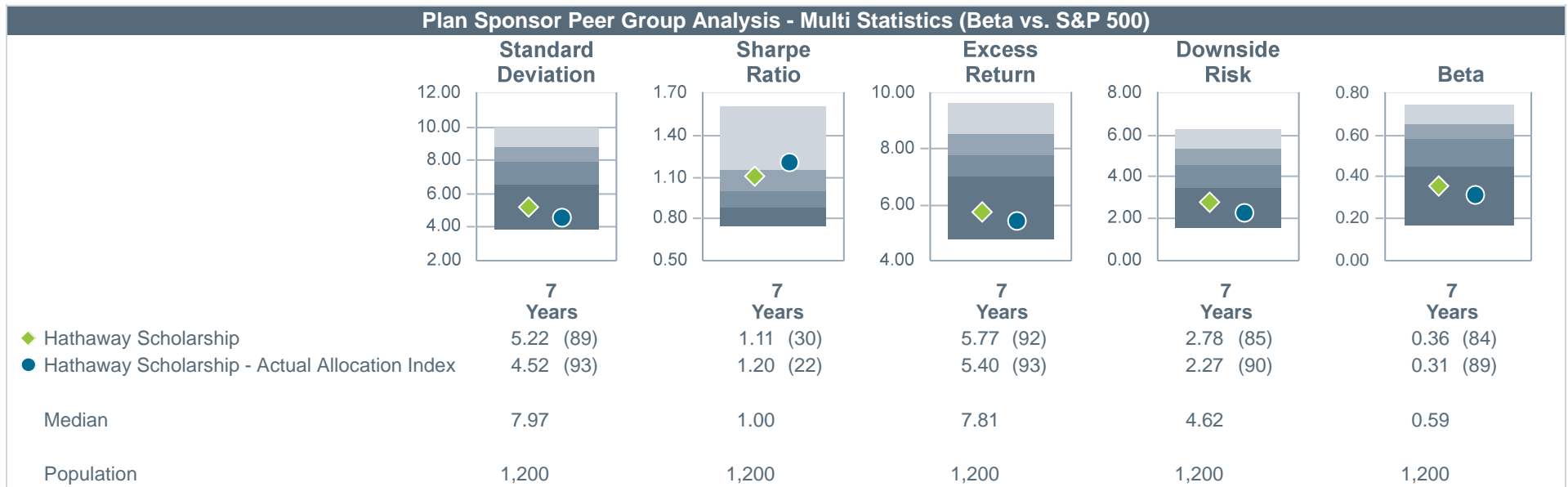
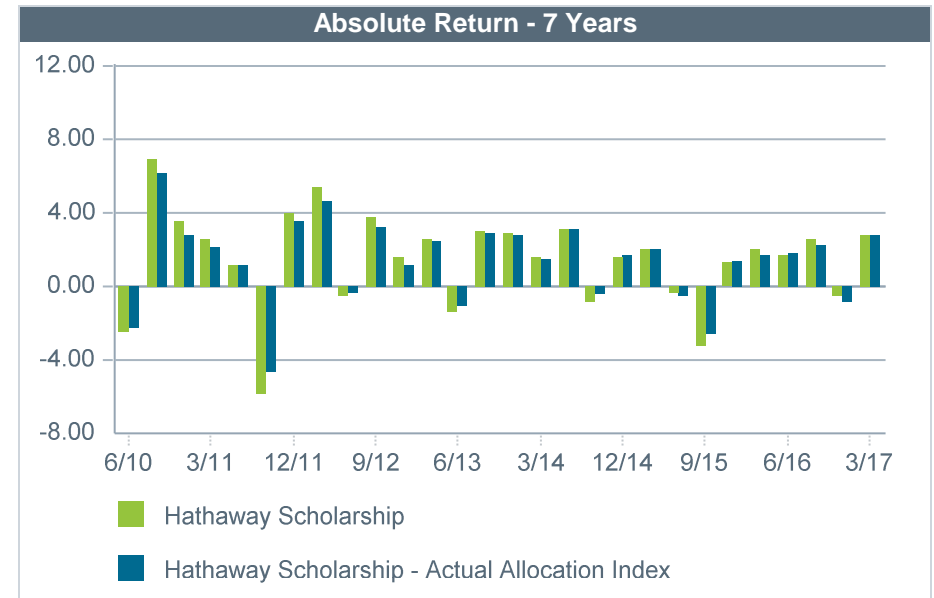
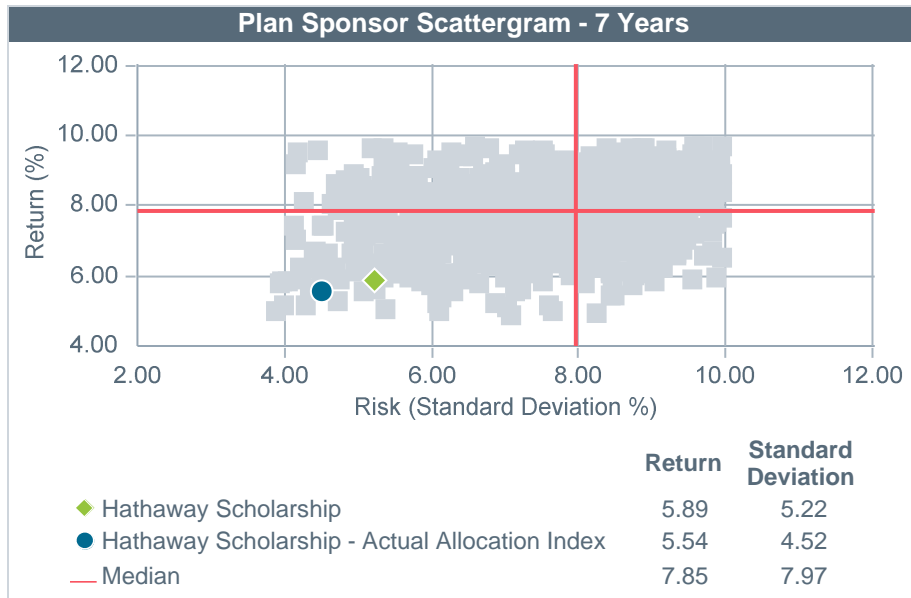
Performance shown is gross of fees. Calculations are based on quarterly periodicity.



Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
US Equity	94,255,089	16.16	16.20
Global Equity	16,789,663	2.88	3.00
International Equity	66,496,382	11.40	11.20
Real Estate	42,064,637	7.21	7.30
Absolute Return	22,651,975	3.88	7.30
Convertibles	11,404,007	1.96	2.00
Fixed Income	268,510,557	46.05	48.00
Cash (inv. in SAP)	60,957,370	10.45	5.00
Total Fund	583,129,680	100.00	100.00





Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

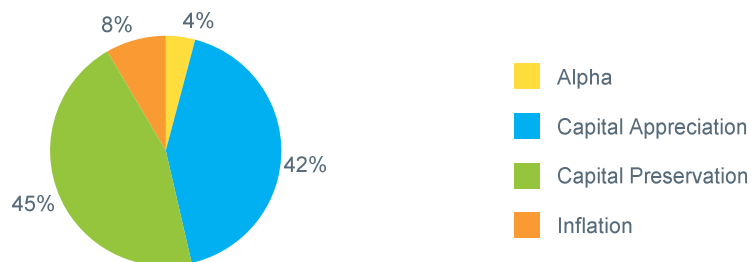
Wyoming State Treasurer's Office  
Higher Education Endowment Fund  
Total Fund Characteristics

As of March 31, 2017

Investment Pool Profile

**Fund Type:** Permanent Fund  
**Main Objective:** Produce maximized long-term investment income and capital gains while providing appropriate liquidity  
**Primary Investment Goal:** Capital appreciation, total return, and protection against inflation  
**Long-Term Return Expectation:** CPI + 4%  
**Spending Policy:** 5% of the five-year rolling average market value, calculated on the first day of the fiscal year  
**Funding Source:** Federal mineral royalties  
**Liquidity Constraints:** The corpus cannot be spent but only invested for income and capital gains  
**Maximum Equity Allocation:** 55%  
**Current Target Equity Allocation:** 45%

Asset Allocation by Theme



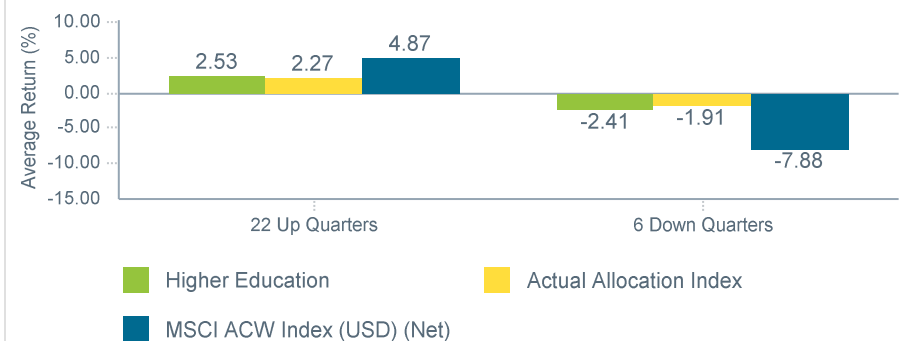
MPT Stats

	5 Years	7 Years
Maximum Return	3.79	6.85
Minimum Return	-3.28	-5.85
Standard Deviation	3.61	5.22
vs. S&P 500 Index (Cap Wtd)		
Beta	0.32	0.36
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.40	1.10

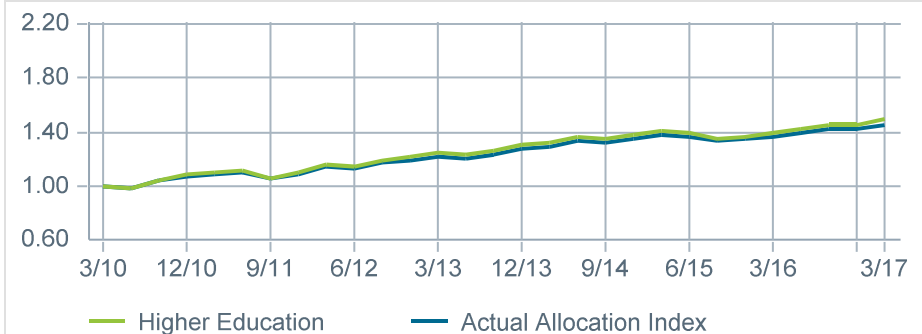
Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Higher Education	120,296	100.00	-	100.00	-
US Equity	19,473	16.19	12.95	16.20	19.45
Global Equity	3,519	2.92	2.25	3.00	3.75
International Equity	13,786	11.46	8.70	11.20	13.70
Real Estate	8,597	7.15	4.30	7.30	10.30
Absolute Return	4,953	4.12	4.30	7.30	10.30
Convertibles	2,401	2.00	1.00	2.00	3.00
Fixed Income	56,329	46.83	43.00	48.00	53.00
Cash (inv. in SAP)	11,238	9.34	0.00	5.00	10.00

Up/Down Markets - 7 Years

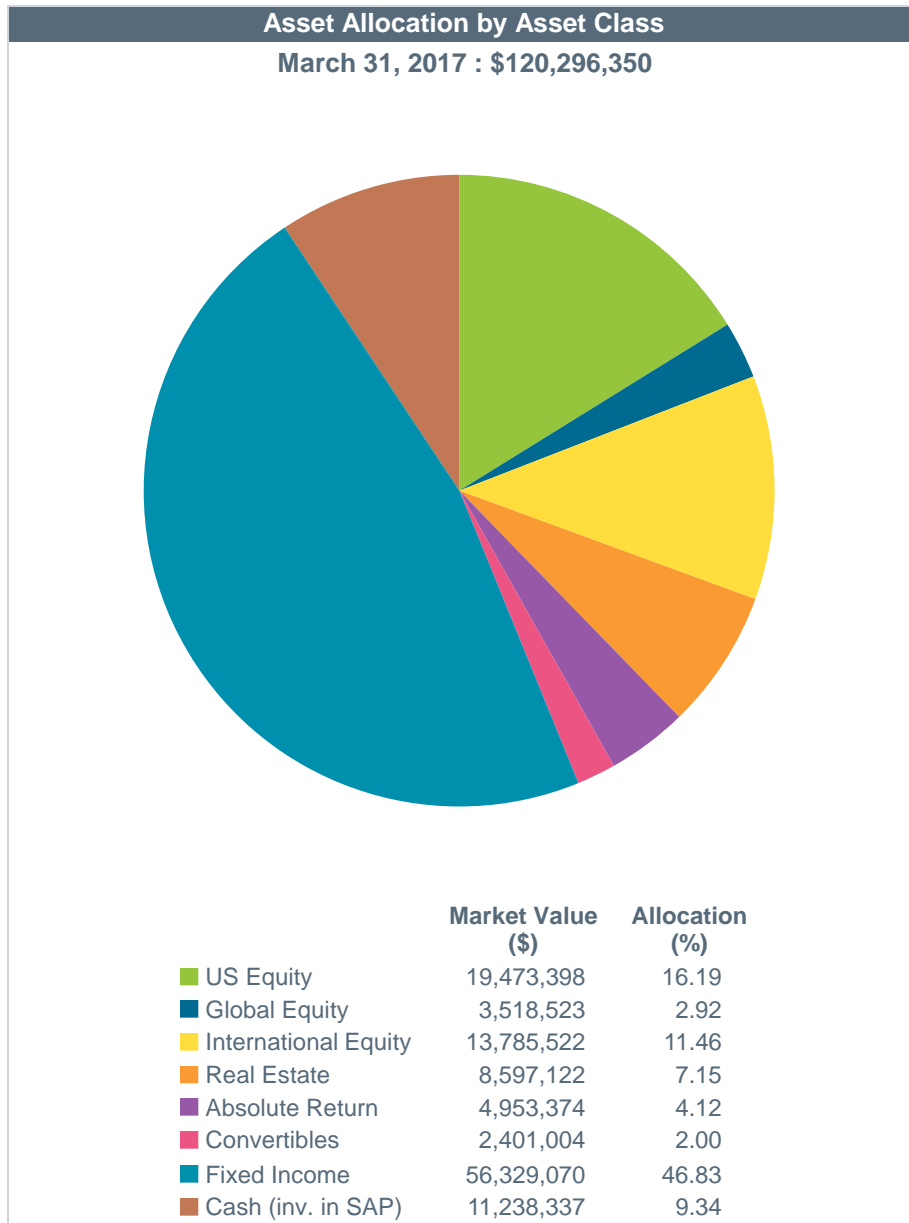


Growth of \$1 - 7 Years



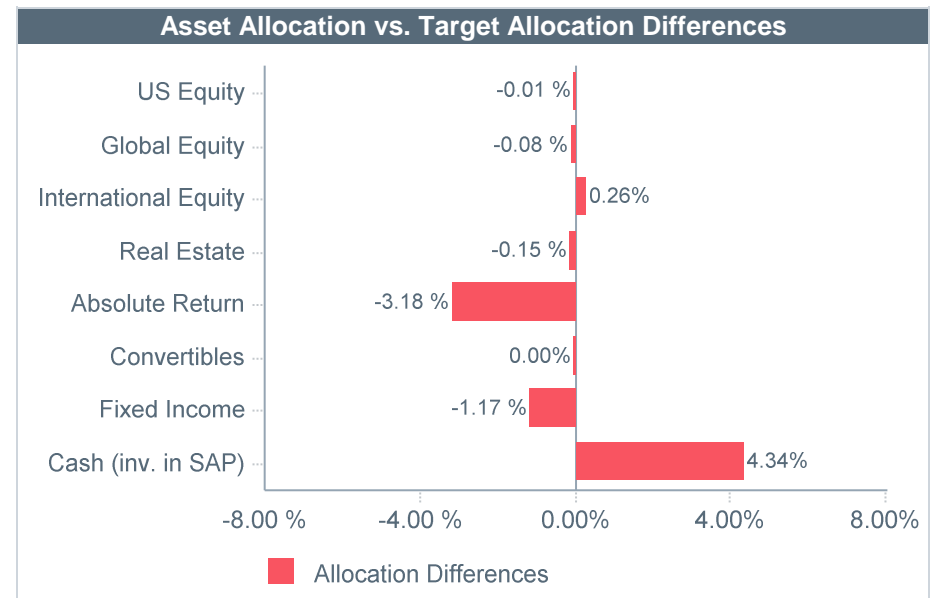
Performance shown is gross of fees. Calculations are based on quarterly periodicity.

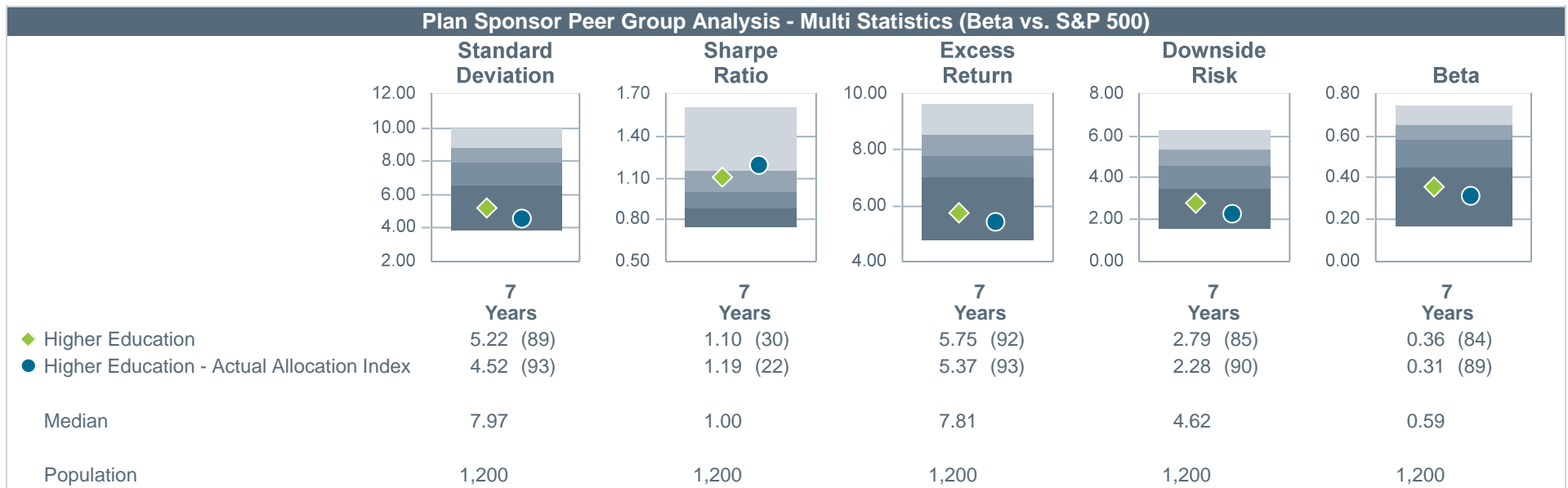
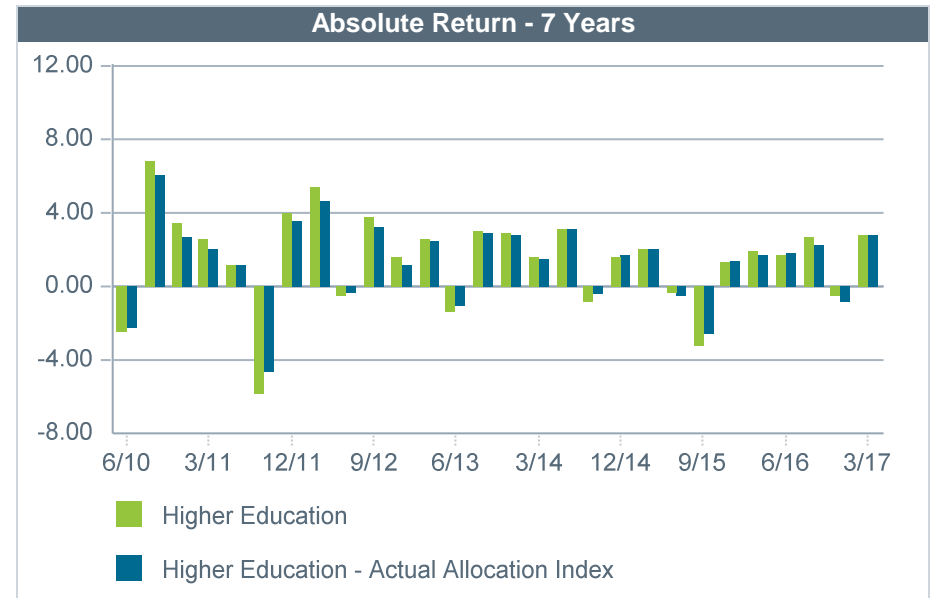
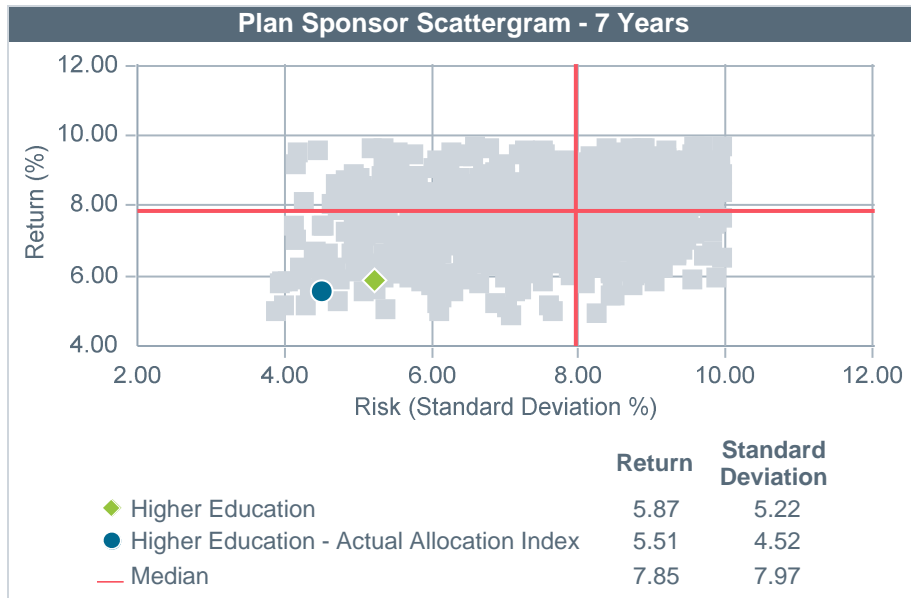




Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
US Equity	19,473,398	16.19	16.20
Global Equity	3,518,523	2.92	3.00
International Equity	13,785,522	11.46	11.20
Real Estate	8,597,122	7.15	7.30
Absolute Return	4,953,374	4.12	7.30
Convertibles	2,401,004	2.00	2.00
Fixed Income	56,329,070	46.83	48.00
Cash (inv. in SAP)	11,238,337	9.34	5.00
Total Fund	120,296,350	100.00	100.00





Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

Wyoming State Treasurer's Office  
Workers Compensation Fund  
Total Fund Characteristics

As of March 31, 2017

Investment Pool Profile

**Fund Type:** Permanent Fund

**Main Objective:** To be invested for the very long-term to produce a situation in which the fund is self funding or nearly self-funding in order to substantially reduce or eliminate the need for employer contributions

**Primary Investment Goal:** Safety of capital, yield, and capital appreciation

**Long-Term Return Expectation:** CPI + 3%

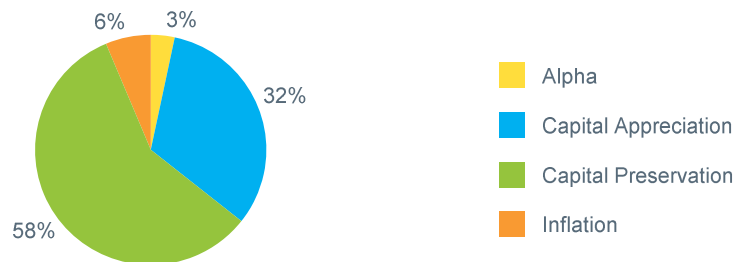
**Funding Source:** Employer premiums

**Liquidity Constraints:** The Fund must be managed for long-term return with cash flow necessary only in the case of a disaster

**Maximum Equity Allocation:** 45%

**Current Target Equity Allocation:** 30%

Asset Allocation by Theme



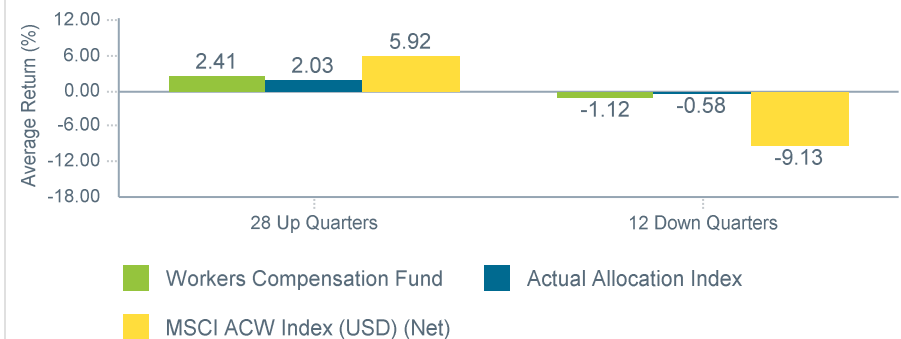
MPT Stats

	5 Years	10 Years
Maximum Return	3.38	7.93
Minimum Return	-2.03	-3.64
Standard Deviation	3.07	4.86
vs. S&P 500 Index (Cap Wtd)		
Beta	0.21	0.23
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	1.36	0.94

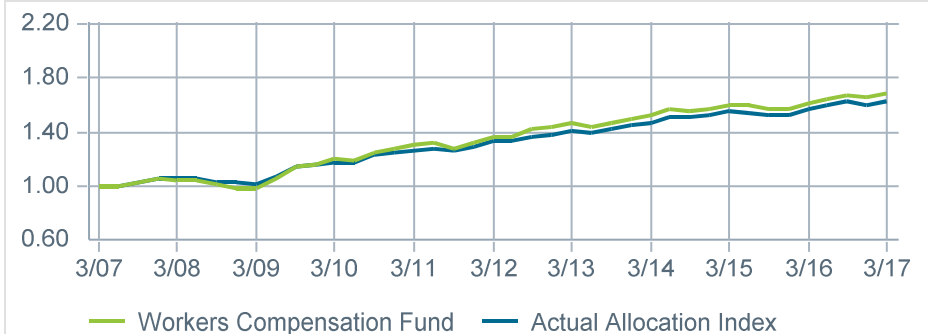
Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Workers Compensation Fund	1,952,740	100.00	-	100.00	-
US Equity	192,596	9.86	7.75	10.00	12.25
Global Equity	35,610	1.82	1.40	1.90	2.40
International Equity	137,715	7.05	5.60	7.10	8.60
Real Estate	75,001	3.84	2.25	4.00	5.75
Absolute Return	65,538	3.36	4.00	7.00	10.00
Convertibles	56,031	2.87	1.75	3.00	4.25
Fixed Income	1,121,048	57.41	56.00	62.00	68.00
Cash (inv. in SAP)	269,201	13.79	0.00	5.00	10.00

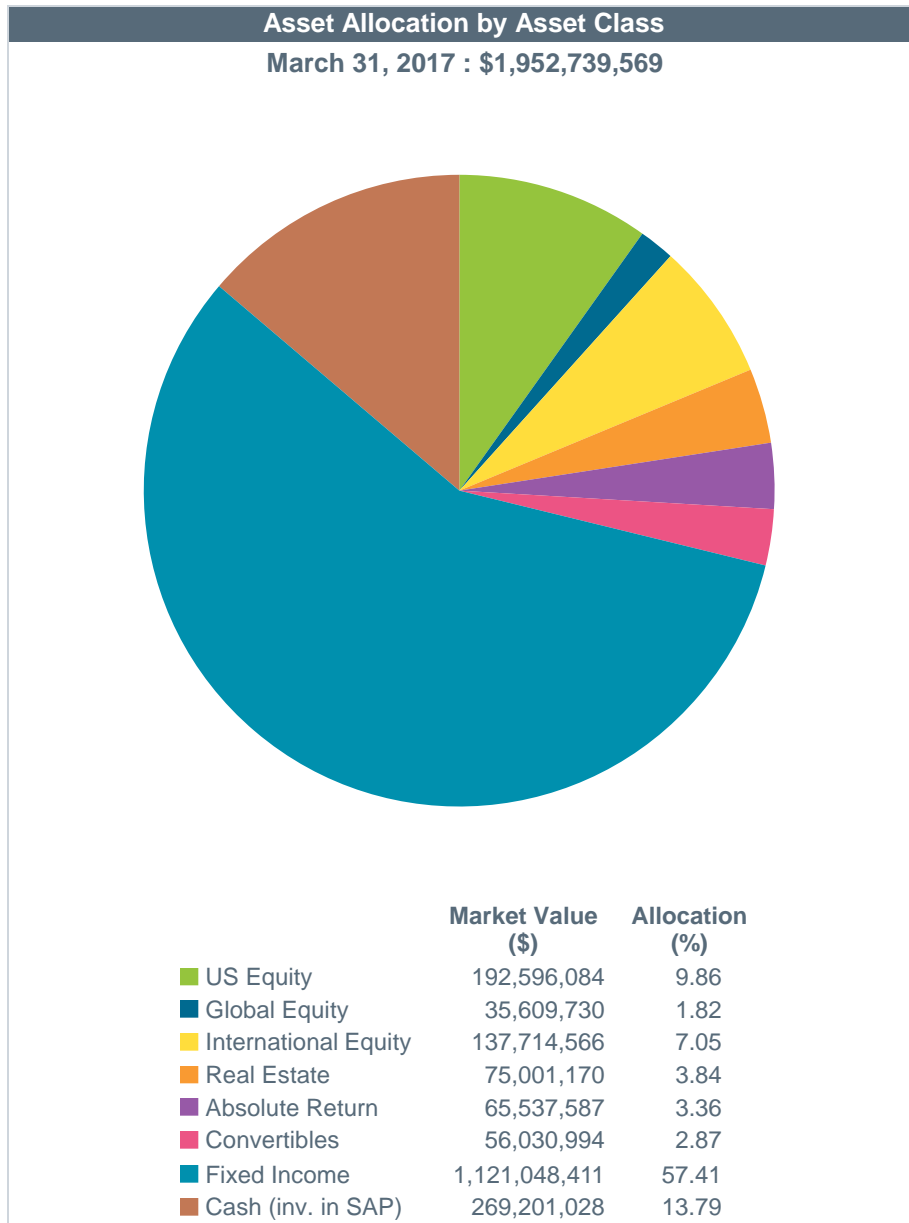
Up/Down Markets - 10 Years



Growth of \$1 - 10 Years

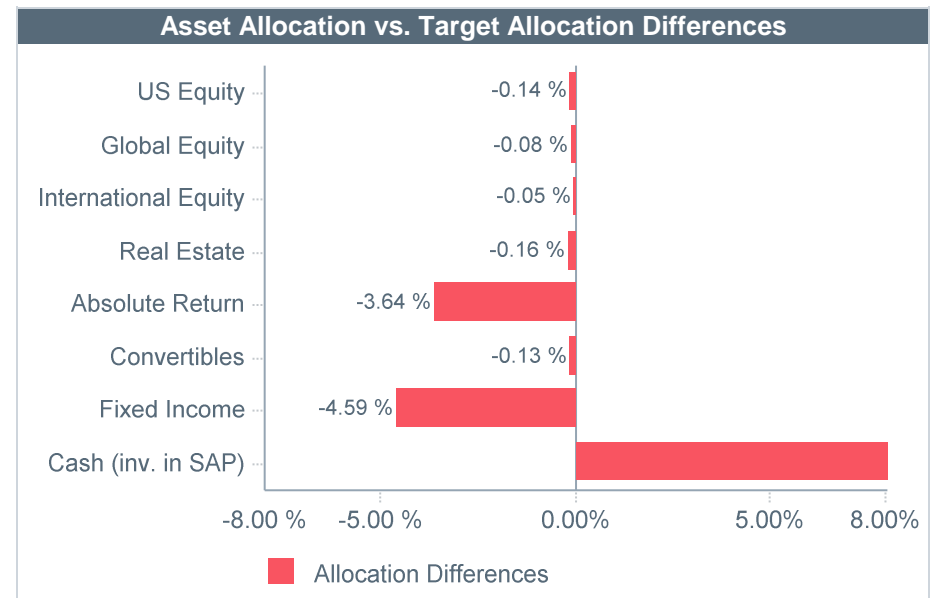


Performance shown is gross of fees. Calculations are based on quarterly periodicity.



Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
US Equity	192,596,084	9.86	10.00
Global Equity	35,609,730	1.82	1.90
International Equity	137,714,566	7.05	7.10
Real Estate	75,001,170	3.84	4.00
Absolute Return	65,537,587	3.36	7.00
Convertibles	56,030,994	2.87	3.00
Fixed Income	1,121,048,411	57.41	62.00
Cash (inv. in SAP)	269,201,028	13.79	5.00
Total Fund	1,952,739,569	100.00	100.00



Wyoming State Treasurer's Office  
Tobacco Settlement Trust  
Total Fund Characteristics

As of March 31, 2017

### Investment Pool Profile

**Fund Type:** Non-Permanent Fund

**Main Objective:** Managed for investment of payments received pursuant to the Master Settlement Agreement

**Primary Investment Goal:** Safety of capital, yield, and liquidity

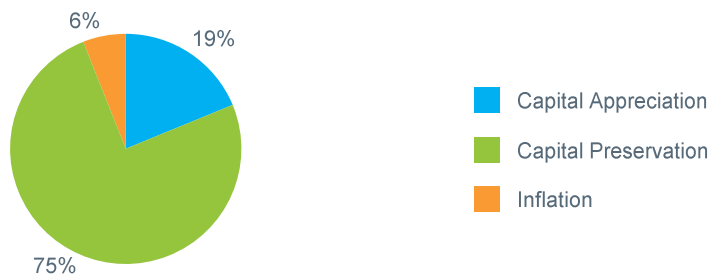
**Long-Term Return Expectation:** CPI + 2.25%

**Funding Source:** Settlement proceeds received under the 1998 Master Settlement Agreement between States and tobacco companies

**Maximum Equity Allocation:** 0%

**Current Target Equity Allocation:** 0%

### Asset Allocation by Theme



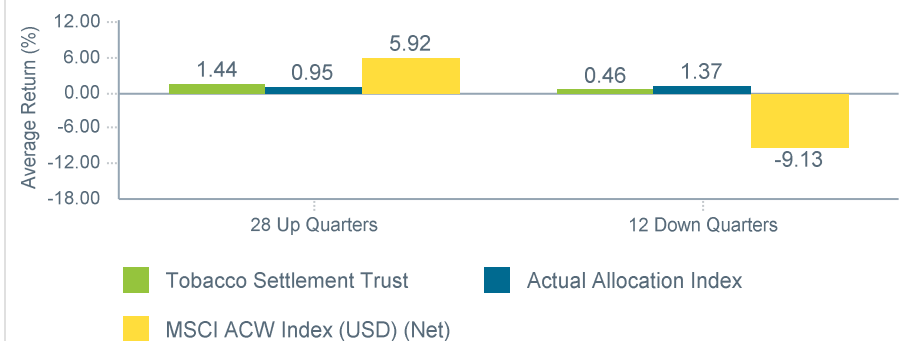
### MPT Stats

	5 Years	10 Years
Maximum Return	2.99	5.27
Minimum Return	-3.07	-3.07
Standard Deviation	3.08	3.31
vs. S&P 500 Index (Cap Wtd)		
Beta	-0.01	0.04
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	0.82	1.16

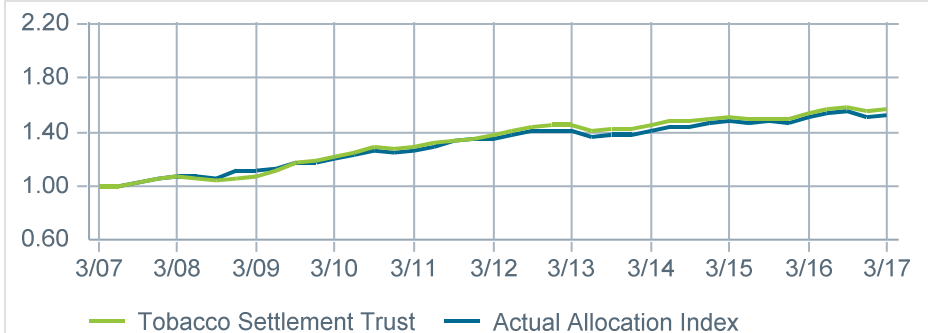
### Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
Tobacco Settlement Trust	83,854	100.00	-	100.00	-
Convertibles	2,651	3.16	1.75	3.00	4.25
Fixed Income	75,740	90.32	88.00	94.00	100.00
Cash (inv. in SAP)	5,463	6.51	0.00	3.00	6.00

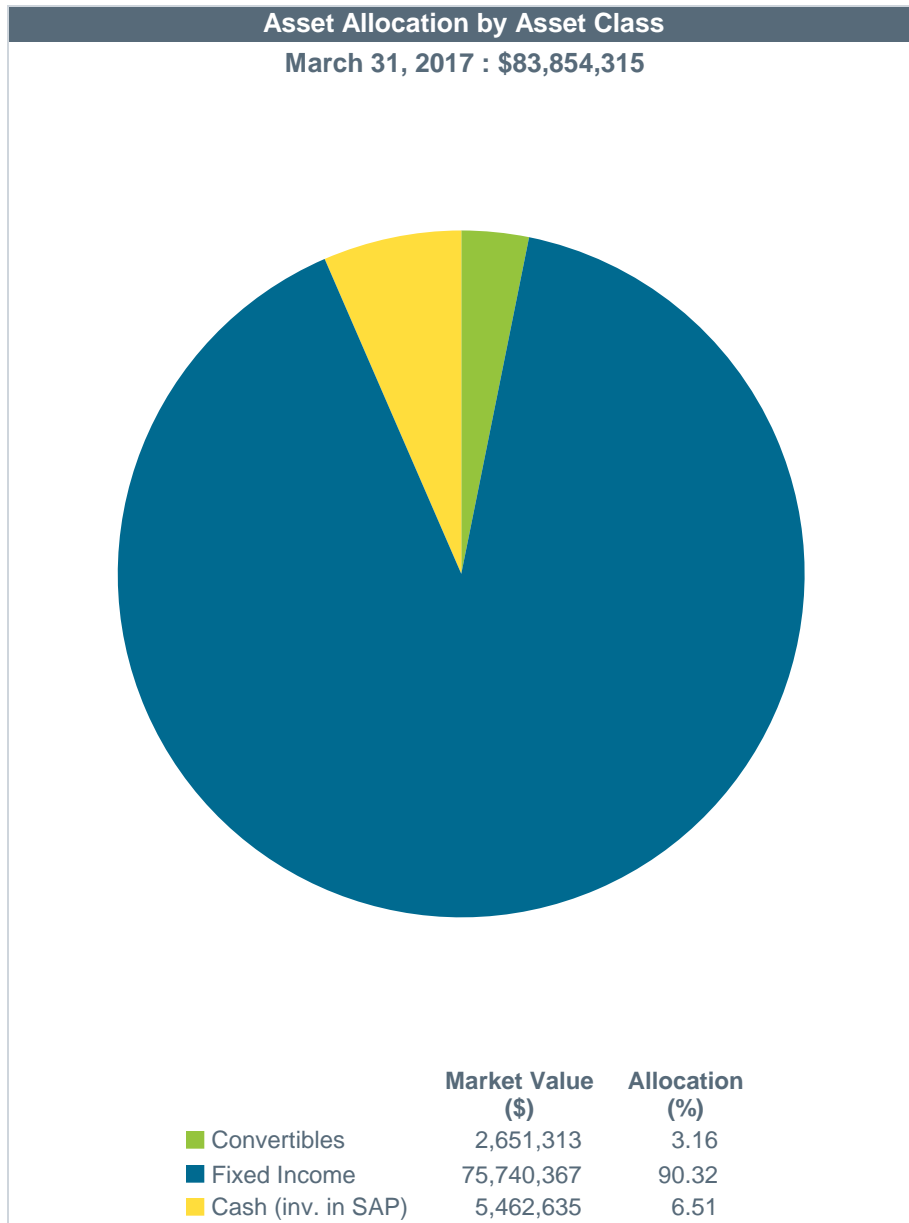
### Up/Down Markets - 10 Years



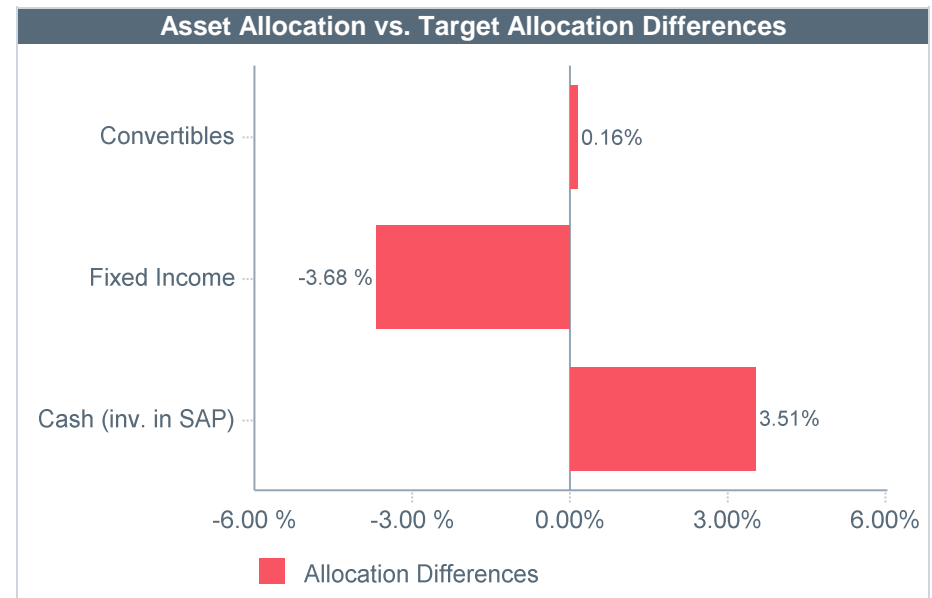
### Growth of \$1 - 10 Years



Performance shown is gross of fees. Calculations are based on quarterly periodicity.



Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
Convertibles	2,651,313	3.16	3.00
Fixed Income	75,740,367	90.32	94.00
Cash (inv. in SAP)	5,462,635	6.51	3.00
Total Fund	83,854,315	100.00	100.00



Allocations shown may not sum up to 100% exactly due to rounding.

Wyoming State Treasurer's Office  
State Agency Pool  
Total Fund Characteristics

As of March 31, 2017

### Investment Pool Profile

**Fund Type:** Non-Permanent Fund

**Main Objective:** Produce an investment return so that State agencies have the advantage of better income from their invested funds, while maintaining liquidity

**Primary Investment Goal:** Safety of capital, yield, and liquidity

**Long-Term Return Expectation:** CPI + 2%

**Funding Source:** Monies from all other State funds pooled for investment

**Liquidity Constraints:** The Fund must meet the day-to-day cash flow needs of the State

**Maximum Equity Allocation:** 0%

**Current Target Equity Allocation:** 0%

### Asset Allocation by Theme



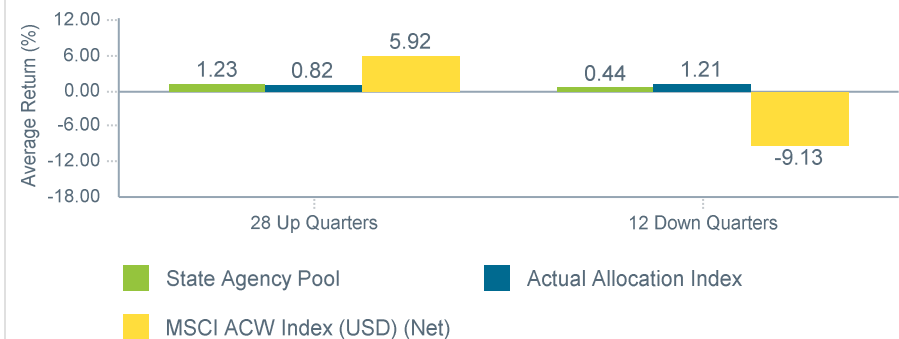
### MPT Stats

	5 Years	10 Years
Maximum Return	2.61	4.64
Minimum Return	-2.47	-2.47
Standard Deviation	2.61	2.78
vs. S&P 500 Index (Cap Wtd)		
Beta	-0.01	0.03
vs. BofA ML 3 Mo US T-Bill Index		
Sharpe Ratio	0.82	1.16

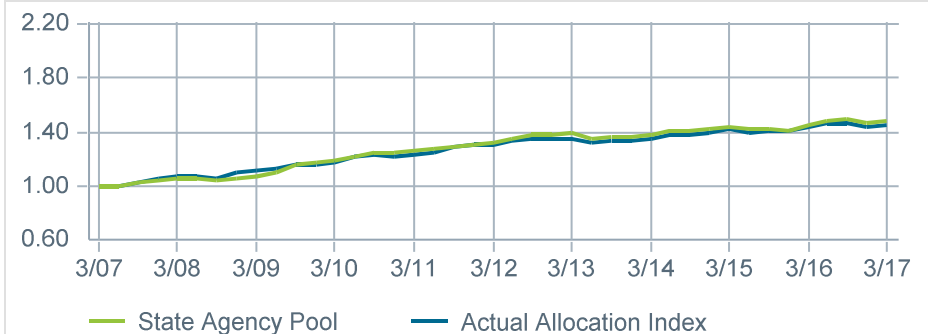
### Asset Allocation vs. Target Allocation

	Market Value (\$000)	Allocation (%)	Minimum Range (%)	Target (%)	Maximum Range (%)
State Agency Pool	5,796,140	100.00	-	100.00	-
Convertibles	172,875	2.98	1.75	3.00	4.25
Fixed Income	4,410,195	76.09	82.00	88.00	94.00
Cash Equivalents	959,590	16.56	0.00	9.00	18.00
Public Purpose Investments	253,479	4.37	0.00	0.00	0.00

### Up/Down Markets - 10 Years

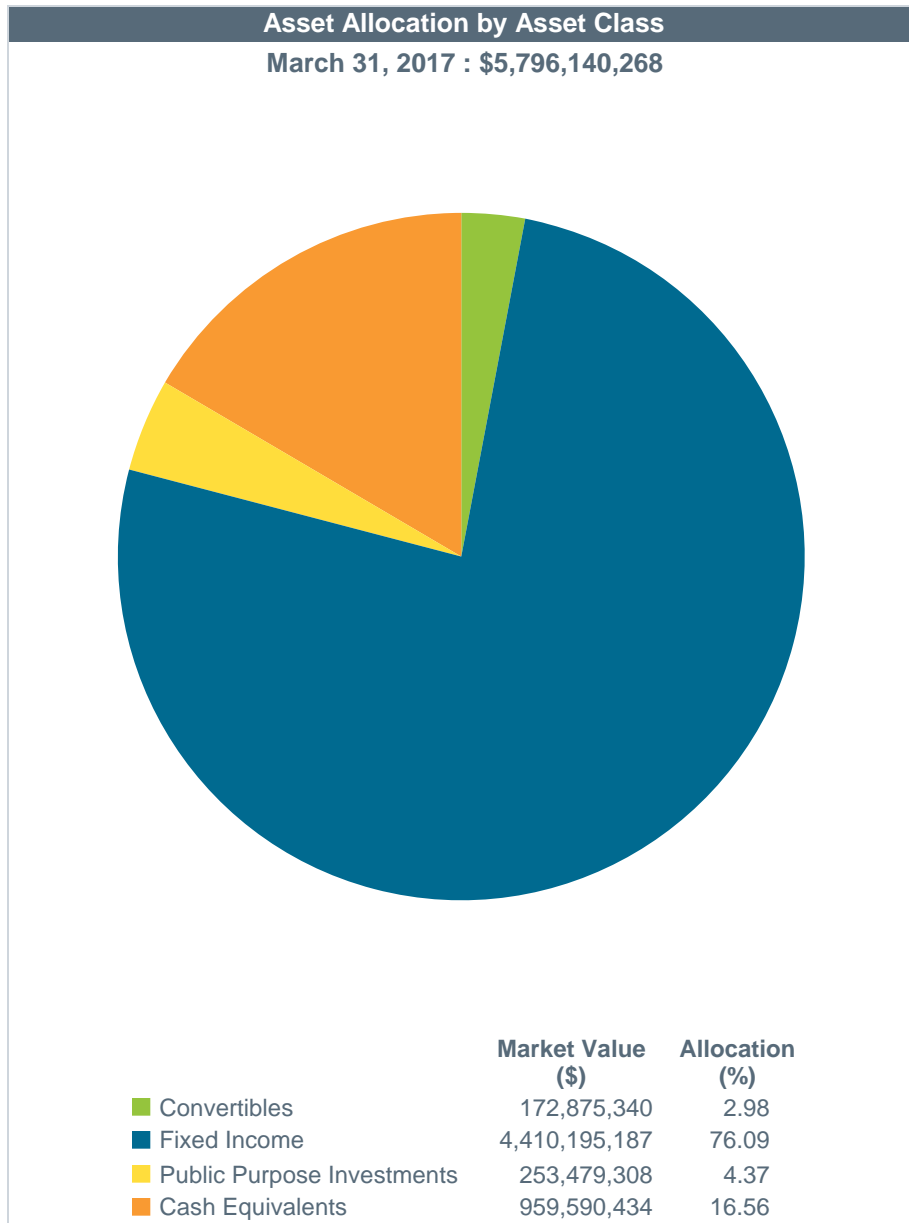


### Growth of \$1 - 10 Years



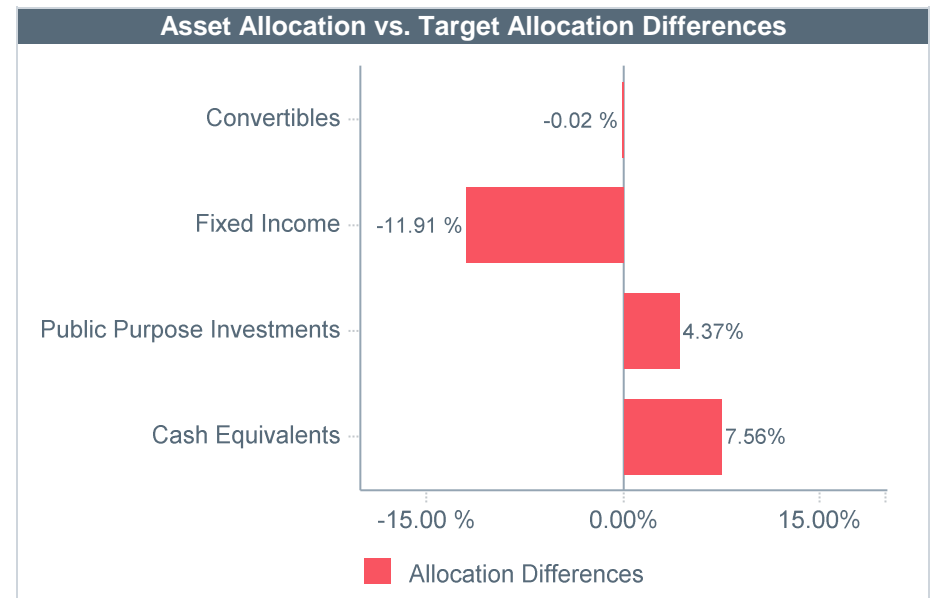
Performance shown is gross of fees. Calculations are based on quarterly periodicity.



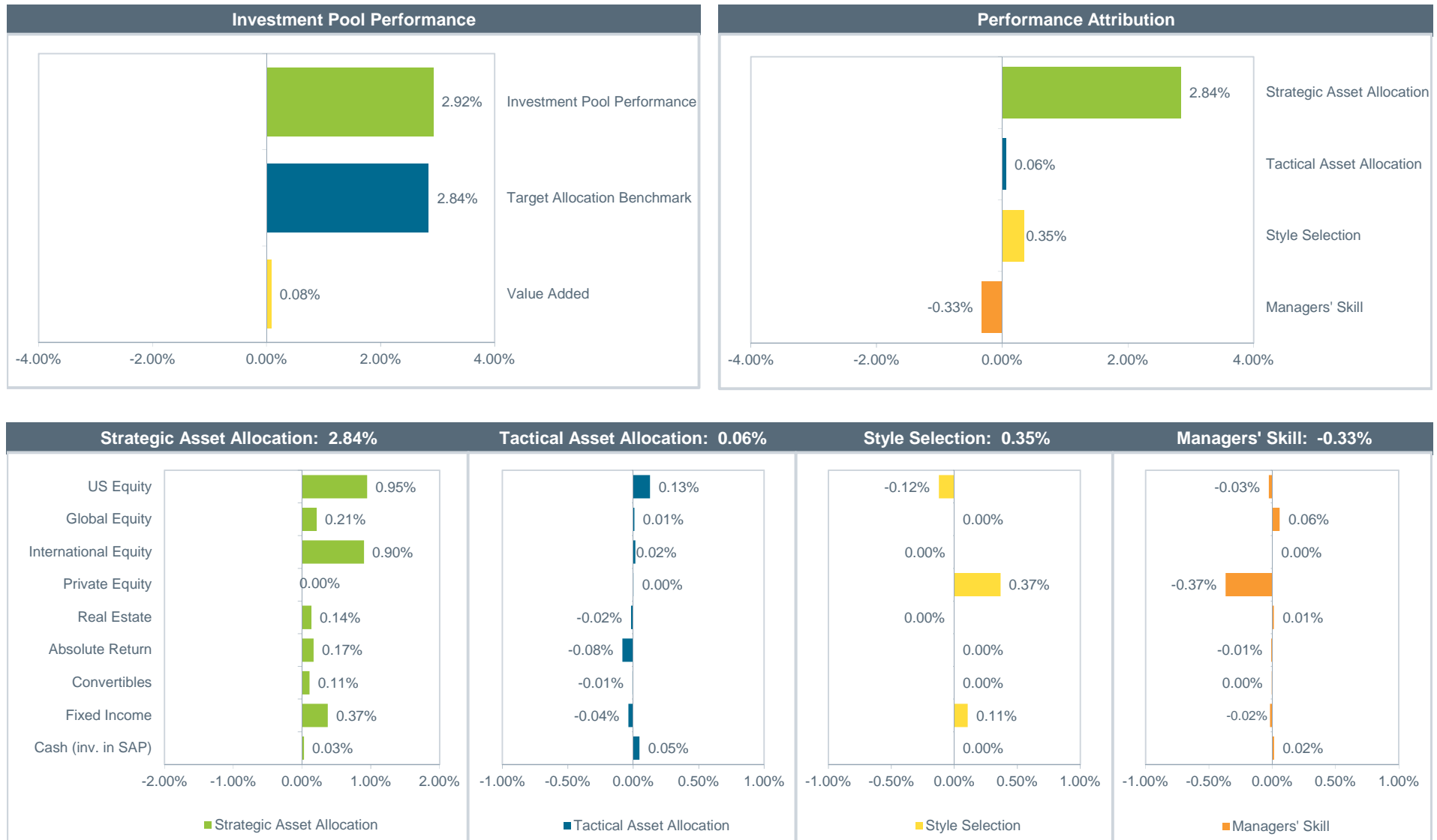


Allocations shown may not sum up to 100% exactly due to rounding.

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
Convertibles	172,875,340	2.98	3.00
Fixed Income	4,410,195,187	76.09	88.00
Public Purpose Investments	253,479,308	4.37	0.00
Cash Equivalents	959,590,434	16.56	9.00
Total Fund	5,796,140,268	100.00	100.00

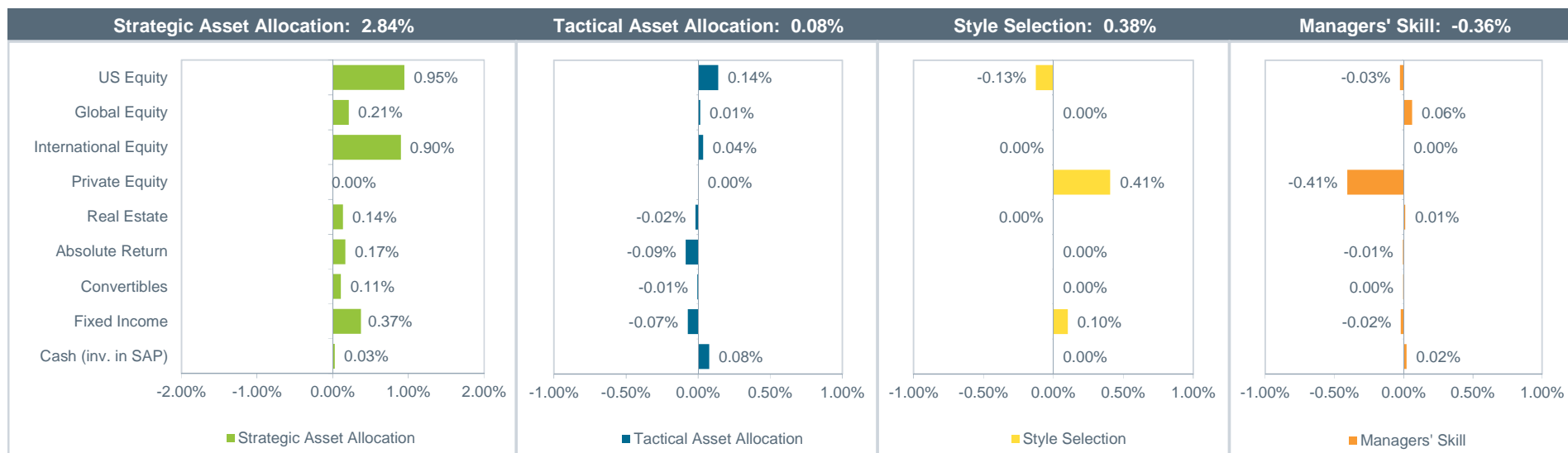
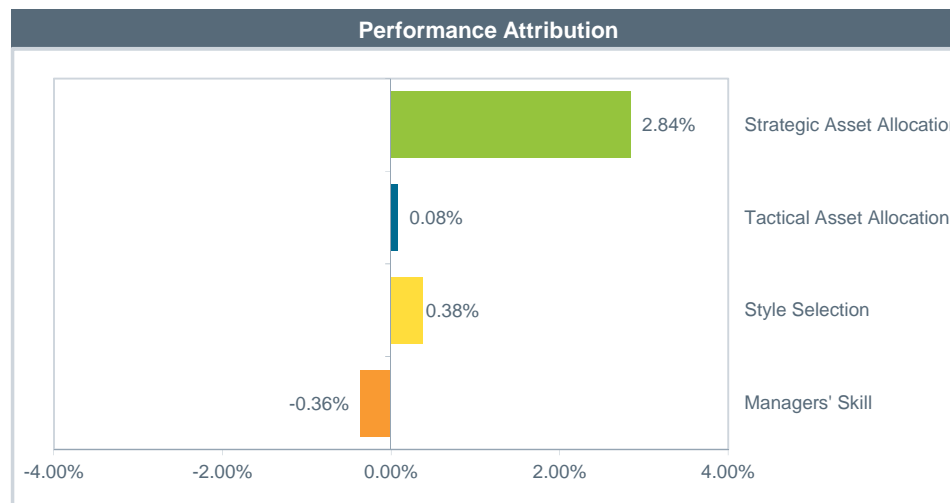
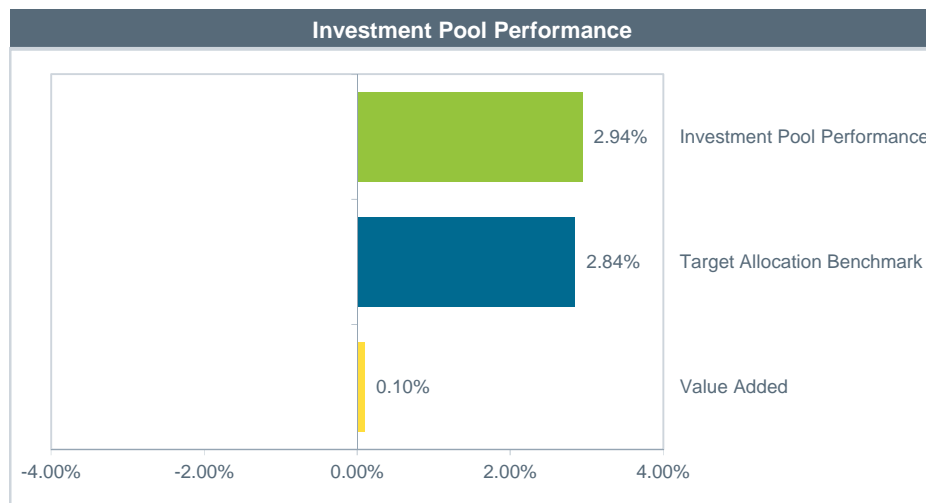


**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Permanent Mineral Trust Fund vs. Target Allocation Index**  
**1 Quarter Ending March 31, 2017**



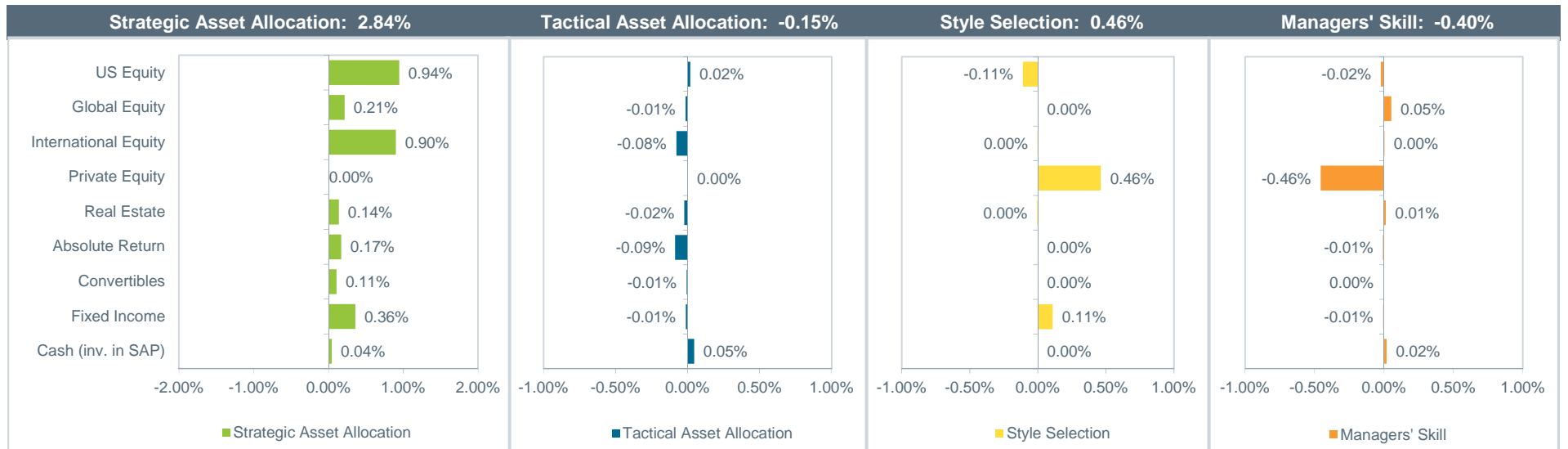
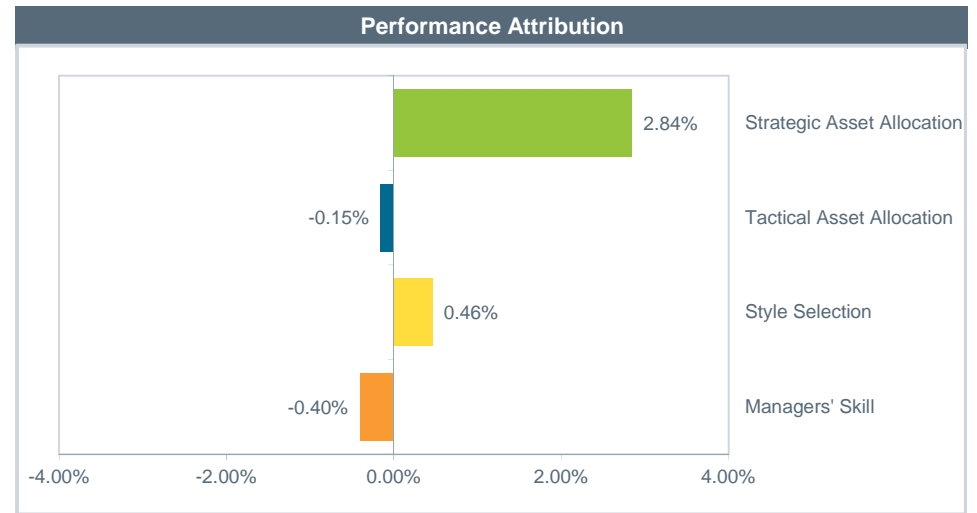
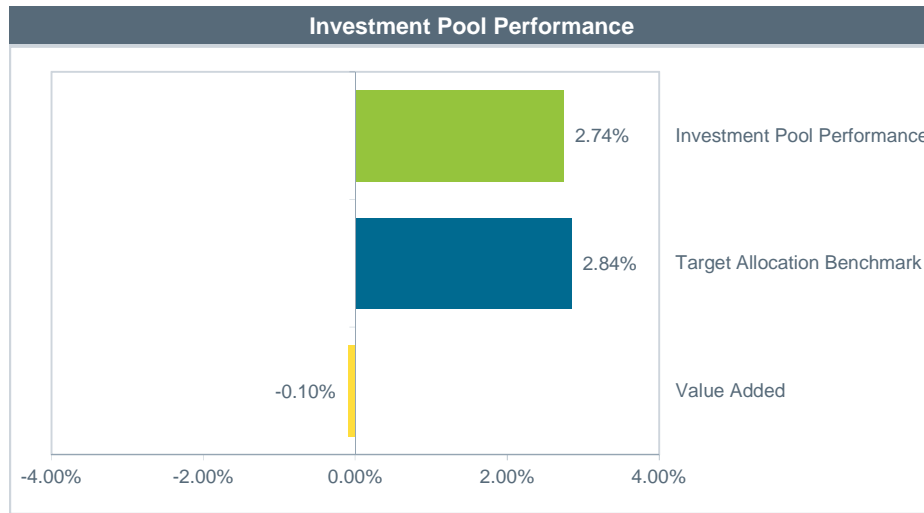
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index.  
 Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Common School Permanent Land Fund vs. Target Allocation Index**  
**1 Quarter Ending March 31, 2017**



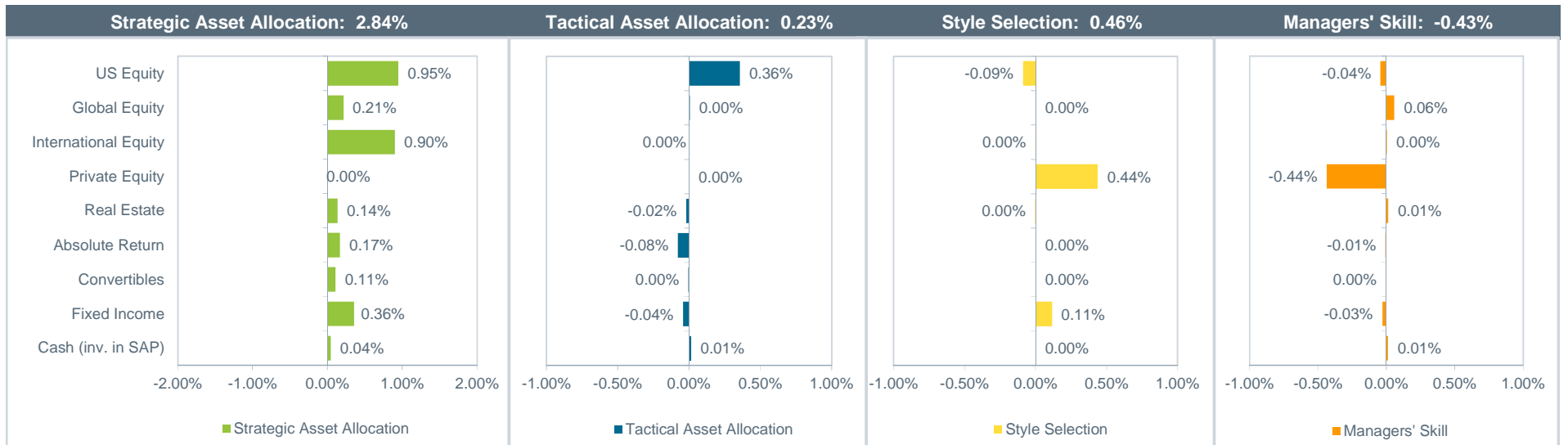
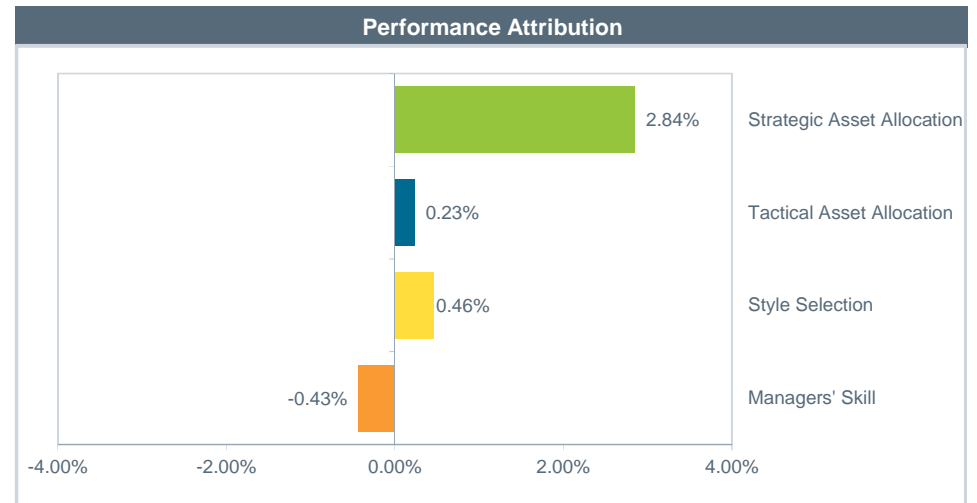
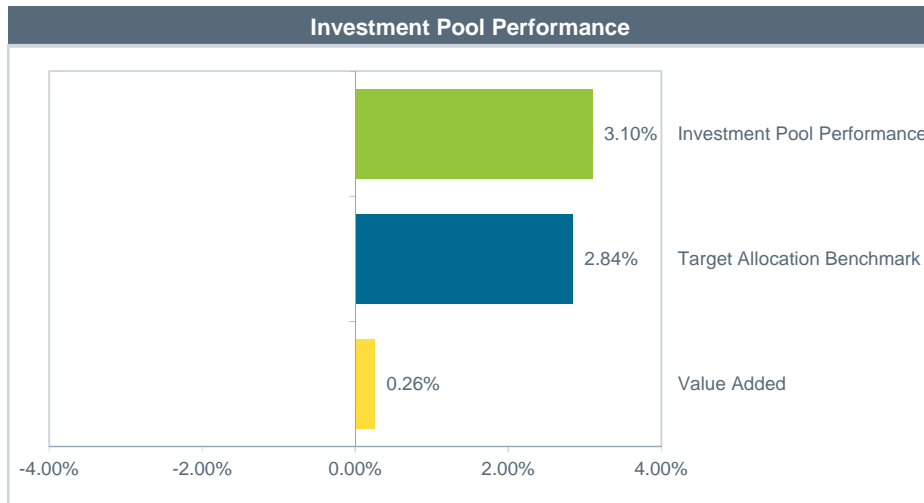
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Permanent Land Fund vs. Target Allocation Index**  
**1 Quarter Ending March 31, 2017**



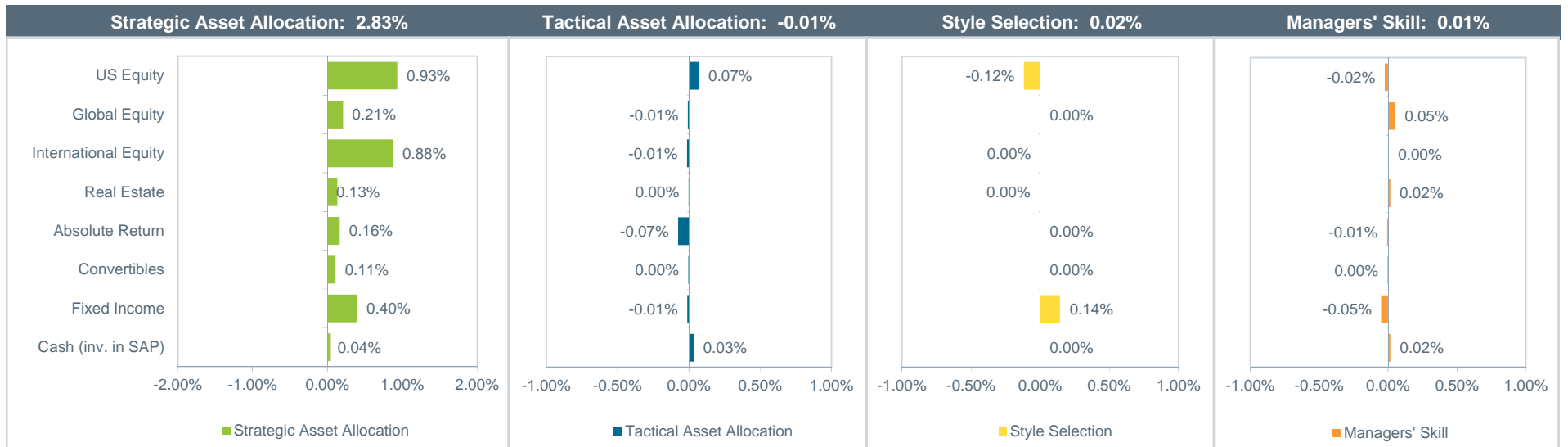
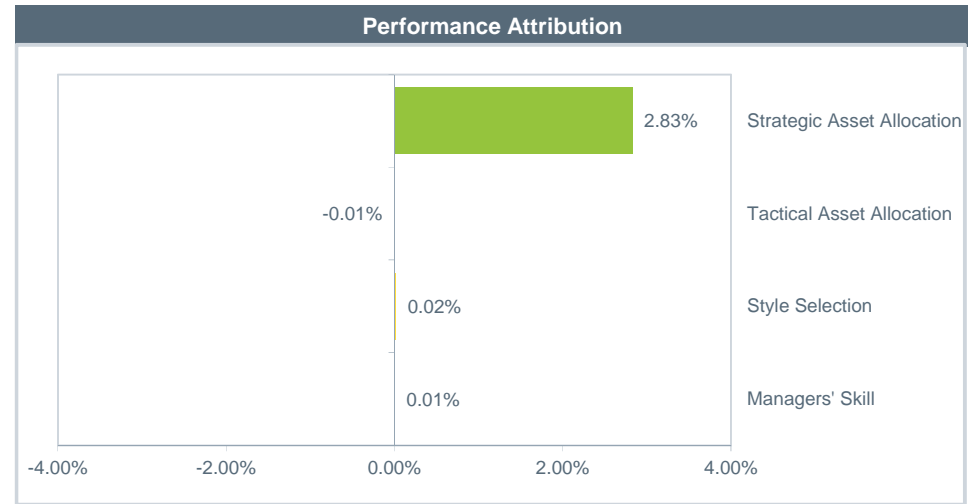
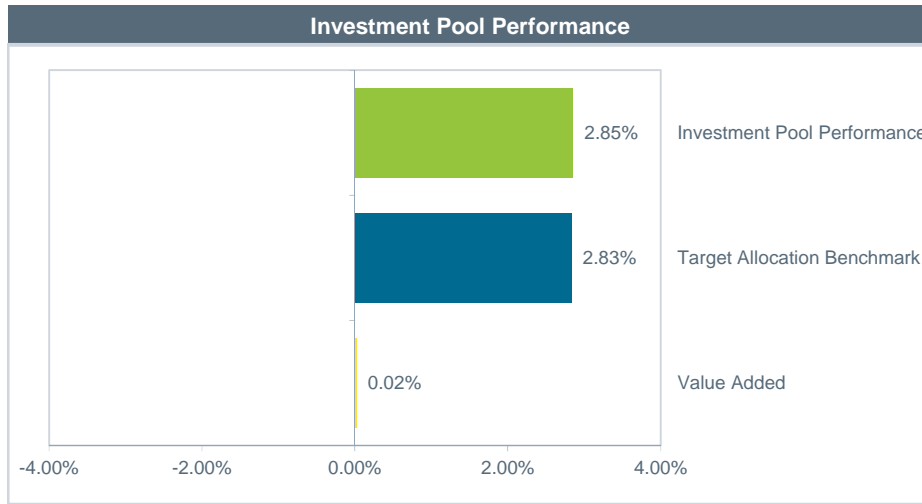
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index.  
 Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**University Permanent Land Fund vs. Target Allocation Index**  
**1 Quarter Ending March 31, 2017**



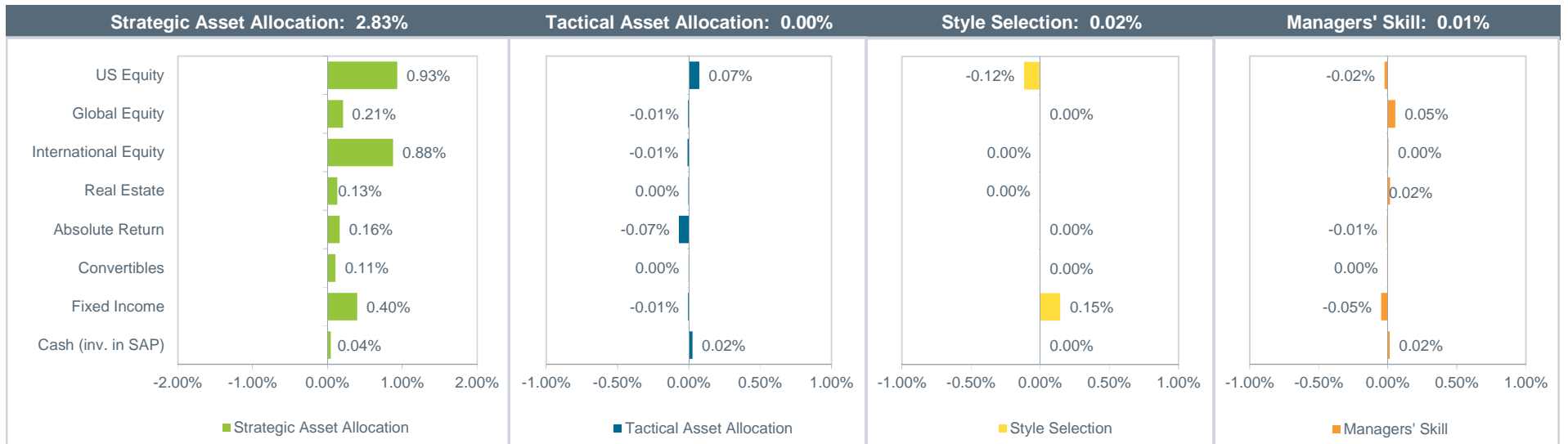
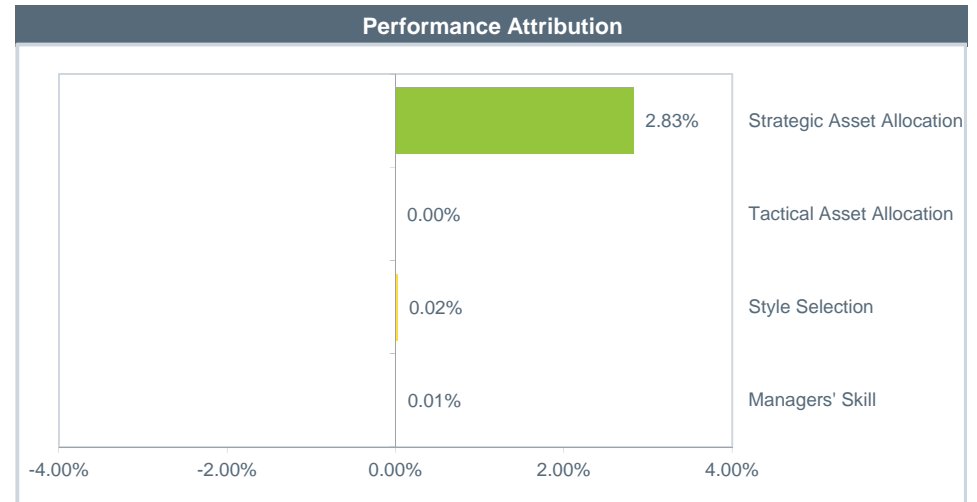
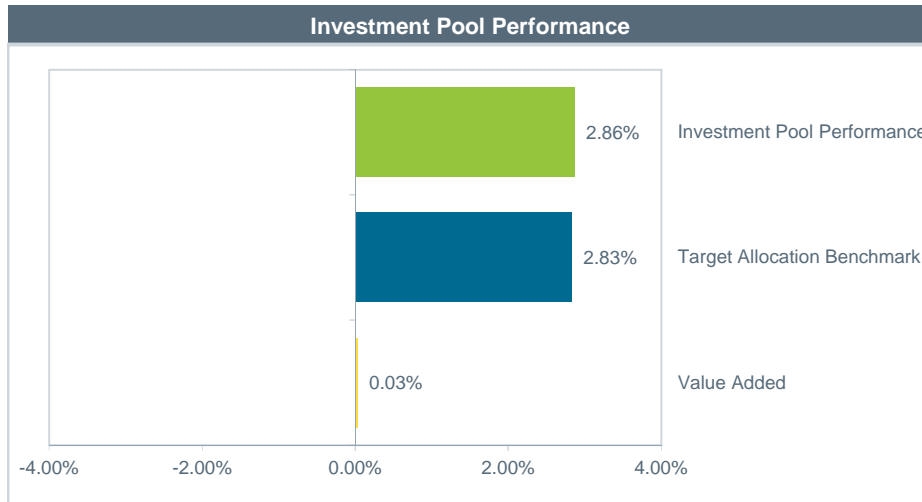
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Hathaway Scholarship Endowment Fund vs. Target Allocation Index**  
**1 Quarter Ending March 31, 2017**



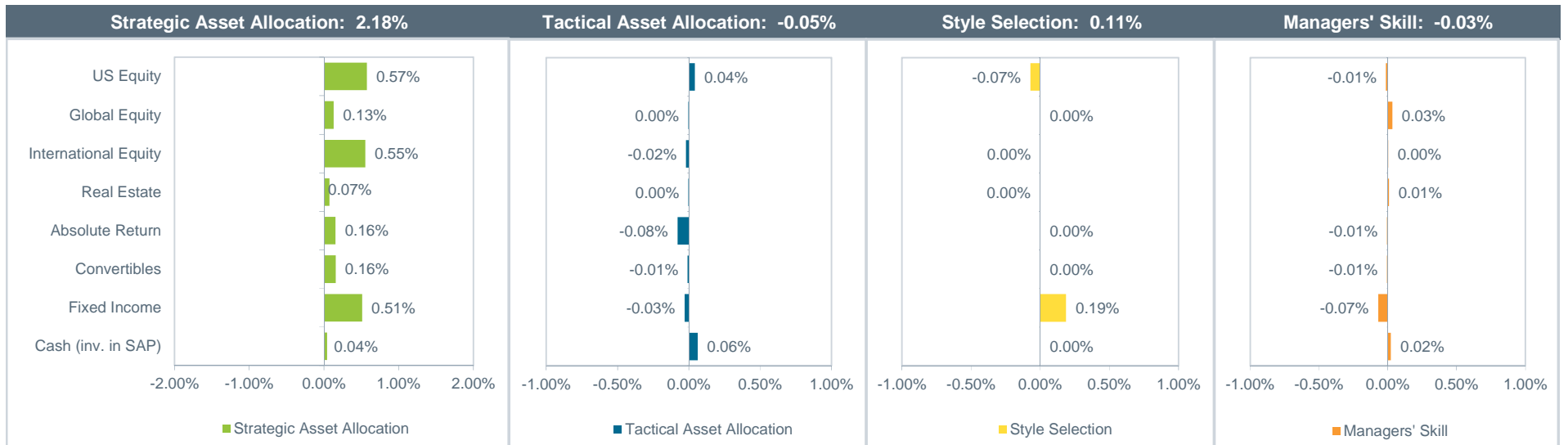
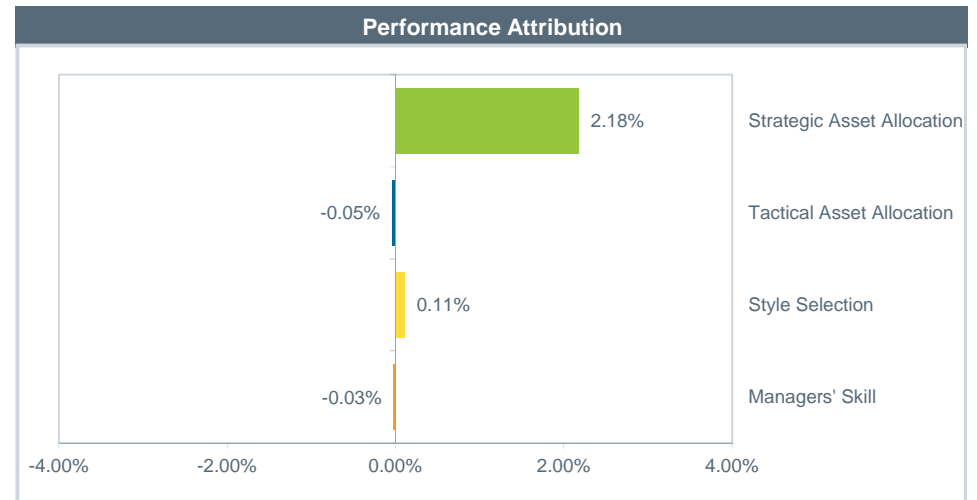
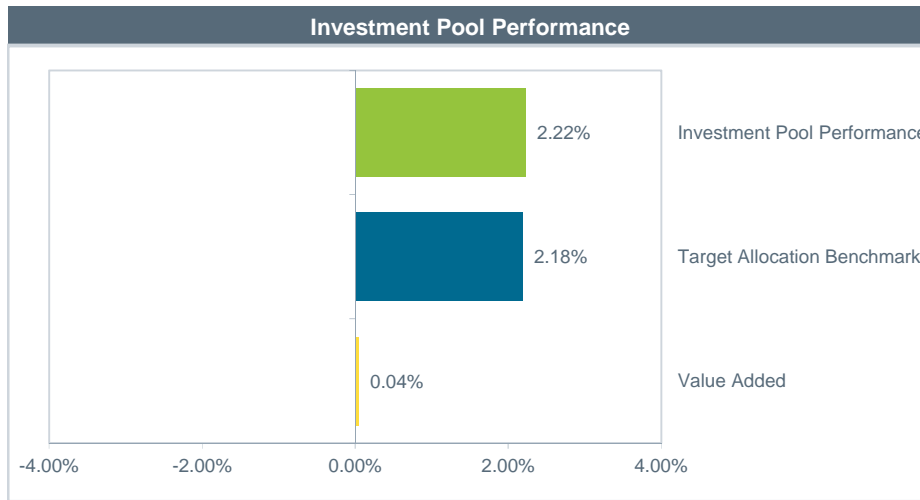
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Higher Education Endowment Fund vs. Target Allocation Index**  
**1 Quarter Ending March 31, 2017**



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index.  
 Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Workers Compensation Fund vs. Target Allocation Index**  
**1 Quarter Ending March 31, 2017**



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

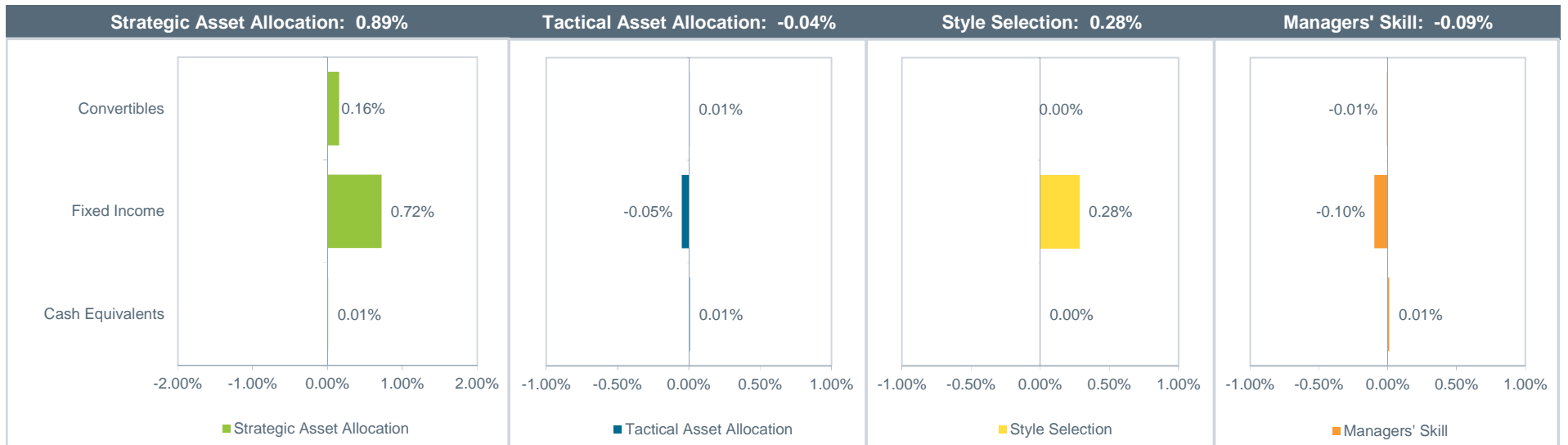
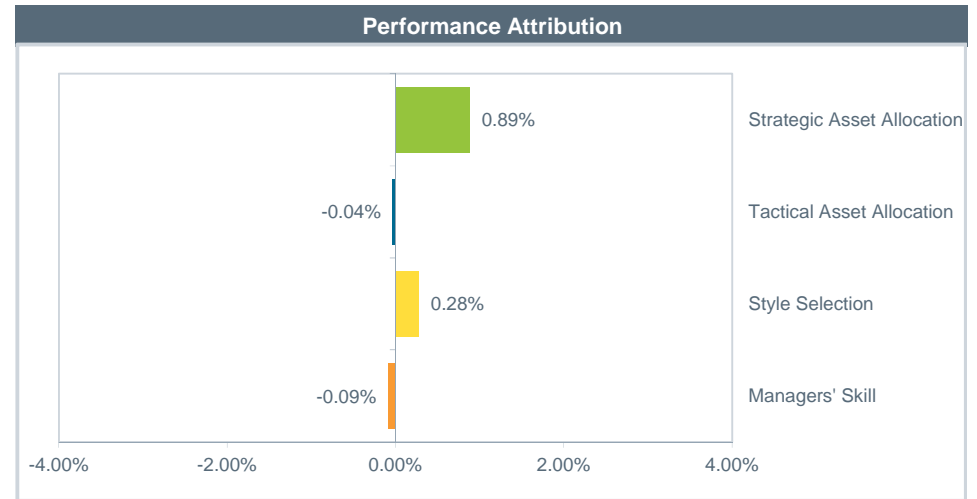
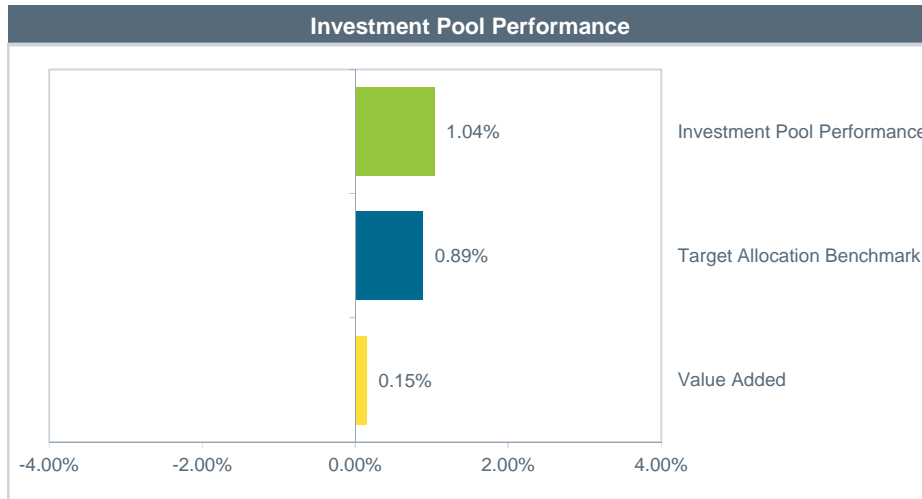


**Wyoming State Treasurer's Office  
Pool Attribution - IDP Methodology  
Tobacco Settlement Fund vs. Target Allocation Index  
1 Quarter Ending March 31, 2017**



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

**Wyoming State Treasurer's Office  
Pool Attribution - IDP Methodology  
State Agency Pool vs. Target Allocation Index  
1 Quarter Ending March 31, 2017**



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is gross of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.

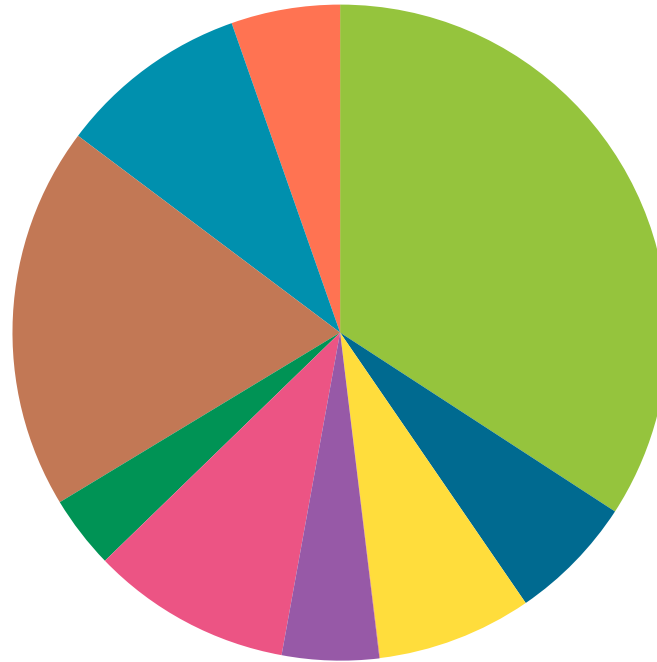
Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of March 31, 2017

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015
<b>Permanent Mineral Trust</b>	<b>7,684,969,507</b>	<b>39.49</b>	<b>2.92</b>	<b>2.92</b>	<b>5.82</b>	<b>7.68</b>	<b>4.41</b>	<b>5.84</b>	<b>6.41</b>	<b>5.03</b>	<b>6.40</b>	<b>-0.41</b>
Permanent Mineral Trust - Actual Allocation Index			2.90	2.90	5.16	7.13	4.35	5.63	6.00	4.39	5.58	0.01
Difference			0.02	0.02	0.66	0.55	0.06	0.21	0.41	0.64	0.82	-0.42
<b>Common School PLF</b>	<b>3,835,405,670</b>	<b>19.71</b>	<b>2.94</b>	<b>2.94</b>	<b>5.87</b>	<b>7.79</b>	<b>4.53</b>	<b>5.93</b>	<b>6.58</b>	<b>5.27</b>	<b>6.51</b>	<b>-0.27</b>
Common School - Actual Allocation Index			2.92	2.92	5.23	7.26	4.50	5.68	6.07	4.44	5.70	0.17
Difference			0.02	0.02	0.64	0.53	0.03	0.25	0.51	0.83	0.81	-0.44
<b>Permanent Land Fund</b>	<b>187,920,344</b>	<b>0.97</b>	<b>2.75</b>	<b>2.75</b>	<b>5.45</b>	<b>7.33</b>	<b>4.32</b>	<b>5.68</b>	<b>6.27</b>	<b>4.88</b>	<b>6.34</b>	<b>-0.49</b>
Permanent Land Fund - Actual Allocation Index			2.69	2.69	4.72	6.71	4.26	5.47	5.86	4.20	5.48	-0.05
Difference			0.06	0.06	0.73	0.62	0.06	0.21	0.41	0.68	0.86	-0.44
<b>University Permanent Land Fund</b>	<b>21,584,210</b>	<b>0.11</b>	<b>3.10</b>	<b>3.10</b>	<b>6.27</b>	<b>8.16</b>	<b>4.59</b>	<b>5.90</b>	<b>6.34</b>	<b>4.81</b>	<b>6.70</b>	<b>-0.59</b>
University PLF - Actual Allocation Index			3.07	3.07	5.73	7.76	4.59	5.77	6.07	4.36	6.02	-0.16
Difference			0.03	0.03	0.54	0.40	0.00	0.13	0.27	0.45	0.68	-0.43
<b>Hathaway Scholarship</b>	<b>583,129,680</b>	<b>3.00</b>	<b>2.85</b>	<b>2.85</b>	<b>4.98</b>	<b>6.81</b>	<b>4.15</b>	<b>5.23</b>	<b>5.89</b>	<b>N/A</b>	<b>5.94</b>	<b>-0.29</b>
Hathaway Scholarship - Actual Allocation Index			2.82	2.82	4.27	6.20	4.18	5.08	5.54	N/A	5.11	0.21
Difference			0.03	0.03	0.71	0.61	-0.03	0.15	0.35	N/A	0.83	-0.50
<b>Higher Education</b>	<b>120,296,350</b>	<b>0.62</b>	<b>2.86</b>	<b>2.86</b>	<b>5.03</b>	<b>6.85</b>	<b>4.12</b>	<b>5.23</b>	<b>5.87</b>	<b>N/A</b>	<b>5.94</b>	<b>-0.34</b>
Higher Education - Actual Allocation Index			2.83	2.83	4.31	6.23	4.15	5.07	5.51	N/A	5.11	0.15
Difference			0.03	0.03	0.72	0.62	-0.03	0.16	0.36	N/A	0.83	-0.49
<b>Workers Compensation Fund</b>	<b>1,952,739,569</b>	<b>10.03</b>	<b>2.22</b>	<b>2.22</b>	<b>3.12</b>	<b>5.08</b>	<b>3.51</b>	<b>4.31</b>	<b>5.05</b>	<b>5.38</b>	<b>5.11</b>	<b>-0.26</b>
Workers Compensation - Actual Allocation Index			2.14	2.14	2.23	4.26	3.56	4.18	4.76	5.01	4.18	0.15
Difference			0.08	0.08	0.89	0.82	-0.05	0.13	0.29	0.37	0.93	-0.41
<b>Tobacco Settlement Trust</b>	<b>83,854,315</b>	<b>0.43</b>	<b>1.16</b>	<b>1.16</b>	<b>0.07</b>	<b>2.25</b>	<b>2.71</b>	<b>2.63</b>	<b>3.74</b>	<b>4.62</b>	<b>4.11</b>	<b>-0.07</b>
Tobacco Settlement - Actual Allocation Index			0.95	0.95	-1.26	0.96	2.75	2.44	3.53	4.31	2.84	0.41
Difference			0.21	0.21	1.33	1.29	-0.04	0.19	0.21	0.31	1.27	-0.48
<b>State Agency Pool</b>	<b>5,796,140,268</b>	<b>29.78</b>	<b>1.04</b>	<b>1.04</b>	<b>0.13</b>	<b>2.08</b>	<b>2.37</b>	<b>2.25</b>	<b>3.13</b>	<b>4.01</b>	<b>3.67</b>	<b>-0.09</b>
State Agency Pool - Actual Allocation Index			0.85	0.85	-1.06	0.92	2.41	2.10	2.99	3.77	2.54	0.33
Difference			0.19	0.19	1.19	1.16	-0.04	0.15	0.14	0.24	1.13	-0.42
<b>Total Fund Composite</b>	<b>19,461,545,382</b>	<b>100.00</b>	<b>2.49</b>	<b>2.49</b>	<b>3.99</b>	<b>5.90</b>	<b>3.84</b>	<b>4.62</b>	<b>5.29</b>	<b>4.87</b>	<b>5.49</b>	<b>-0.16</b>
Wyoming State Actual Allocation Index			2.21	2.21	3.08	5.01	3.74	4.40	4.97	4.38	4.64	0.26
Difference			0.28	0.28	0.91	0.89	0.10	0.22	0.32	0.49	0.85	-0.42

Performance shown is gross of fees. Wyoming State Treasurer's Office fiscal year ends on June 30th.

March 31, 2017 : \$4,238,562,820



	Market Value (\$)	Allocation (%)
State Street All Cap	1,448,765,091	34.18
Epoch	264,615,050	6.24
Lazard	323,656,090	7.64
UW Portfolio Mgmt Program	1,361,977	0.03
RBC	202,091,938	4.77
Arrowstreet	419,530,434	9.90
Internal International Equity Portfolio	151,872,423	3.58
Northern Trust	801,263,177	18.90
Fisher Investments	397,561,560	9.38
Manning & Napier	227,803,046	5.37
The Boston Company	42,033	0.00

Allocations shown may not sum up to 100% exactly due to rounding.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of March 31, 2017

	Allocation		Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	Since Incep.	Inception Date
<b>Total Equity Composite</b>	<b>4,238,562,820</b>	<b>100.00</b>	<b>6.30</b>	<b>6.30</b>	<b>14.23</b>	<b>15.57</b>	<b>6.13</b>	<b>9.59</b>	<b>9.41</b>	<b>5.47</b>	<b>9.66</b>	<b>6.55</b>	<b>01/01/2006</b>
Total Equity Custom Index			6.91	6.91	13.92	15.04	5.08	8.37	7.71	3.59	7.86	5.11	
Difference			-0.61	-0.61	0.31	0.53	1.05	1.22	1.70	1.88	1.80	1.44	
<b>US Equity Composite</b>	<b>2,240,490,146</b>	<b>52.86</b>	<b>4.85</b>	<b>4.85</b>	<b>14.78</b>	<b>17.56</b>	<b>9.89</b>	<b>13.30</b>	<b>13.20</b>	<b>8.16</b>	<b>13.83</b>	<b>6.90</b>	<b>06/01/1997</b>
US Equity Custom Index			5.74	5.74	15.04	18.07	10.24	13.22	12.88	7.47	12.74	7.27	
Difference			-0.89	-0.89	-0.26	-0.51	-0.35	0.08	0.32	0.69	1.09	-0.37	
<b>State Street All Cap</b>	<b>1,448,765,091</b>	<b>34.18</b>	<b>5.18</b>	<b>5.18</b>	<b>14.31</b>	<b>17.74</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>13.77</b>	<b>8.29</b>	<b>01/01/2015</b>
State Street All Cap Custom Index			5.17	5.17	14.40	17.85	9.81	13.37	13.01	7.83	13.78	8.36	
Difference			0.01	0.01	-0.09	-0.11	N/A	N/A	N/A	N/A	-0.01	-0.07	
Russell 3000 Index			5.74	5.74	15.04	18.07	9.76	13.18	12.89	7.54	12.74	8.35	
Difference			-0.56	-0.56	-0.73	-0.33	N/A	N/A	N/A	N/A	1.03	-0.06	
IM U.S. All Cap Equity (SA+CF) Median			5.44	5.44	14.93	17.54	8.39	12.49	12.69	8.01	12.53	7.36	
State Street All Cap Rank			58	58	56	50	N/A	N/A	N/A	N/A	43	39	
<b>Epoch</b>	<b>264,615,050</b>	<b>6.24</b>	<b>7.46</b>	<b>7.46</b>	<b>19.22</b>	<b>19.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.19</b>	<b>8.44</b>	<b>11/01/2014</b>
Russell 3000 Index			5.74	5.74	15.04	18.07	9.76	13.18	12.89	7.54	12.74	8.83	
Difference			1.72	1.72	4.18	1.74	N/A	N/A	N/A	N/A	-2.55	-0.39	
IM U.S. All Cap Equity (SA+CF) Median			5.44	5.44	14.93	17.54	8.39	12.49	12.69	8.01	12.53	8.16	
Epoch Rank			20	20	18	28	N/A	N/A	N/A	N/A	58	44	
<b>Lazard</b>	<b>323,656,090</b>	<b>7.64</b>	<b>5.70</b>	<b>5.70</b>	<b>11.11</b>	<b>10.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.28</b>	<b>9.51</b>	<b>11/01/2014</b>
Russell 3000 Index			5.74	5.74	15.04	18.07	9.76	13.18	12.89	7.54	12.74	8.83	
Difference			-0.04	-0.04	-3.93	-7.26	N/A	N/A	N/A	N/A	-3.46	0.68	
IM U.S. All Cap Equity (SA+CF) Median			5.44	5.44	14.93	17.54	8.39	12.49	12.69	8.01	12.53	8.16	
Lazard Rank			44	44	87	94	N/A	N/A	N/A	N/A	63	26	
<b>UW Portfolio Mgmt Program</b>	<b>1,361,977</b>	<b>0.03</b>	<b>5.78</b>	<b>5.78</b>	<b>12.93</b>	<b>15.64</b>	<b>9.63</b>	<b>10.94</b>	<b>8.81</b>	<b>3.83</b>	<b>10.87</b>	<b>4.30</b>	<b>04/01/2006</b>
S&P 500 Index (Cap Wtd)			6.07	6.07	14.36	17.17	10.37	13.30	12.94	7.51	11.96	7.89	
Difference			-0.29	-0.29	-1.43	-1.53	-0.74	-2.36	-4.13	-3.68	-1.09	-3.59	
IM U.S. Large Cap Core Equity (SA+CF) Median			5.96	5.96	14.26	16.29	9.82	13.24	12.92	7.76	10.52	8.11	
UW Portfolio Mgmt Program Rank			57	57	64	61	55	88	97	100	47	100	

Performance shown is gross of fees. Total Equity Index consists of the MSCI World Index through July 2010 and the MSCI ACW Index thereafter. US Equity Index consists of the S&P 500 Index through September 2014 and the Russell 3000 Index thereafter. International Equity Custom Index and Fisher Index both consist of the MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter. Wyoming State Treasurer's Office fiscal year ends on June 30th. Since Inception date shown represents the first full month following initial funding.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of March 31, 2017

	Allocation		Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	Since Incep.	Inception Date
<b>RBC</b>	<b>202,091,938</b>	<b>4.77</b>	<b>-1.14</b>	<b>-1.14</b>	<b>19.92</b>	<b>24.89</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>27.49</b>	<b>7.74</b>	<b>01/01/2015</b>
Russell 2000 Index			2.47	2.47	21.60	26.22	7.22	12.35	12.27	7.12	21.31	7.96	
Difference			-3.61	-3.61	-1.68	-1.33	N/A	N/A	N/A	N/A	6.18	-0.22	
IM U.S. Small Cap Core Equity (SA+CF) Median			2.88	2.88	21.05	24.10	8.85	13.92	14.17	8.45	20.64	9.59	
RBC Rank			98	98	65	44	N/A	N/A	N/A	N/A	11	74	
<b>Arrowstreet</b>	<b>419,530,434</b>	<b>9.90</b>	<b>8.81</b>	<b>8.81</b>	<b>15.43</b>	<b>17.86</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.94</b>	<b>5.87</b>	<b>03/01/2015</b>
MSCI ACW Index (USD) (Net)			6.91	6.91	13.92	15.04	5.08	8.37	7.81	4.00	7.86	3.92	
Difference			1.90	1.90	1.51	2.82	N/A	N/A	N/A	N/A	1.08	1.95	
IM Global Equity (SA+CF) Median			6.76	6.76	13.31	14.17	5.71	9.87	9.61	5.41	6.92	4.65	
Arrowstreet Rank			19	19	34	19	N/A	N/A	N/A	N/A	34	31	
<b>Int'l Equity Composite</b>	<b>1,578,542,239</b>	<b>37.24</b>	<b>7.88</b>	<b>7.88</b>	<b>13.01</b>	<b>11.98</b>	<b>0.54</b>	<b>4.50</b>	<b>4.29</b>	<b>1.73</b>	<b>3.74</b>	<b>5.56</b>	<b>01/01/2004</b>
International Equity Custom Index			7.86	7.86	13.87	13.13	0.56	4.36	3.66	0.49	4.50	5.00	
Difference			0.02	0.02	-0.86	-1.15	-0.02	0.14	0.63	1.24	-0.76	0.56	
<b>Internal International Equity Portfolio</b>	<b>151,872,423</b>	<b>3.58</b>	<b>8.43</b>	<b>8.43</b>	<b>13.58</b>	<b>13.95</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>17.18</b>	<b>02/01/2016</b>
FTSE All Wrld Ex US Index (US Invstr) (USD) (Net)			7.85	7.85	14.08	13.50	1.19	4.82	4.24	1.90	4.80	18.03	
Difference			0.58	0.58	-0.50	0.45	N/A	N/A	N/A	N/A	N/A	-0.85	
<b>Northern Trust</b>	<b>801,263,177</b>	<b>18.90</b>	<b>7.90</b>	<b>7.90</b>	<b>13.49</b>	<b>12.95</b>	<b>0.64</b>	<b>4.47</b>	<b>N/A</b>	<b>N/A</b>	<b>4.48</b>	<b>4.85</b>	<b>08/01/2010</b>
MSCI ACW Ex US Index (USD) (Net)			7.86	7.86	13.87	13.13	0.56	4.36	3.82	1.35	4.50	4.74	
Difference			0.04	0.04	-0.38	-0.18	0.08	0.11	N/A	N/A	-0.02	0.11	
<b>Fisher Investments</b>	<b>397,561,560</b>	<b>9.38</b>	<b>8.67</b>	<b>8.67</b>	<b>15.43</b>	<b>13.09</b>	<b>2.07</b>	<b>5.09</b>	<b>5.65</b>	<b>3.19</b>	<b>1.94</b>	<b>7.11</b>	<b>09/01/2004</b>
MSCI ACW Ex US Index (USD) (Net)			7.86	7.86	13.87	13.13	0.56	4.36	3.66	0.49	4.50	5.11	
Difference			0.81	0.81	1.56	-0.04	1.51	0.73	1.99	2.70	-2.56	2.00	
IM International Equity (SA+CF) Median			8.81	8.81	14.24	13.72	2.29	6.48	6.10	3.30	3.74	7.94	
Fisher Investments Rank			52	52	41	55	55	70	57	53	62	63	
<b>Manning &amp; Napier</b>	<b>227,803,046</b>	<b>5.37</b>	<b>6.14</b>	<b>6.14</b>	<b>6.86</b>	<b>5.74</b>	<b>-1.78</b>	<b>3.82</b>	<b>N/A</b>	<b>N/A</b>	<b>3.51</b>	<b>4.22</b>	<b>08/01/2010</b>
MSCI ACW Ex US Index (USD) (Net)			7.86	7.86	13.87	13.13	0.56	4.36	3.82	1.35	4.50	4.74	
Difference			-1.72	-1.72	-7.01	-7.39	-2.34	-0.54	N/A	N/A	-0.99	-0.52	
IM International Equity (SA+CF) Median			8.81	8.81	14.24	13.72	2.29	6.48	6.10	3.30	3.74	6.92	
Manning & Napier Rank			89	89	92	94	97	79	N/A	N/A	51	84	

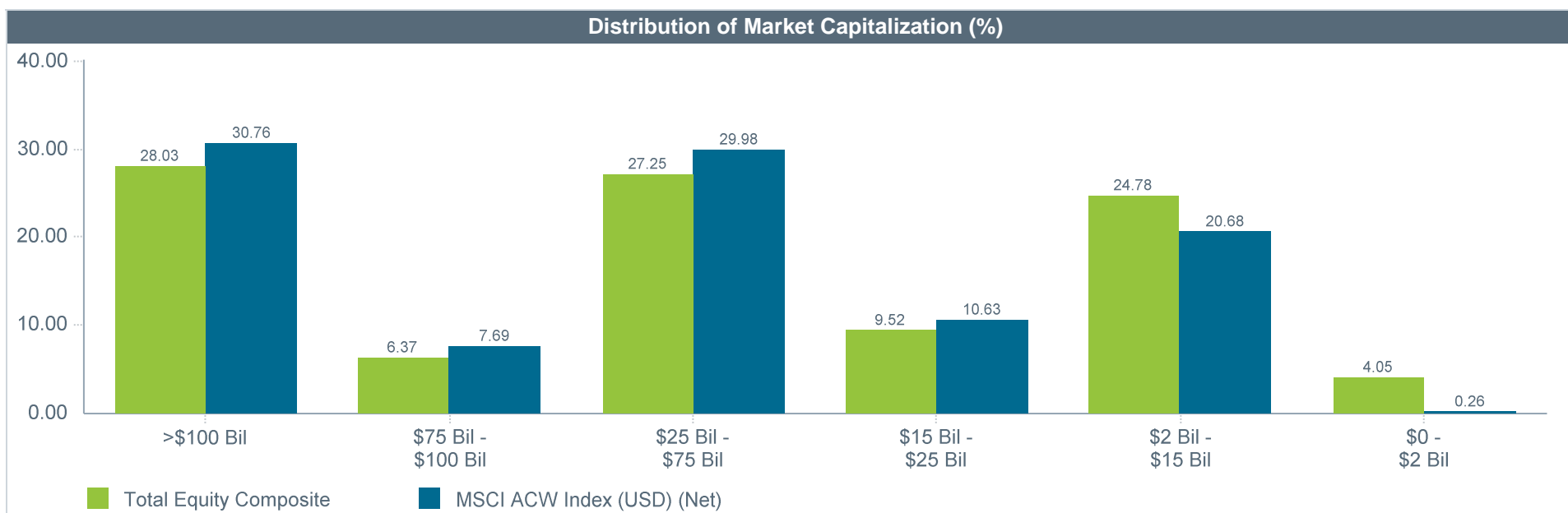
Performance shown is gross of fees. Total Equity Index consists of the MSCI World Index through July 2010 and the MSCI ACW Index thereafter. US Equity Index consists of the S&P 500 Index through September 2014 and the Russell 3000 Index thereafter. International Equity Custom Index and Fisher Index both consist of the MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter. Wyoming State Treasurer's Office fiscal year ends on June 30th. Since Inception date shown represents the first full month following initial funding.

Wyoming State Treasurer's Office  
Total Equity Composite vs. MSCI ACW Index (USD) (Net)  
Portfolio Characteristics

As of March 31, 2017

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Apple Inc	1.37	1.92	-0.55	24.57
Microsoft Corp	1.09	1.22	-0.13	6.63
Medtronic PLC	1.00	0.28	0.72	13.70
Cisco Systems Inc	0.88	0.42	0.46	12.81
Alphabet Inc	0.87	0.63	0.24	6.99
Coca-Cola Co (The)	0.87	0.44	0.43	3.26
Pfizer Inc	0.72	0.52	0.20	6.39
AT&T Inc	0.68	0.64	0.04	-1.15
Tencent Holdings LTD	0.68	0.41	0.27	17.18
Samsung Electronics Co Ltd	0.67	0.45	0.22	23.13
% of Portfolio	8.83	6.93		

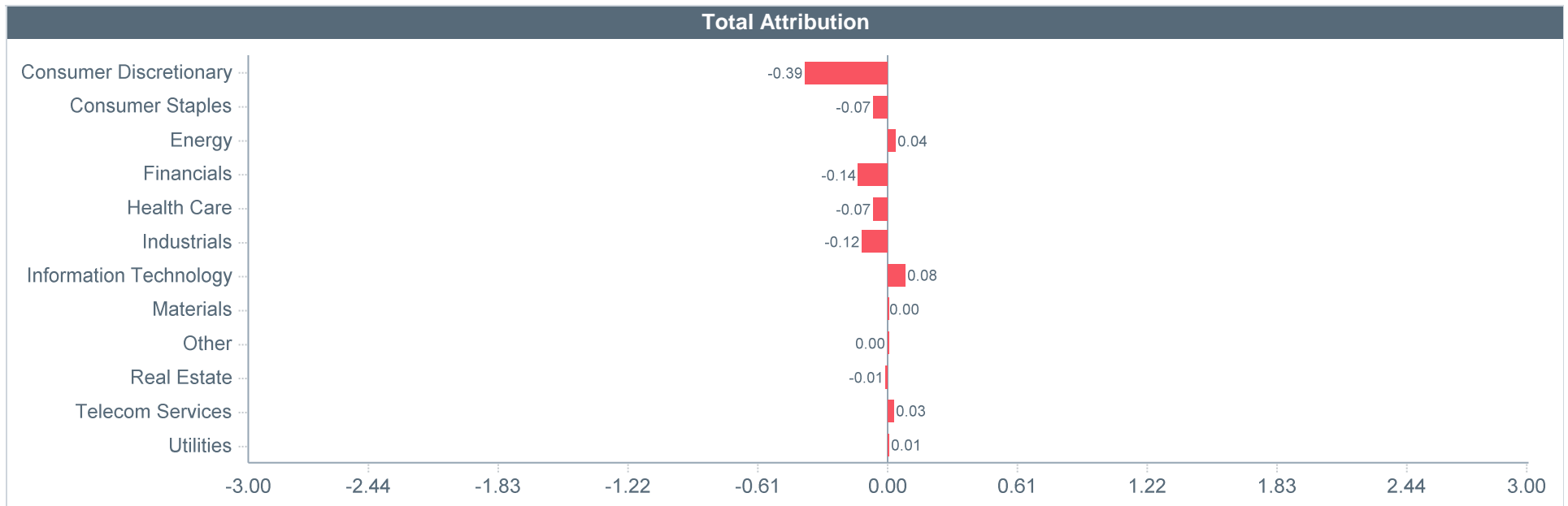
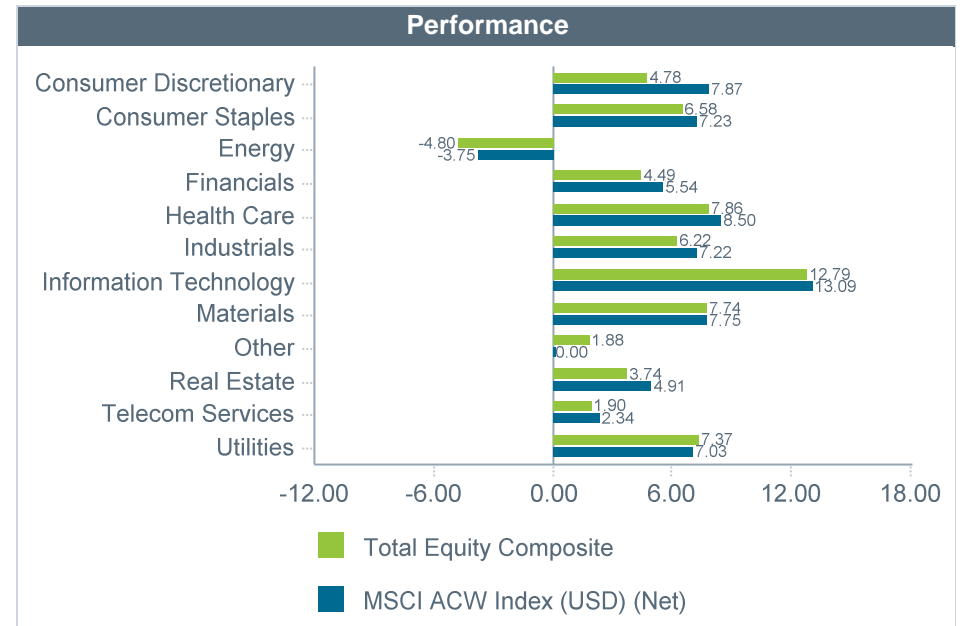
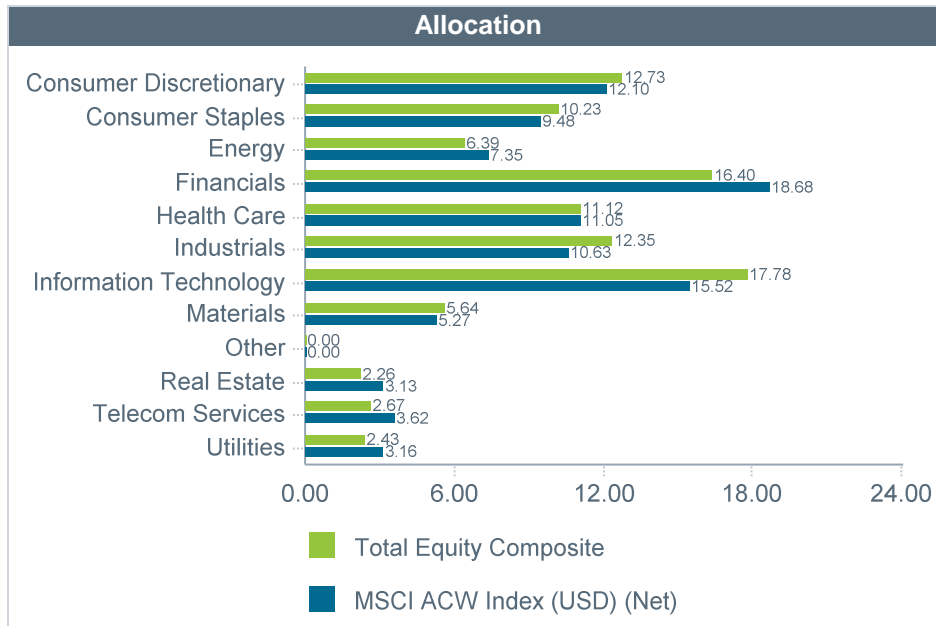
Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	92,825	107,714
Median Mkt. Cap (\$M)	3,828	9,252
Price/Earnings Ratio	19.40	19.21
Price/Book Ratio	2.78	2.69
5 Yr. EPS Growth Rate (%)	8.45	8.36
Current Yield (%)	2.27	2.46
Beta (5 Years, Monthly)	0.98	1.00
Number of Securities	5,509	2,480



The Total Equity Custom Index currently consists of the MSCI ACW Index (USD) (Net).

Wyoming State Treasurer's Office  
Total Equity Composite vs. MSCI ACW Index (USD) (Net)  
Buy and Hold Sector Attribution Graph

1 Quarter Ending March 31, 2017

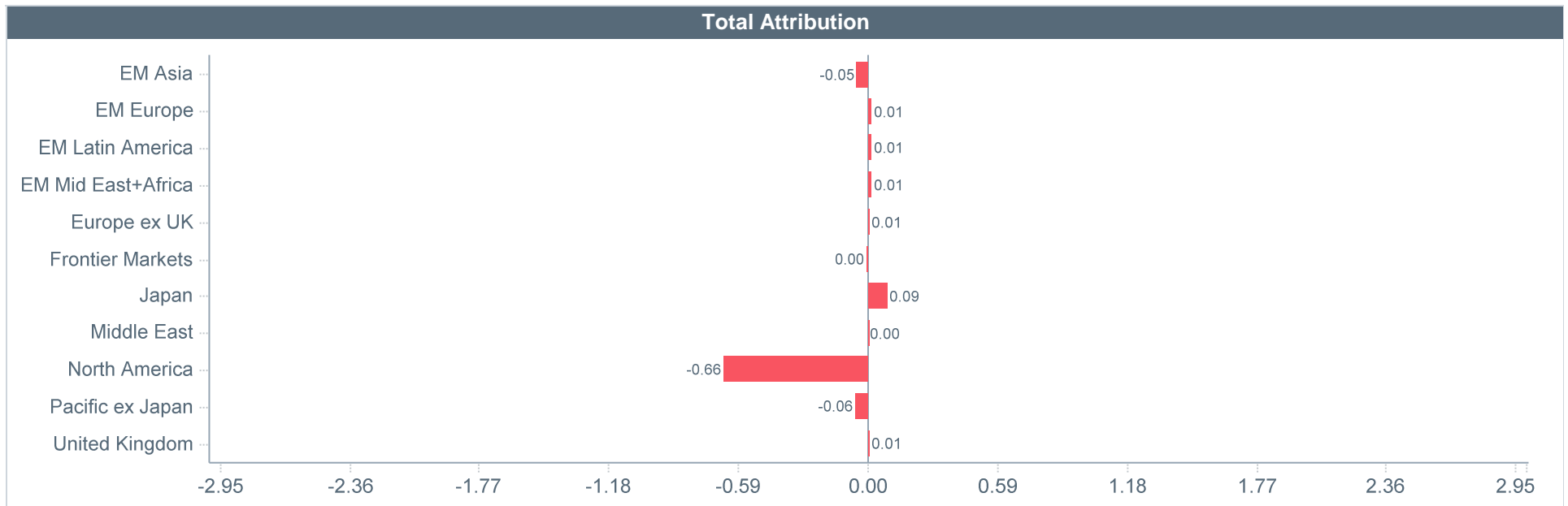
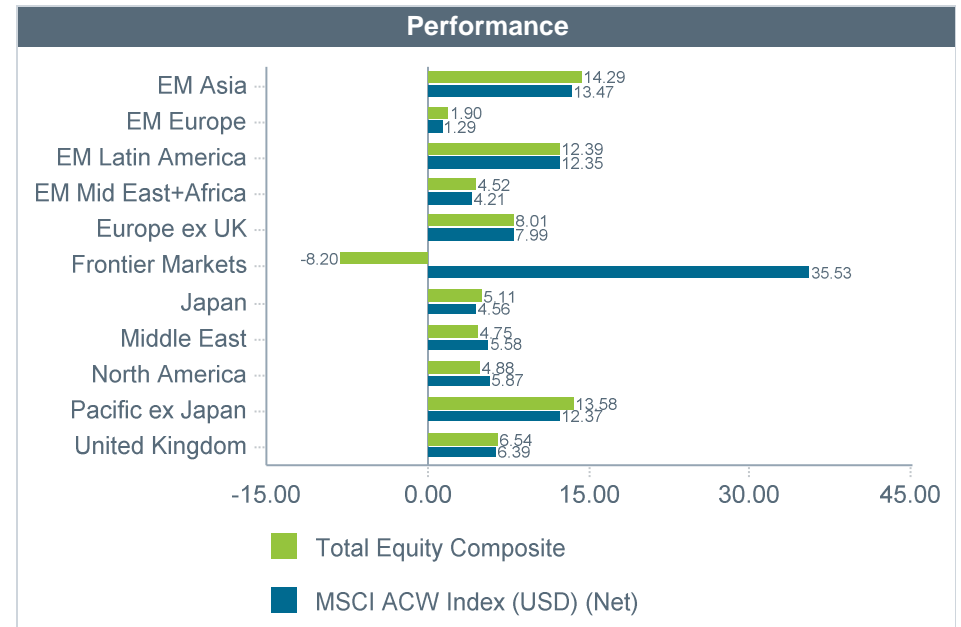
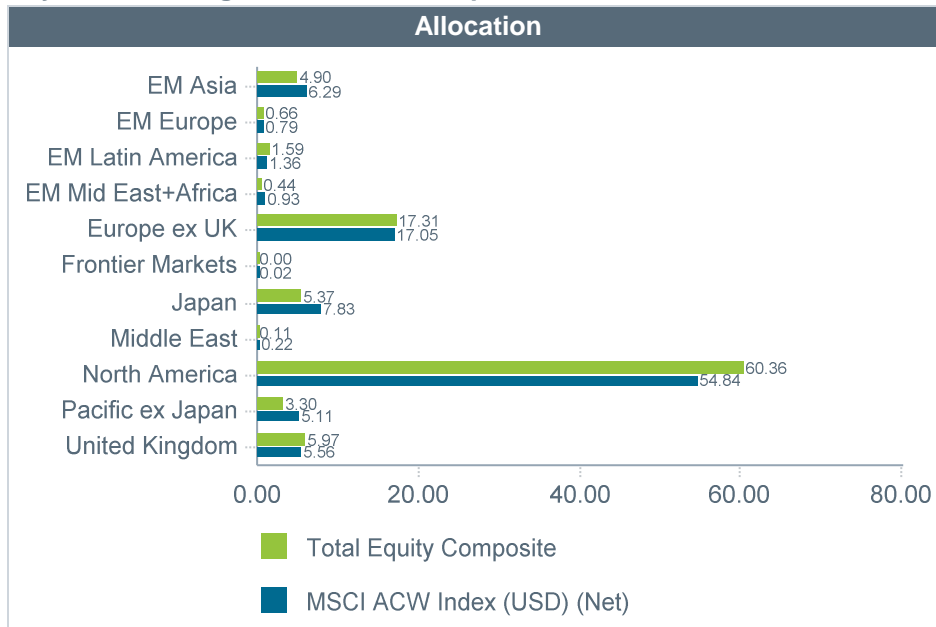


The Total Equity Custom Index currently consists of the MSCI ACW Index (USD) (Net). Allocation to "Other" consists of an investment in M&G Investment Funds (3) held by Northern Trust.



Wyoming State Treasurer's Office  
Total Equity Composite vs. MSCI ACW Index (USD) (Net)  
Buy and Hold Region Attribution Graph

1 Quarter Ending March 31, 2017



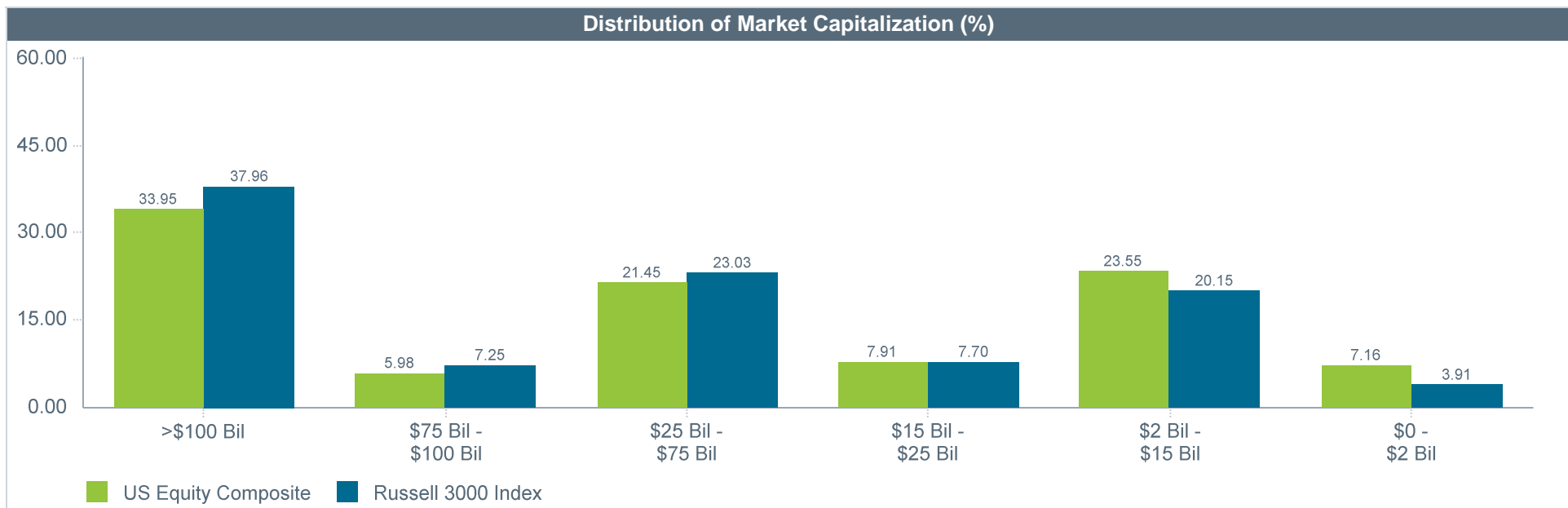
The Total Equity Custom Index currently consists of the MSCI ACW Index (USD) (Net).

Wyoming State Treasurer's Office  
US Equity Composite vs. Russell 3000 Index  
Portfolio Characteristics

As of March 31, 2017

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Apple Inc	2.44	3.21	-0.77	24.57
Microsoft Corp	1.77	2.03	-0.26	6.63
Coca-Cola Co (The)	1.64	0.67	0.97	3.26
Alphabet Inc	1.64	1.02	0.62	6.99
Cisco Systems Inc	1.45	0.69	0.76	12.81
Medtronic PLC	1.40	0.46	0.94	13.70
Pfizer Inc	1.36	0.84	0.52	6.39
Motorola Solutions Inc	1.18	0.06	1.12	4.62
Walgreens Boots Alliance Inc	1.17	0.29	0.88	0.80
Exxon Mobil Corp	1.12	1.40	-0.28	-8.30
% of Portfolio	15.17	10.67		

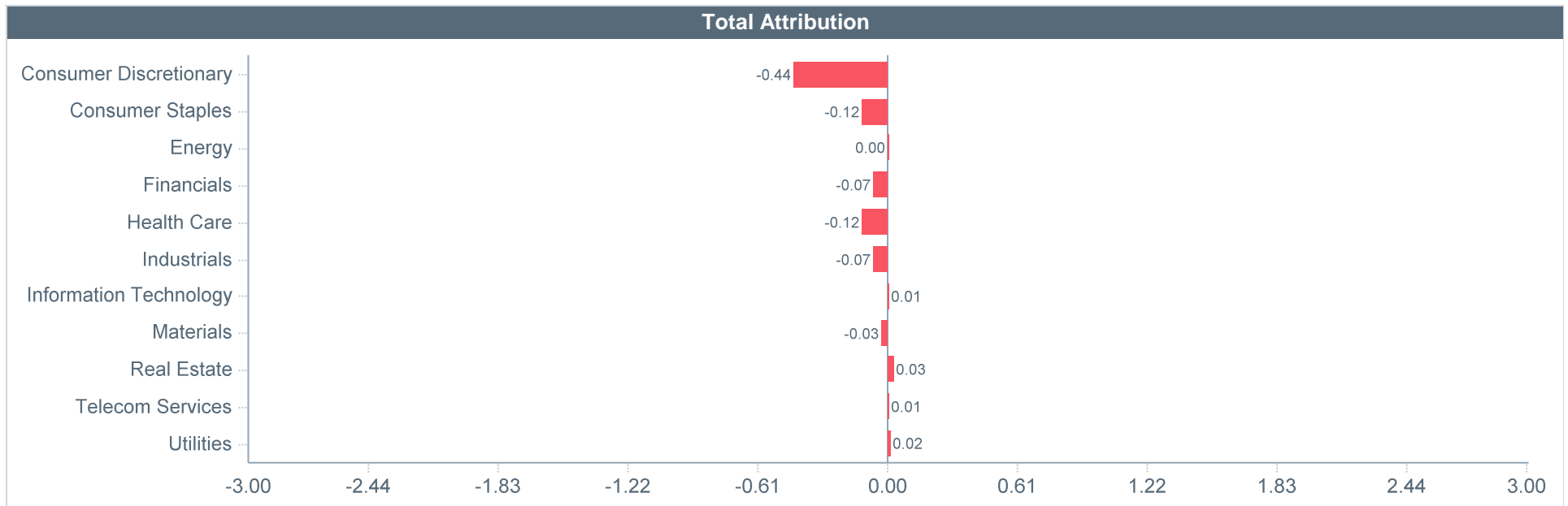
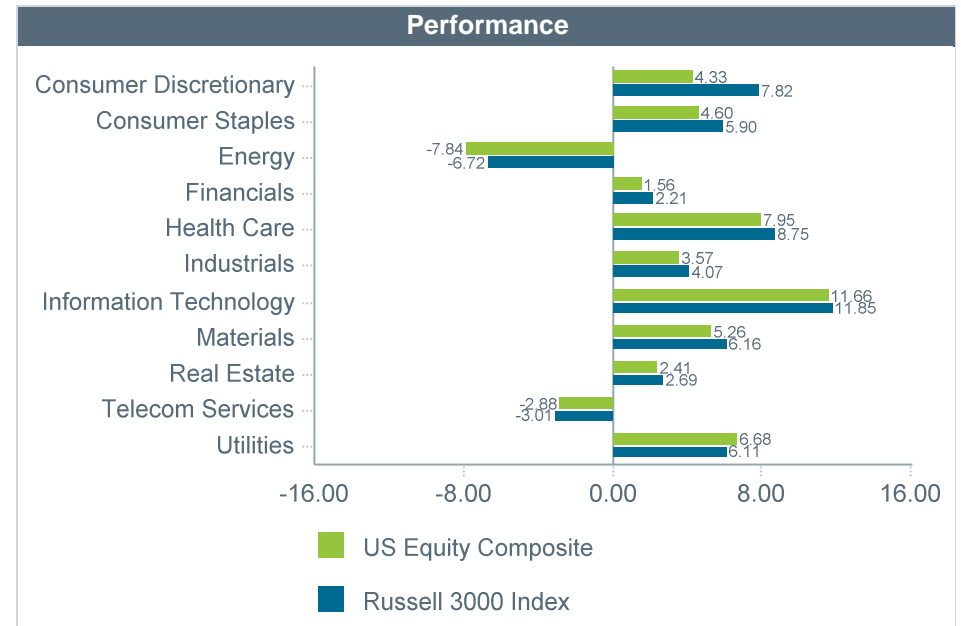
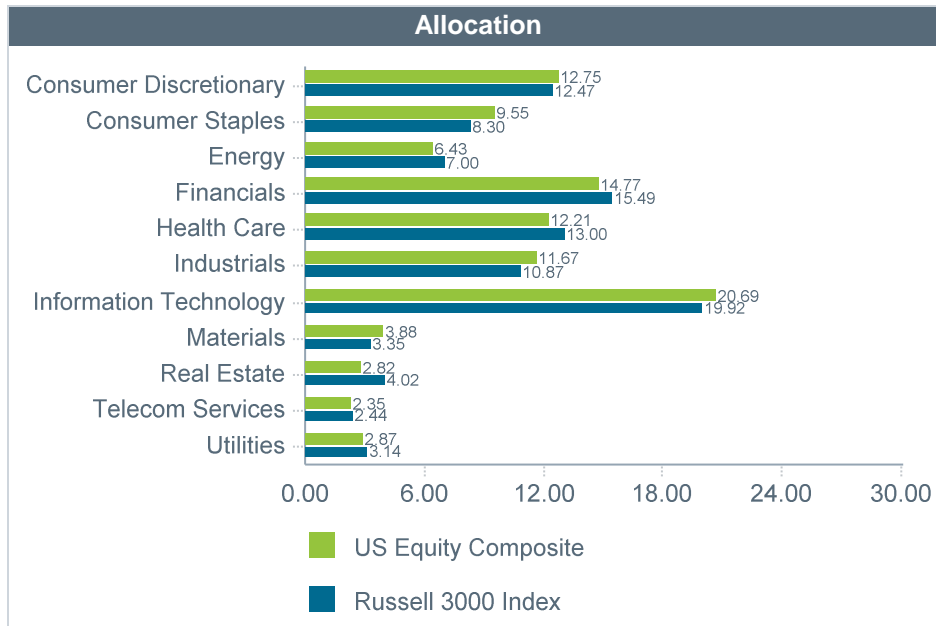
Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	117,263	135,981
Median Mkt. Cap (\$M)	2,101	1,630
Price/Earnings Ratio	20.62	21.37
Price/Book Ratio	3.11	3.14
5 Yr. EPS Growth Rate (%)	11.34	11.57
Current Yield (%)	1.91	1.94
Beta (5 Years, Monthly)	0.99	1.00
Number of Securities	2,631	2,943



The US Equity Custom Index currently consists of the Russell 3000 Index.

Wyoming State Treasurer's Office  
US Equity Composite vs. Russell 3000 Index  
Buy and Hold Sector Attribution Graph

1 Quarter Ending March 31, 2017



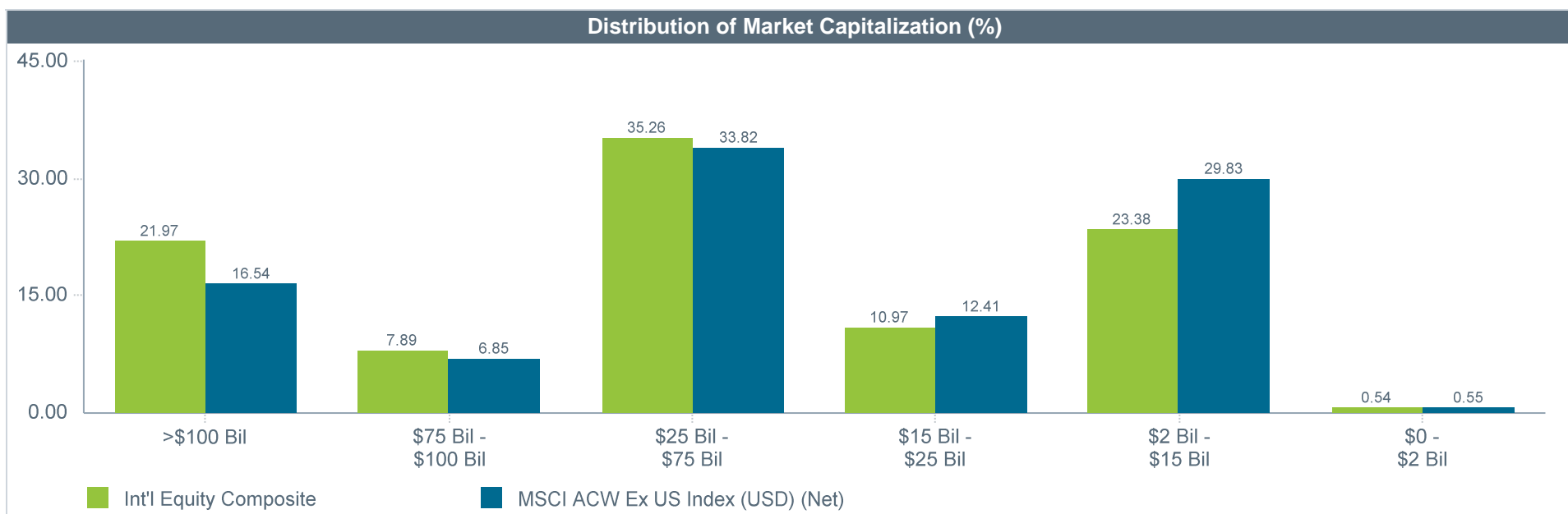
The US Equity Custom Index currently consists of the Russell 3000 Index.

Wyoming State Treasurer's Office  
Int'l Equity Composite vs. MSCI ACW Ex US Index (USD) (Net)  
Portfolio Characteristics

As of March 31, 2017

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Tencent Holdings LTD	1.83	0.87	0.96	17.18
Anheuser-Busch InBev SA/NV	1.36	0.45	0.91	3.73
Samsung Electronics Co Ltd	1.35	0.97	0.38	23.13
Nestle SA, Cham Und Vevey	1.25	1.28	-0.03	6.82
Roche Holding AG	1.09	0.96	0.13	15.30
Alibaba Group Holding Ltd	1.06	0.65	0.41	22.80
Safran SA	0.99	0.13	0.86	3.75
Novartis AG	0.98	0.89	0.09	5.57
ASML Holding NV	0.98	0.27	0.71	18.23
Diageo PLC	0.95	0.38	0.57	10.63
% of Portfolio	11.84	6.85		

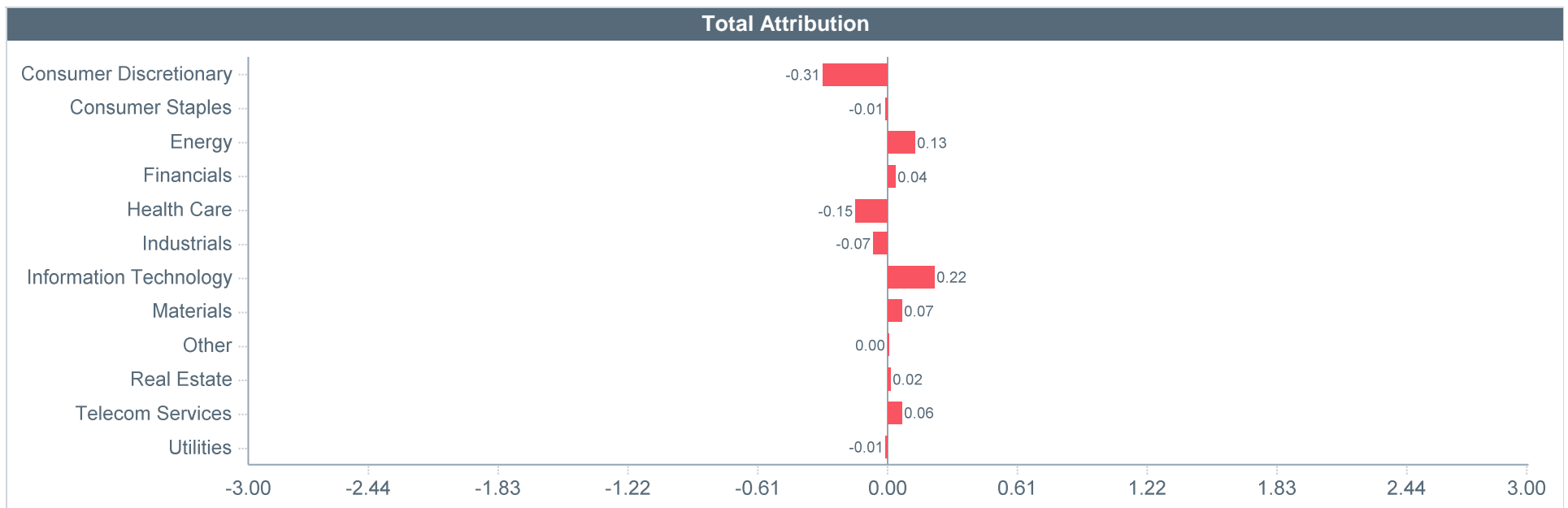
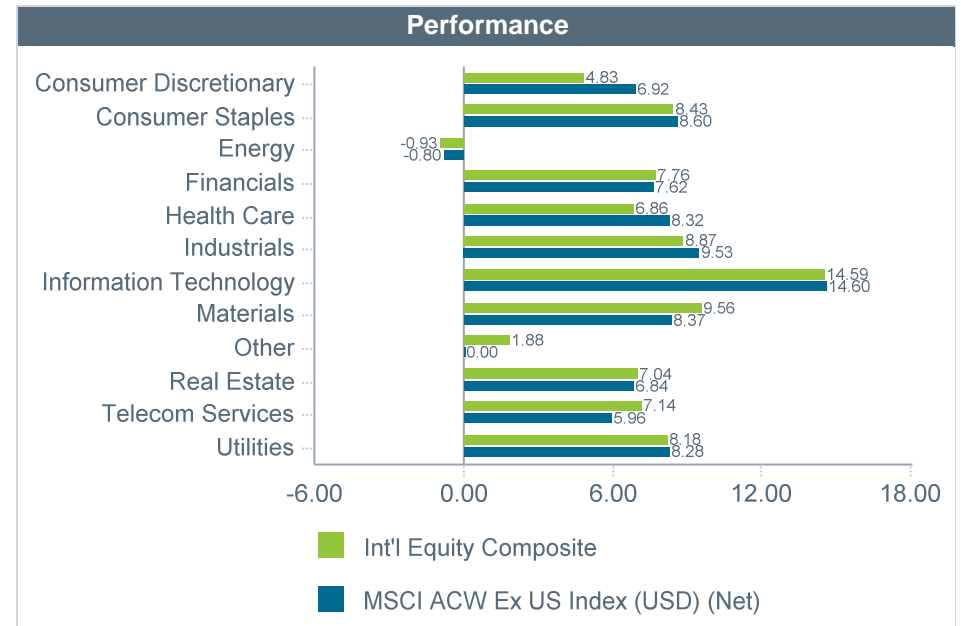
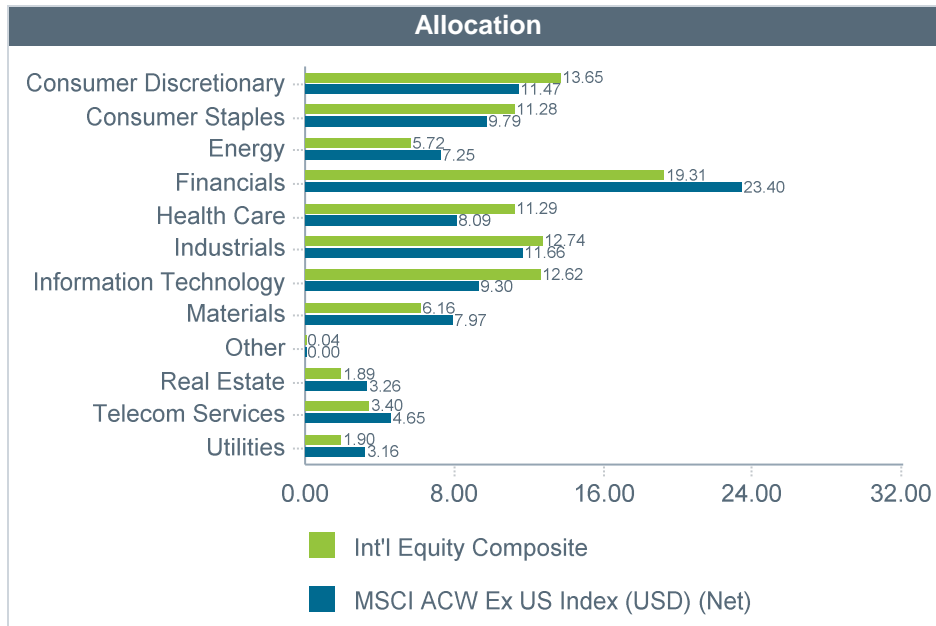
Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	65,491	55,193
Median Mkt. Cap (\$M)	5,533	7,415
Price/Earnings Ratio	18.67	17.07
Price/Book Ratio	2.40	2.16
5 Yr. EPS Growth Rate (%)	4.79	4.87
Current Yield (%)	2.76	2.98
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	2,817	1,853



The International Equity Custom Index currently consists of the MSCI ACW Ex US Index (USD) (Net).

Wyoming State Treasurer's Office  
 Int'l Equity Composite vs. MSCI ACW Ex US Index (USD) (Net)  
 Buy and Hold Sector Attribution Graph

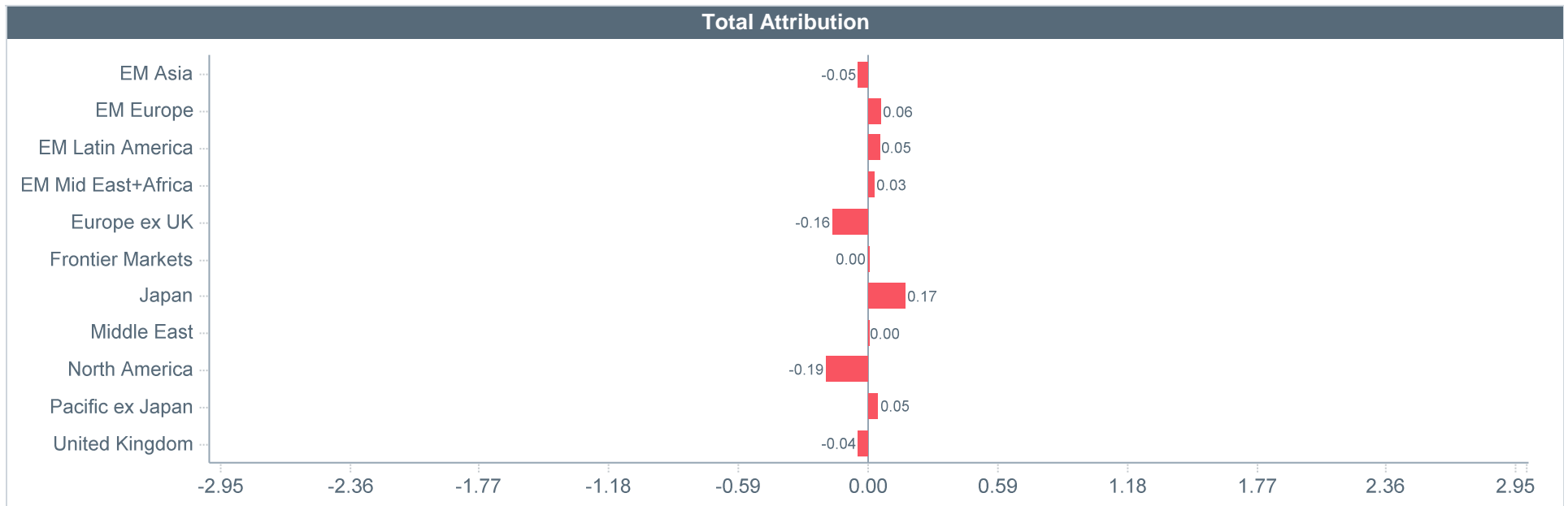
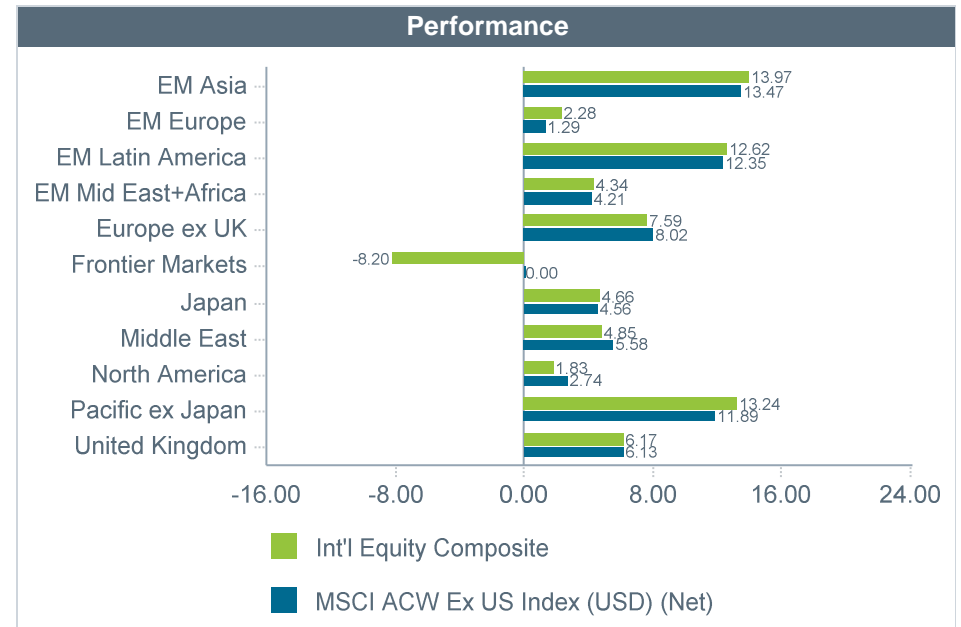
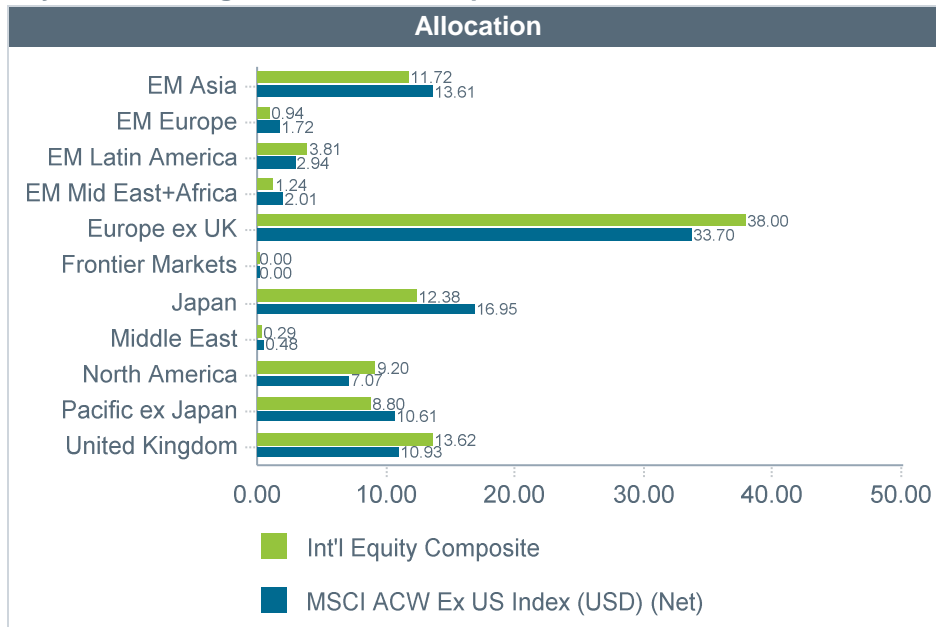
1 Quarter Ending March 31, 2017



The International Equity Custom Index currently consists of the MSCI ACW Ex US Index (USD) (Net). Allocation to "Other" consists of an investment in M&G Investment Funds (3) held by Northern Trust.

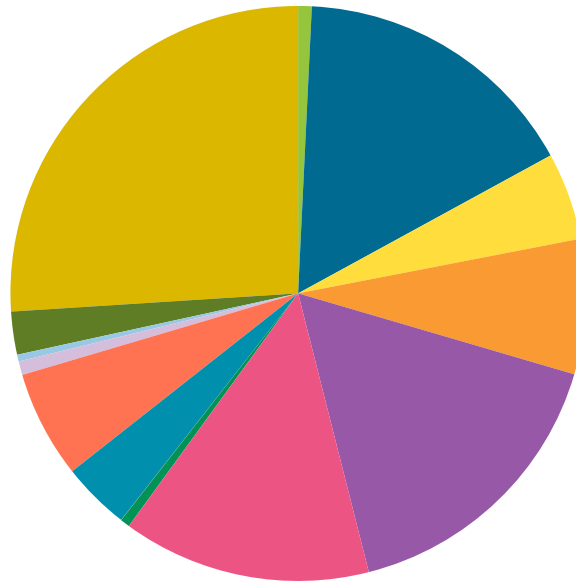
Wyoming State Treasurer's Office  
 Int'l Equity Composite vs. MSCI ACW Ex US Index (USD) (Net)  
 Buy and Hold Region Attribution Graph

1 Quarter Ending March 31, 2017



The International Equity Custom Index currently consists of the MSCI ACW Ex US Index (USD) (Net).

March 31, 2017 : \$1,946,147,686



	Market Value (\$)	Allocation (%)
Access Venture Partners II	14,734,664	0.76
Cheyenne Equity Capital Fund, L.P.	316,599,211	16.27
Hamilton Lane Nowood Fund, L.P.	95,809,371	4.92
Neuberger Berman Sauger Fund, L.P.	147,761,760	7.59
Clarion Lion	321,396,894	16.51
UBS Trumbull	271,713,389	13.96
Cornerstone	10,165,690	0.52
Heitman	357,677	0.02
M&G	74,367,747	3.82
Northwood	117,735,541	6.05
SC Capital	15,085,385	0.78
TA Associates Realty	7,420,648	0.38
WestRiver	46,996,606	2.41
PAAMCO - Jackalope Fund	506,003,104	26.00

Allocations shown may not sum up to 100% exactly due to rounding.

Wyoming State Treasurer's Office  
Comparative Performance

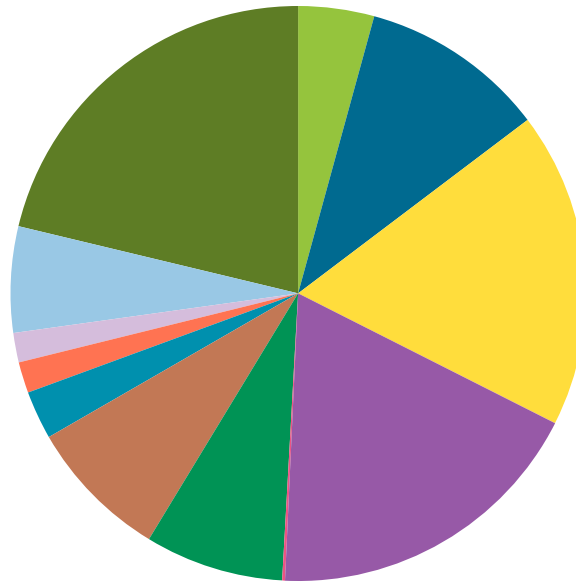
As of March 31, 2017

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	Since Incep.	Inception Date
<b>Core Real Estate Composite</b>	<b>1.94</b>	<b>1.94</b>	<b>5.41</b>	<b>7.40</b>	<b>11.74</b>	<b>11.36</b>	<b>13.03</b>	<b>5.24</b>	<b>8.17</b>	<b>6.51</b>	<b>01/01/2006</b>
NCREIF ODCE Index (AWA) (Gross)	1.77	1.77	6.07	8.34	11.79	11.98	13.49	5.59	8.77	6.74	
Difference	0.17	0.17	-0.66	-0.94	-0.05	-0.62	-0.46	-0.35	-0.60	-0.23	
<b>Clarion Lion</b>	<b>2.61</b>	<b>2.61</b>	<b>6.30</b>	<b>8.40</b>	<b>12.90</b>	<b>12.31</b>	<b>14.32</b>	<b>4.58</b>	<b>9.10</b>	<b>5.85</b>	<b>01/01/2006</b>
NCREIF ODCE Index (AWA) (Gross)	1.77	1.77	6.07	8.34	11.79	11.98	13.49	5.59	8.77	6.74	
Difference	0.84	0.84	0.23	0.06	1.11	0.33	0.83	-1.01	0.33	-0.89	
<b>UBS Trumbull</b>	<b>1.15</b>	<b>1.15</b>	<b>4.37</b>	<b>6.23</b>	<b>10.06</b>	<b>10.04</b>	<b>11.62</b>	<b>5.70</b>	<b>7.11</b>	<b>6.52</b>	<b>07/01/2006</b>
NCREIF ODCE Index (AWA) (Gross)	1.77	1.77	6.07	8.34	11.79	11.98	13.49	5.59	8.77	6.31	
Difference	-0.62	-0.62	-1.70	-2.11	-1.73	-1.94	-1.87	0.11	-1.66	0.21	
<b>Absolute Return Composite</b>	<b>2.04</b>	<b>2.04</b>	<b>5.40</b>	<b>5.87</b>	<b>0.85</b>	<b>4.07</b>	<b>3.79</b>	<b>N/A</b>	<b>0.57</b>	<b>2.39</b>	<b>12/01/2007</b>
HFN FOF Multi-Strat Index (Net)	2.20	2.20	5.33	5.72	1.11	2.93	2.18	0.94	0.14	0.35	
Difference	-0.16	-0.16	0.07	0.15	-0.26	1.14	1.61	N/A	0.43	2.04	
<b>PAAMCO - Jackalope Fund</b>	<b>2.04</b>	<b>2.04</b>	<b>5.40</b>	<b>5.87</b>	<b>0.15</b>	<b>4.25</b>	<b>3.57</b>	<b>N/A</b>	<b>0.57</b>	<b>2.12</b>	<b>12/01/2007</b>
HFN FOF Multi-Strat Index (Net)	2.20	2.20	5.33	5.72	1.11	2.93	2.18	0.94	0.14	0.35	
Difference	-0.16	-0.16	0.07	0.15	-0.96	1.32	1.39	N/A	0.43	1.77	

Performance shown is gross of fees with the exception of PAAMCO and the Absolute Return Composite, which are shown net of fees. Wyoming State Treasurer's Office fiscal year ends June 30th. Since Inception date shown represents the first full month following initial funding.



March 31, 2017 : \$12,042,776,039



	Market Value (\$)	Allocation (%)
Allianz Global Investors	511,683,757	4.25
C.S. McKee	1,255,473,326	10.43
JP Morgan Core	2,139,598,376	17.77
Neuberger Berman Core	1,689,913	0.01
PIMCO Core	2,200,564,054	18.27
Wells Capital	20,639,055	0.17
Neuberger Berman Credit	936,580,077	7.78
Seix	962,636,239	7.99
Grosvenor Silvery Lupine Fund	328,374,955	2.73
Investec	209,303,773	1.74
Stone Harbor	200,547,916	1.67
State Street TIPS	717,808,388	5.96
Internal Fixed Income Portfolio	2,557,830,106	21.24
MacKay Shields	46,101	0.00

Allocations shown may not sum up to 100% exactly due to rounding. Market value for MacKay Shields represent residual assets and subsequent transactions from the liquidation process.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of March 31, 2017

	Allocation		Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	Since Incep.	Inception Date
<b>Total Fixed Income Composite</b>	<b>12,042,776,039</b>	<b>100.00</b>	<b>1.51</b>	<b>1.51</b>	<b>0.43</b>	<b>2.64</b>	<b>2.84</b>	<b>2.74</b>	<b>3.90</b>	<b>4.79</b>	<b>4.13</b>	<b>5.61</b>	<b>10/01/1996</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	5.35	
Difference			0.69	0.69	2.16	2.20	0.16	0.40	0.42	0.52	1.48	0.26	
<b>Total Fixed Income (Ex. Convertibles) Composite</b>	<b>11,531,092,282</b>	<b>95.75</b>	<b>1.32</b>	<b>1.32</b>	<b>-0.09</b>	<b>2.10</b>	<b>2.75</b>	<b>2.43</b>	<b>3.60</b>	<b>4.60</b>	<b>4.04</b>	<b>5.59</b>	<b>10/01/1996</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	5.35	
Difference			0.50	0.50	1.64	1.66	0.07	0.09	0.12	0.33	1.39	0.24	
<b>US Fixed Income (Ex. Convertibles) Composite</b>	<b>10,792,865,638</b>	<b>89.62</b>	<b>1.05</b>	<b>1.05</b>	<b>-0.49</b>	<b>1.68</b>	<b>2.91</b>	<b>2.56</b>	<b>3.64</b>	<b>N/A</b>	<b>3.74</b>	<b>3.68</b>	<b>12/01/2009</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	3.35	
Difference			0.23	0.23	1.24	1.24	0.23	0.22	0.16	N/A	1.09	0.33	
<b>Externally Mgd Fixed Income Composite</b>	<b>9,484,945,933</b>	<b>78.76</b>	<b>1.50</b>	<b>1.50</b>	<b>0.39</b>	<b>2.70</b>	<b>2.84</b>	<b>2.80</b>	<b>4.14</b>	<b>4.82</b>	<b>4.25</b>	<b>5.35</b>	<b>10/01/1996</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	5.35	
Difference			0.68	0.68	2.12	2.26	0.16	0.46	0.66	0.55	1.60	0.00	
<b>Allianz Global Investors (Net)</b>	<b>511,683,757</b>	<b>4.25</b>	<b>5.10</b>	<b>5.10</b>	<b>12.11</b>	<b>14.72</b>	<b>3.98</b>	<b>8.49</b>	<b>9.35</b>	<b>7.98</b>	<b>5.86</b>	<b>5.57</b>	<b>09/01/2000</b>
BofA ML All Cnvrts Index (All Qual)			5.30	5.30	13.99	18.14	5.68	9.92	9.22	6.71	10.44	5.19	
Difference			-0.20	-0.20	-1.88	-3.42	-1.70	-1.43	0.13	1.27	-4.58	0.38	
<b>Core Fixed Income Composite</b>	<b>5,618,010,827</b>	<b>46.65</b>	<b>0.76</b>	<b>0.76</b>	<b>-1.52</b>	<b>0.63</b>	<b>2.80</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.95</b>	<b>1.91</b>	<b>01/01/2013</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	1.83	
Difference			-0.06	-0.06	0.21	0.19	0.12	N/A	N/A	N/A	0.30	0.08	
IM U.S. Broad Mkt Core Fixed Income (SA+CF) Median			0.93	0.93	-1.30	1.02	2.99	2.81	3.98	4.77	3.10	2.18	
Core Fixed Income Composite Rank			90	90	62	66	71	N/A	N/A	N/A	60	79	
<b>C.S. McKee</b>	<b>1,255,473,326</b>	<b>10.43</b>	<b>0.74</b>	<b>0.74</b>	<b>-1.35</b>	<b>0.35</b>	<b>2.78</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.65</b>	<b>1.94</b>	<b>01/01/2013</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	1.83	
Difference			-0.08	-0.08	0.38	-0.09	0.10	N/A	N/A	N/A	0.00	0.11	
IM U.S. Broad Mkt Core Fixed Income (SA+CF) Median			0.93	0.93	-1.30	1.02	2.99	2.81	3.98	4.77	3.10	2.18	
C.S. McKee Rank			91	91	55	82	73	N/A	N/A	N/A	76	77	
<b>JP Morgan Core</b>	<b>2,139,598,376</b>	<b>17.77</b>	<b>0.94</b>	<b>0.94</b>	<b>-1.79</b>	<b>0.30</b>	<b>3.01</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.52</b>	<b>2.10</b>	<b>01/01/2013</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	1.83	
Difference			0.12	0.12	-0.06	-0.14	0.33	N/A	N/A	N/A	-0.13	0.27	
IM U.S. Broad Mkt Core Fixed Income (SA+CF) Median			0.93	0.93	-1.30	1.02	2.99	2.81	3.98	4.77	3.10	2.18	
JP Morgan Core Rank			50	50	84	84	48	N/A	N/A	N/A	86	57	

Performance shown is gross of fees with the exception of the convertible bond portfolio and Grosvenor Silvery Lupine Fund, which is shown net of fees. Wyoming State Treasurer's Office fiscal year ends on June 30th. Since Inception date shown represents the first full month following initial funding. The Credit Custom Index consists of 20% Bloomberg US Credit Index, 20% BofA ML US HY Master II Const. Index, and 60% S&P/LSTA Leveraged Loan Index. The Internal Fixed Income Portfolio Index consists of the Bloomberg US Gov't: Int. Term Bond Index; prior to December 2009 the index consisted of the Bloomberg US Gov't/Credit Bond Index.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of March 31, 2017

	Allocation		Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	Since Incep.	Inception Date
<b>PIMCO Core</b>	<b>2,200,564,054</b>	<b>18.27</b>	<b>1.01</b>	<b>1.01</b>	<b>-1.10</b>	<b>1.19</b>	<b>3.00</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>3.35</b>	<b>1.89</b>	<b>01/01/2013</b>
Bloomberg US Agg Bond Index			0.82	0.82	-1.73	0.44	2.68	2.34	3.48	4.27	2.65	1.83	
Difference			0.19	0.19	0.63	0.75	0.32	N/A	N/A	N/A	0.70	0.06	
IM U.S. Broad Mkt Core Fixed Income (SA+CF) Median			0.93	0.93	-1.30	1.02	2.99	2.81	3.98	4.77	3.10	2.18	
PIMCO Core Rank			41	41	43	44	49	N/A	N/A	N/A	43	81	
<b>Credit Fixed Income Composite</b>	<b>1,899,216,317</b>	<b>15.77</b>	<b>1.49</b>	<b>1.49</b>	<b>5.27</b>	<b>8.66</b>	<b>3.98</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.91</b>	<b>3.75</b>	<b>04/01/2013</b>
Credit Custom Index			1.49	1.49	5.90	9.74	3.80	4.87	5.43	5.35	10.69	3.93	
Difference			0.00	0.00	-0.63	-1.08	0.18	N/A	N/A	N/A	-0.78	-0.18	
IM U.S. Fixed Income (SA+CF) Median			1.14	1.14	0.07	1.91	3.04	3.20	4.21	4.72	3.70	2.55	
Credit Fixed Income Composite Rank			33	33	21	19	29	N/A	N/A	N/A	18	31	
<b>Neuberger Berman Credit</b>	<b>936,580,077</b>	<b>7.78</b>	<b>1.10</b>	<b>1.10</b>	<b>4.57</b>	<b>7.18</b>	<b>3.69</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.42</b>	<b>3.91</b>	<b>04/01/2013</b>
Credit Custom Index			1.49	1.49	5.90	9.74	3.80	4.87	5.43	5.35	10.69	3.93	
Difference			-0.39	-0.39	-1.33	-2.56	-0.11	N/A	N/A	N/A	-2.27	-0.02	
IM U.S. Fixed Income (SA+CF) Median			1.14	1.14	0.07	1.91	3.04	3.20	4.21	4.72	3.70	2.55	
Neuberger Berman Credit Rank			53	53	22	22	35	N/A	N/A	N/A	23	29	
<b>Seix</b>	<b>962,636,239</b>	<b>7.99</b>	<b>1.65</b>	<b>1.65</b>	<b>6.07</b>	<b>10.23</b>	<b>4.17</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>11.46</b>	<b>3.93</b>	<b>05/01/2013</b>
Credit Custom Index			1.49	1.49	5.90	9.74	3.80	4.87	5.43	5.35	10.69	3.72	
Difference			0.16	0.16	0.17	0.49	0.37	N/A	N/A	N/A	0.77	0.21	
IM U.S. Fixed Income (SA+CF) Median			1.14	1.14	0.07	1.91	3.04	3.20	4.21	4.72	3.70	2.33	
Seix Rank			27	27	18	16	26	N/A	N/A	N/A	13	22	
<b>Grosvenor Silvery Lupine Fund</b>	<b>328,374,955</b>	<b>2.73</b>	<b>2.83</b>	<b>2.83</b>	<b>9.27</b>	<b>11.51</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.58</b>	<b>5.96</b>	<b>07/01/2014</b>
CS Western Eur Hi Yld Index			2.40	2.40	9.37	11.65	5.65	8.31	8.31	7.88	11.29	5.25	
Difference			0.43	0.43	-0.10	-0.14	N/A	N/A	N/A	N/A	-2.71	0.71	

Performance shown is gross of fees with the exception of the convertible bond portfolio and Grosvenor Silvery Lupine Fund, which is shown net of fees. Wyoming State Treasurer's Office fiscal year ends on June 30th. Since Inception date shown represents the first full month following initial funding. The Credit Custom Index consists of 20% Bloomberg US Credit Index, 20% BofA ML US HY Master II Const. Index, and 60% S&P/LSTA Leveraged Loan Index. The Internal Fixed Income Portfolio Index consists of the Bloomberg US Gov't: Int. Term Bond Index; prior to December 2009 the index consisted of the Bloomberg US Gov't/Credit Bond Index.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of March 31, 2017

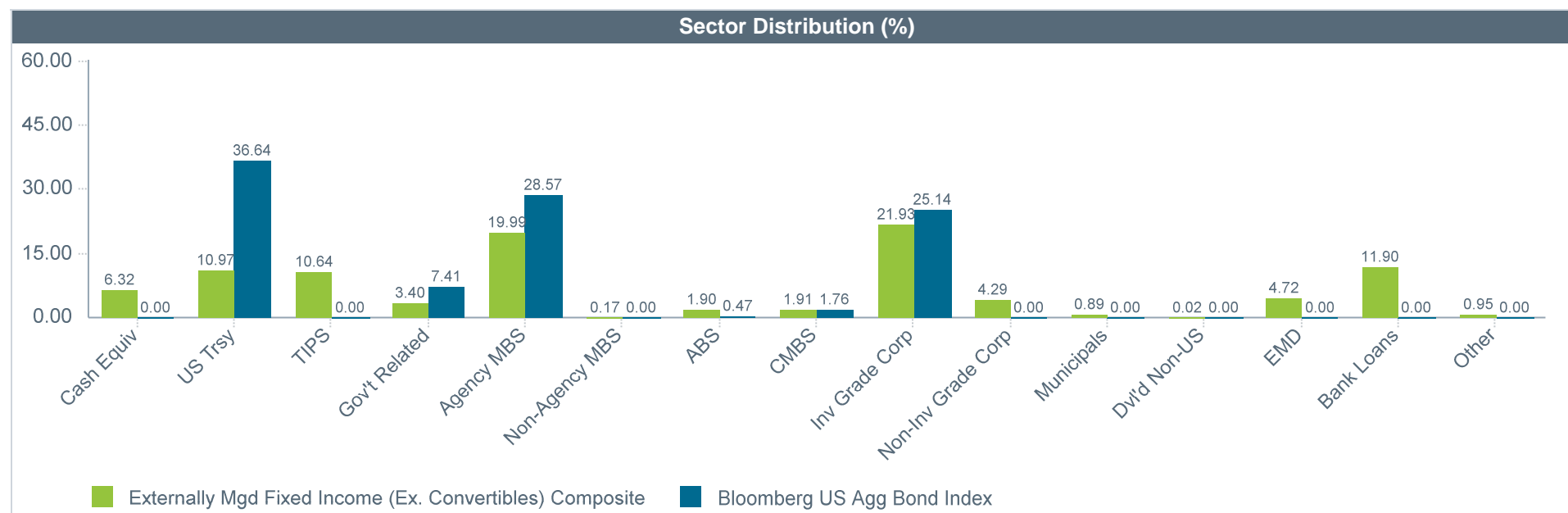
	Allocation		Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	Since Incep.	Inception Date
<b>Emerging Market Debt Fixed Income Composite</b>	<b>409,851,690</b>	<b>3.40</b>	<b>7.54</b>	<b>7.54</b>	<b>3.35</b>	<b>6.13</b>	<b>-2.94</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.42</b>	<b>-4.21</b>	<b>04/01/2013</b>
JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)			6.50	6.50	2.69	5.47	-2.68	-1.62	1.05	4.10	9.94	-3.81	
Difference			1.04	1.04	0.66	0.66	-0.26	N/A	N/A	N/A	-1.52	-0.40	
IM Emerging Markets Debt (SA+CF) Median			4.94	4.94	5.18	9.69	4.04	4.45	6.48	6.95	11.04	2.97	
Emerging Market Debt Fixed Income Composite Rank			15	15	85	85	98	N/A	N/A	N/A	85	98	
<b>Investec</b>	<b>209,303,773</b>	<b>1.74</b>	<b>8.02</b>	<b>8.02</b>	<b>3.73</b>	<b>6.64</b>	<b>-2.70</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.00</b>	<b>-3.72</b>	<b>04/01/2013</b>
JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)			6.50	6.50	2.69	5.47	-2.68	-1.62	1.05	4.10	9.94	-3.81	
Difference			1.52	1.52	1.04	1.17	-0.02	N/A	N/A	N/A	-2.94	0.09	
IM Emerging Markets Debt (SA+CF) Median			4.94	4.94	5.18	9.69	4.04	4.45	6.48	6.95	11.04	2.97	
Investec Rank			8	8	77	83	96	N/A	N/A	N/A	92	92	
<b>Stone Harbor</b>	<b>200,547,916</b>	<b>1.67</b>	<b>7.04</b>	<b>7.04</b>	<b>2.97</b>	<b>5.62</b>	<b>-3.19</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.94</b>	<b>-4.77</b>	<b>04/01/2013</b>
JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)			6.50	6.50	2.69	5.47	-2.68	-1.62	1.05	4.10	9.94	-3.81	
Difference			0.54	0.54	0.28	0.15	-0.51	N/A	N/A	N/A	0.00	-0.96	
IM Emerging Markets Debt (SA+CF) Median			4.94	4.94	5.18	9.69	4.04	4.45	6.48	6.95	11.04	2.97	
Stone Harbor Rank			22	22	89	92	100	N/A	N/A	N/A	70	100	
<b>State Street TIPS</b>	<b>717,808,388</b>	<b>5.96</b>	<b>1.11</b>	<b>1.11</b>	<b>-0.44</b>	<b>1.43</b>	<b>2.17</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.04</b>	<b>-0.26</b>	<b>01/01/2013</b>
Bloomberg US Trsy: US TIPS Index (Series B)			1.37	1.37	-0.26	1.54	2.19	1.04	3.59	4.31	4.85	-0.24	
Difference			-0.26	-0.26	-0.18	-0.11	-0.02	N/A	N/A	N/A	0.19	-0.02	
<b>Internal Fixed Income Portfolio</b>	<b>2,557,830,106</b>	<b>21.24</b>	<b>1.02</b>	<b>1.02</b>	<b>-0.05</b>	<b>-0.02</b>	<b>2.31</b>	<b>1.64</b>	<b>2.12</b>	<b>3.15</b>	<b>0.95</b>	<b>4.84</b>	<b>10/01/1996</b>
Bloomberg US Gov't: Int. Term Bond Index			0.54	0.54	-1.89	-0.67	1.55	1.23	2.22	3.24	1.05	4.85	
Difference			0.48	0.48	1.84	0.65	0.76	0.41	-0.10	-0.09	-0.10	-0.01	
IM U.S. Government Bonds (SA+CF) Median			0.62	0.62	-1.90	-0.57	2.07	1.43	2.42	3.61	1.37	4.71	
Internal Fixed Income Portfolio Rank			38	38	7	24	47	47	69	70	86	47	

Performance shown is gross of fees with the exception of the convertible bond portfolio and Grosvenor Silvery Lupine Fund, which is shown net of fees. Wyoming State Treasurer's Office fiscal year ends on June 30th. Since Inception date shown represents the first full month following initial funding. The Credit Custom Index consists of 20% Bloomberg US Credit Index, 20% BofA ML US HY Master II Const. Index, and 60% S&P/LSTA Leveraged Loan Index. The Internal Fixed Income Portfolio Index consists of the Bloomberg US Gov't: Int. Term Bond Index; prior to December 2009 the index consisted of the Bloomberg US Gov't/Credit Bond Index.

## Externally Mgd Fixed Income (Ex. Convertibles) Composite vs. Bloomberg US Agg Bond Index

## Portfolio Characteristics

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	4.80	6.00
Avg. Maturity	6.59	8.22
Avg. Quality	A2	Aa1/Aa2
Yield To Maturity (%)	3.31	2.61
Coupon Rate (%)	2.98	3.06
Current Yield (%)	2.87	N/A

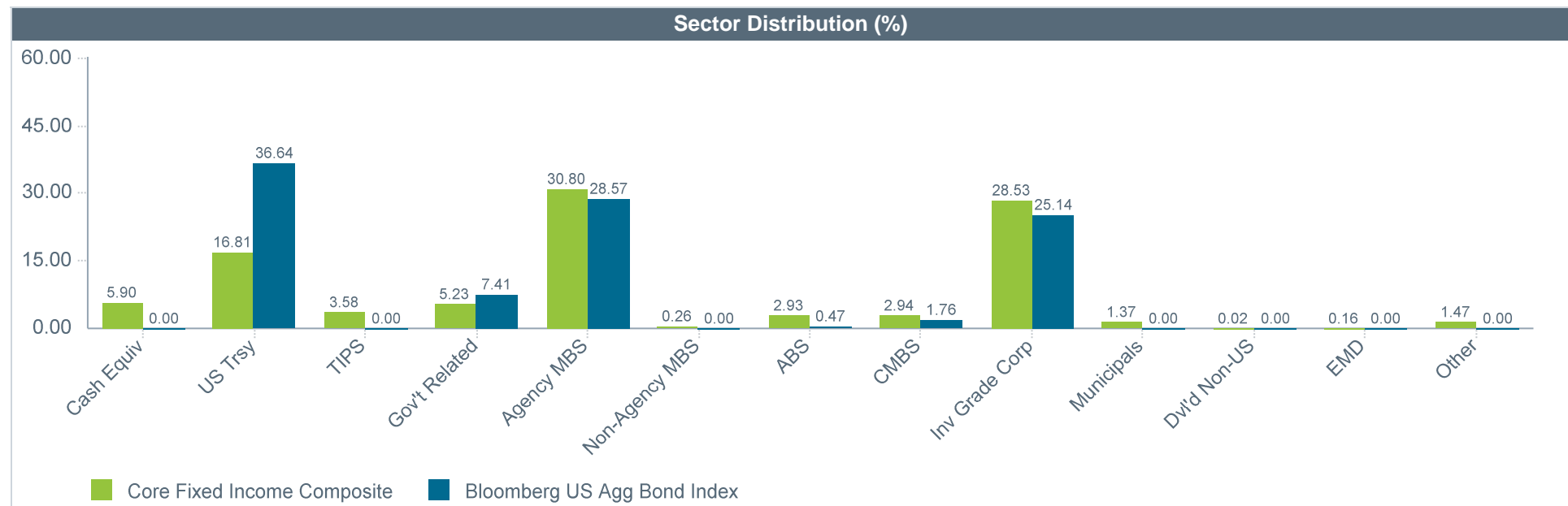


The statistics are calculated based on a weighted average of the underlying managers. Statistics shown exclude Grosvenor Silvery Lupine Fund and managers in the liquidation process as of March 31, 2017. Allocation to "Other" consists of collateralized mortgage obligations, Euro/Yankee securities, and emerging market hard currency debt.

Wyoming State Treasurer's Office  
Core Fixed Income Composite vs. Bloomberg US Agg Bond Index  
Portfolio Characteristics

As of March 31, 2017

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.49	6.00
Convexity	N/A	0.19
Avg. Maturity	6.86	8.22
Avg. Quality	Aa3	Aa1/Aa2
Yield To Maturity (%)	2.76	2.61
Coupon Rate (%)	2.73	3.06
Current Yield (%)	2.77	N/A

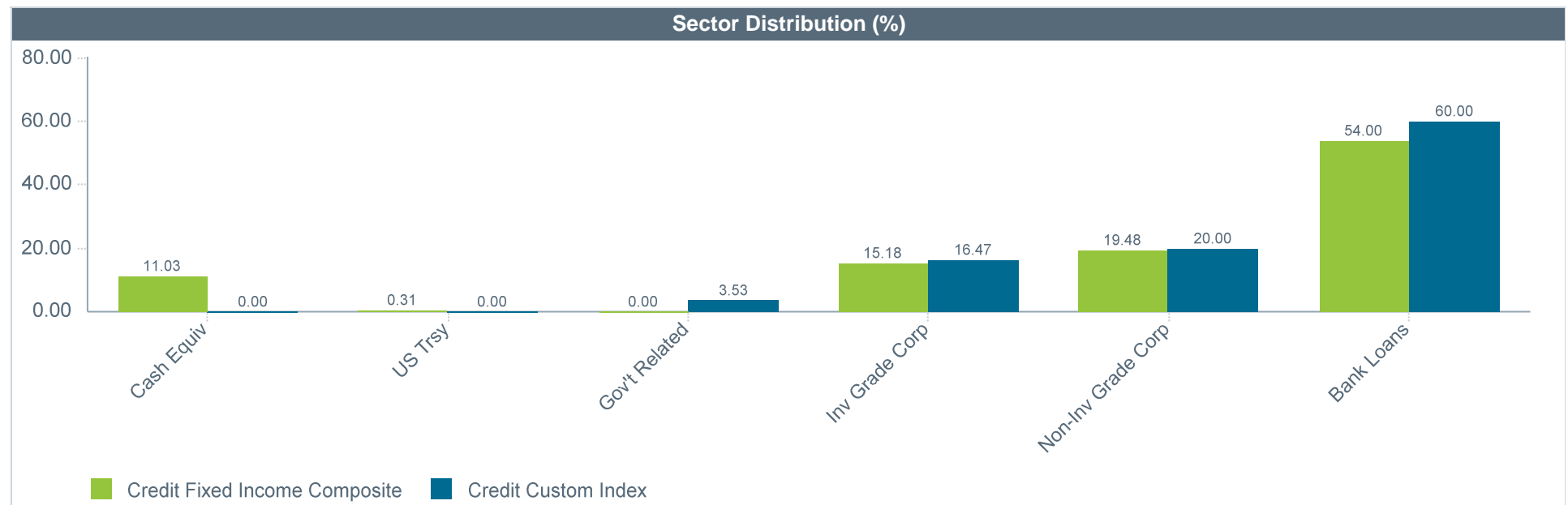


The statistics are calculated based on a weighted average of the underlying managers. Allocation to "Other" consists of collateralized mortgage obligations and Euro/Yankee securities.

Wyoming State Treasurer's Office  
Credit Fixed Income Composite vs. Credit Custom Index  
Portfolio Characteristics

As of March 31, 2017

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	2.23	N/A
Avg. Maturity	4.55	6.18
Avg. Quality	Ba2	Ba2
Yield To Maturity (%)	4.41	5.88
Coupon Rate (%)	3.76	4.99
Current Yield (%)	3.06	N/A

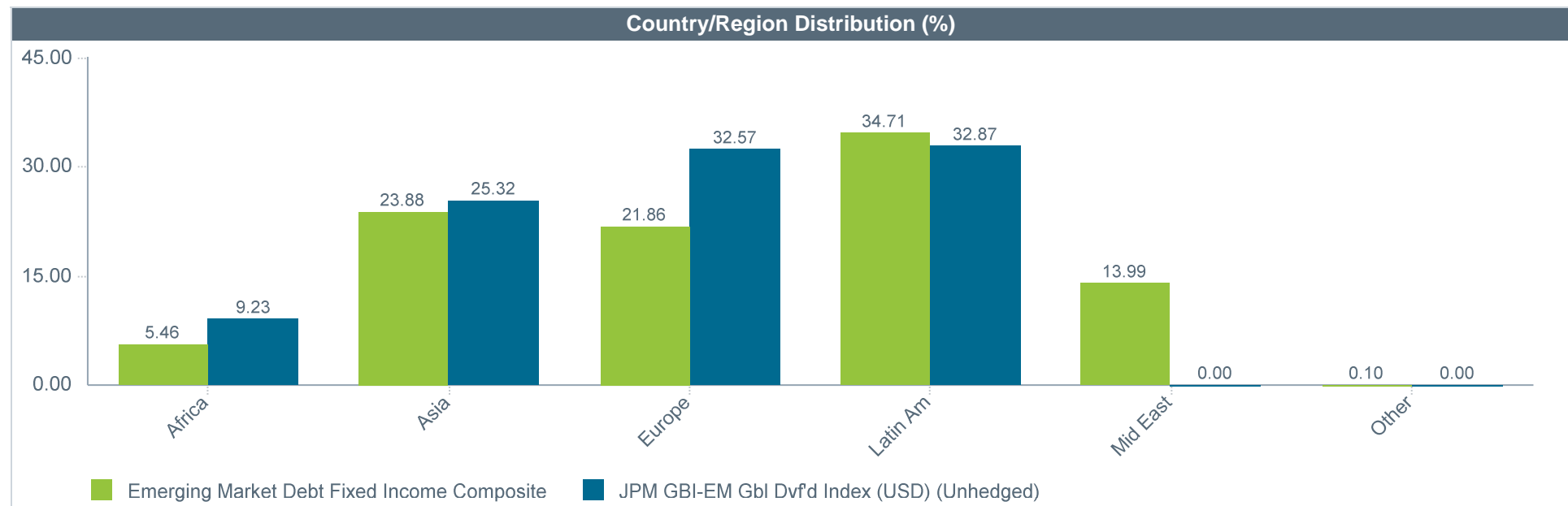


The statistics are calculated based on a weighted average of the underlying members.  
Statistics for the S&P/LSTA Leveraged Loan Index are unavailable.  
The Credit Suisse Leveraged Loan Index is used as a proxy within the Credit Custom Index.

## Emerging Market Debt Fixed Income Composite vs. JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)

## Portfolio Characteristics

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	4.96	5.03
Spread Duration	4.56	N/A
Convexity	0.44	0.46
Avg. Maturity	7.97	7.36
Avg. Quality	Baa2	Baa3
Yield To Maturity (%)	7.38	6.50
Coupon Rate (%)	6.33	8.14
Yield To Worst (%)	7.38	6.50
Current Yield (%)	7.09	8.01



The statistics are calculated based on a weighted average of the underlying managers. Region allocation to "Other" consists of cash. Negative region allocation reflects manager's use of derivatives, short selling, or interest rate swaps.



**Wyoming State Treasurer's Office  
Comparative Performance**

**As of March 31, 2017**

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	Since Incep.	Inception Date
<b>JP Morgan Cash Composite</b>	<b>0.19</b>	<b>0.19</b>	<b>0.33</b>	<b>0.51</b>	<b>0.42</b>	<b>0.34</b>	<b>0.41</b>	<b>1.14</b>	<b>0.58</b>	<b>1.59</b>	<b>01/01/2006</b>
JP Morgan Cash Custom Index	0.12	0.12	0.16	0.32	0.27	0.24	0.34	1.08	0.38	1.51	
Difference	0.07	0.07	0.17	0.19	0.15	0.10	0.07	0.06	0.20	0.08	
<b>Wyo-Star Cash Composite</b>	<b>0.18</b>	<b>0.18</b>	<b>0.19</b>	<b>0.39</b>	<b>0.40</b>	<b>0.36</b>	<b>0.45</b>	<b>1.25</b>	<b>0.53</b>	<b>3.46</b>	<b>10/01/1996</b>
Wyo-Star Cash Custom Index	0.13	0.13	0.08	0.25	0.32	0.30	0.43	1.18	0.38	2.75	
Difference	0.05	0.05	0.11	0.14	0.08	0.06	0.02	0.07	0.15	0.71	

Performance shown for the JP Morgan Cash Composite and the Wyo-Star Cash Composite consists of the respective operating and extended cash accounts.

The JP Morgan Cash Custom Index is calculated monthly using beginning of the month investment weights applied to each corresponding primary benchmark return. Currently, the primary benchmark for JP Morgan Cash is the BofA ML 3 Mo US T-Bill Index and for JP Morgan Extd is the JP Morgan Blended Index.

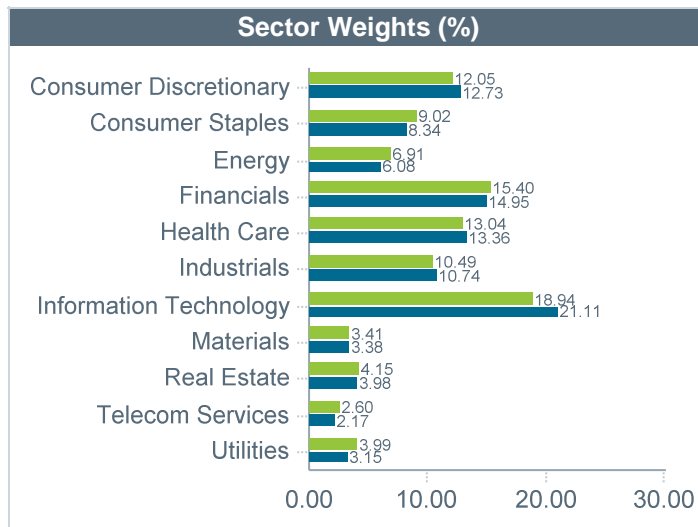
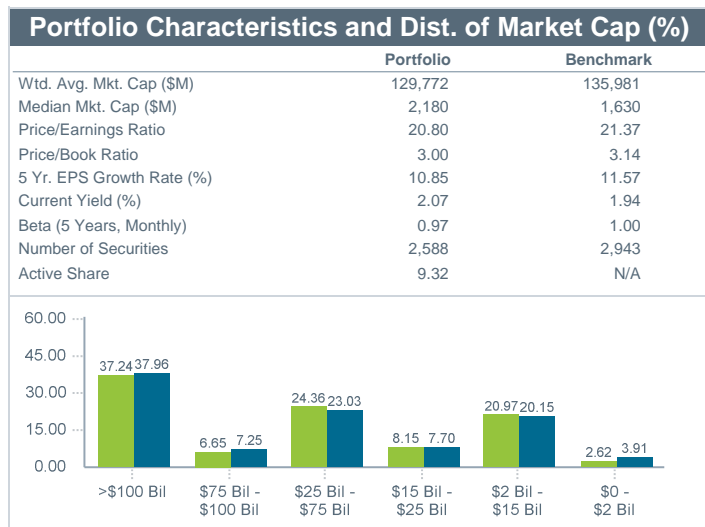
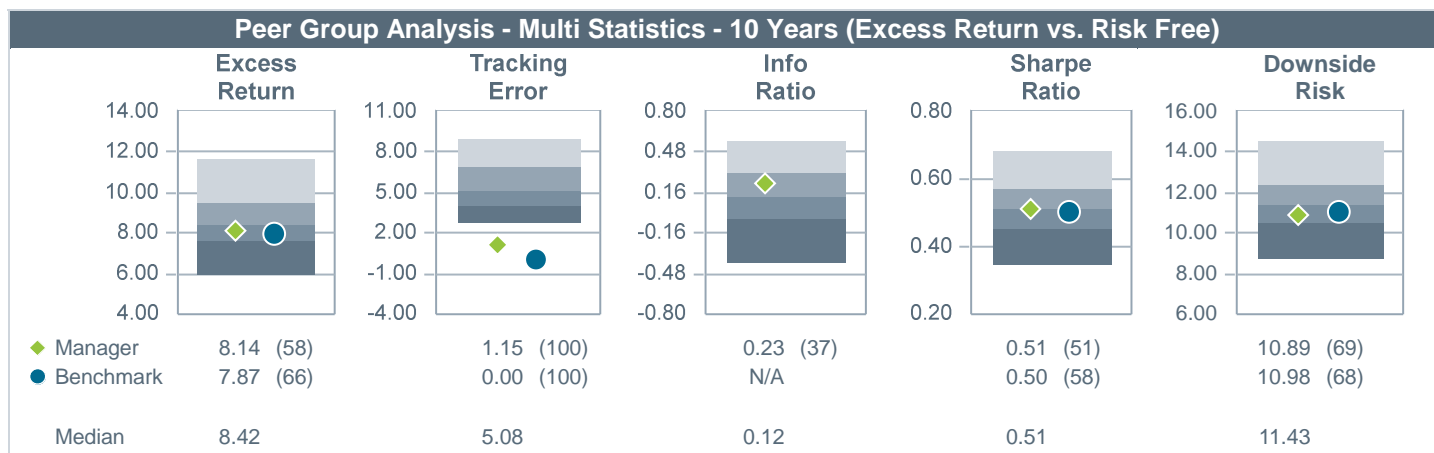
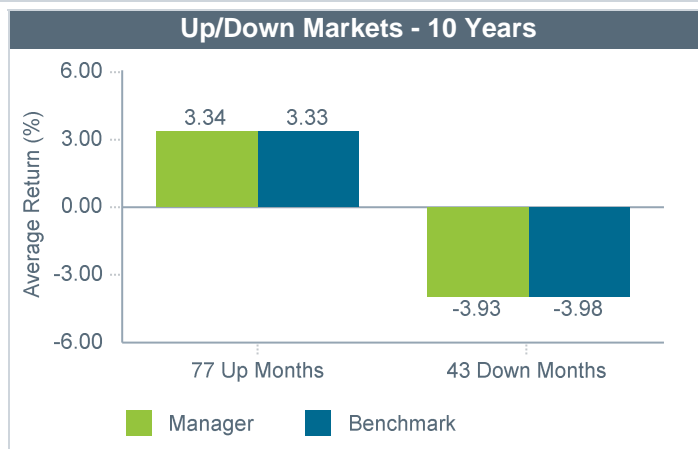
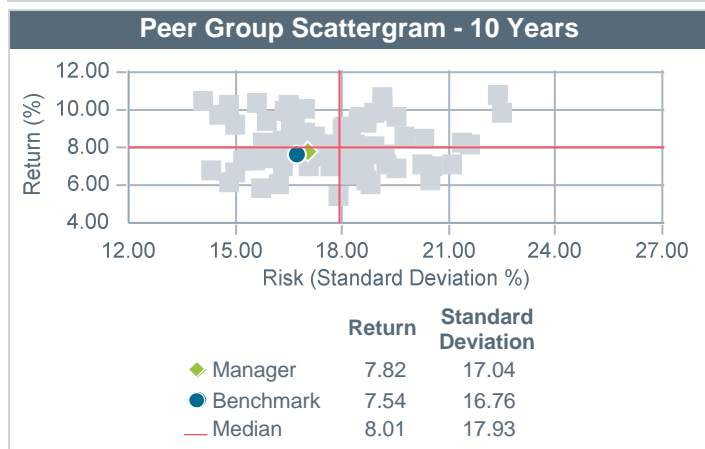
The Wyo-Star Cash Custom Index is calculated monthly using beginning of the month investment weights applied to each corresponding primary benchmark return. Currently, the primary benchmark for Wyo-Star Cash is the BofA ML 3 Mo US T-Bill Index and for Wyo-Star Extd is the JP Morgan Blended Index.

Performance shown is gross of fees. Wyoming State Treasurer's Office fiscal year ends on June 30th. Since Inception date shown represents the first full month following initial funding.

**Manager:** State Street All Cap  
**Benchmark:** Russell 3000 Index  
**Peer Group:** IM U.S. All Cap Equity (SA+CF)

As of March 31, 2017

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	5.18	17.74	9.76	13.33	12.98	7.82	13.77	-0.02	12.86	33.48	16.26
Benchmark	5.74	18.07	9.76	13.18	12.89	7.54	12.74	0.48	12.56	33.55	16.42
Difference	-0.56	-0.33	0.00	0.15	0.09	0.28	1.03	-0.50	0.30	-0.07	-0.16
Peer Group Median	5.44	17.52	8.39	12.51	12.69	8.01	12.45	-0.48	10.01	35.06	15.87
Rank	58	49	25	39	44	54	42	47	23	66	46
Population	163	162	155	146	132	107	168	178	189	201	210



Performance shown is gross of fees. Performance prior to client inception consists of the State Street All Cap Custom Index. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

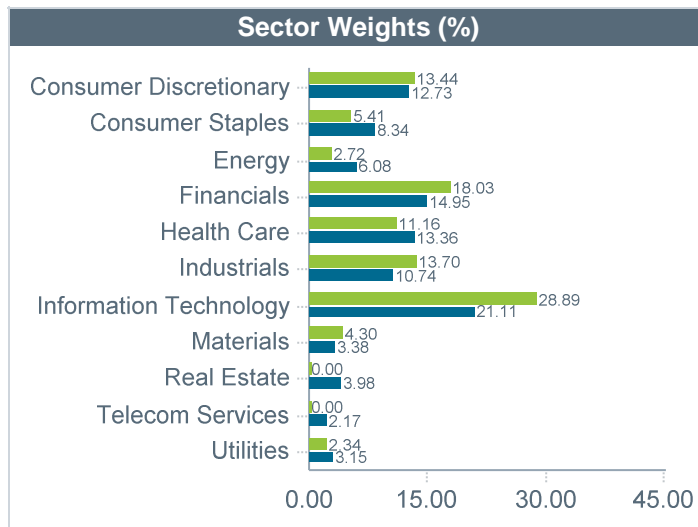
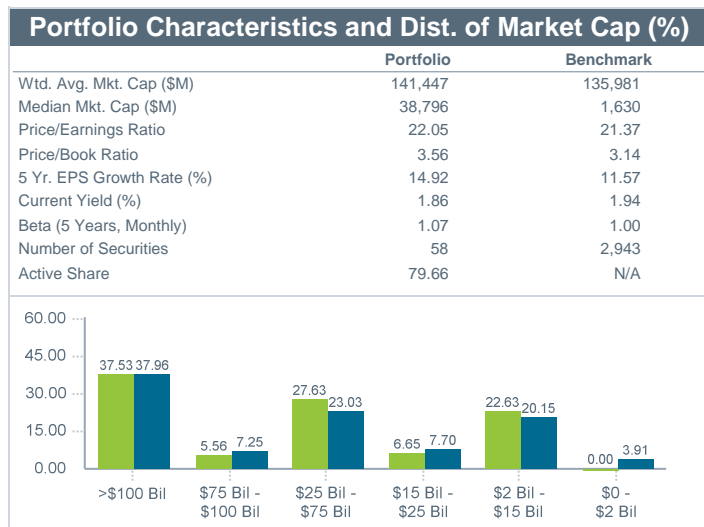
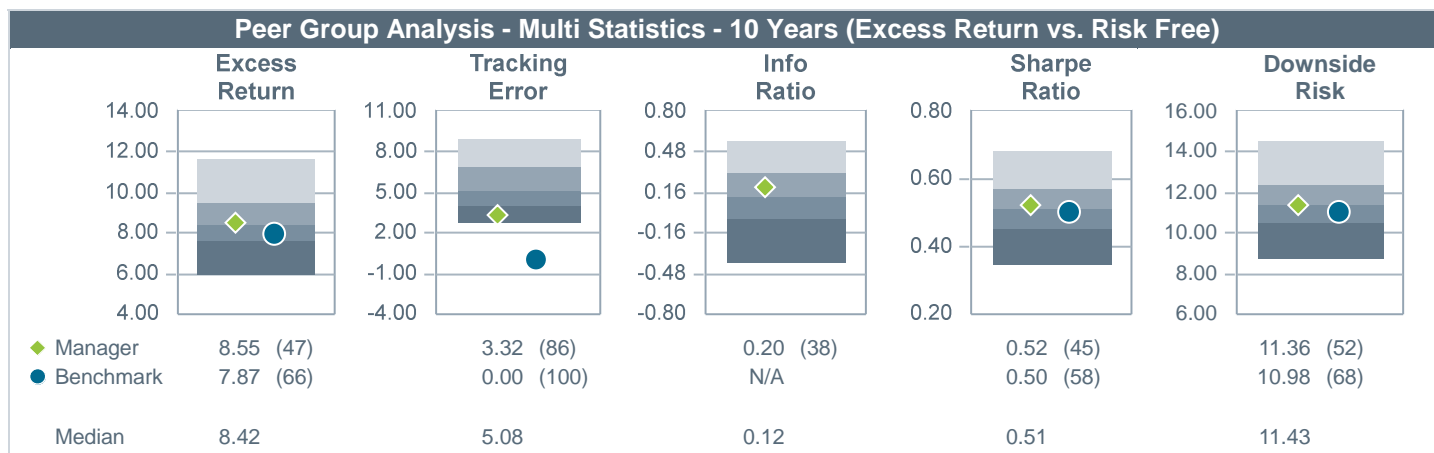
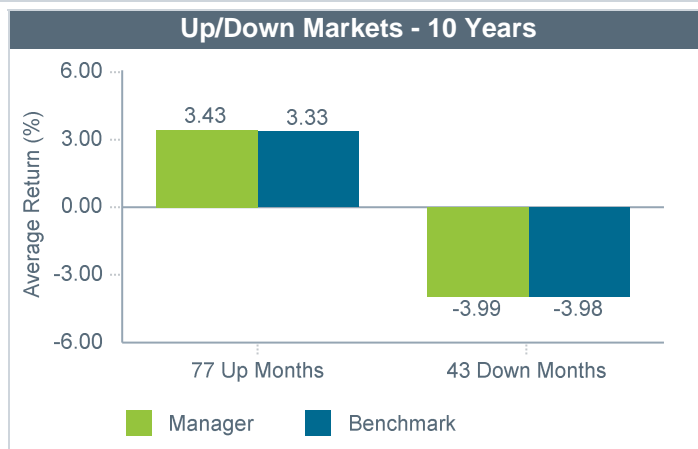
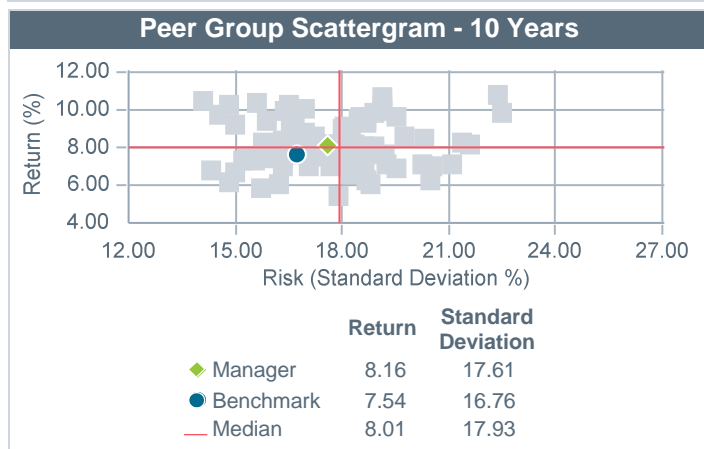
Manager: Epoch

As of March 31, 2017

Benchmark: Russell 3000 Index

Peer Group: IM U.S. All Cap Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	7.46	19.81	9.80	12.79	12.50	8.16	10.19	-1.61	14.56	37.28	12.01
Benchmark	5.74	18.07	9.76	13.18	12.89	7.54	12.74	0.48	12.56	33.55	16.42
Difference	1.72	1.74	0.04	-0.39	-0.39	0.62	-2.55	-2.09	2.00	3.73	-4.41
Peer Group Median	5.44	17.52	8.39	12.51	12.69	8.01	12.45	-0.48	10.01	35.06	15.87
Rank	20	28	25	46	56	43	58	58	12	37	77
Population	163	162	155	146	132	107	168	178	189	201	210



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

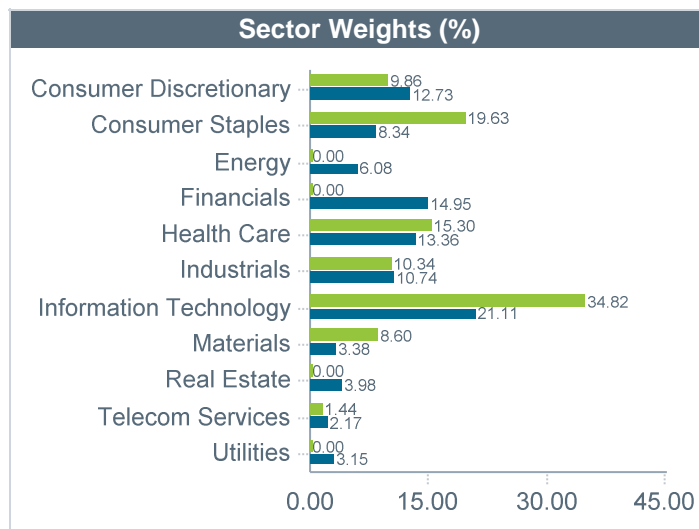
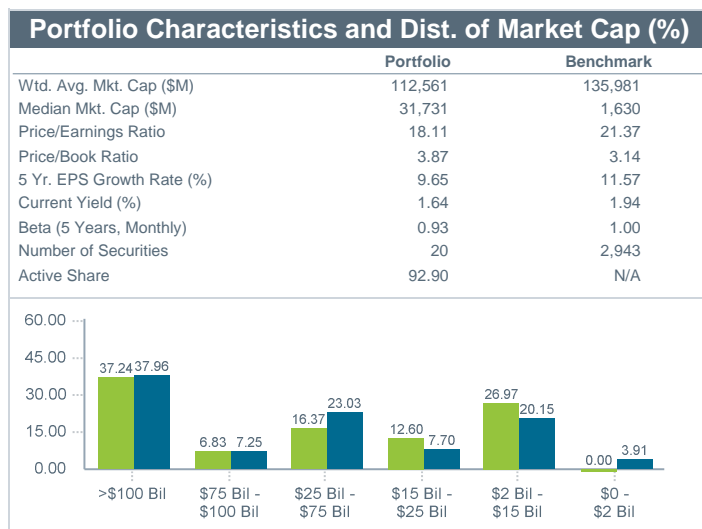
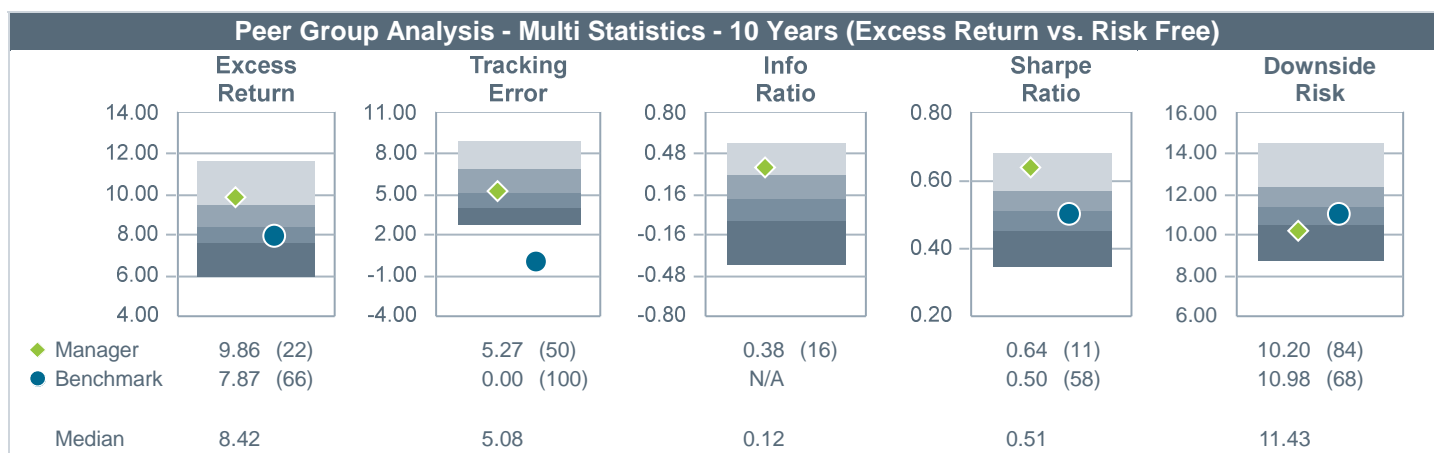
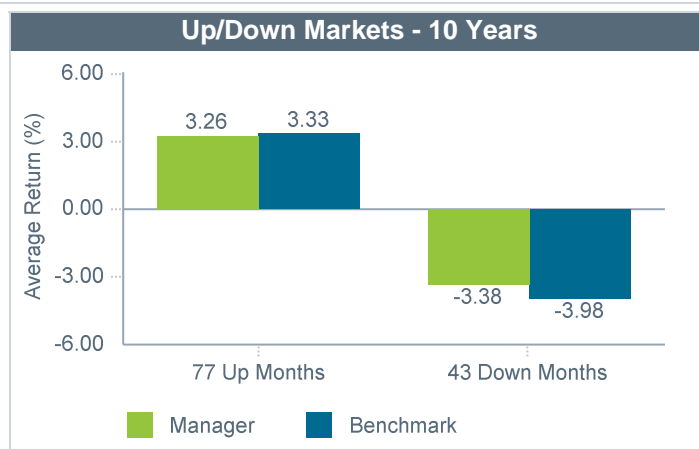
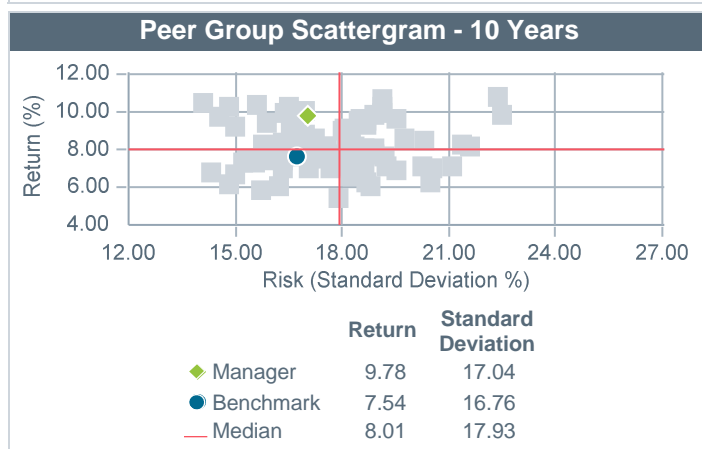
Manager: Lazard

As of March 31, 2017

Benchmark: Russell 3000 Index

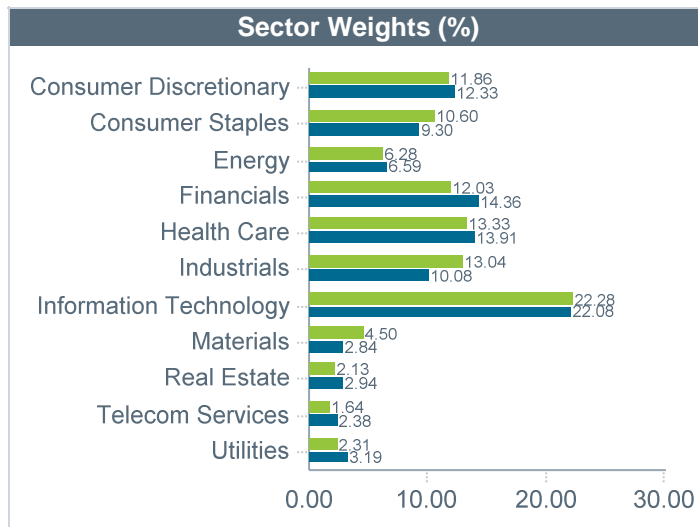
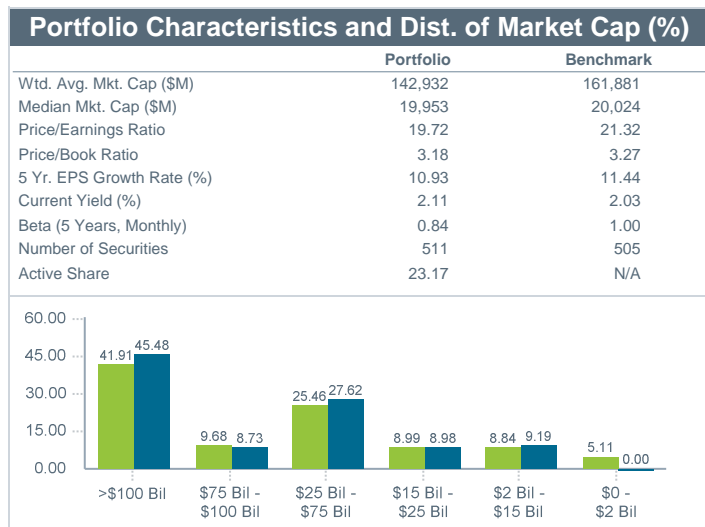
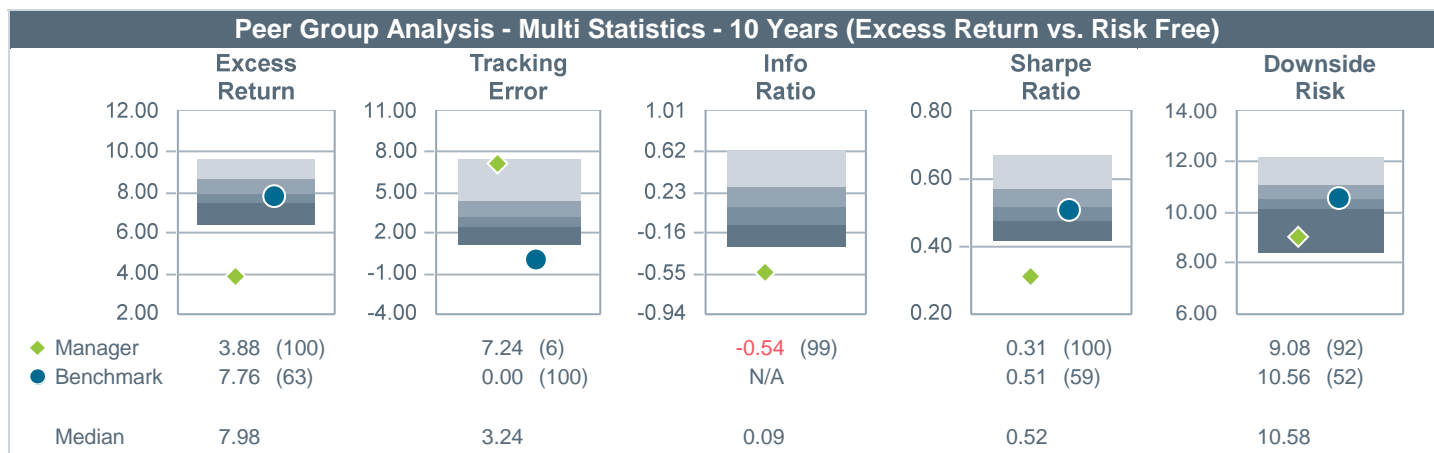
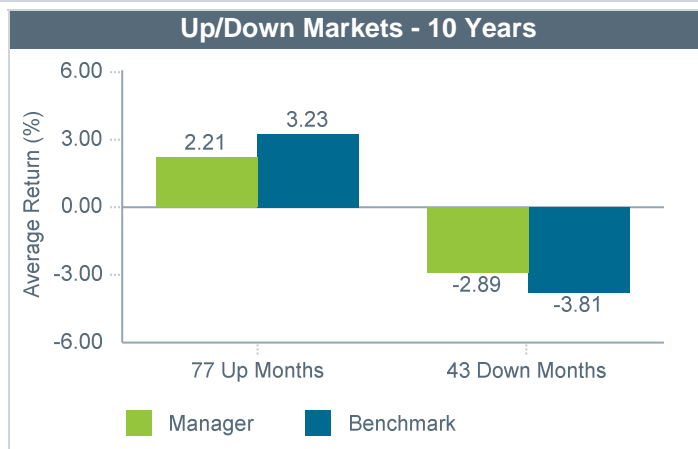
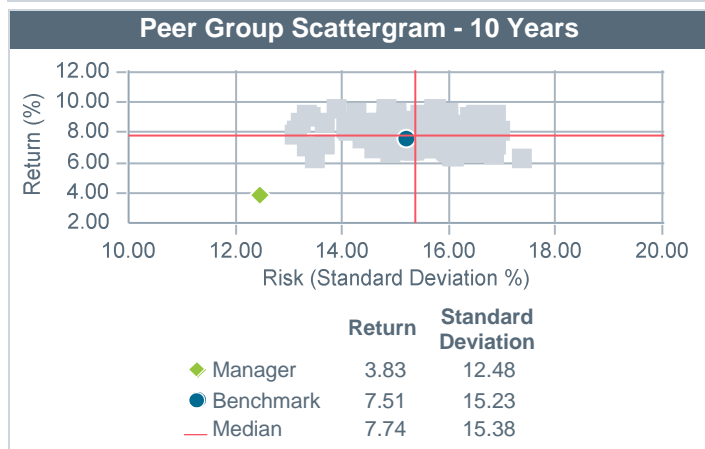
Peer Group: IM U.S. All Cap Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	5.70	10.81	11.56	14.92	14.62	9.78	9.28	4.26	17.84	30.58	19.32
Benchmark	5.74	18.07	9.76	13.18	12.89	7.54	12.74	0.48	12.56	33.55	16.42
Difference	-0.04	-7.26	1.80	1.74	1.73	2.24	-3.46	3.78	5.28	-2.97	2.90
Peer Group Median	5.44	17.52	8.39	12.51	12.69	8.01	12.45	-0.48	10.01	35.06	15.87
Rank	44	94	11	15	13	19	63	20	1	80	20
Population	163	162	155	146	132	107	168	178	189	201	210



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	5.78	15.64	9.63	10.94	8.81	3.83	10.87	1.03	13.30	23.52	6.25
Benchmark	6.07	17.17	10.37	13.30	12.94	7.51	11.96	1.38	13.69	32.39	16.00
Difference	-0.29	-1.53	-0.74	-2.36	-4.13	-3.68	-1.09	-0.35	-0.39	-8.87	-9.75
Peer Group Median	5.97	16.32	9.80	13.22	12.92	7.74	10.52	1.28	13.41	32.96	15.70
Rank	58	61	54	88	97	100	47	53	51	95	98
Population	273	271	263	246	229	201	288	310	333	352	359



Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

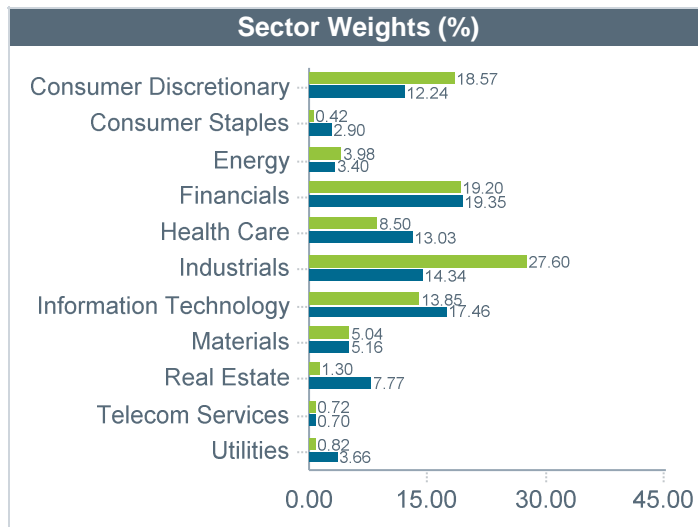
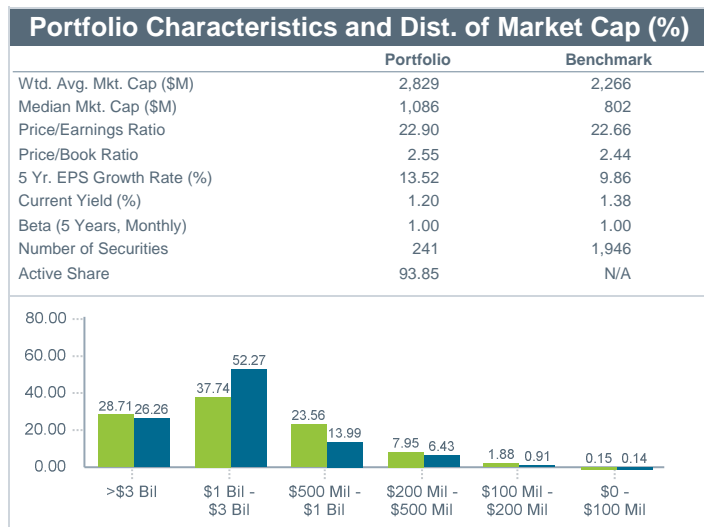
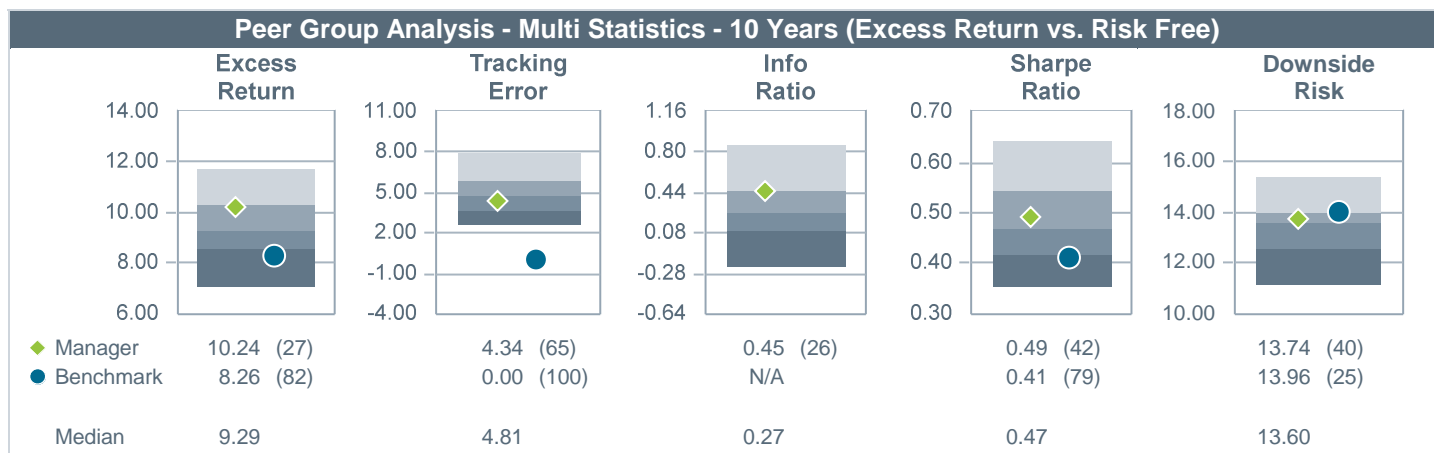
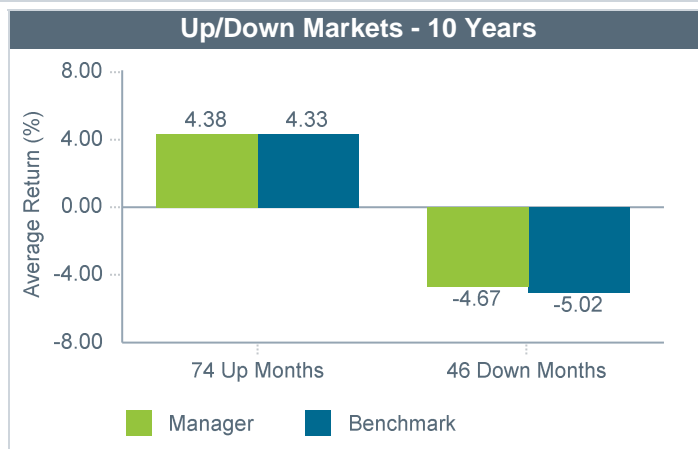
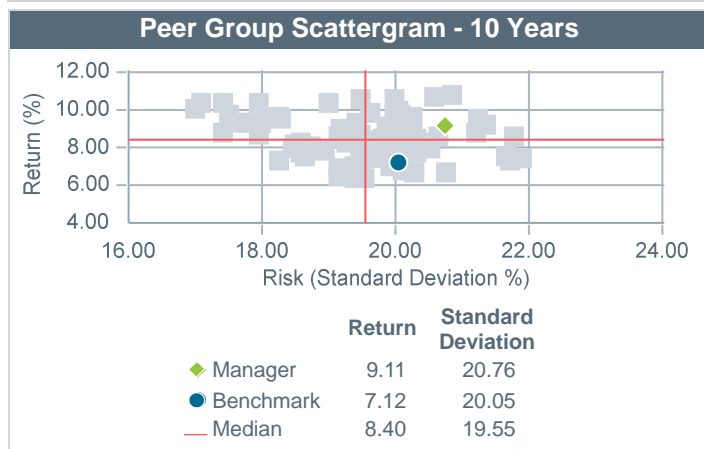
Manager: RBC

As of March 31, 2017

Benchmark: Russell 2000 Index

Peer Group: IM U.S. Small Cap Core Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	-1.14	24.89	7.04	12.81	13.95	9.11	27.49	-6.18	5.31	39.56	17.26
Benchmark	2.47	26.22	7.22	12.35	12.27	7.12	21.31	-4.41	4.89	38.82	16.35
Difference	-3.61	-1.33	-0.18	0.46	1.68	1.99	6.18	-1.77	0.42	0.74	0.91
Peer Group Median	2.93	24.15	8.75	13.90	14.16	8.40	20.61	-1.36	6.55	41.26	16.84
Rank	98	44	75	68	58	35	11	91	61	67	47
Population	138	138	136	131	121	102	143	151	151	151	153



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

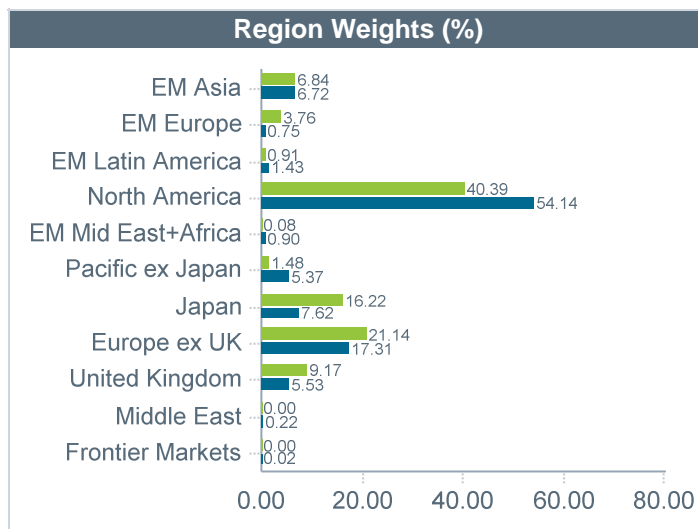
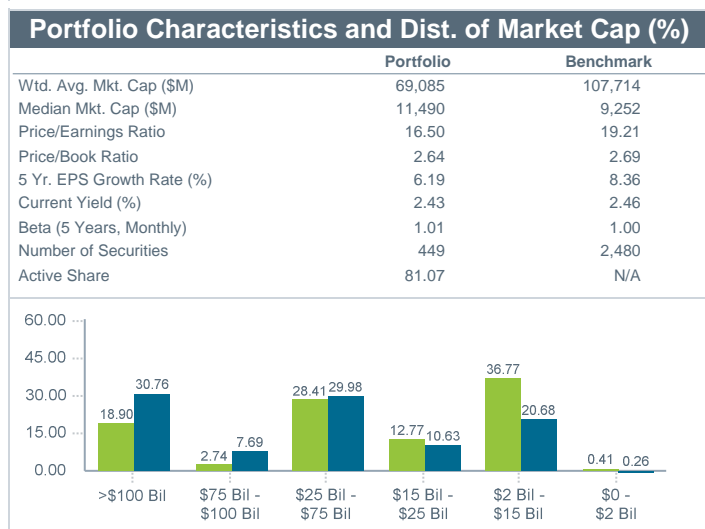
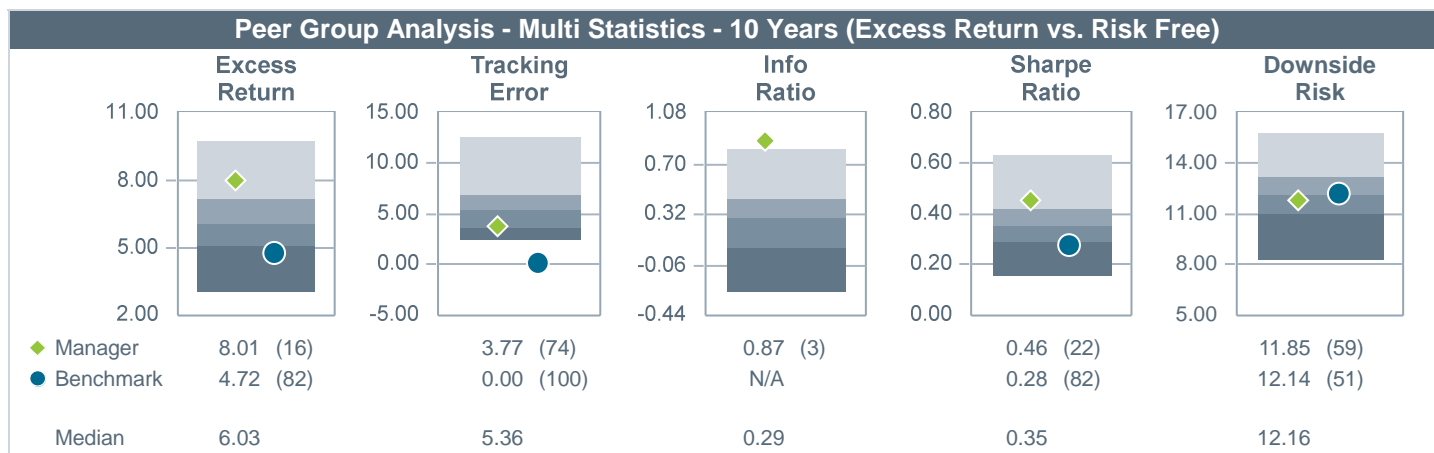
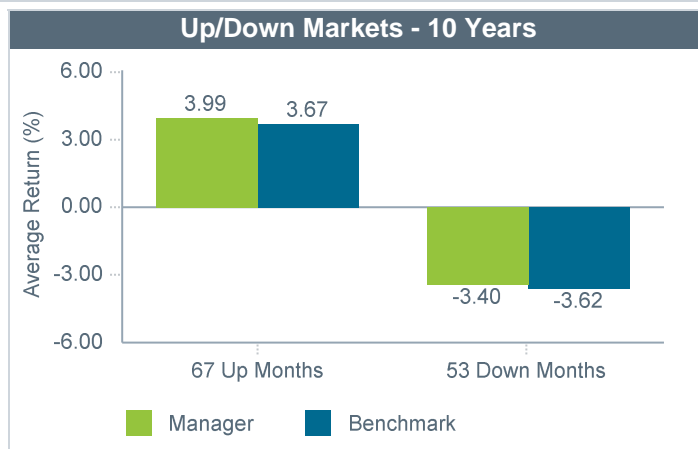
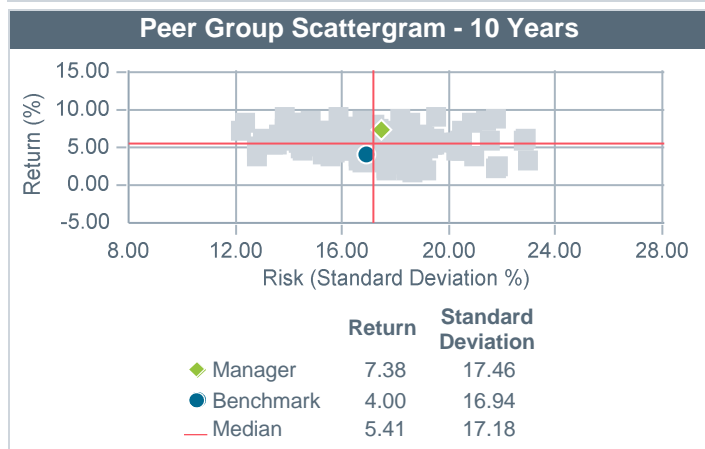
Manager: Arrowstreet

As of March 31, 2017

Benchmark: MSCI ACW Index (USD) (Net)

Peer Group: IM Global Equity (SA+CF)

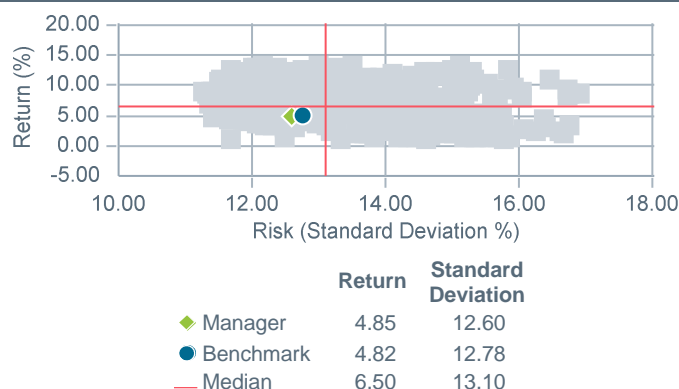
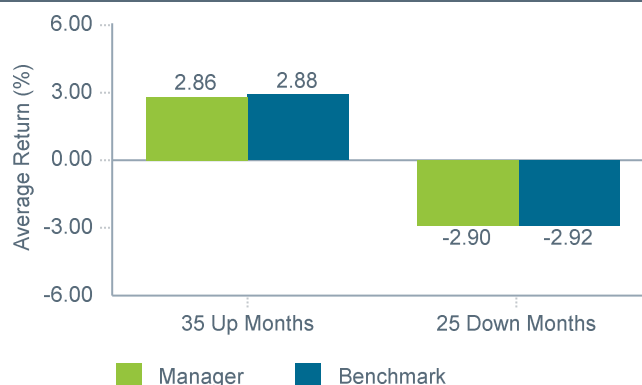
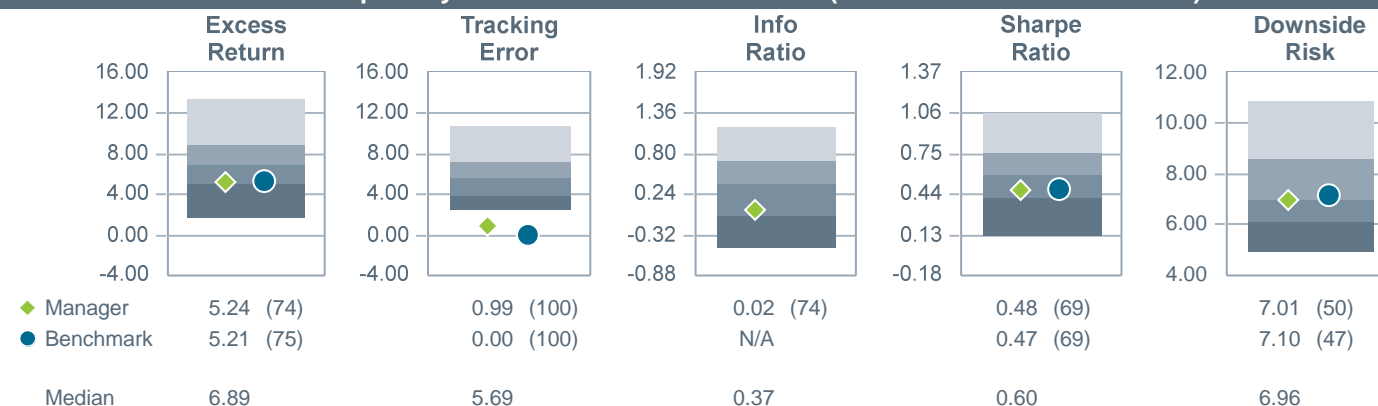
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	8.81	17.86	8.00	12.45	11.35	7.38	8.94	-0.05	8.57	34.46	17.69
Benchmark	6.91	15.04	5.08	8.37	7.81	4.00	7.86	-2.36	4.16	22.80	16.13
Difference	1.90	2.82	2.92	4.08	3.54	3.38	1.08	2.31	4.41	11.66	1.56
Peer Group Median	6.81	14.23	5.72	9.88	9.61	5.41	6.93	0.12	4.37	27.49	16.78
Rank	20	19	19	14	22	15	34	52	18	17	42
Population	472	468	434	379	310	214	492	532	537	548	541



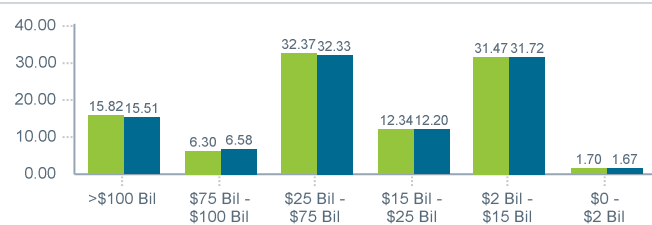
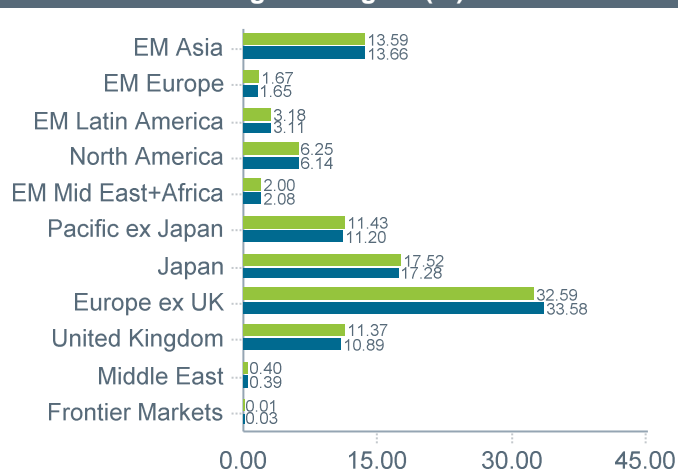
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

**Manager: Internal International Equity Portfolio**
**As of March 31, 2017**
**Benchmark: FTSE All Wrld Ex US Index (US Invstr) (USD) (Net)**
**Peer Group: IM International Equity (SA+CF)**

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	8.43	13.95	1.24	4.85	N/A	N/A	4.81	-4.54	-3.92	14.65	18.69
Benchmark	7.85	13.50	1.19	4.82	4.24	1.90	4.80	-4.72	-3.31	15.31	17.48
Difference	0.58	0.45	0.05	0.03	N/A	N/A	0.01	0.18	-0.61	-0.66	1.21
Peer Group Median	8.81	13.73	2.30	6.50	6.09	3.33	3.68	-1.50	-2.64	20.09	19.84
Rank	55	49	69	73	N/A	N/A	45	63	64	64	61
Population	963	960	908	806	702	565	1,029	1,126	1,151	1,154	1,150

**Peer Group Scattergram - 5 Years**

**Up/Down Markets - 5 Years**

**Peer Group Analysis - Multi Statistics - 5 Years (Excess Return vs. Risk Free)**

**Portfolio Characteristics and Dist. of Market Cap (%)**

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	52,321	51,968
Median Mkt. Cap (\$M)	5,496	5,456
Price/Earnings Ratio	16.48	16.80
Price/Book Ratio	2.10	2.14
5 Yr. EPS Growth Rate (%)	5.13	5.15
Current Yield (%)	2.71	3.01
Beta (5 Years, Monthly)	0.98	1.00
Number of Securities	2,524	2,468
Active Share	16.10	N/A


**Region Weights (%)**


Performance shown is gross of fees and product specific prior to client inception. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. The Internal International Equity Portfolio currently consists of Vanguard FTSE xUS:InsP (VFWPX).



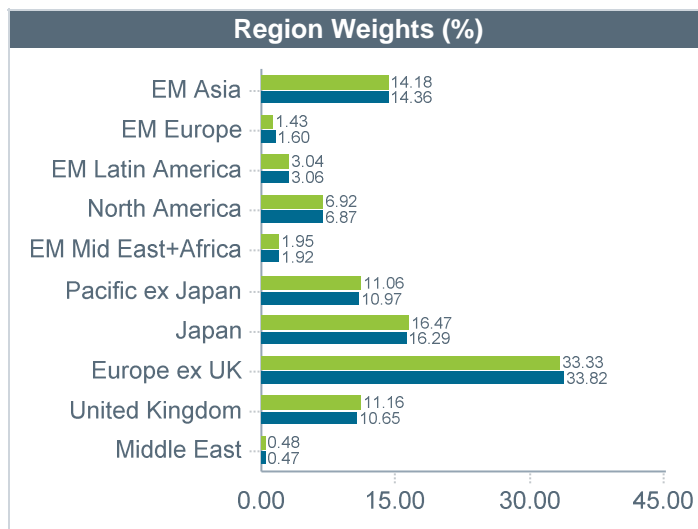
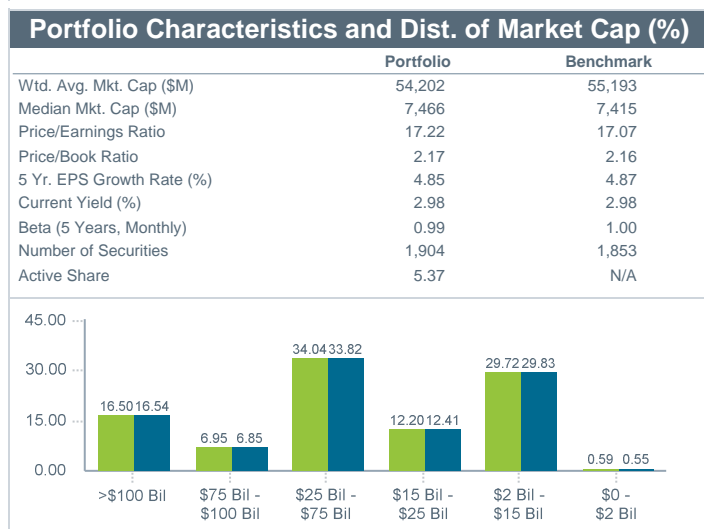
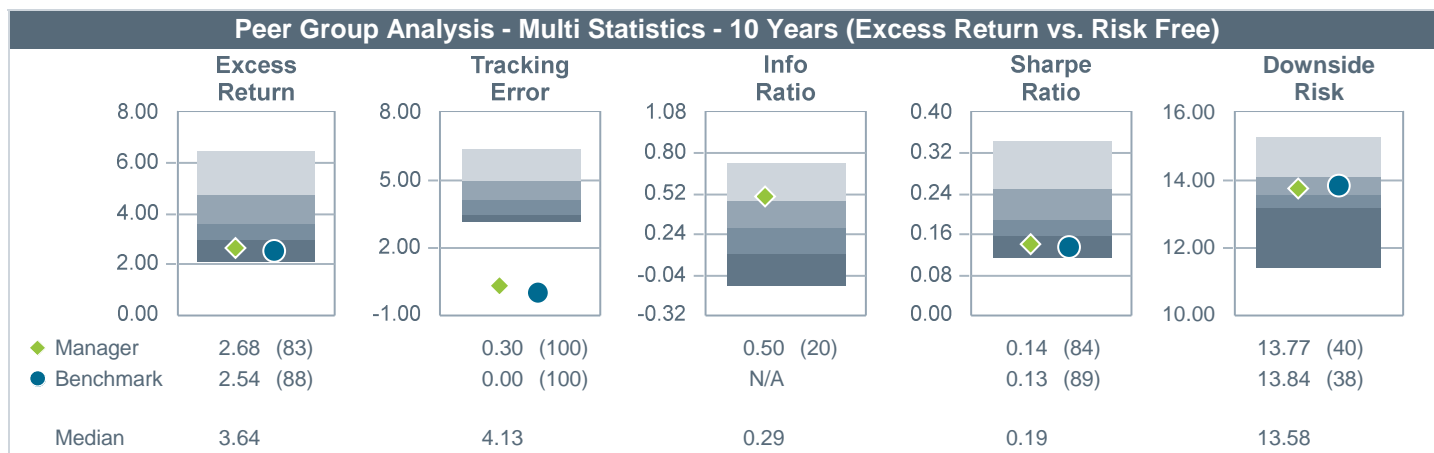
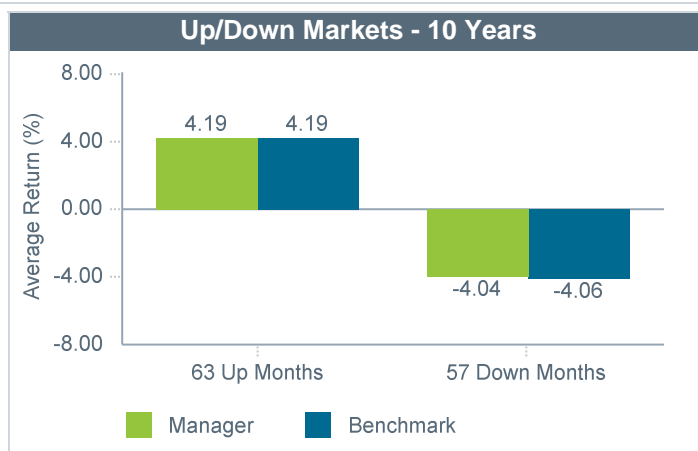
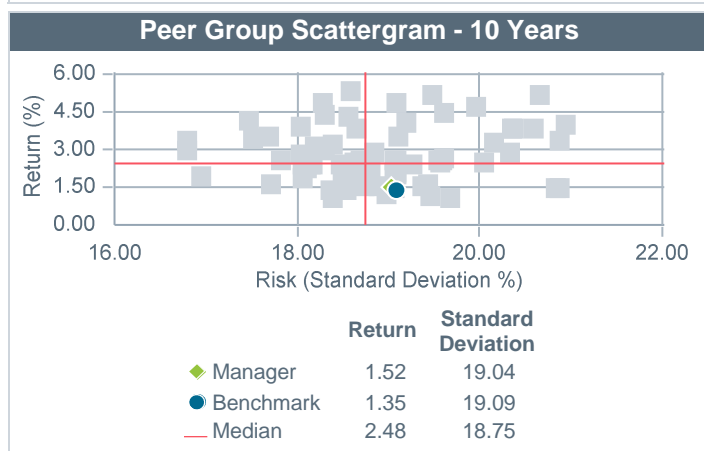
Manager: Northern Trust

As of March 31, 2017

Benchmark: MSCI ACW Ex US Index (USD) (Net)

Peer Group: IM International Core Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	7.90	12.95	0.64	4.47	3.94	1.52	4.48	-5.70	-3.63	15.42	17.13
Benchmark	7.86	13.13	0.56	4.36	3.82	1.35	4.50	-5.66	-3.87	15.29	16.83
Difference	0.04	-0.18	0.08	0.11	0.12	0.17	-0.02	-0.04	0.24	0.13	0.30
Peer Group Median	8.04	11.64	1.92	7.19	6.32	2.48	1.39	1.13	-3.51	23.97	19.73
Rank	55	33	79	93	97	84	21	94	52	95	80
Population	167	167	152	140	131	104	177	183	176	183	184



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

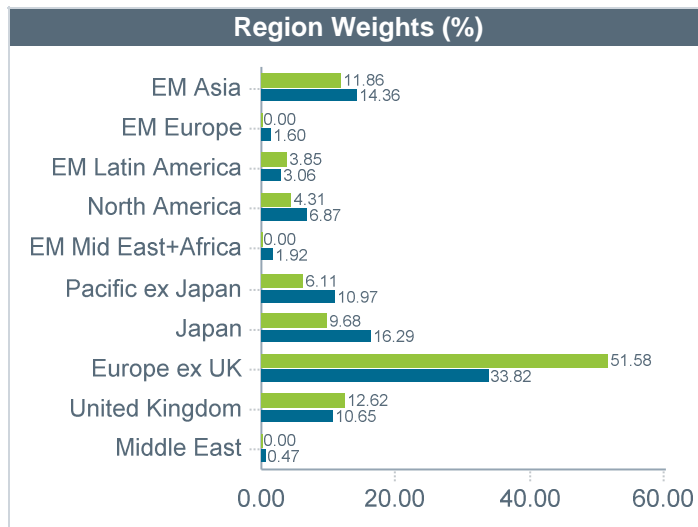
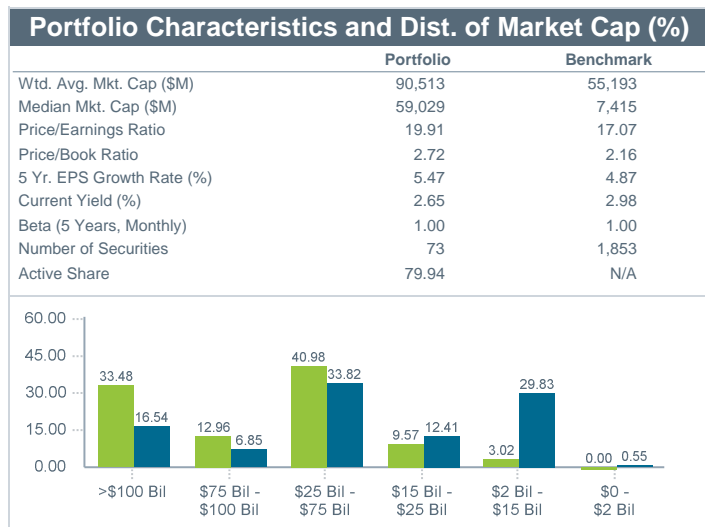
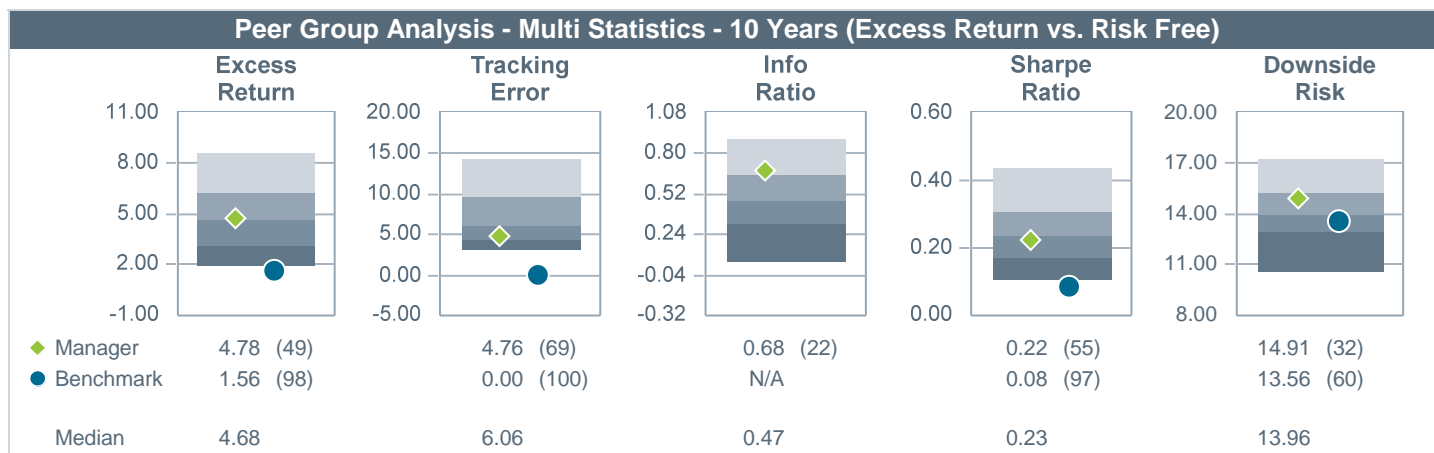
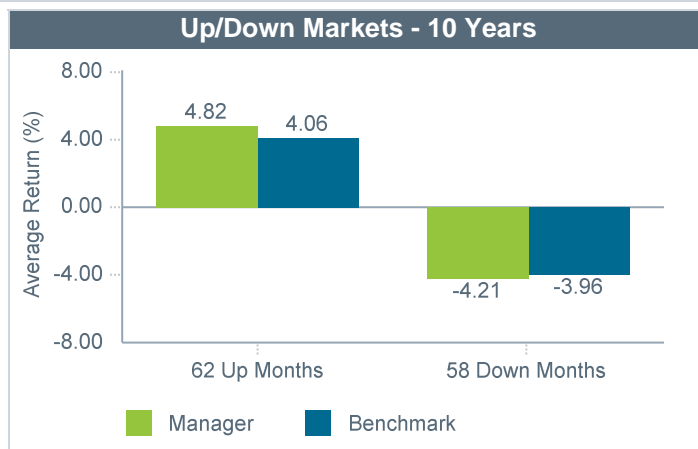
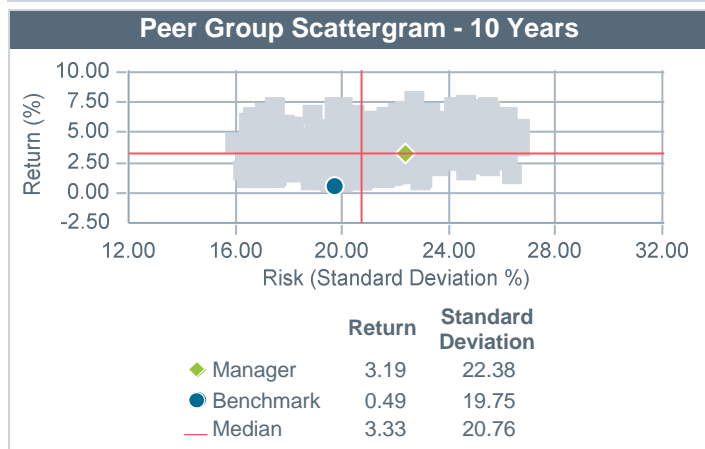
**Manager:** Fisher Investments

**As of March 31, 2017**

**Benchmark:** MSCI ACW Ex US Index (Net)\*

**Peer Group:** IM International Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	8.67	13.09	2.07	5.09	5.65	3.19	1.94	-1.84	-1.91	17.68	16.88
Benchmark	7.86	13.13	0.56	4.36	3.66	0.49	4.50	-5.66	-3.87	15.29	16.83
Difference	0.81	-0.04	1.51	0.73	1.99	2.70	-2.56	3.82	1.96	2.39	0.05
Peer Group Median	8.81	13.73	2.30	6.50	6.09	3.33	3.68	-1.50	-2.64	20.09	19.84
Rank	52	55	54	71	57	53	62	52	45	57	74
Population	963	960	908	806	702	565	1,029	1,126	1,151	1,154	1,150



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

\*Consists of the MSCI EAFE (Gross) through July 2010 and the MSCI ACW Ex US (Net) thereafter.

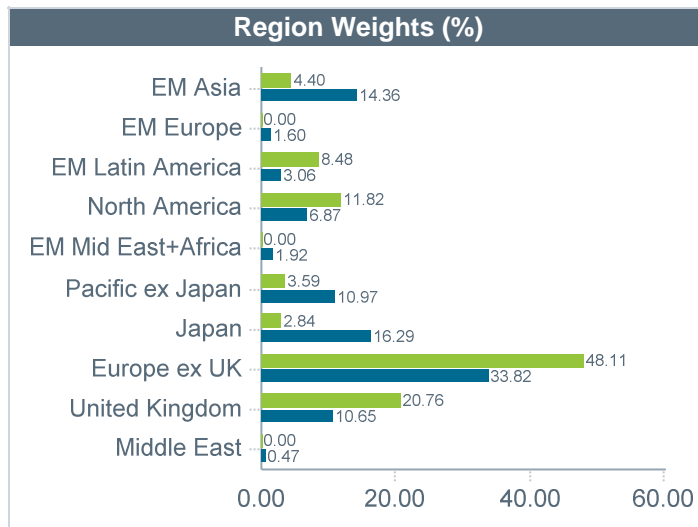
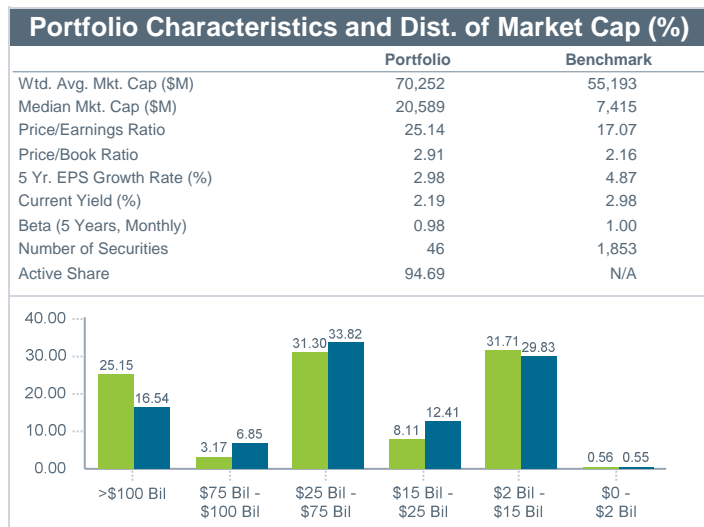
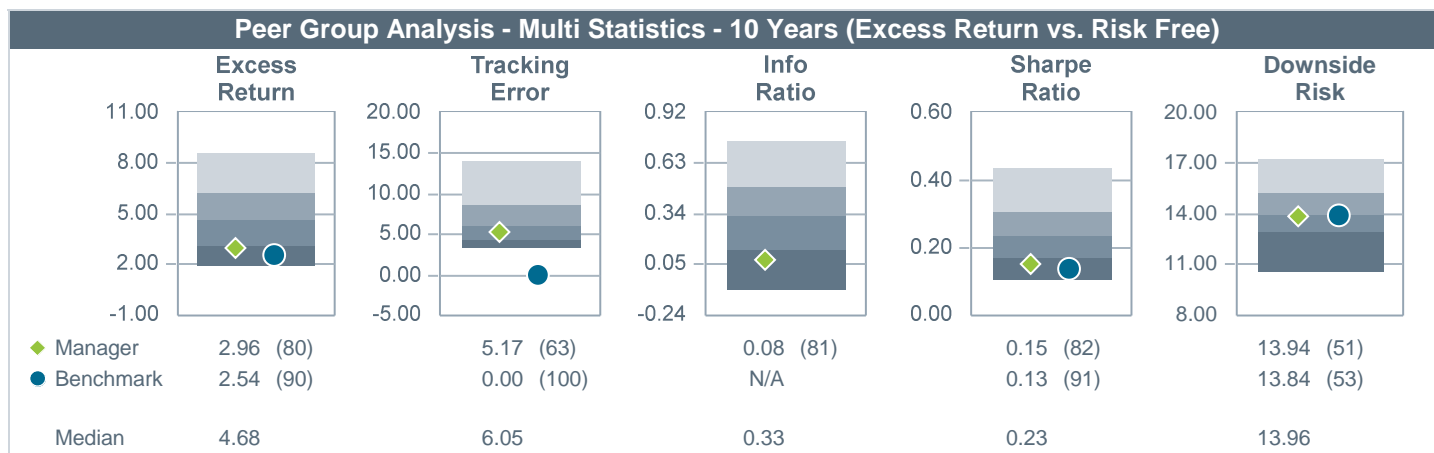
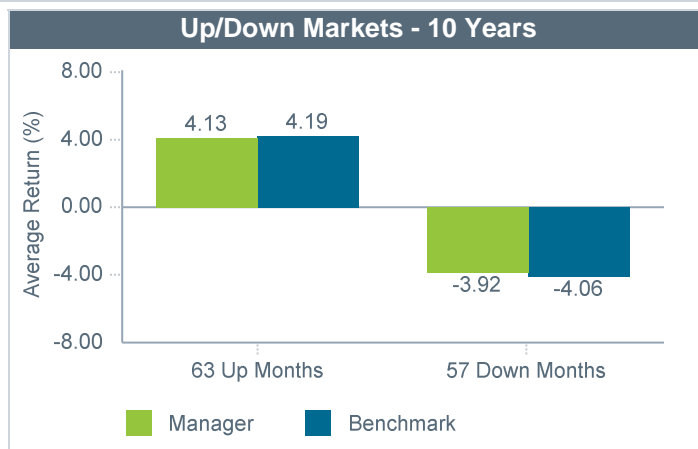
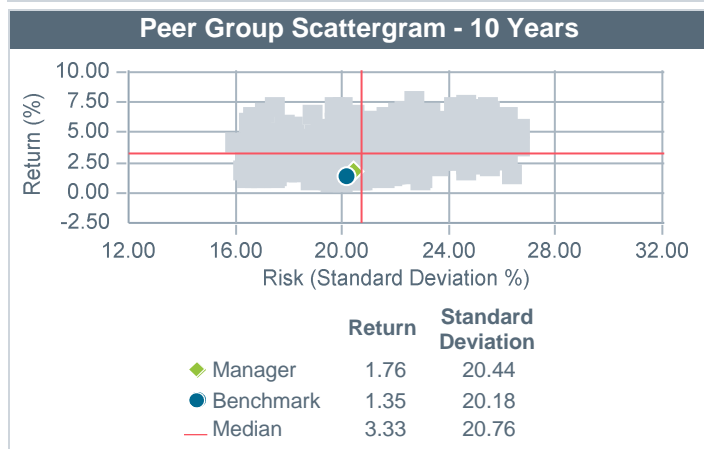
Manager: Manning & Napier

As of March 31, 2017

Benchmark: MSCI ACW Ex US Index (USD) (Net)

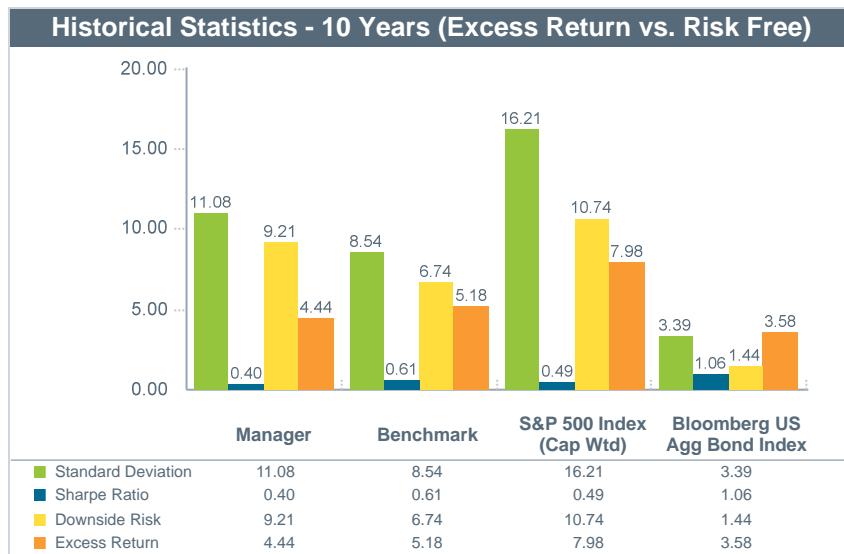
Peer Group: IM International Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	6.14	5.74	-1.78	3.82	3.22	1.76	3.51	-4.39	-8.29	21.38	19.59
Benchmark	7.86	13.13	0.56	4.36	3.82	1.35	4.50	-5.66	-3.87	15.29	16.83
Difference	-1.72	-7.39	-2.34	-0.54	-0.60	0.41	-0.99	1.27	-4.42	6.09	2.76
Peer Group Median	8.81	13.73	2.30	6.50	6.09	3.33	3.68	-1.50	-2.64	20.09	19.84
Rank	90	94	97	80	88	82	51	63	93	47	54
Population	963	960	908	806	702	565	1,029	1,126	1,151	1,154	1,150



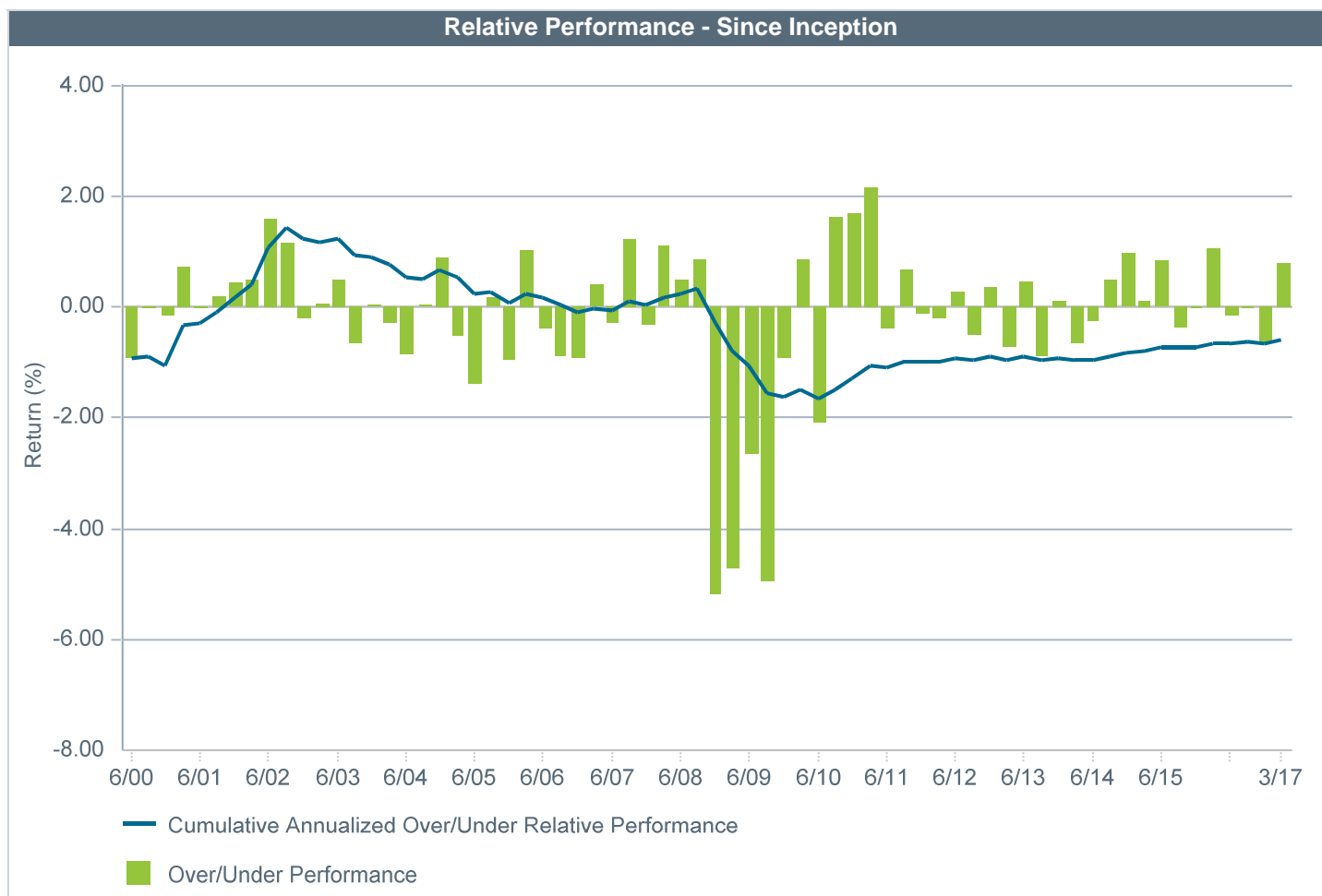
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	2.61	8.39	12.90	12.30	14.27	4.54	9.09	15.71	13.17	12.77	10.91
Benchmark	1.77	8.34	11.79	11.98	13.49	5.59	8.77	15.02	12.50	13.94	10.94
Difference	0.84	0.05	1.11	0.32	0.78	-1.05	0.32	0.69	0.67	-1.17	-0.03



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.98
S&P 500 Index (Cap Wtd)	0.22
Russell 2000 Index	0.18
MSCI EAFE Index (USD) (Net)	0.08
MSCI Emg Mkts Index (USD) (Net)	-0.04
Bloomberg US Agg Bond Index	-0.24
Bloomberg US Trsy: US TIPS Index	-0.05
Wilshire US REIT Index	0.20
HFRI FOF Comp Index	0.14
Bloomberg Cmnty Index (TR)	0.18
BofA ML 3 Mo US T-Bill Index	0.08
Consumer Price Index (Unadjusted)	0.24



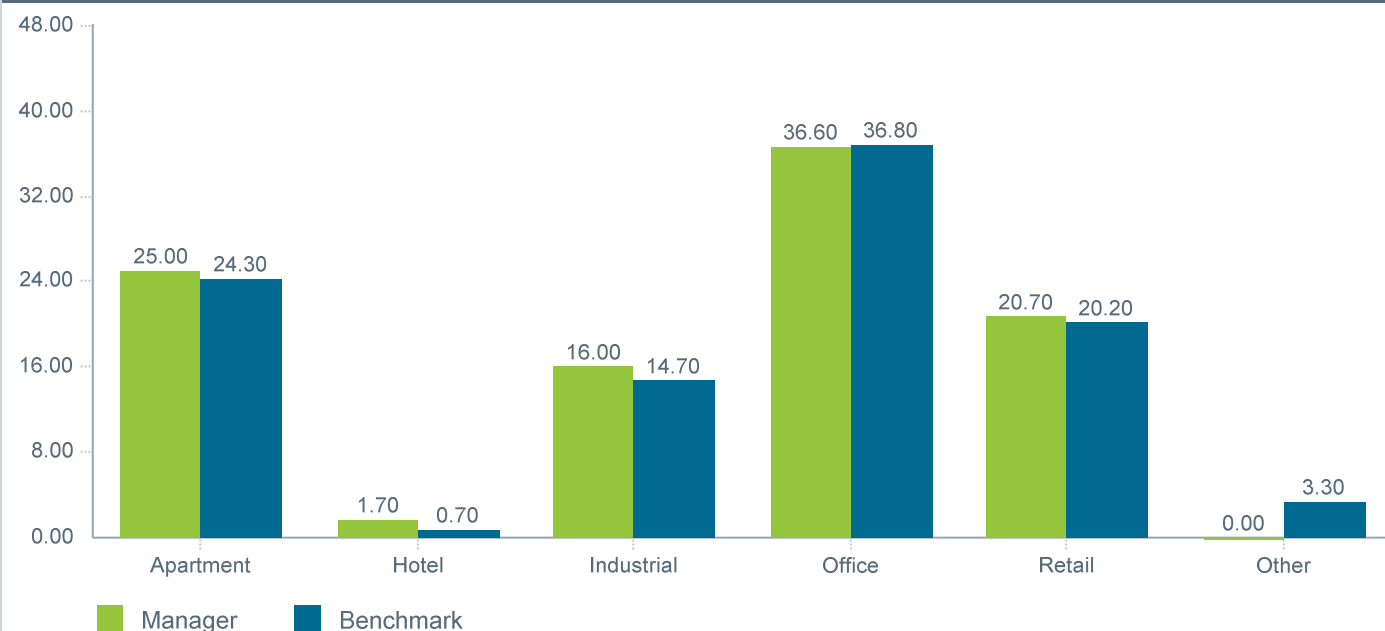
### Investment Strategy

The investment strategy for the Lion Properties Fund is to manage a diversified portfolio of primarily institutional quality real estate assets and related investments within the United States. The portfolio is actively managed with inputs from the firm's Research and Investment Strategy Group and the firm's Acquisitions Group through a continuous evaluation of real estate cycles, national and regional market fundamentals, and property characteristics to emphasize sectors of relative value.

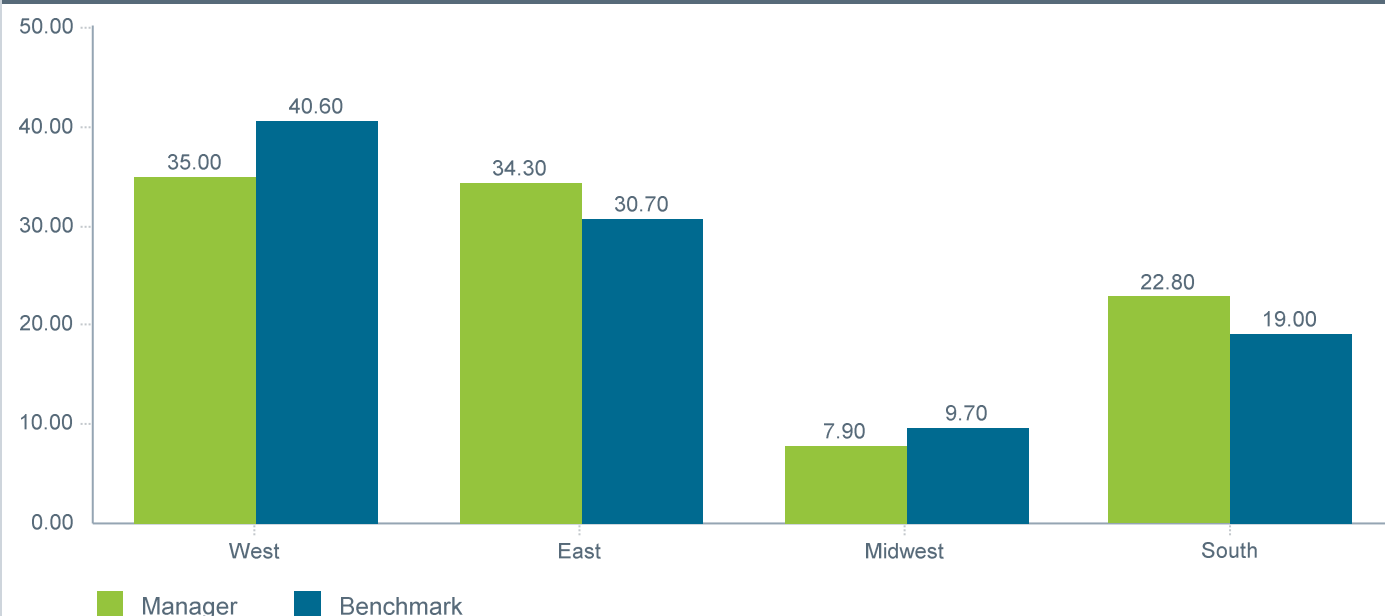
### Investment Profile

Fund Inception	2000
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	9,690
Fund Leverage %	23.90
Portfolio Occupancy %	94.30
Cash Reserve %	1.70
Number of Investments	130
Number of Limited Partners	268

### Property Type Allocation (%)

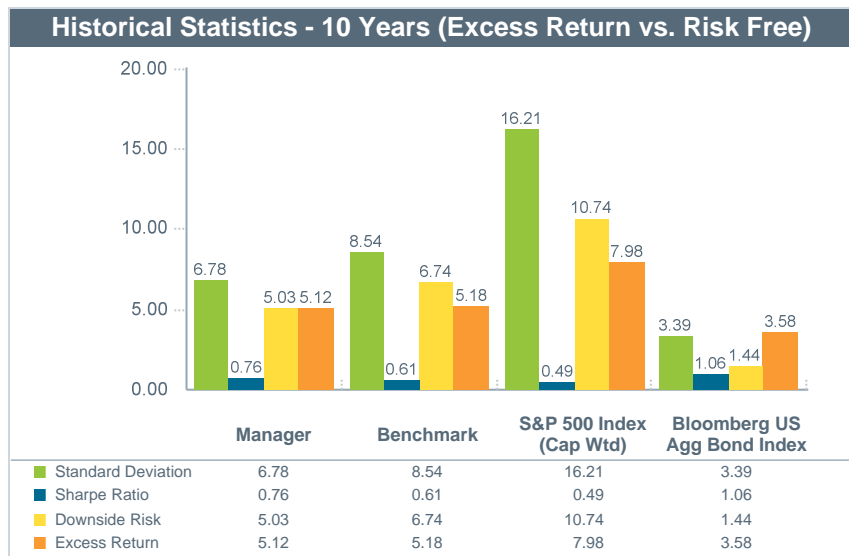


### Geographic Allocation (%)



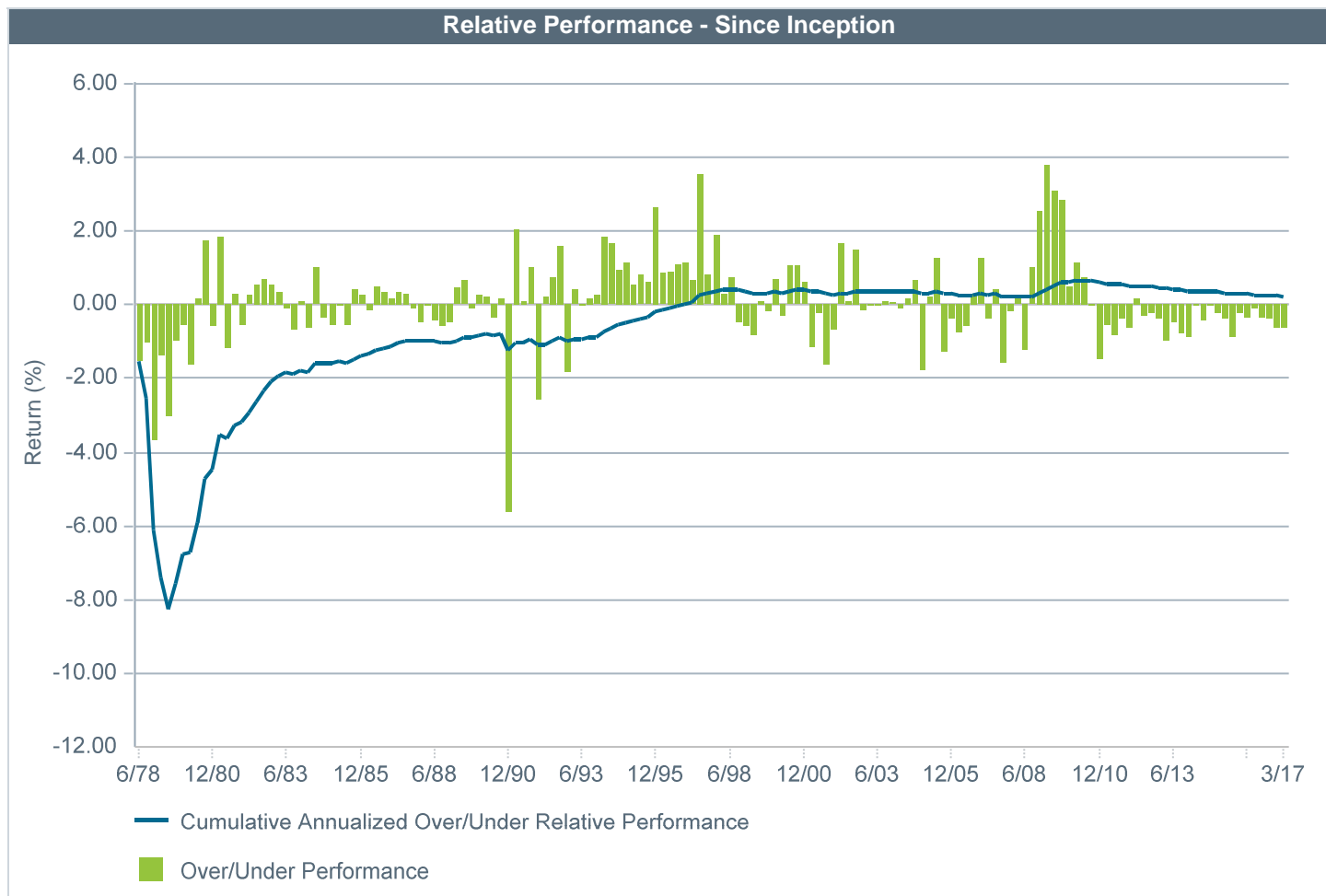
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of land. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.15	6.23	10.08	10.07	11.63	5.68	7.21	12.94	11.69	10.44	10.15
Benchmark	1.77	8.34	11.79	11.98	13.49	5.59	8.77	15.02	12.50	13.94	10.94
Difference	-0.62	-2.11	-1.71	-1.91	-1.86	0.09	-1.56	-2.08	-0.81	-3.50	-0.79



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.99
S&P 500 Index (Cap Wtd)	0.22
Russell 2000 Index	0.18
MSCI EAFE Index (USD) (Net)	0.10
MSCI Emg Mkts Index (USD) (Net)	-0.03
Bloomberg US Agg Bond Index	-0.15
Bloomberg US Trsy: US TIPS Index	-0.04
Wilshire US REIT Index	0.23
HFRI FOF Comp Index	0.15
Bloomberg Cmnty Index (TR)	0.12
BofA ML 3 Mo US T-Bill Index	0.06
Consumer Price Index (Unadjusted)	0.21



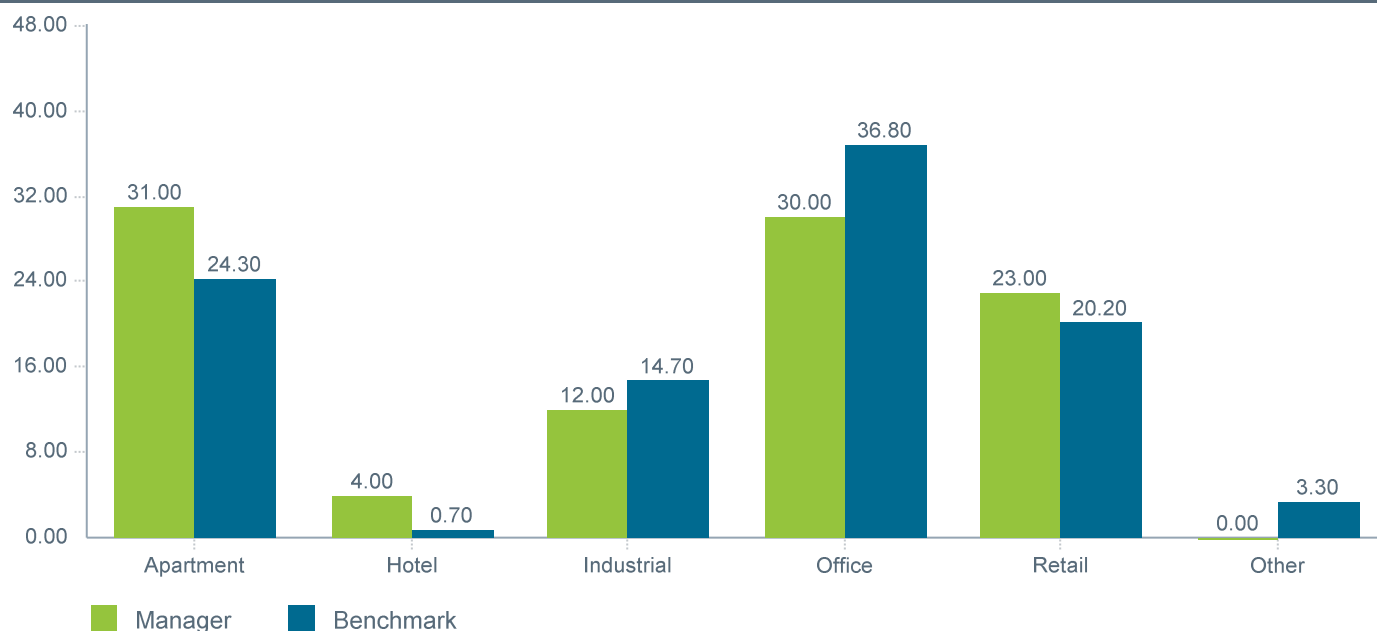
### Investment Strategy

UBS-TPF is an actively managed, core portfolio of equity real estate. Its focus is to acquire existing, well-leased properties, or properties with expansion and/or rehabilitation potential and, to a limited extent, make forward commitments on to-be-built properties. Investments are structured as wholly owned properties or as partnership ventures. UBS-TPF investments generally are purchased for cash; a modest amount of leverage may be used. The ongoing, long-term strategy for the Fund is to produce attractive risk-adjusted returns by focusing on selective acquisitions, diversification, active portfolio management, and aggressive asset management.

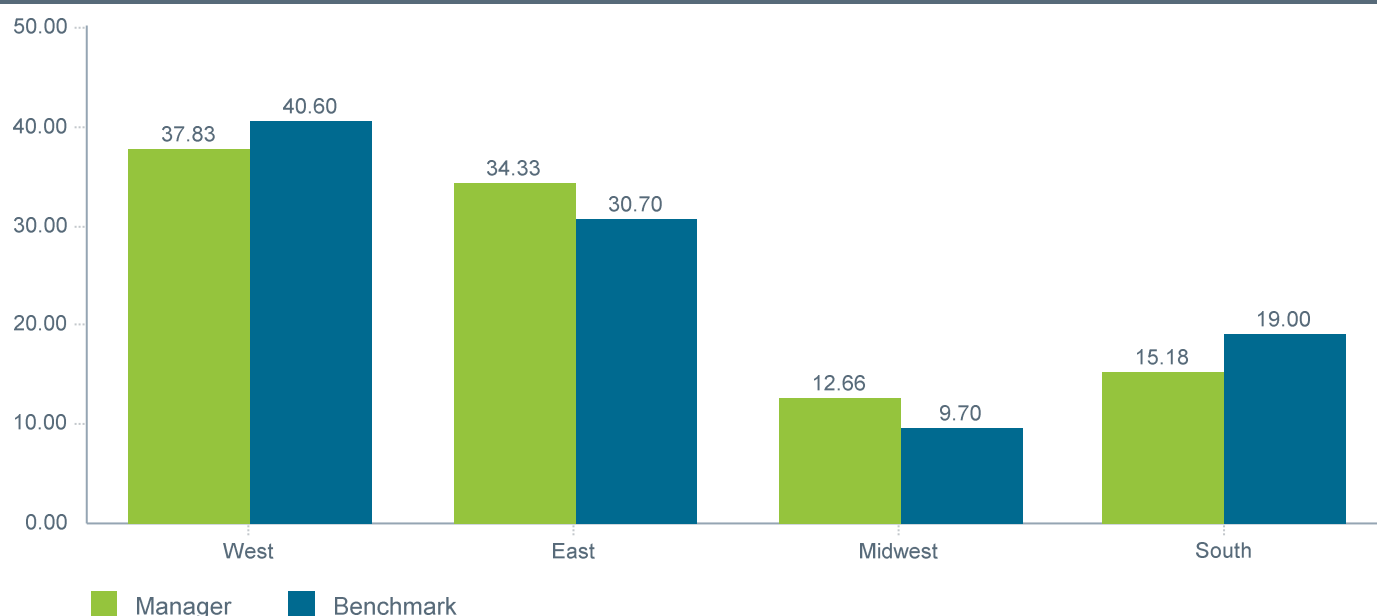
### Investment Profile

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	23,451
Fund Leverage %	15.00
Portfolio Occupancy %	92.90
Cash Reserve %	3.50
Number of Investments	219
Number of Limited Partners	447

### Property Type Allocation (%)

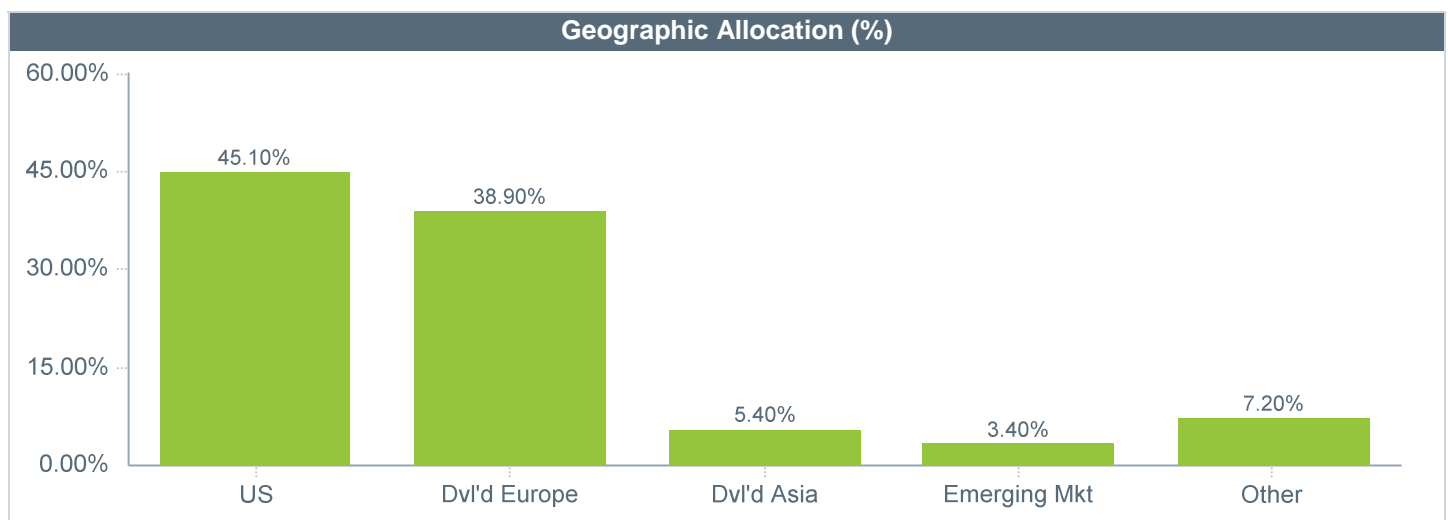
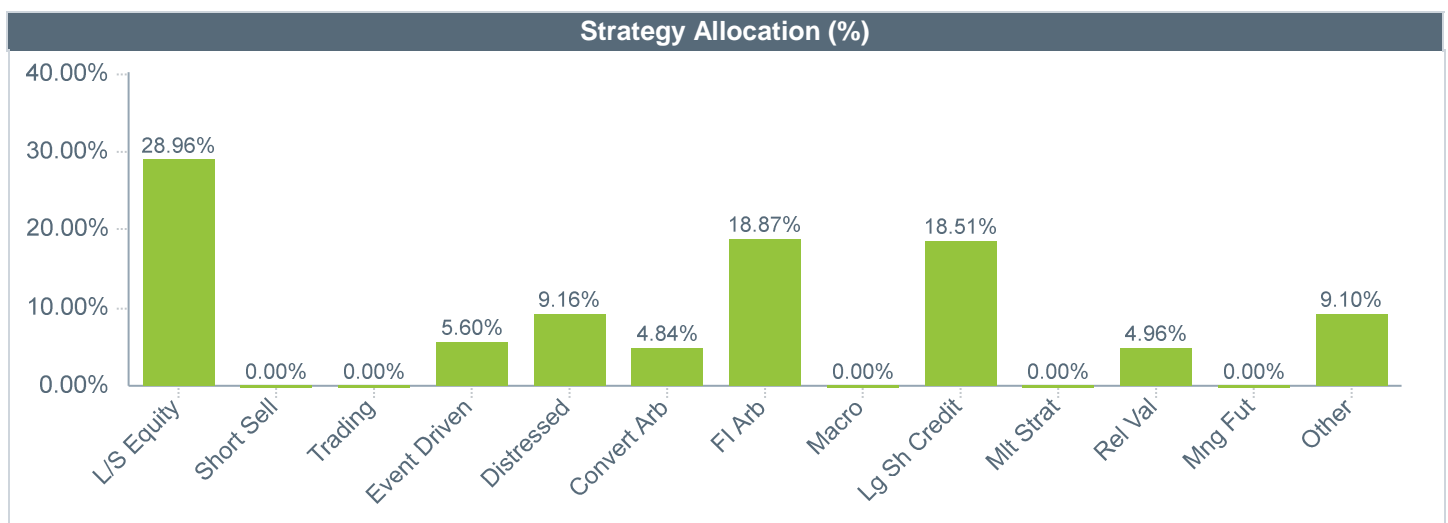


### Geographic Allocation (%)



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

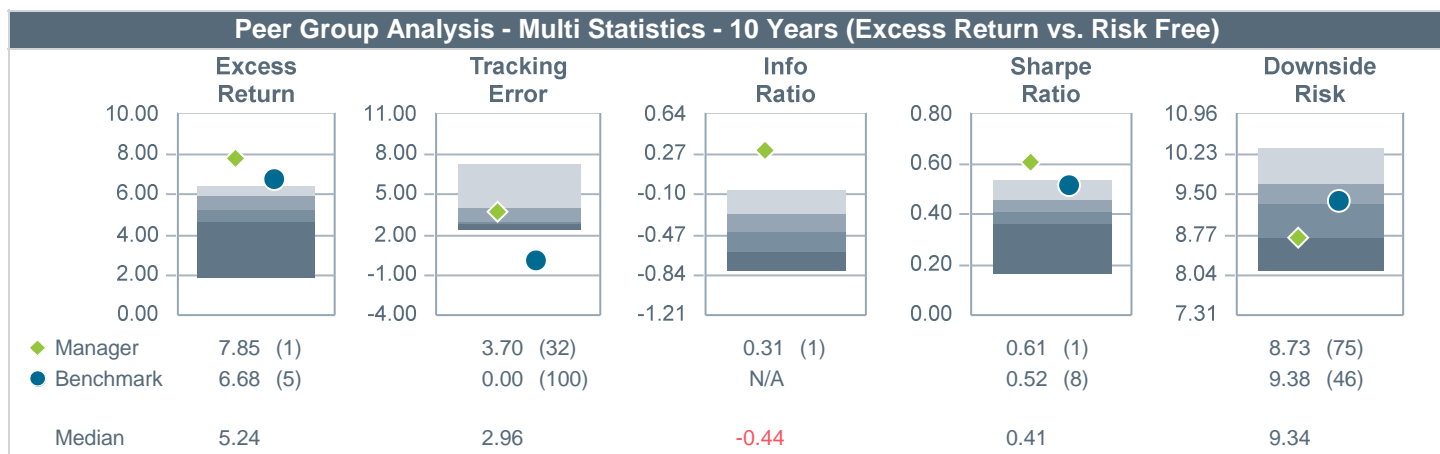
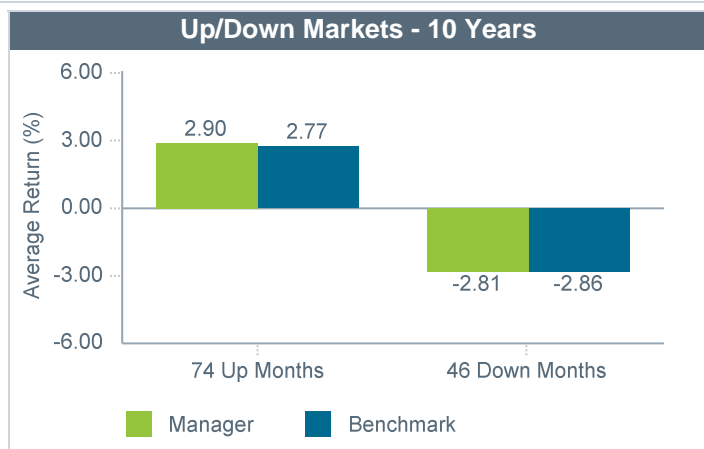
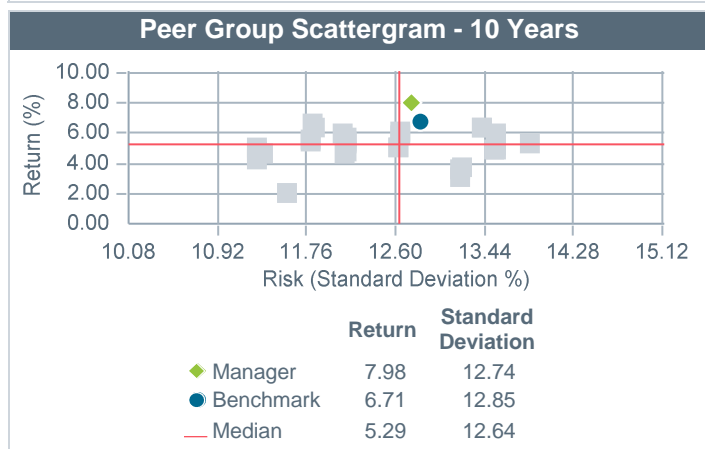
Investment Strategy	Firm Statistics	
PAAMCO focuses on returns which are targeted to be independent of traditional markets and builds portfolios which aim to diversify sources of idiosyncratic returns. PAAMCO believes in being open to new investment ideas and that investment decisions should be based on independent, fundamental assessments. PAAMCO attempts to avoid conflicts and maintain the highest ethical standards in evaluating investment opportunities.	Year Firm Established	2000
	Firm AUM (\$M)	9,974
	Percentage Employee Owned %	83.00
	Fund Statistics	
	Fund Inception	2007
	Fund Size(\$M)	495
	Number of Underlying Managers	40
	Maximum Weighting of an Underlying Manager %	6.09
	Current Leverage (Assets/Equity)	2.75
	Annual Manager Turnover %	15.44
Annual Management Fee %	0.96	
Performance Fee %	No	
Hurdle %	No	
Initial Lock-Up Periods	No	
Redemption Frequency	Monthly	
Notification Period	30 Days	



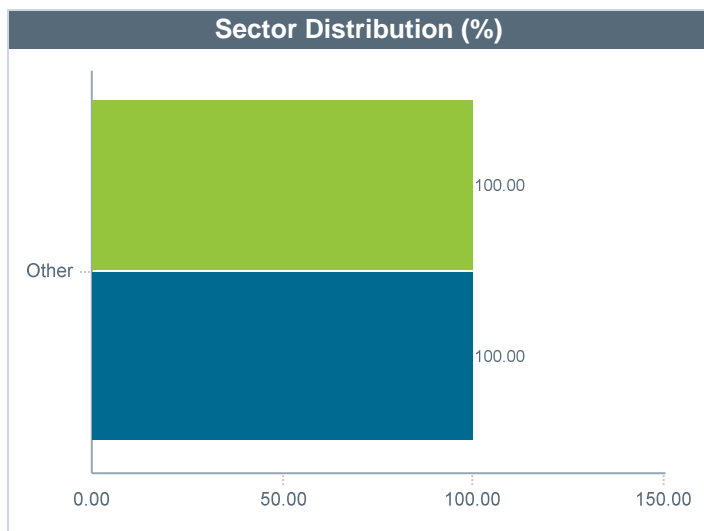
Strategy Allocation to "Other" consists of opportunistic investments, lower liquidity investments, and cash. Geographic Allocation to "Other" consists of Asia ex-Japan, Canada, and unclassified geographies. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end.



Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	5.10	14.72	3.98	8.49	9.35	7.98	5.86	-1.49	6.64	25.60	11.93
Benchmark	5.30	18.14	5.68	9.92	9.22	6.71	10.44	-3.24	9.42	24.96	14.96
Difference	-0.20	-3.42	-1.70	-1.43	0.13	1.27	-4.58	1.75	-2.78	0.64	-3.03
Peer Group Median	5.06	14.26	3.70	7.46	7.41	5.29	6.43	-3.71	6.28	22.31	11.52
Rank	49	45	42	20	1	1	62	31	42	10	42
Population	95	94	76	71	56	39	94	86	83	83	82



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	N/A	2.30
Spread Duration	N/A	N/A
Avg. Maturity	16.92	20.20
Avg. Quality	Ba2	Ba2
Yield To Maturity (%)	N/A	1.77
Coupon Rate (%)	2.63	3.48
Current Yield (%)	2.18	2.94
Holdings Count	105	432



Performance shown is net of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to other consists of convertibles.

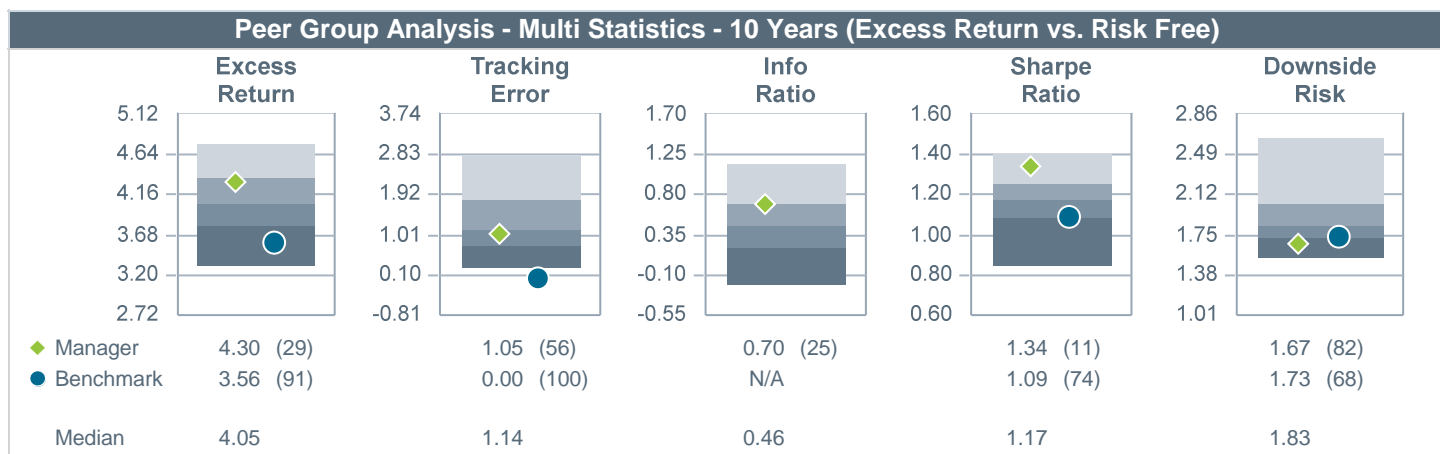
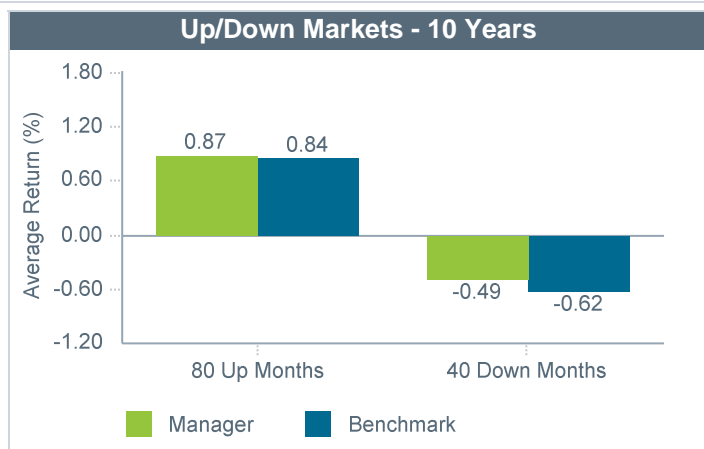
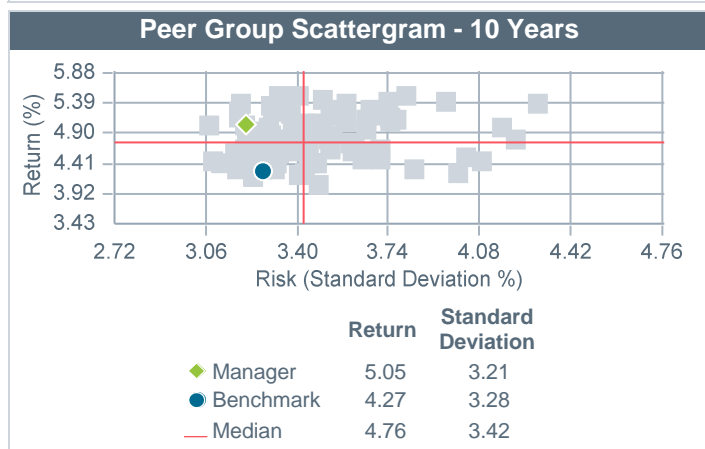
Manager: C.S. McKee

As of March 31, 2017

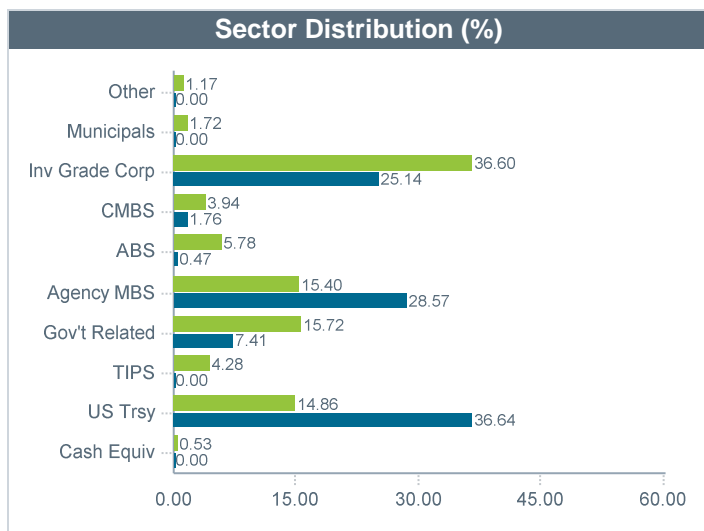
Benchmark: Bloomberg US Agg Bond Index

Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	0.74	0.35	2.78	2.48	3.73	5.05	2.65	1.49	5.75	-2.23	5.07
Benchmark	0.82	0.44	2.68	2.34	3.48	4.27	2.65	0.55	5.97	-2.02	4.21
Difference	-0.08	-0.09	0.10	0.14	0.25	0.78	0.00	0.94	-0.22	-0.21	0.86
Peer Group Median	0.92	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	-1.56	5.88
Rank	90	83	73	77	72	28	76	10	78	88	77
Population	140	139	138	136	133	128	151	157	171	183	192



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.77	6.00
Spread Duration	3.98	6.07
Avg. Maturity	7.42	8.22
Avg. Quality	Aa2	Aa1/Aa2
Yield To Maturity (%)	2.70	2.61
Coupon Rate (%)	2.90	3.06
Current Yield (%)	2.86	N/A
Holdings Count	259	9,304



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Sector allocation to "Other" consists of collateralized mortgage obligations.

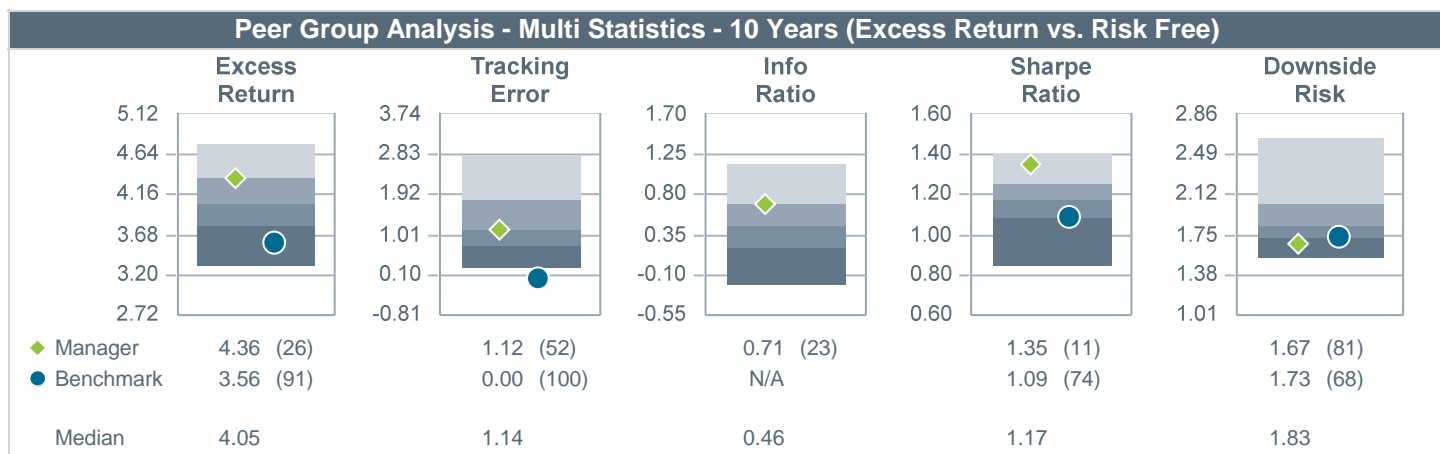
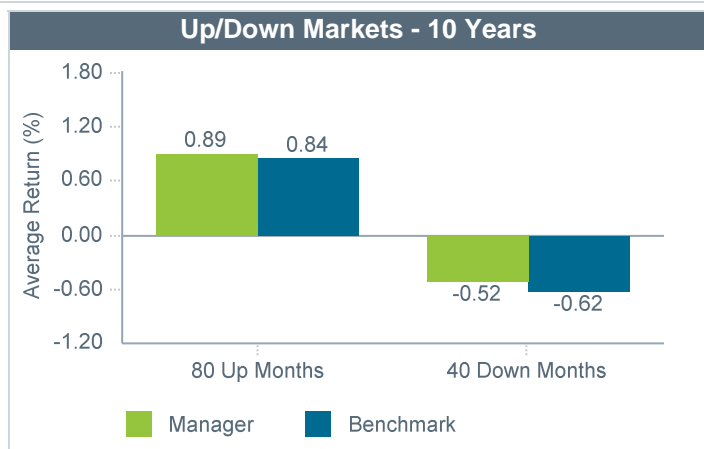
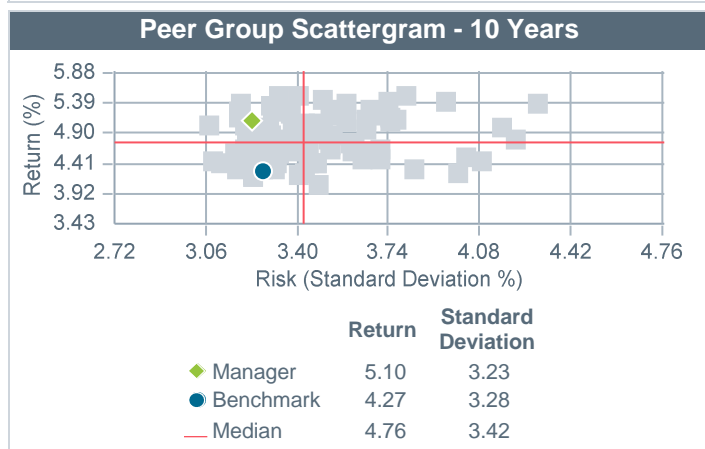
Manager: JP Morgan Core

As of March 31, 2017

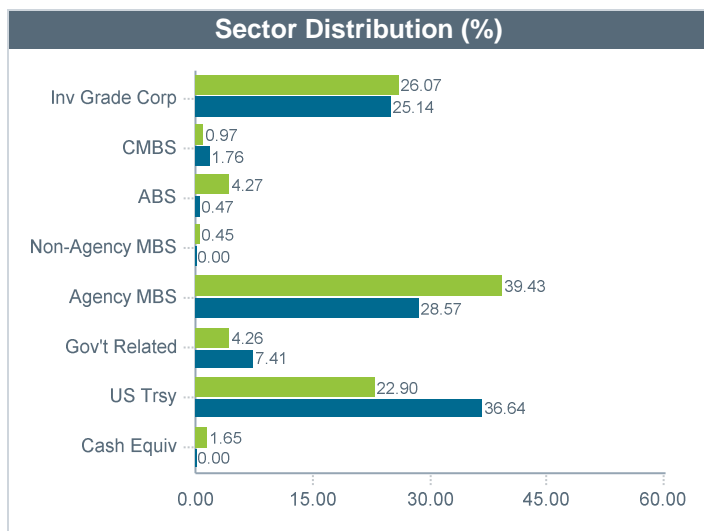
Benchmark: Bloomberg US Agg Bond Index

Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	0.94	0.30	3.01	2.71	4.06	5.10	2.52	1.25	6.19	-1.83	5.74
Benchmark	0.82	0.44	2.68	2.34	3.48	4.27	2.65	0.55	5.97	-2.02	4.21
Difference	0.12	-0.14	0.33	0.37	0.58	0.83	-0.13	0.70	0.22	0.19	1.53
Peer Group Median	0.92	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	-1.56	5.88
Rank	49	85	46	60	43	25	86	16	46	66	52
Population	140	139	138	136	133	128	151	157	171	183	192



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.55	6.00
Spread Duration	3.93	6.07
Avg. Maturity	6.59	8.22
Avg. Quality	Aa2	Aa1/Aa2
Yield To Maturity (%)	2.60	2.61
Coupon Rate (%)	2.44	3.06
Current Yield (%)	2.58	N/A
Holdings Count	1,004	9,304



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

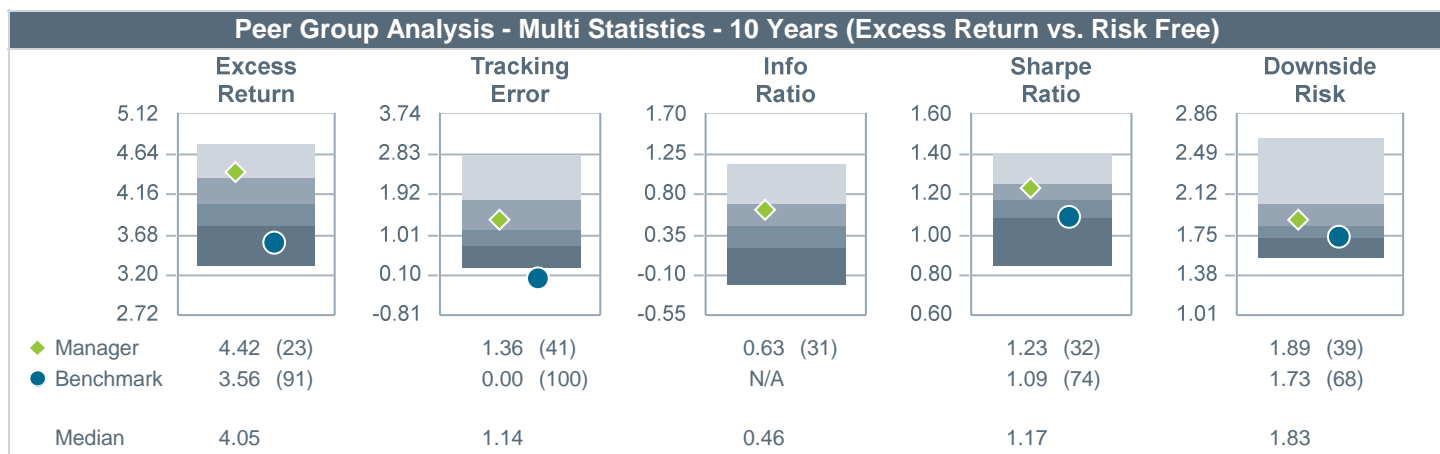
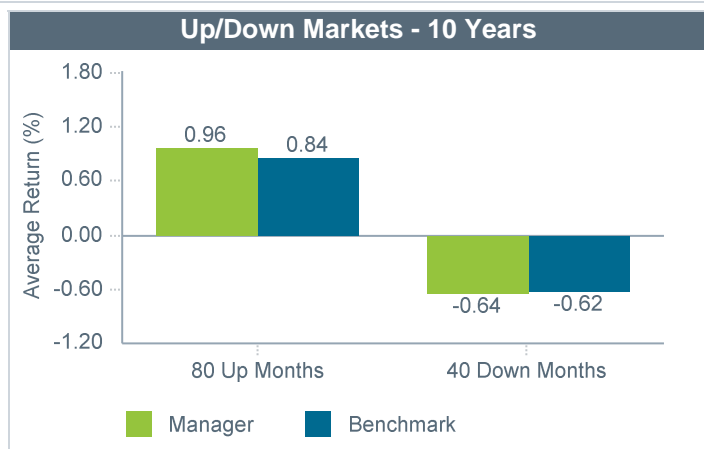
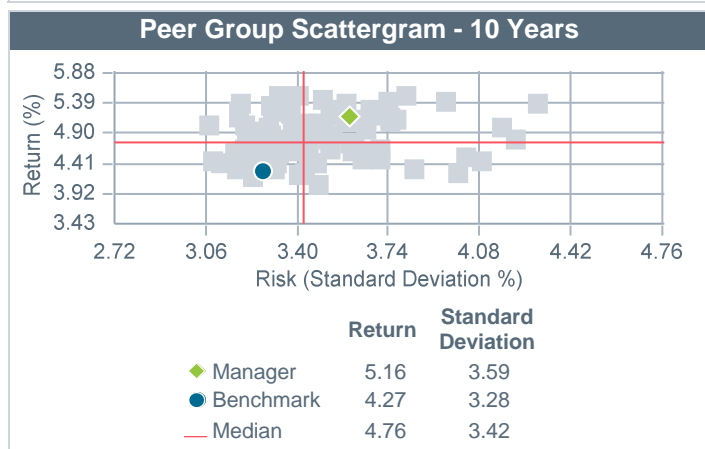
Manager: PIMCO Core

As of March 31, 2017

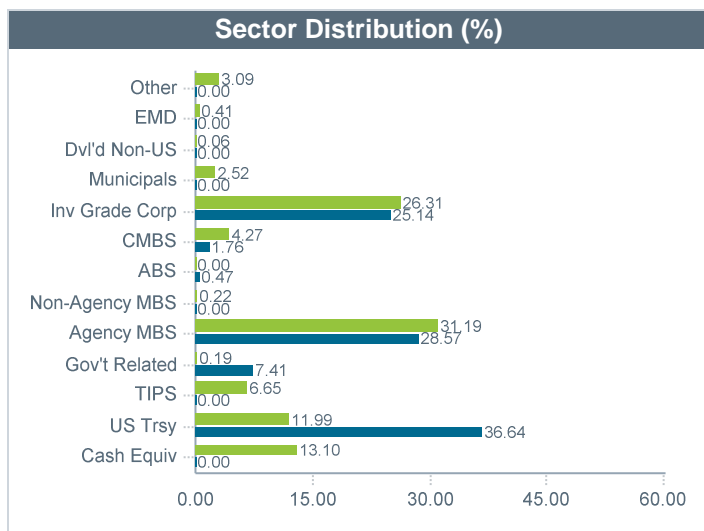
Benchmark: Bloomberg US Agg Bond Index

Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.01	1.19	3.00	2.84	4.02	5.16	3.35	0.50	5.85	-2.48	7.88
Benchmark	0.82	0.44	2.68	2.34	3.48	4.27	2.65	0.55	5.97	-2.02	4.21
Difference	0.19	0.75	0.32	0.50	0.54	0.89	0.70	-0.05	-0.12	-0.46	3.67
Peer Group Median	0.92	1.01	2.97	2.81	3.97	4.76	3.10	0.82	6.14	-1.56	5.88
Rank	40	43	47	46	47	23	43	79	72	95	10
Population	140	139	138	136	133	128	151	157	171	183	192

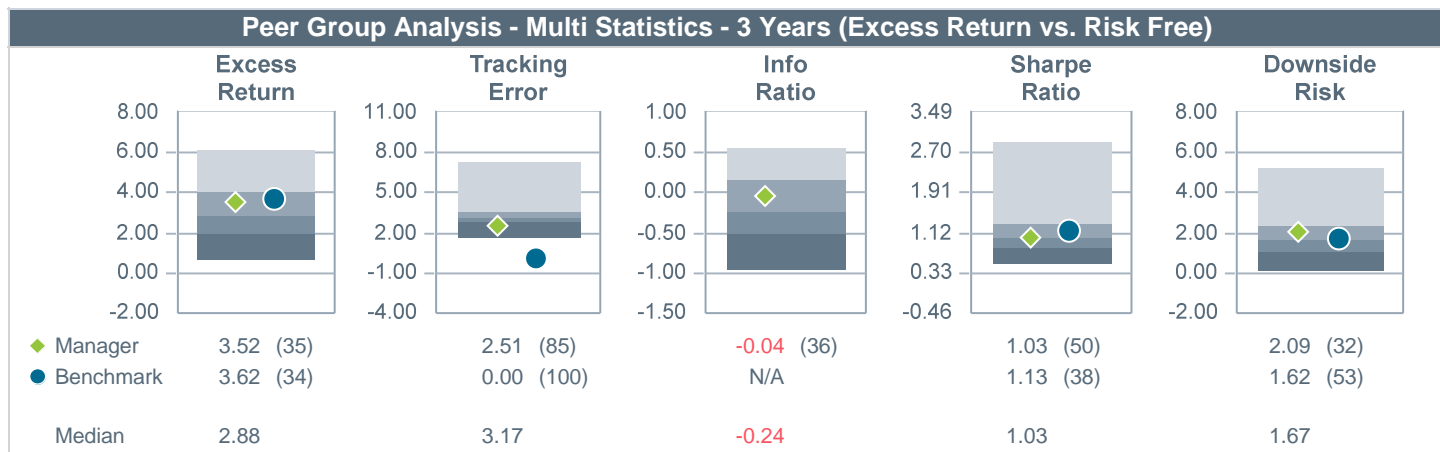
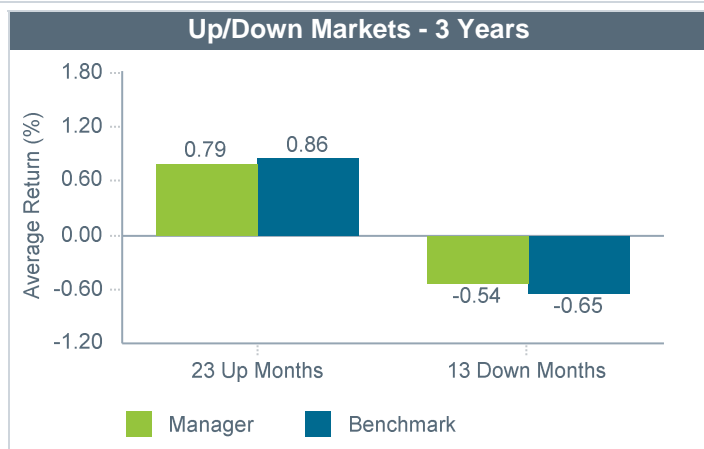
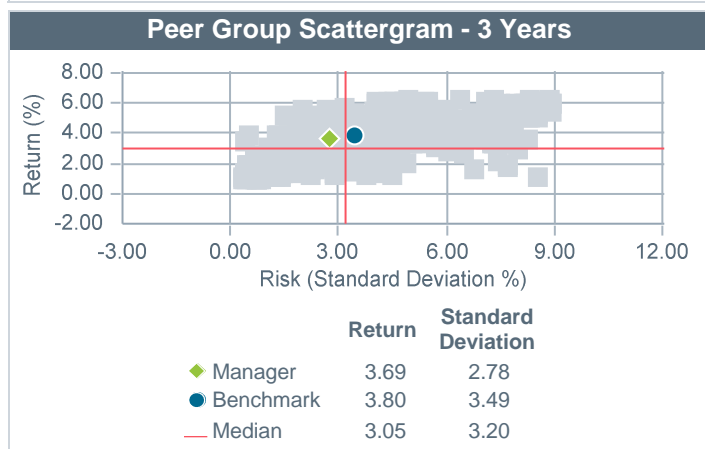


Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.26	6.00
Spread Duration	3.64	6.07
Avg. Maturity	6.81	8.22
Avg. Quality	Aa3	Aa1/Aa2
Yield To Maturity (%)	2.96	2.61
Coupon Rate (%)	2.91	3.06
Current Yield (%)	2.90	N/A
Holdings Count	368	9,304

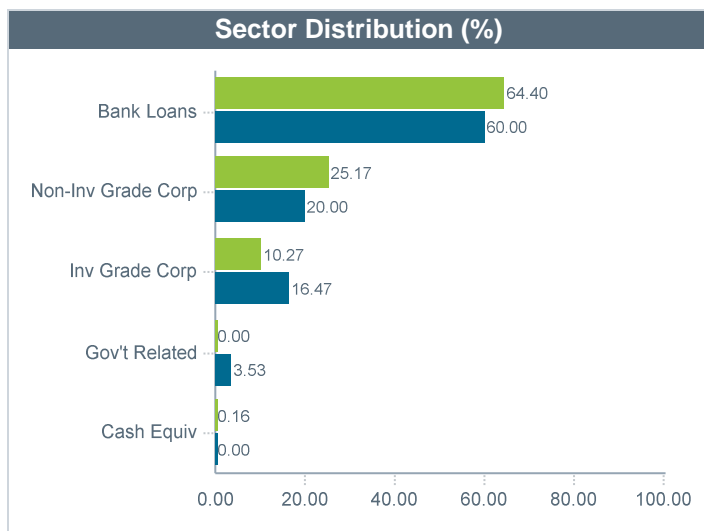


Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Sector allocation to "Other" consists of Euro/Yankee securities.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.10	7.18	3.69	N/A	N/A	N/A	8.42	0.08	3.40	N/A	N/A
Benchmark	1.49	9.74	3.80	4.87	5.43	5.35	10.69	-1.47	2.95	4.22	10.77
Difference	-0.39	-2.56	-0.11	N/A	N/A	N/A	-2.27	1.55	0.45	N/A	N/A
Peer Group Median	1.14	1.95	3.05	3.22	4.22	4.73	3.70	0.72	4.45	-0.21	6.88
Rank	52	22	35	N/A	N/A	N/A	23	66	62	N/A	N/A
Population	1,315	1,308	1,275	1,227	1,133	956	1,404	1,454	1,514	1,555	1,594



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	2.14	N/A
Spread Duration	4.56	N/A
Avg. Maturity	3.06	6.18
Avg. Quality	Ba3	Ba2
Yield To Maturity (%)	4.51	5.88
Coupon Rate (%)	3.60	4.99
Current Yield (%)	2.22	N/A
Holdings Count	144	2,494



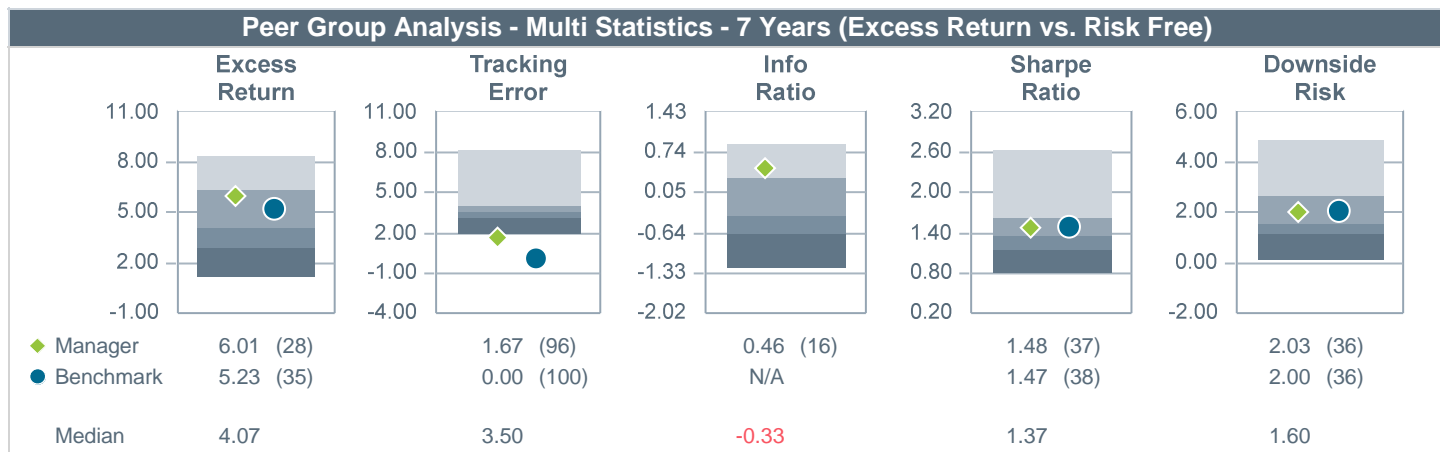
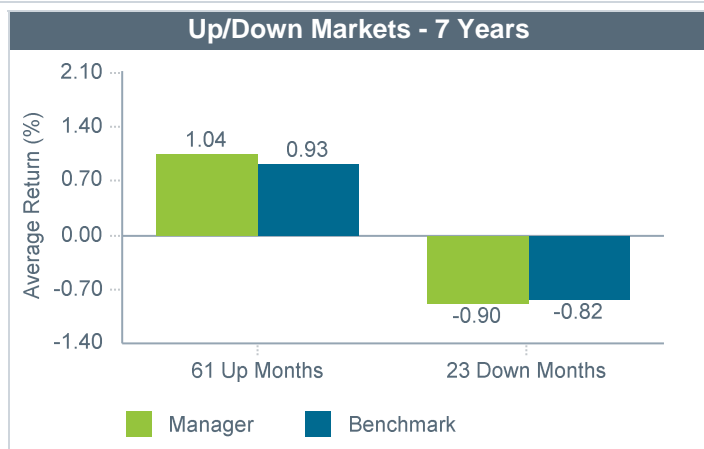
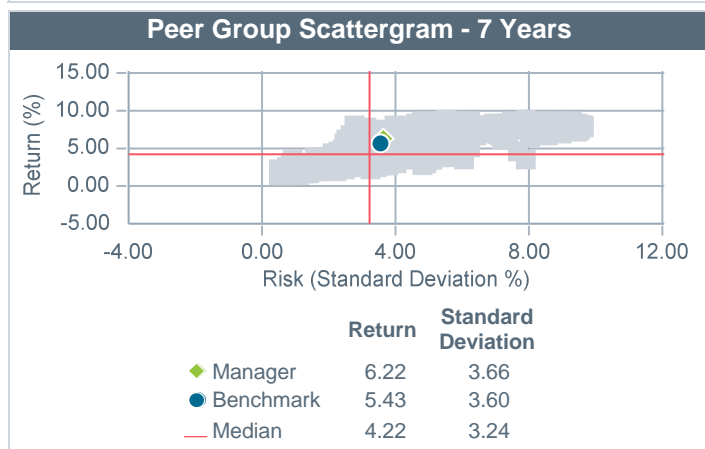
Manager: Seix

As of March 31, 2017

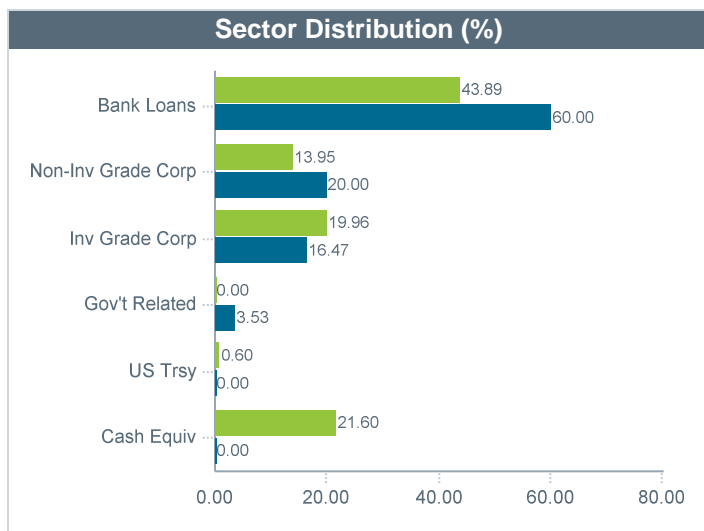
Benchmark: Credit Custom Index

Peer Group: IM U.S. Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.65	10.23	4.17	4.96	6.22	N/A	11.46	-0.91	2.68	3.27	11.09
Benchmark	1.49	9.74	3.80	4.87	5.43	5.35	10.69	-1.47	2.95	4.22	10.77
Difference	0.16	0.49	0.37	0.09	0.79	N/A	0.77	0.56	-0.27	-0.95	0.32
Peer Group Median	1.14	1.95	3.05	3.22	4.22	4.73	3.70	0.72	4.45	-0.21	6.88
Rank	27	16	26	29	28	N/A	13	76	70	22	25
Population	1,315	1,308	1,275	1,227	1,133	956	1,404	1,454	1,514	1,555	1,594



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	2.31	N/A
Spread Duration	N/A	N/A
Avg. Maturity	5.99	6.18
Avg. Quality	Baa3	Ba2
Yield To Maturity (%)	N/A	5.88
Coupon Rate (%)	3.91	4.99
Current Yield (%)	3.87	N/A
Holdings Count	749	2,494



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Manager: Investec

As of March 31, 2017

Benchmark: JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)

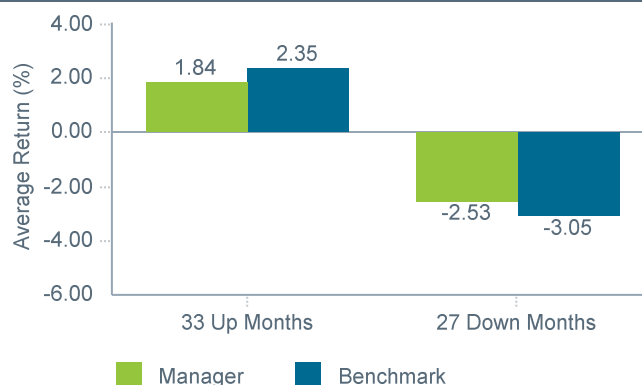
Peer Group: IM Emerging Markets Debt (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	8.02	6.64	-2.70	-2.20	N/A	N/A	7.00	-14.68	-4.67	-8.93	-1.35
Benchmark	6.50	5.47	-2.68	-1.62	1.05	4.10	9.94	-14.92	-5.72	-8.98	16.76
Difference	1.52	1.17	-0.02	-0.58	N/A	N/A	-2.94	0.24	1.05	0.05	-18.11
Peer Group Median	5.01	9.79	4.47	4.45	6.41	7.04	11.04	-2.99	1.34	-5.95	18.86
Rank	10	87	95	98	N/A	N/A	92	83	81	81	100
Population	118	118	113	95	69	56	150	167	168	155	146

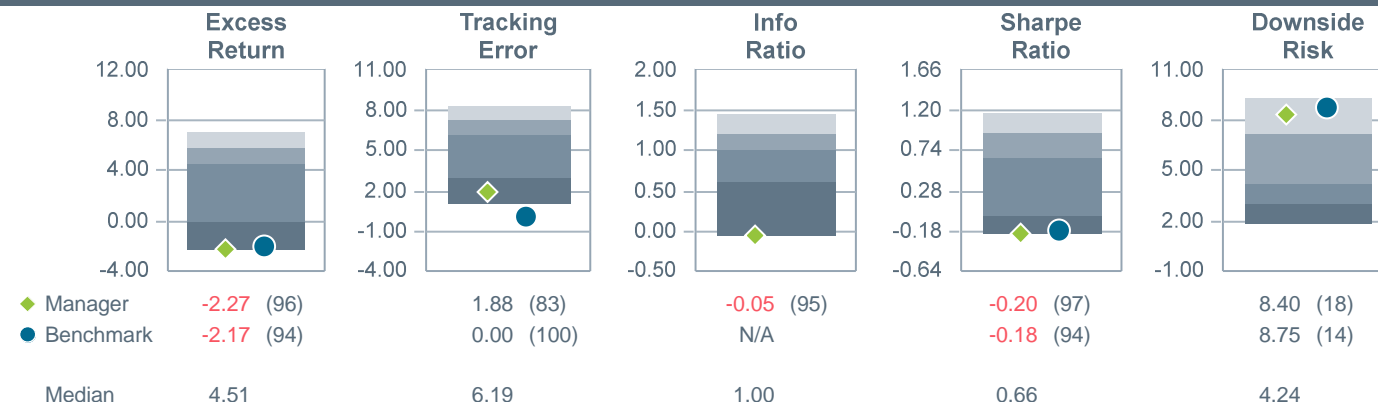
Peer Group Scattergram - 5 Years



Up/Down Markets - 5 Years



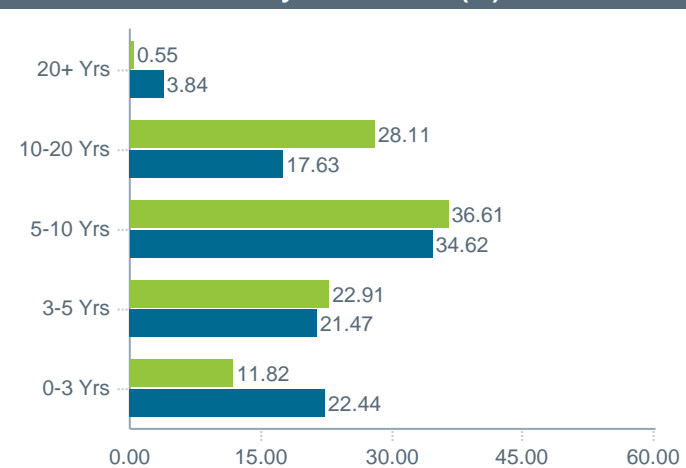
Peer Group Analysis - Multi Statistics - 5 Years (Excess Return vs. Risk Free)



Portfolio Characteristics (%)

	Portfolio	Benchmark
Effective Duration	4.89	5.03
Spread Duration	4.14	N/A
Avg. Maturity	8.51	7.36
Avg. Quality	Baa1	Baa3
Yield To Maturity (%)	7.93	6.50
Coupon Rate (%)	6.01	8.14
Current Yield (%)	7.56	8.01
Holdings Count	198	198

Maturity Distribution (%)

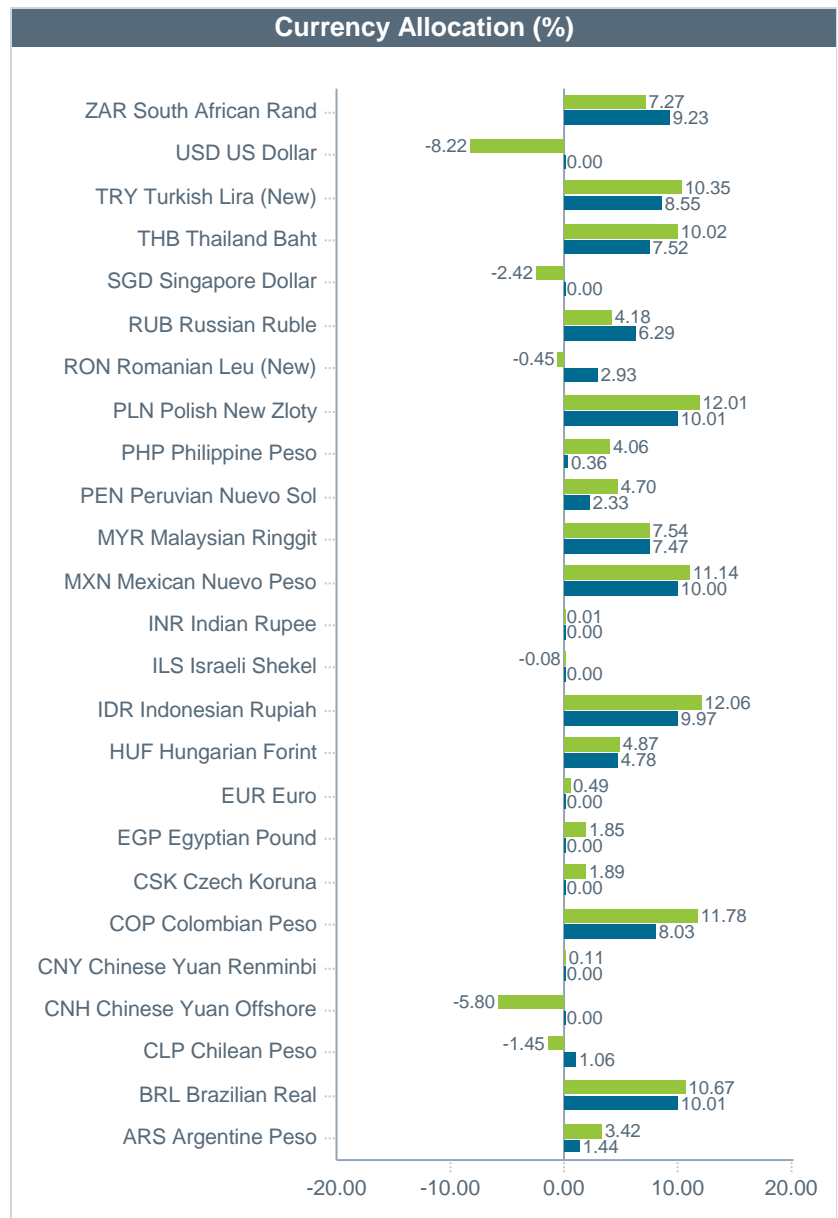
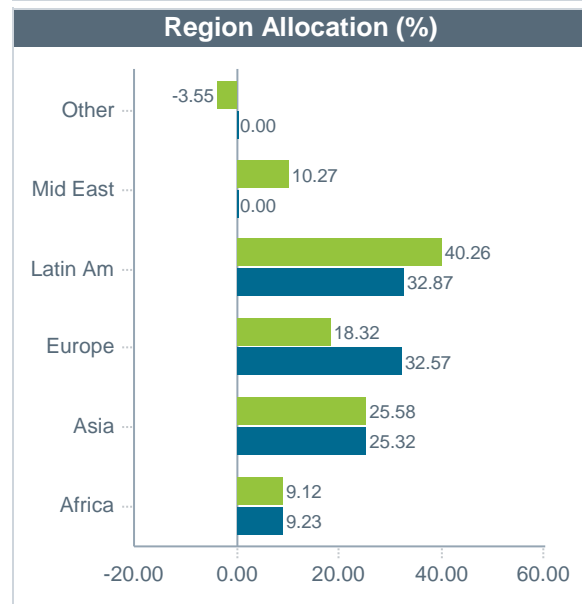
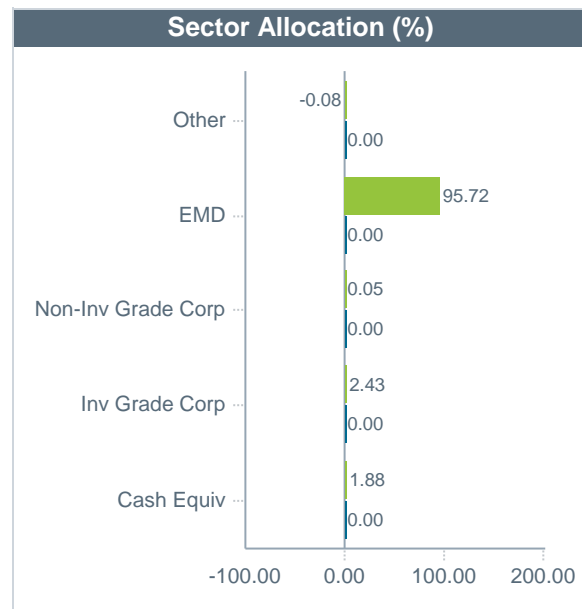
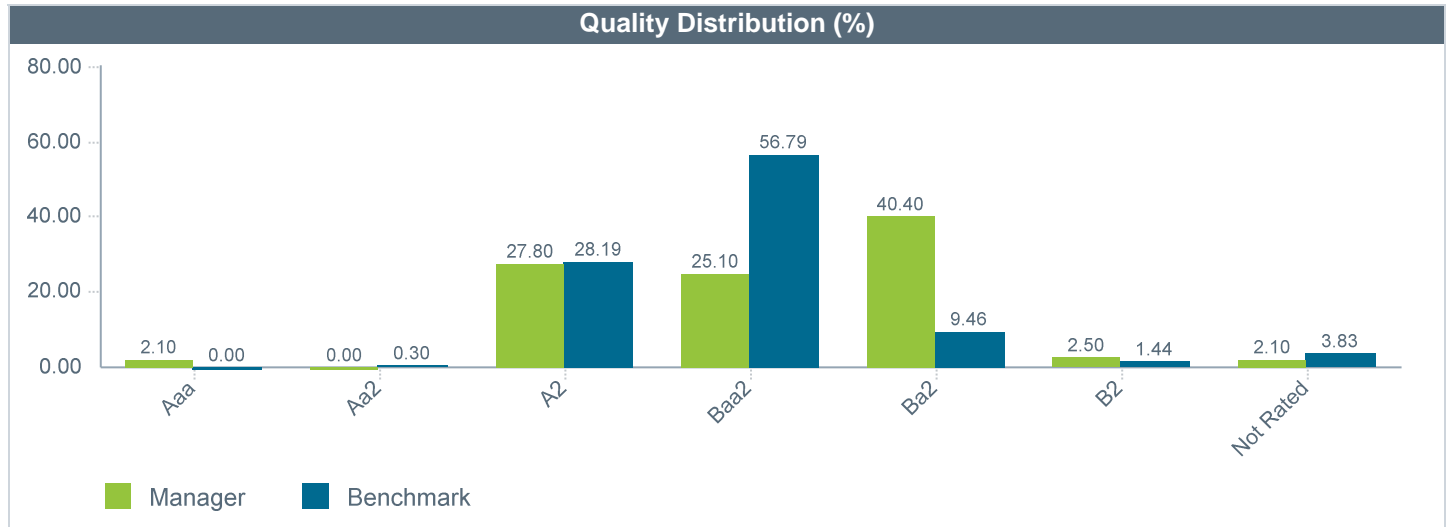


**Manager: Investec**

**As of March 31, 2017**

**Benchmark: JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)**

**Peer Group: IM Emerging Markets Debt (SA+CF)**



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Negative sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps. Sector allocation to "Other" consists of Investment Grade Corporates. Region allocation to "Other" consists of developed market securities and securities from the Commonwealth of Independent States region.



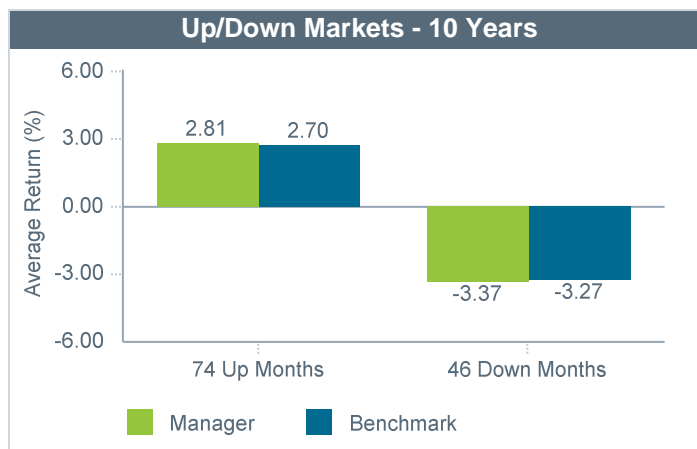
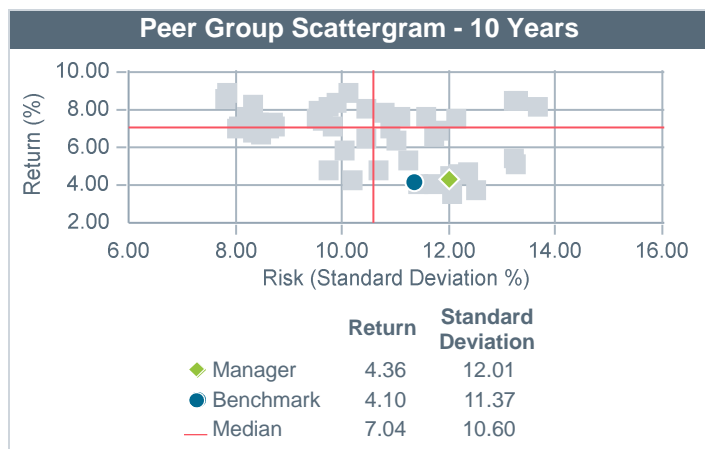
Manager: Stone Harbor

As of March 31, 2017

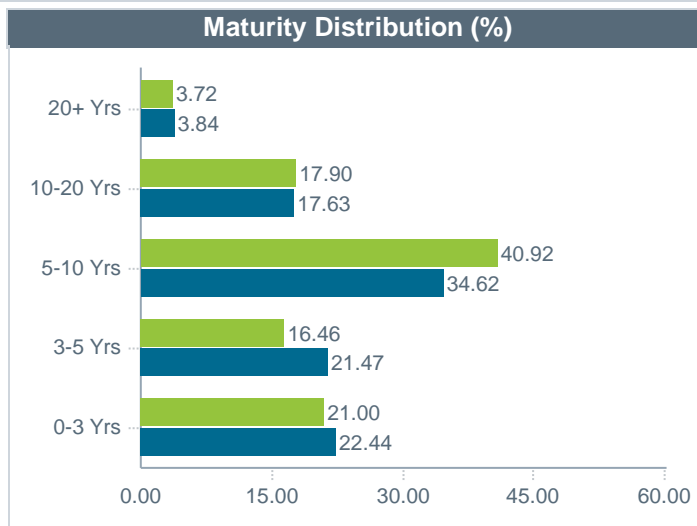
Benchmark: JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)

Peer Group: IM Emerging Markets Debt (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	7.04	5.62	-3.19	-2.59	0.93	4.36	9.94	-14.61	-7.63	-11.48	15.60
Benchmark	6.50	5.47	-2.68	-1.62	1.05	4.10	9.94	-14.92	-5.72	-8.98	16.76
Difference	0.54	0.15	-0.51	-0.97	-0.12	0.26	0.00	0.31	-1.91	-2.50	-1.16
Peer Group Median	5.01	9.79	4.47	4.45	6.41	7.04	11.04	-2.99	1.34	-5.95	18.86
Rank	26	96	100	100	92	87	70	82	98	99	87
Population	118	118	113	95	69	56	150	167	168	155	146



Portfolio Characteristics (%)		
	Portfolio	Benchmark
Effective Duration	5.03	5.03
Spread Duration	4.91	N/A
Avg. Maturity	7.40	7.36
Avg. Quality	Baa1/Baa2	Baa3
Yield To Maturity (%)	6.81	6.50
Coupon Rate (%)	6.66	8.14
Current Yield (%)	6.60	8.01
Holdings Count	170	198

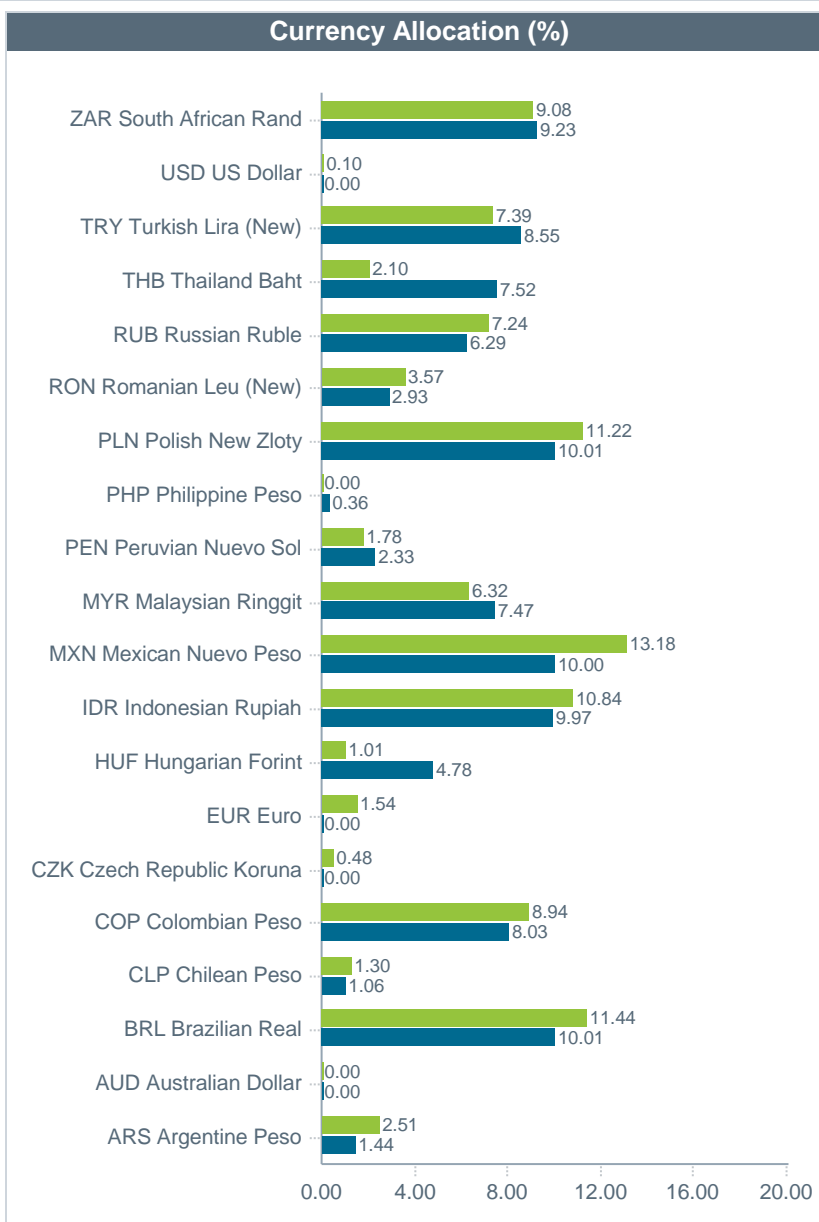
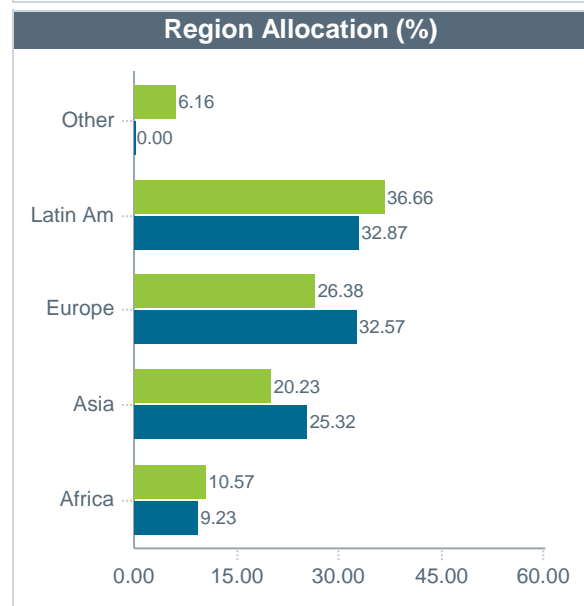
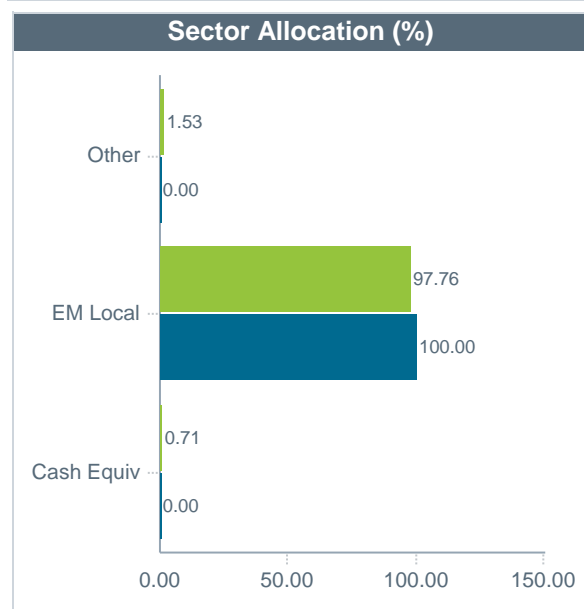
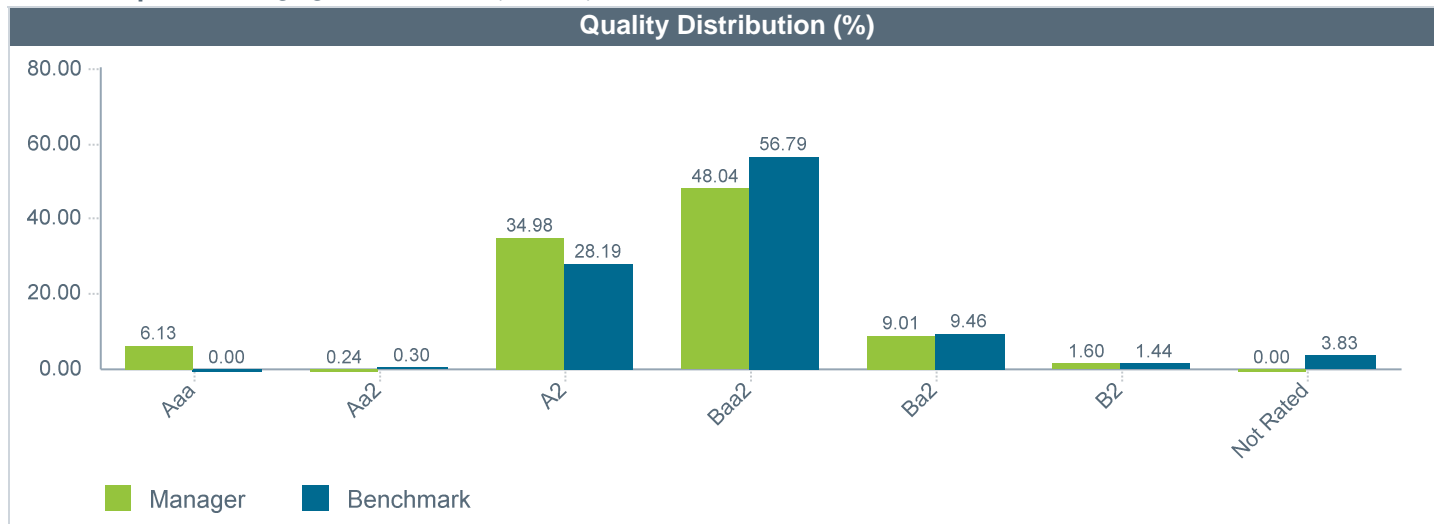


Manager: Stone Harbor

As of March 31, 2017

Benchmark: JPM GBI-EM Gbl Dvf'd Index (USD) (Unhedged)

Peer Group: IM Emerging Markets Debt (SA+CF)



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Negative sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps. Region allocation to "Other" consists of USD and cash. Sector Allocation to "Other" consists of Investment Grade Corporate and Emerging Market hard Currency Debt.

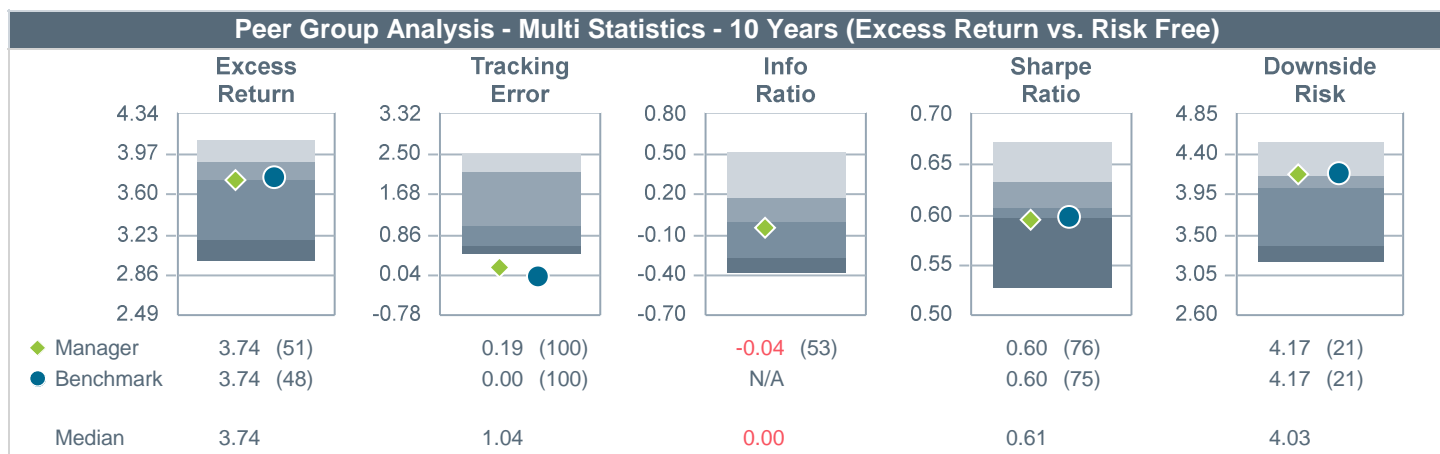
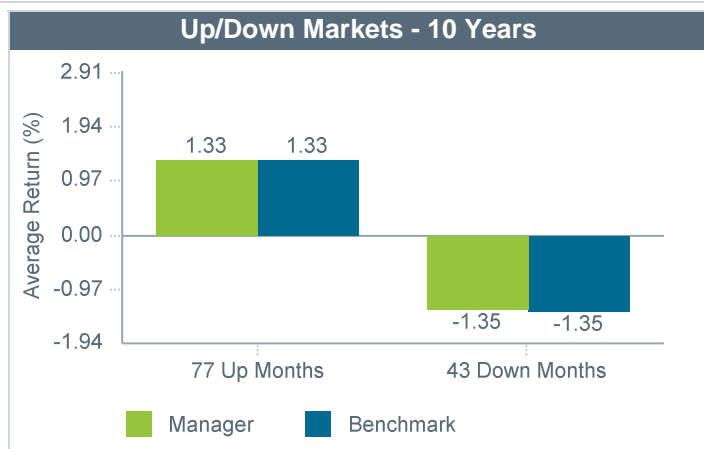
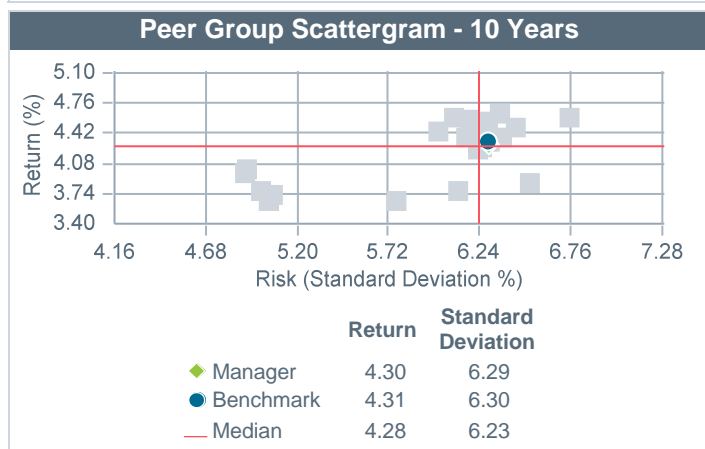
Manager: State Street TIPS

As of March 31, 2017

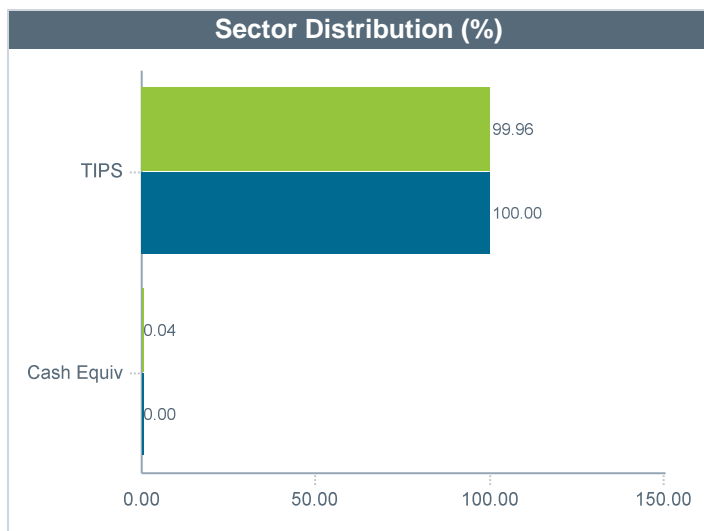
Benchmark: Bloomberg US Trsy: US TIPS Index (Series B)

Peer Group: IM U.S. TIPS (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.11	1.43	2.17	1.03	3.58	4.30	5.04	-1.75	4.47	-9.26	7.26
Benchmark	1.37	1.54	2.19	1.04	3.59	4.31	4.85	-1.72	4.43	-9.26	7.26
Difference	-0.26	-0.11	-0.02	-0.01	-0.01	-0.01	0.19	-0.03	0.04	0.00	0.00
Peer Group Median	1.27	1.56	2.03	1.01	3.52	4.28	4.65	-1.41	3.54	-8.33	6.99
Rank	79	80	27	44	33	48	21	88	7	93	38
Population	33	33	31	31	30	29	36	36	41	44	42



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	6.12	8.29
Spread Duration	N/A	N/A
Avg. Maturity	9.03	N/A
Avg. Quality	Aaa	Aaa
Yield To Maturity (%)	2.33	N/A
Coupon Rate (%)	1.00	0.84
Current Yield (%)	0.73	N/A
Holdings Count	39	38

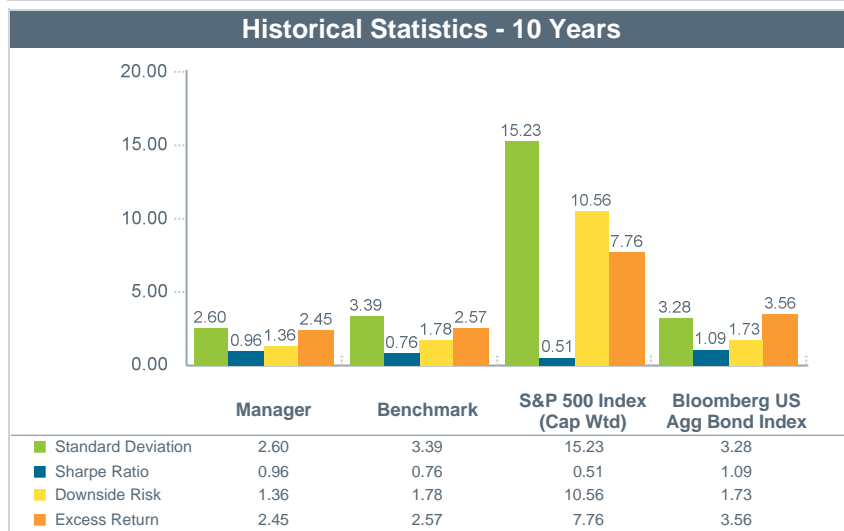
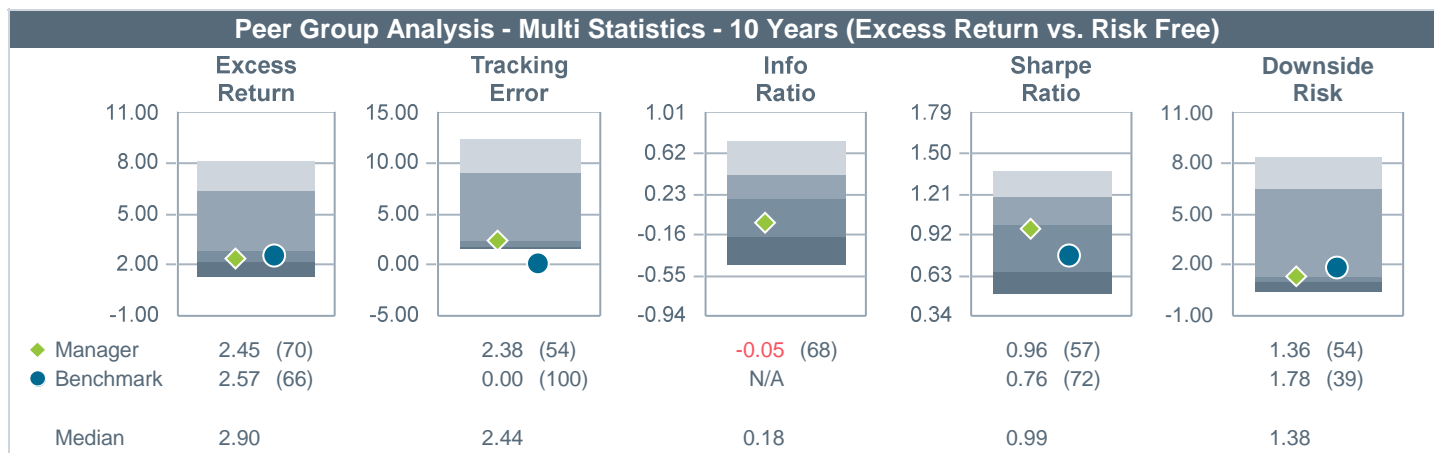
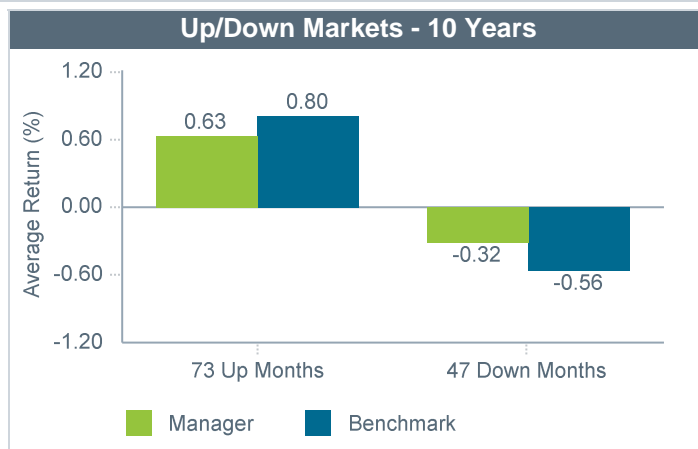
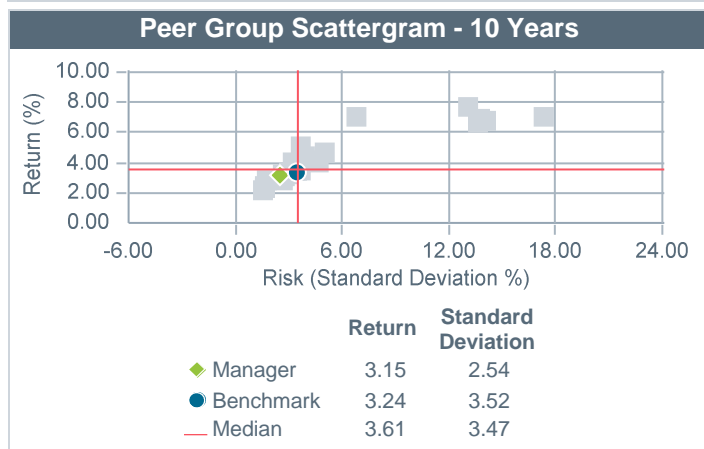


Performance shown is gross of fees. Performance prior to client inception consists of the Bloomberg US Trsy: US TIPS Index (Series B). Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

**Manager:** Internally Managed Fixed Income Comp  
**Benchmark:** Bloomberg US Gov't: Int. Term Bond Index\*  
**Peer Group:** IM U.S. Government Bonds (SA+CF)

As of March 31, 2017

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2016	2015	2014	2013	2012
Manager	1.02	-0.02	2.31	1.64	2.12	3.15	0.95	1.83	5.30	-3.11	2.66
Benchmark	0.54	-0.67	1.55	1.23	2.22	3.24	1.05	1.18	2.52	-1.25	1.73
Difference	0.48	0.65	0.76	0.41	-0.10	-0.09	-0.10	0.65	2.78	-1.86	0.93
Peer Group Median	0.62	-0.57	2.07	1.43	2.42	3.61	1.37	0.72	2.96	-1.28	2.12
Rank	38	24	47	47	69	70	86	7	36	67	45
Population	43	43	43	41	40	35	45	45	46	46	49



**Actual Correlation - 10 Years**

	Actual Correlation
Bloomberg US Gov't: Int. Term Bond Index*	0.72
S&P 500 Index (Cap Wtd)	-0.12
Russell 2000 Index	-0.20
MSCI EAFE Index (USD) (Net)	-0.07
MSCI Emg Mkts Index (USD) (Net)	-0.02
Bloomberg US Agg Bond Index	0.75
Bloomberg US Trsy: US TIPS Index	0.58
NCREIF ODCE Index (AWA) (Gross)	-0.19
Wilshire US REIT Index	0.03
HFN FOF Multi-Strat Index (Net)	-0.13
Bloomberg Cmdty Index (TR)	-0.06
BofA ML 3 Mo US T-Bill Index	0.20
Consumer Price Index (Unadjusted)	-0.14

Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

\*Consists of the Bloomberg US Gov't: Int. Term Bond Index; prior to December 2009 the index consisted of the Bloomberg US Gov't/Credit Bond Index.

State of Wyoming  
State Loan and Investment Board  
Investment Policy Objective Review

March 31, 2017

Investment Policy Guidelines	Meeting Objective			Explanation
	Yes	No	N/A	
<b>1. Total Fund</b>				
Exceed the rate of inflation (C.P.I.) over a market cycle of 5-years.	✓			Wyoming returned 4.6% vs. 1.2% for the C.P.I. for the current 5-year period
Exceed a weighted index of the total fund's asset allocation and component benchmarks over rolling 5-year periods by an appropriate amount.	✓			Wyoming returned 4.6% vs. 4.4% for the Actual Allocation Index for the current 5-year period
Not more than 1% of the outstanding common shares of any corporation shall be owned by the State. An exception may be made for Alternative Investments.	✓			
Not more than 1.5% of the total book value of permanent funds shall be invested in the common stock of any corporation. An exception may be made for Alternative Investments.	✓			

	Yes	No	N/A	Explanation
<b>2. Investment Funds</b>				
<b>a) Permanent Mineral Trust Fund</b>				
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Permanent Mineral Trust Fund return was 5.8% vs. 5.6% for the Actual Allocation Index
<b>b) Common School Permanent Land Fund</b>				
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Common School Permanent Land Fund return was 5.9% vs. 5.7% for the Actual Allocation Index
<b>c) Permanent Land Fund</b>				
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Permanent Land Fund return was 5.7% vs. 5.5% for the Actual Allocation Index
<b>d) University Permanent Land Fund</b>				
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: University Permanent Land Fund return was 5.9% vs. 5.8% for the Actual Allocation Index
<b>e) Hathaway Scholarship Endowment Fund</b>				
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Hathaway Scholarship Endowment Fund return was 5.2% vs. 5.1% for the Actual Allocation Index
<b>f) Higher Education Endowment Fund</b>				
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Higher Education Endowment Fund return was 5.2% vs. 5.1% for the Actual Allocation Index
<b>g) Workers Compensation Fund</b>				
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Workers Compensation Fund return was 4.3% vs. 4.2% for the Actual Allocation Index
<b>h) Tobacco Settlement Trust Fund</b>				
At least 5% to 10% of the fund balance should be invested in securities with maturities of less than one year.	✓			
No public and/or private equities are permitted.	✓			
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Tobacco Settlement Trust Fund return was 2.6% vs. 2.4% for the Actual Allocation Index
<b>i) State Agency Pool</b>				
At least 10% to 15% of the fund balance should be invested in securities with maturities of less than one year.	✓			
No public and/or private equities are permitted.	✓			
Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: State Agency Pool return was 2.3% vs. 2.1% for the Actual Allocation Index

	Yes	No	N/A	Explanation
<b>3. US Equity Portfolios</b>				
<b>a) State Street Global Advisors – All Cap – Passive</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Largest Holding: Apple Inc = 2.7%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Meet performance of the State Street All Cap Custom Index, net of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 01/2015
<b>b) Epoch – All Cap</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Largest Holding: Apple Inc = 5.7%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Outperform the Russell 3000 Index, net of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 11/2014
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 11/2014

	Yes	No	N/A	Explanation
<b>c) Lazard – All Cap</b>				
A maximum of 7.5% of the total stock portfolio may be invested in any one security.	✓			Largest Holding: Motorola Solutions Inc = 7.8%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			There were three instances over the quarter where sells moved faster than buys and securities held were less than 20 for a day.
Outperform the Russell 3000 Index, net of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 11/2014
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 11/2014
<b>d) RBC – Small Cap</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Largest Holding: Patrick Industries Inc = 4.2%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Outperform the Russell 2000 Index, net of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 11/2014
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 11/2014



	Yes	No	N/A	Explanation
<b>4. Global Equity Portfolios</b>				
<b>a) Arrowstreet – Global Equity</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Largest Holding: Philip Morris Int'l Inc = 2.0%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Outperform the MSCI ACW Index (Net), net of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 03/2015
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 03/2015

	Yes	No	N/A	Explanation
<b>5. International Equity Portfolios</b>				
<b>a) Internal International Equity Portfolio – Int'l – Passive</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Largest Holding: Nestle SA = 1.3%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Meet performance of the FTSE All World Ex US Index (Net), net of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception Date: 02/2016
<b>b) Northern Trust – Int'l – Passive</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Largest Holding: Nestle SA = 1.3%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Meet performance of the MSCI ACW Ex US Index (Net), before fees, over a full market cycle, approximated by the most recent five-year period.	✓			5-year: Northern Trust gross of fees return was 4.5% vs. 4.4% for the MSCI ACW Ex US Index (Net)

	Yes	No	N/A	Explanation
<b>c) Fisher – Int'l Active</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Largest Holding: Samsung Electronics Co Ltd = 3.6%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Outperform the MSCI ACW Ex US Index (Net)*, net of fees, over a full market cycle, approximated by the most recent five-year period.	✓			5-year: Fisher net of fees return was 4.6% vs. 4.4% for the MSCI ACW Ex US Index (Net)
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.		✗		5-year: Fisher ranked in the 70th percentile for International Equity

\*Fisher Index consists of MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter.

<b>d) Manning &amp; Napier – Int'l Active</b>				
A maximum of the greater of five percent (5%), or the benchmark weighting plus two percent (2%), of the total stock portfolio of a manager may be invested in any one security.	✓			Unilever PLC = 4.9%
A maximum of one percent (1%) of the outstanding float of shares of one company may be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. A maximum of five percent (5%) of the outstanding float of shares of one company may be held in companies with market capitalizations of less than \$5 Billion at the time of purchase.	✓			
The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is two and one-half (2.5) times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
A minimum number of twenty (20) securities shall be held.	✓			
Outperform the MSCI ACW Ex US Index (Net), net of fees, over a full market cycle, approximated by the most recent five-year period.		✗		5-year: Manning & Napier net of fees return was 3.2% vs. 4.4% for the MSCI ACW Ex US Index (Net)
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.		✗		5-year: Manning & Napier ranked in the 79th percentile for International Equity

	Yes	No	N/A	Explanation
<b>6. Alternative Strategies</b>				
<b>Core Real Estate</b>				
<b>a) Clarion Lion</b>				
Outperform the NCREIF Fund Index – Open-End Diversified Core Equity (ODCE), net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Clarion Lion net of fees return was 11.5% vs. 10.9% for the NCREIF ODCE Index (Net) (AWA)
<b>b) UBS Trumbull</b>				
Outperform the NCREIF Fund Index – Open-End Diversified Core Equity (ODCE), net of fees, over a full market cycle, approximated by the most recent 5-year period.		✗		5-year: UBS Trumbull net of fees return was 9.0% vs. 10.9% for the NCREIF ODCE Index (Net) (AWA)
<b>Absolute Return</b>				
<b>c) PAAMCO</b>				
Outperform the 90-Day T-Bills by 500 basis points, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.		✗		5-year: PAAMCO net of fees return was 4.3% vs. 0.1% for the BofA ML 3 Mo US T-Bill Index
Outperform the HFN Fund of Funds Multi-Strategy Index, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: PAAMCO net of fees return was 4.3% vs. 2.9% for the HFN FOF Multi-Strategy Index

	Yes	No	N/A	Explanation
<b>7. Convertible Bond Portfolios</b>				
<b>a) Allianz Global Investors</b>				
Outperform the BofA ML All Quality Convertible Bond Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.		✗		5-year: Allianz Global Investors net of fees return was 8.5% vs. 9.9% for the BofA ML All Quality Convertible Bond Index

	Yes	No	N/A	Explanation
<b>8. Fixed Income Portfolios</b>				
<b>a) C.S. McKee – Core</b>				
Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
Commercial paper of all issuers shall not exceed \$500 million.	✓			
Duration must fall in the range of plus or minus twenty percent (20%) of the Bloomberg US Aggregate Bond Index.	✓			
Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities	✓			
Average portfolio credit quality must be A- or better.	✓			
Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
A minimum number of 25 securities shall be held.	✓			
Investments in mortgage interest only and principal only securities or their derivations are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
Private placements, including 144A securities are not permitted.	✓			
Outperform the Bloomberg US Aggregate Bond Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 01/2013
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 01/2013

	Yes	No	N/A	Explanation
<b>b) JP Morgan – Core</b>				
Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.			N/A	
Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
Commercial paper of all issuers shall not exceed \$500 million.			N/A	
Duration must fall in the range of plus or minus twenty percent (20%) of the Bloomberg US Aggregate Bond Index.	✓			
Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities	✓			
Average portfolio credit quality must be A- or better.	✓			
Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.			N/A	
A minimum number of 25 securities shall be held.	✓			
Investments in mortgage interest only and principal only securities or their derivations are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
Private placements, including 144A securities are not permitted.	✓			
Outperform the Bloomberg US Aggregate Bond Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 01/2013
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 01/2013

	Yes	No	N/A	Explanation
<b>c) PIMCO – Core</b>				
Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
Commercial paper of all issuers shall not exceed \$500 million.	✓			
Duration must fall in the range of plus or minus twenty percent (20%) of the Bloomberg US Aggregate Bond Index.	✓			
Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities	✓			The portfolio currently holds two securities that were downgraded below BBB-. PIMCO plans to sell both these securities by June 30th, 2017.
Average portfolio credit quality must be A- or better.	✓			
Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
A minimum number of 25 securities shall be held.	✓			
Investments in mortgage interest only and principal only securities or their derivations are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
Private placements, including 144A securities are not permitted.	✓			
Outperform the Bloomberg US Aggregate Bond Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 01/2013
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 01/2013

	Yes	No	N/A	Explanation
<b>d) Neuberger Berman – Credit</b>				
Duration must not exceed plus two (2) years of the custom index.	✓			
Minimum Issue Credit Rating for commercial paper will be A1.	✓			
Average portfolio credit quality must be B or better.	✓			
Obligations of specific issuers are subject to five percent (5%) per issuer limit, excluding investments in commingled vehicles.	✓			
Standalone purchases of private placements, including 144A securities, are not allowed.	✓			
Outperform the State's custom benchmark as measured by twenty percent (20%) Bloomberg US Credit Index, twenty percent (20%) BofA Merrill Lynch US High Yield Master II Constrained Index and sixty percent (60%) S&P/LSTA Leveraged Loan Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 04/2013
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 04/2013
<b>Investment Grade Credit Sleeve:</b>				
Minimum Issue Credit Rating at the time of purchase will be: BBB- for individual securities.	✓			
Minimum of ten percent (10%) of the total portfolio must be invested in investment grade rated securities and a maximum of sixty percent (60%) of the total portfolio can be invested in investment grade rated securities.	✓			
<b>High Yield Sleeve:</b>				
Minimum Issue Credit Rating at the time of purchase will be:  CCC- for individual securities. Securities that are not rated shall be, in the judgement of the investment manager, of credit quality equal or superior to the standards described above.	✓			
Maximum of forty percent (40%) of the total portfolio can be invested in high yield bonds.	✓			
<b>Bank Loan Sleeve:</b>				
Minimum Issue Credit Rating at the time of purchase will be:  CCC for individual securities. Securities that are not rated shall be, in the judgement of the investment manager, of credit quality equal or superior to the standards described above.	✓			
Minimum of forty percent (40%) of the total portfolio must be invested in bank loans and a maximum of eighty percent (80%) of the total portfolio can be invested in bank loans.	✓			



	Yes	No	N/A	Explanation
<b>e) Seix – Credit</b>				
Duration must not exceed plus two (2) years of the custom index.	✓			
Minimum Issue Credit Rating for commercial paper will be A1.	✓			
Average portfolio credit quality must be B or better.	✓			
Obligations of specific issuers are subject to five percent (5%) per issuer limit, excluding investments in commingled vehicles.	✓			
Standalone purchases of private placements, including 144A securities, are not allowed.	✓			
Outperform the State's custom benchmark as measured by twenty percent (20%) Bloomberg US Credit Index, twenty percent (20%) BofA Merrill Lynch US High Yield Master II Constrained Index and sixty percent (60%) S&P/LSTA Leveraged Loan Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 05/2013
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 05/2013
<b>Investment Grade Credit Sleeve:</b>				
Minimum Issue Credit Rating at the time of purchase will be: BBB- for individual securities.	✓			
Minimum of ten percent (10%) of the total portfolio must be invested in investment grade rated securities and a maximum of sixty percent (60%) of the total portfolio can be invested in investment grade rated securities.	✓			
<b>High Yield Sleeve:</b>				
Minimum Issue Credit Rating at the time of purchase will be:  CCC- for individual securities. Securities that are not rated shall be, in the judgement of the investment manager, of credit quality equal or superior to the standards described above.	✓			
Maximum of forty percent (40%) of the total portfolio can be invested in high yield bonds.	✓			
<b>Bank Loan Sleeve:</b>				
Minimum Issue Credit Rating at the time of purchase will be:  CCC for individual securities. Securities that are not rated shall be, in the judgement of the investment manager, of credit quality equal or superior to the standards described above.	✓			
Minimum of forty percent (40%) of the total portfolio must be invested in bank loans and a maximum of eighty percent (80%) of the total portfolio can be invested in bank loans.	✓			

	Yes	No	N/A	Explanation
<b>f) Grosvenor Silvery Lupine Fund – Opportunistic Fixed Income</b>				
Outperform the CS Western European Hi Yld Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 07/2014
<b>g) Investec – Emerging Market Debt (Local Currency)</b>				
Duration must fall in the range of plus or minus twenty percent (20%) of the index.	✓			
Minimum Issue Credit Rating at the time of purchase will be: A1 for commercial paper B- for individual securities Where a security is not rated at the issue level, the issuer rating will be relied upon.	✓			
Average portfolio credit quality must be BB+ or better.	✓			
Obligations of individual sovereign/quasi-sovereign issuer are subject to a twenty-five percent (25%) per issuer limit.	✓			
Private placements, including 144A securities are not allowed.	✓			There are two 144A securities held by this portfolio. Retention of this security in the portfolio is permitted pursuant to Section 7.2 of the Investment Policy.
The investment manager, as part of managing the account, can take net investment positions of up to twenty percent (20%) of the portfolio in currency and currency forwards.	✓			
Outperform the JP Morgan GBI-EM Global Diversified Unhedged Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 04/2013
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 04/2013

	Yes	No	N/A	Explanation
<b>h) Stone Harbor – Emerging Market Debt (Local Currency)</b>				
Duration must fall in the range of plus or minus twenty percent (20%) of the index.	✓			
Minimum Issue Credit Rating at the time of purchase will be: A1 for commercial paper B- for individual securities Where a security is not rated at the issue level, the issuer rating will be relied upon.	✓			The portfolio currently holds securities which are rated below B-. Retention of these securities in the portfolio is permitted pursuant to Section 7.2 of the Investment Policy.
Average portfolio credit quality must be BB+ or better.	✓			
Obligations of individual sovereign/quasi-sovereign issuer are subject to a twenty-five percent (25%) per issuer limit.	✓			
Private placements, including 144A securities are not allowed.	✓			The portfolio holds private placement and 144A securities. Retention of these securities in the portfolio is permitted pursuant to Section 7.2 of the Investment Policy.
The investment manager, as part of managing the account, can take net investment positions of up to twenty percent (20%) of the portfolio in currency and currency forwards.	✓			
Outperform the JP Morgan GBI-EM Global Diversified Unhedged Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 04/2013
Performance should rank in the top 40th percentile of peer manager universe as measured by the State's Consultant, gross of fees, over a full market cycle, approximated by the most recent five-year period.			N/A	Inception date: 04/2013
<b>i) State Street – US TIPS – Passive</b>				
Meet the performance of the Bloomberg US TIPS Index with minimal tracking error, gross of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 01/2013

	Yes	No	N/A	Explanation
<b>8. Cash and Cash Equivalents Portfolios</b>				
<b>JP Morgan Cash Composite*</b>				
<b>a) JP Morgan Treasury Cash</b>				
Portfolio's weighted average maturity is not to exceed 90 days.	✓			
Portfolio's maximum average cash flow weighted duration of the portfolio must not exceed 90 days.	✓			
The market value of the portfolio must remain within plus or minus one-half percent (0.5%) of one percent (1%) of amortized cost.	✓			
A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
Investment in any single issuer must not exceed 5% of the outstanding issues of that issuer.	✓			
Investment performance must exceed Monitored Repurchase Agreement Rate and the cash equivalents allocation by the 90-day T-Bill rate, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: JP Morgan Treasury Cash net of fees return was 0.1% vs. 0.1% for the BofA ML 3 Mo US T-Bill Index
<b>b) JP Morgan Treasury Extended Cash</b>				
Portfolio's average cash flow weighted duration is not to exceed 3 years.	✓			
Average cash flow weighted duration is not to exceed 3 years.	✓			
Individual securities must not exceed cash flow weighted duration of greater than 5-years.	✓			One security has cash flow weighted duration extended past 5 years. The State has been made aware of this security.
A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
Investment Performance must exceed an Equal Weighted Blend of the BofA Merrill Lynch 1-3 Year Agency, 1-3 Year Treasury, and a 0-3 Year Mortgage Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: JP Morgan Treasury Extended Cash net of fees return was 0.8% vs. 0.8% for the Blended Index
The extended portfolio must not exceed 35% of the total JP Morgan managed portfolio.	✓			

\*During the fourth quarter of 2011, JP Morgan Treasury Cash and JP Morgan Treasury Extended Cash were combined. Net of fees performance shown consists of performance calculated by RVK, Inc. prior to December 31, 2011 and performance calculated by JP Morgan thereafter.

	Yes	No	N/A	Explanation
<b>JP Morgan Wyo-Star Cash Composite*</b>				
<b>c) JP Morgan Wyo-Star Cash</b>				
Portfolio's weighted average maturity is not to exceed 90 days.	✓			
Portfolio's maximum average cash flow weighted duration of the portfolio must not exceed 90 days.	✓			
The market value of the portfolio must remain within plus or minus one-half percent (0.5%) of one percent (1%) of amortized cost.	✓			
A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
Investment in any single issuer must not exceed 5% of the outstanding issues of that issuer.	✓			
Investment performance must exceed Monitored Repurchase Agreement Rate and the cash equivalents allocation by the 90-day T-Bill rate, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: JP Morgan Wyo-Star Cash net of fees return was 0.1% vs. 0.1% for the BofA ML 3 Mo US T-Bill Index
<b>d) JP Morgan Wyo-Star Extended Cash</b>				
Portfolio's average cash flow weighted duration is not to exceed 3 years.	✓			
Average cash flow weighted duration is not to exceed 3 years.	✓			
Individual securities must not exceed cash flow weighted duration of greater than 5-years.	✓			One security has cash flow weighted duration extended past 5 years. The State has been made aware of this security.
A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
Investment Performance must exceed an Equal Weighted Blend of the BofA Merrill Lynch 1-3 Year Agency, 1-3 Year Treasury, and a 0-3 Year Mortgage Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.		✗		5-year: JP Morgan Wyo-Star Extended Cash net of fees return was 0.7% vs. 0.8% for the Blended Index
The extended portfolio must not exceed 35% of the total JP Morgan managed portfolio.	✓			

\*During the fourth quarter of 2011, JP Morgan Wyo-Star Cash and JP Morgan Wyo-Star Extended Cash were combined. Net of fees performance shown consists of performance calculated by RVK, Inc. prior to December 31, 2011 and performance calculated by JP Morgan thereafter.

**Custom Benchmark Comments**

The Wyoming State Actual Allocation Index is calculated using beginning month asset class weights applied to the appropriate asset class benchmark return, using the US Equity Custom Index for US equities, MSCI ACW Index (Net) for global equities, MSCI ACW Ex US Index (Net) for international equities, Bloomberg US Aggregate Bond Index for fixed income, BofA Merrill Lynch All Convertibles Index (All Qualities) for convertible bonds, NCREIF Open-End Diversified Core Equity Index (Gross) (AWA) for core real estate, NCREIF Property Index for value-added real estate, the State's actual private equity investment returns for private equity, HFN Fund of Funds Multi-Strat Index for absolute return, and BofA Merrill Lynch 90 day US T-Bill rate for cash equivalents.

Pooled Fund actual allocation indices are calculated using beginning month asset class weights applied to the appropriate asset class benchmark return, using the US Equity Custom Index for US equities, MSCI ACW Index (Net) for global equities, MSCI ACW Ex US Index (Net) for international equities, Bloomberg US Aggregate Bond Index for fixed income, BofA Merrill Lynch All Convertibles Index (All Qualities) for convertible bonds, NCREIF Open-End Diversified Core Equity Index for core real estate, NCREIF Property Index for value-added real estate, the State's actual private equity investment returns for private equity, HFN Fund of Funds Multi-Strat Index for absolute return, and the State Agency Pool Custom Index for the State Agency Pool allocation.

The Total Equity Custom Index consists of the MSCI World Index (USD) (Net) through July 2010 and the MSCI All Country World Index (USD) (Net) thereafter.

The US Equity Custom Index consists of the S&P 500 Index (Cap Wtd) through September 2014 and the Russell 3000 Index thereafter.

The State Street All Cap Custom Index consists of 69% Russell 3000 Index, 23% FTSE RAFI US 1000 Index and 7% MSCI USA Minimum Volatility Index (Net).

The International Equity Custom Index and the Fisher Custom Benchmark both consist of MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter.

The Credit Custom Index consists of 20% Bloomberg US Credit Index, 20% BofA Merrill Lynch US High Yield Master II Constrained Index, and 60% S&P/LSTA Leveraged Loan Index.

The Internal Fixed Income Portfolio Custom Index consists of the Bloomberg US Gov't: Int. Term Bond Index; prior to December 2009 the index consists of the Bloomberg US Gov't/Credit Bond Index.

The JP Morgan Blended Index consists of an equal-weighted allocation to the BofA Merrill Lynch 1-3 Year US Treasury Index, BofA Merrill Lynch 1-3 Year US Agencies Index, and BofA Merrill Lynch 0-3 Year Weighted Average Life Mortgage Index.

The JP Morgan Cash Custom Index is calculated monthly using beginning of the month investment weights applied to each corresponding primary benchmark return. Currently, the primary benchmark for JP Morgan Cash is the BofA ML 3 ML US T-Bill Index and for JP Morgan Extd is the JP Morgan Blended Index.

The Wyo-Star Cash Custom Index is calculated monthly using beginning of the month investment weights applied to each corresponding primary benchmark return. Currently, the primary benchmark for Wyo-Star Cash is the BofA ML 3 ML US T-Bill Index and for Wyo-Star Extd is the JP Morgan Blended Index.

**Performance & Holding Comments**

RVK, Inc. shows performance beginning with the first full month following inception. Inception date shown for the Global Equity, Int'l Equity, and JP Morgan Cash Composites represents the first date of performance calculated by RVK, Inc.

Performance shown for Pooled Funds is calculated on a capital-weighted basis using beginning-period allocations and does not reflect net cash flows.

Performance shown for the UW Portfolio Management Program prior to 07/01/2009 includes their participation in the State Agency Pool. Performance calculated for the UW Portfolio Management Program after 02/01/2013 has not been verified by RVK as the assets have been moved to a platform in which the custodian does not provide a reconcilable return.

Performance for the Internal Fixed Income Portfolio excludes distressed securities taken in-kind following the liquidation of WAMCO Core Plus.

Performance shown for the JP Morgan Cash Composite and the Wyo-Star Cash Composite consists of the respective operating and extended cash accounts.

RVK endorses GIPS and calculates performance for investment managers and composites using different methodologies. For additional information, please see the Glossary.

Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark.

**Alternative Investment Comments**

Reporting for Private Equity performance was changed from cost basis to the latest portfolio valuation adjusted for cash flows, consistent with the supplementary alternatives report. This methodology change involved reflecting the difference between cost value and the most recent valuation, resulting in a significant positive performance impact on the total fund during 2nd quarter 2008.

Valuations for value-added real estate and private equity were changed from a one-quarter lag to as of the most recent valuation, adjusted for subsequent cash flows. This methodology change involved reflecting all cash flows occurring during 4th quarter 2011 as of January 2012, resulting in a minor positive performance impact on the total fund during 1st quarter 2012. Investment (Cost) Values are not lagged.

Performance for value-added real estate and private equity investments is calculated on an IRR basis. For further analysis, please refer to the supplementary alternatives performance report.

Cheyenne Capital Fund valuations set forth herein could be materially different once underlying investments are realized. Market conditions at the time of exit could be substantially different than at the reporting period, resulting in valuations different than those represented above.

**Miscellaneous Comments**

Wyoming State Treasurer's Office fiscal year ends on June 30th.

Fixed Income style peer groups have low populations, and may cause ranks to change significantly from quarter to quarter.

"IM" is the acronym for Investment Metrics, the provider of peer group data used in ranking investment manager and asset class performance.

During the 4th quarter of 2012, WAMCO Core Plus, Neuberger Berman Core Plus, PIMCO Core Plus, PIMCO Mortgages, JP Morgan Mortgages, WAMCO Corporates, Logan Circle, and PIMCO Global/EM began the liquidation process to transition assets to the State's new fixed income asset class structure. The proceeds were used to fund State Street TIPS, C.S. McKee, JP Morgan Core, MacKay Shields, Neuberger Berman Core, PIMCO Core, and Wells Capital. During the 1st quarter of 2013, additional assets were transitioned to Neuberger Berman Credit, Seix, Investec, and Stone Harbor.

During the 4th quarter of 2014, State Street S&P 500 and Gabelli began the liquidation process to transition assets to the State's new US equity asset class structure. The proceeds were used to fund State Street All Cap, Epoch, Lazard, and RBC. During the 1st quarter of 2015, additional assets were transitioned to Arrowstreet.

During the 4th quarter of 2015, the Workers Compensation Fund was reclassified as a Permanent Fund.

During the 1st quarter of 2016, the State funded the Internal International Equity Portfolio, using proceeds from the liquidation of The Boston Company.

During the 3rd quarter of 2016, Bloomberg acquired the Barclays Global Family of Fixed Income Indices. Naming conventions have been updated to "Bloomberg" to reflect the acquisition.

During the 3rd quarter of 2016, MacKay Shields began the liquidation process, with proceeds used to increase allocations to C.S. McKee and the Internal Fixed Income Portfolio.

During the 1st quarter of 2017, Neuberger Berman Core and Wells Capital began their respective liquidation processes.

## INVESTMENT MANAGER PEER GROUP GLOSSARY

**IM U.S. All Cap Equity (SA+CF):** The **U.S. All Cap Equity** universe includes products with a higher growth bias, products with a higher value bias, and products where the investment strategy permits investments in both value and growth equity securities across the complete Russell 3000 market cap spectrum.

**IM U.S. Large Cap Core Equity (SA+CF):** The **U.S. Large Cap Core Equity** universe includes products where the investment strategy can best be described as benchmark driven rather than style driven and can include a blend of both value and growth considerations. The weighted average market cap is in excess of \$10 billion.

**IM U.S. Small Cap Core Equity (SA+CF):** The **U.S. Small Cap Core Equity** universe includes products where the investment strategy can best be described as benchmark driven rather than style driven and can include a blend of both value and growth considerations. The weighted average market is between \$300 million and \$2 billion.

**IM Global Equity (SA+CF):** The **Global Equity** universe includes funds where the investment strategy focuses on investments in securities in the U.S. and international markets, and includes a blend of both value and growth securities across a variety of market cap ranges.

**IM International Equity (SA+CF):** The **International Equity** universe includes all international equity products.

**IM U.S. Broad Mkt Core Fixed Income (SA+CF):** The **U.S. Broad Mkt Core Fixed** Income universe includes products where the portfolio weighted average duration is greater than or equal to 4 years and less than 6 years. The average maturity can be between 3 and 8 years. The allocation to high yield bonds or emerging market debt is less than or equal to 5%.

**IM U.S. Fixed Income (SA+CF):** The **U.S. Fixed Income** universe includes all U.S. fixed income products.

**IM Emerging Markets Debt (SA+CF):** The **Emerging Markets Debt** universe includes products where the combined market allocation to emerging market debt in Asia, Africa/Europe and Latin America is approximately 75% or more. The JP Morgan Emerging Markets Bond and EMBI+ are commonly used benchmarks.

**IM U.S. Government Bonds (SA+CF):** The **U.S. Government Bonds** universe includes products where the investment style focuses on government bonds and the sector allocation to them is greater than or equal to 75%. The Barclays Capital U.S. Government or Government: Intermediate are commonly used benchmarks.



## Glossary

**Active Share** - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

**Alpha** - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

**Alpha Ratio** - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

**Average Quality** - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. *Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.* There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers) such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>	<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>
<b>Higher Credit Quality – Investment Grade</b>			<b>Lower Credit Quality – Below Investment Grade</b>		
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality
AA+	Aa1	High credit quality	BB	Ba2	
AA	Aa2		BB-	Ba3	
AA-	Aa3		B+	B1	Highly speculative
A+	A1	Upper-medium credit quality	B	B2	
A	A2		B-	B3	
A-	A3		CCC+	Caa1	Substantial credit/default risk
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative
BBB	Baa2		CCC-	Caa3	
BBB-	Baa3		CC	Ca	Vulnerable to default
			C	Ca	
			D	C	In default

**Beta** - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Box Plots** - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> quartile meet.

**Buy and Hold Attribution** - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

**Sector** - Attribution is calculated using the Global Industry Classification Standard (GICS) which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector, as defined by S&P Capital IQ data.

**Country/Region** - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data.

**Style** - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

### Capital Markets Review -

**Breakeven Inflation** - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

**Consumer Confidence** - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

**Consumer Price Index (CPI)** - Measures the change in the price level of consumer goods and services.

**Federal Funds Rate** - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.

**Option-Adjusted Spread** - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.

**Purchasing Managers Index (PMI)** - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.

**Real Gross Domestic Product (Real GDP)** - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.

**US Dollar Total Weighted Index** - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.

## Glossary

**Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.

**VIX** - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."

**Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

**Convexity** - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

**Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

**Coupon Rate** - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

**Current Yield** - The annual income of a security divided by the security's current price.

**Down Market Capture** - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.

**Downside Risk** - A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative monthly returns. The higher the factor, the riskier the product.

**Earnings Per Share** - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

**Effective Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield.

**Excess Return vs. Market** - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

**Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

**Excess Risk** - A measure of the standard deviation of a portfolio's performance relative to the risk free return.

**Expense Ratios** - Morningstar is the source for mutual fund expense ratios.

**Gain/Loss** - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

**Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability and/or completeness.

**Information Ratio** - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.

**Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

**Estimated Funded Status** - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.

**Estimated PV of Liabilities** - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.

**Duration of Liabilities** - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.

**Duration of Assets** - The dollar-weighted average duration of all the individual Plan assets.

**Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

**Modified Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

**Mutual Fund Performance** - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

**Net Cash Flow** - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

## Glossary

### Peer Groups -

**Plan Sponsor Peer Groups** - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client returns compiled from consultant and custodial data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Plan Sponsor Peer Groups are gross of fees.

**Institutional Peer Groups (Separate Account and Commingled Fund)** - RVK utilizes the Investment Metrics Separate Account and Commingled Fund Manager Peer Groups for peer comparison and rankings. The Separate Account and Commingled Fund Peer Group database includes performance and other quantitative data for over 1,000 investment management firms, 6,400 investment products, across 100 standard peer groups. Separate Account and Commingled Fund Peer Groups are gross of fees.

**Mutual Fund (MF) Peer Groups** - RVK utilizes the Lipper Mutual Fund Manager Peer Groups for peer comparison and rankings. The Lipper Manager Peer Group database includes performance and other quantitative data for over 700 investment management firms and 24,500 investment products, across more than 140 standard peer groups. Mutual Fund Peer Groups are net of fees.

For more information on Peer Groups, visit <https://www.invmetrics.com/style-peer-groups>.

**Percentile Rankings** - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value

100 - Lowest Statistical Value

*Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4<sup>th</sup> percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.*

**Performance Methodology** - RVK calculates performance for investment managers and composites using different methodologies.

**Investment Managers** - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of  $\geq 10\%$  of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

**Composites** - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

**Portfolio Characteristics** - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

**Price to Earnings Ratio** - The ratio of a company's share price to its per-share earnings

**Private Equity Quartile Ranks** - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

**Return** - Compounded rate of return for the period.

**% Return** - The time-weighted rate of return of a portfolio for a given period.

**R-Squared** - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

**Risk Free Benchmark** - BofA ML 3 Mo US T-Bill Index unless specified otherwise.

## Glossary

**RVK Liquidity Rating** - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

<u>Asset Class</u>	<u>RVK Liquidity Rating</u>	<u>Asset Class</u>	<u>RVK Liquidity Rating</u>
<u>Liquid Investments</u>		<u>Less Liquid Investments</u>	
T-Bills and Treasuries	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Bank Loans	50
TIPS	95	Stable Value (Plan Sponsor Directed)	50
US Large Cap Equity	95	Absolute Return Strategies	35
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Non-US Large Cap Equity	90	<u>Not Liquid Investments</u>	
Global Tactical Asset Allocation	88	Core Real Estate	25
US Small Cap Equity	85	Core Plus Real Estate	15
REITS	85	Non-Core Real Estate	5
Non-US Small Cap Equity	85	Private Equity Funds of Funds	5
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

**Sector Allocation** - Negative fixed income sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

**Sharpe Ratio** - Represents the excess rate of return over the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

**Simple Alpha** - The difference between the manager's return and the benchmark's return.

**Spread Duration** - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

**Standard Deviation** - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

**Time Period Abbreviations** - **QTD** - Quarter-to-Date. **CYTD** - Calendar Year-to-Date. **FYTD** - Fiscal Year-to-Date. **YOY** - Year Over Year.

**Thematic Classification** - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

<u>Alpha</u>	<u>Capital Appreciation</u>	<u>Capital Preservation</u>	<u>Inflation</u>
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
	Preferred Securities	Asset Backed Fixed Income	Core Real Estate
	High Yield	Domestic Core Plus Fixed Income	Real Return
	Convertible Fixed Income	Mortgage Backed Fixed Income	Inflation Hedges
	TALF Funds	International Developed Fixed Income	REITS
	Distressed Debt	Cash Equivalents	Commodities
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

**Total Fund Attribution** - The Investment Decision Process (IDP) model provides an approach to evaluating investment performance that applies to all asset classes and investment styles. The IDP model is based on a top-down hierarchy framework of investment decisions, with each decision contributing to the overall profit or loss. The IDP approach starts from the strategic asset allocation and follows the flow of the investments down to the manager's skill.

**Strategic Asset Allocation (SAA)** - The percentage return gained or lost from the long-term strategic asset allocation decision, the most significant determinant of long-term performance. SAA is the product of the target asset allocation multiplied by the corresponding benchmark returns.

**Tactical Asset Allocation (TAA)** - The percentage return gained or lost from not having been precisely allocated at the target asset allocation mix, whether by deviations that are tactical in nature or a by-product of moving towards the target mix. TAA is the product of the actual asset allocation multiplied by the broad asset class benchmarks, less the SAA.

**Style Selection (SS)** - The percentage return gained or lost from intentional style biases within each asset class (e.g. value rather than core or overweight to emerging markets relative to benchmark). SS is the product of the actual manager allocation within each asset class multiplied by their specific benchmark, less TAA.

**Manager's Skill (MS)** - The percentage return gained or lost from manager value added relative to their specific benchmark. MS is the product of the actual manager allocation multiplied by their achieved excess return.

**Total Fund Beta** - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

**Tracking Error** - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

## Glossary

**Treynor Ratio** - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

**Unit Value** - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

**Up Market Capture** - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolios return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

**Yield to Maturity** - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

**Yield to Worst** - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.



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