



# Quarterly Investment Performance Analysis

Wyoming State Treasurer's Office

Period Ended: September 30, 2020





## Memorandum

|         |   |
|---------|---|
| To      | Wyoming State Loan and Investment Board               |
| From    | RVK, Inc.   |
| Subject | Investment Performance Analysis – Summary of Contents |
| Date    | September 30, 2020                                    |

To assist in your review of the Investment Performance Analysis for the quarter ended September 30, 2020, 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 – 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.

#### TAB 3 – 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 total fund index is included.

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**TAB 4 – 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 5 – 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 6 – 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 7 – Cash and Cash Equivalents**

- This two-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 8 – 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 9 – 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

*Third QUARTER 2020*

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## Memorandum

|         |  |
|---------|--|
| To      | Wyoming State Loan and Investment Board    |
| From    | RVK, Inc.                                  |
| Subject | Investment Performance Analysis Commentary |
| Date    | September 30, 2020                         |

Outlined below please find a summary of significant observations regarding performance of the State's Funds for the period ended September 30, 2020. We hope this summary will facilitate your review of our Investment Performance Analysis Report.

The Total Fund returned 1.9% net of fees during the third quarter as risk assets produced positive returns. Long-term performance for the Total Fund remains strong, with the State earning returns of 4.4% and 4.8% per annum over the trailing seven- and ten-year periods.

Absolute results were positive for all of the State's investment pools, with each pool keeping pace with, or modestly outperforming, their respective benchmarks during the quarter. The State's non-permanent funds with larger strategic allocations to fixed income investments generated lower returns on an absolute basis, but similar returns on a relative basis, compared to the State's permanent funds.

The Bloomberg US Aggregate Bond Index increased by 0.6% in the quarter, driven by a small decline in rates. Diversification away from core US bonds had mixed results as bank loans, EMD, and long duration outperformed the broad market, while low duration underperformed. The State's core fixed income managers slightly outperformed the broad market index, collectively returning 1.0%. Emerging markets debt and low duration outperformed their respective benchmarks, while long duration and bank loans modestly underperformed their respective benchmarks during the quarter.

US equity markets had a strong recovery across all market capitalizations and styles during the third quarter. Major US equity indices finished the quarter in positive territory, with the Russell 3000 Index returning 9.2% for the quarter. The State's All Cap and Small Cap US equity composites had positive returns during the third quarter, keeping pace with or modestly underperforming their respective indices.

Developed international markets underperformed emerging markets during the quarter, with the MSCI EAFE Index returning 4.8% and the MSCI Emerging Markets Index returning 9.6%. The State's international equity composite returned 7.0% during the quarter, outperforming the MSCI ACW Ex US Index by 0.7%. Passively managed strategies within the State's

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international equity portfolio kept pace with their respective benchmarks, while Arrowstreet outperformed its respective benchmark by 0.4%. Harding Loevner also had strong outperformance of 2.1%.

Mixed assets, including preferred stock and MLPs, generated positive absolute returns during the quarter. Cohen & Steers returned 5.2% in the quarter, but underperformed its benchmark by 1.9%. MLPs had negative performance as Harvest Active and Harvest Passive returned -9.7% and -12.1%, respectively, but both outperformed the index.

Core real estate generated a positive return during the quarter, with income outpacing capital depreciation. The State's core real estate composite earned 0.4% in the quarter, outperforming the NCREIF ODCE Index. Clarion earned 0.5%, while UBS returned -0.4%. MS Prime was also recently funded.

Diversified hedge funds returned 3.6% during the quarter, underperforming the HFRI FOF Composite Index by 0.7%. Grosvenor Diversified Hedge Funds and Internal Diversified Hedge Funds returned 4.5% and 3.1%, respectively.



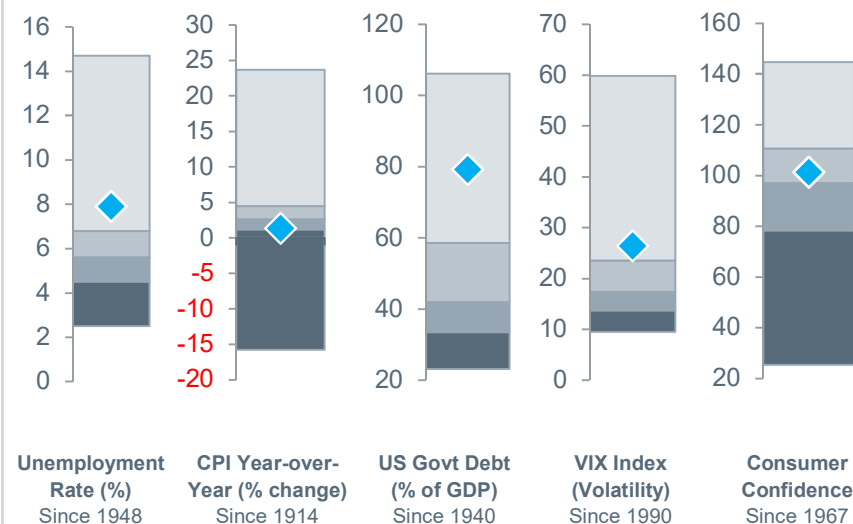
# Capital Markets Review



### Third Quarter Economic Environment

In the first two months of Q3, capital markets generally tracked trends stemming from the latter half of Q2. After strong results in the first two months of the quarter, returns from risk assets reversed in September due to growing concerns over a stagnating recovery and reduced confidence that the US Congress could agree to enact further fiscal stimulus. In addition, the upcoming US presidential and congressional elections offer another source of uncertainty when building expectations for the ongoing economic recovery. The Federal Open Market Committee (FOMC) maintained its accommodative stance and boosted sentiment further by announcing it will use an average inflation target indicating that it could accept levels above its stated 2% target in future periods. Market participants largely saw this as an indication that policy could remain supportive for longer than expected with a fixed inflation target. As of October 1st, the Atlanta Fed's GDPNow annualized estimate for Q3 growth stood at 34.6% which stands in stark contrast to the final reading of the Q2 GDP decline of -31.4%. On a non-annualized basis, the decline in real US GDP, peak to trough, was -10.1%, according to JP Morgan, compared to a -4.0% decline during the great financial crisis. For calendar year 2020, the OECD released a projection in September for a -4.5% contraction in global GDP, which represented an improvement from its June projection for a -6.0% contraction.

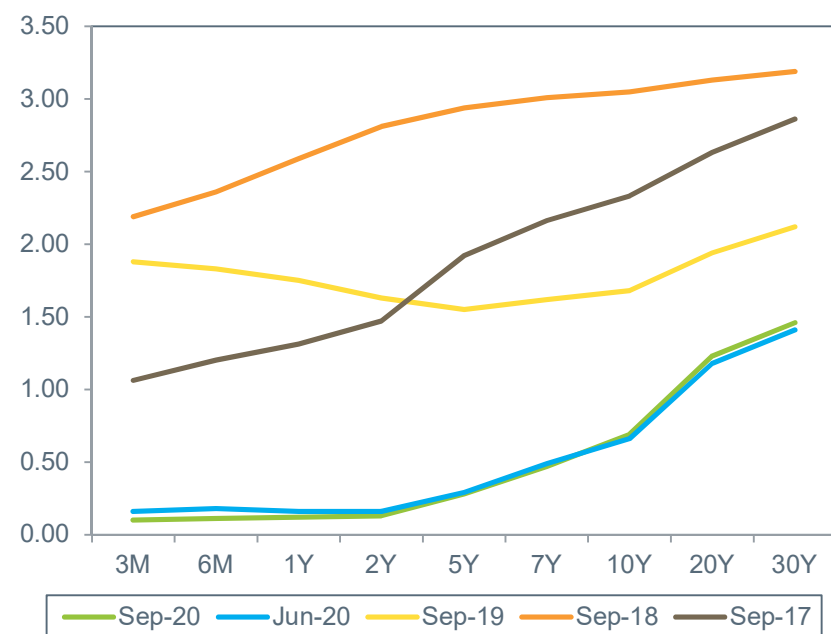
### Key Economic Indicators



| Economic Indicators           | Sep-20   | Jun-20 | Sep-19 | Sep-17 | 20 Yr  |
|-------------------------------|----------|--------|--------|--------|--------|
| Federal Funds Rate (%)        | 0.09 ▲   | 0.08   | 1.90   | 1.06   | 1.57   |
| Breakeven Infl. - 5 Yr (%)    | 1.49 ▲   | 1.17   | 1.35   | 1.78   | 1.82   |
| Breakeven Infl. - 10 Yr (%)   | 1.63 ▲   | 1.34   | 1.52   | 1.85   | 2.01   |
| CPI YoY (Headline) (%)        | 1.4 ▲    | 0.6    | 1.7    | 2.2    | 2.1    |
| Unemployment Rate (%)         | 7.9 ▼    | 11.1   | 3.5    | 4.2    | 6.0    |
| Real GDP YoY (%)              | -2.9 ▲   | -9.0   | 2.1    | 2.4    | 1.8    |
| PMI - Manufacturing           | 55.4 ▲   | 52.6   | 48.2   | 59.9   | 52.5   |
| USD Total Wtd Idx             | 117.35 ▼ | 120.86 | 117.99 | 110.08 | 103.23 |
| WTI Crude Oil per Barrel (\$) | 40.2 ▲   | 39.3   | 54.1   | 51.7   | 62.2   |
| Gold Spot per Oz (\$)         | 1,886 ▲  | 1,781  | 1,472  | 1,280  | 989    |

| Market Performance (%)    | QTD   | CYTD   | 1 Yr   | 5 Yr  | 10 Yr |
|---------------------------|-------|--------|--------|-------|-------|
| S&P 500 (Cap Wtd)         | 8.93  | 5.57   | 15.15  | 14.15 | 13.74 |
| Russell 2000              | 4.93  | -8.69  | 0.39   | 8.00  | 9.85  |
| MSCI EAFE (Net)           | 4.80  | -7.09  | 0.49   | 5.26  | 4.62  |
| MSCI EAFE SC (Net)        | 10.25 | -4.20  | 6.84   | 7.37  | 7.33  |
| MSCI Emg Mkts (Net)       | 9.56  | -1.16  | 10.54  | 8.97  | 2.51  |
| Bloomberg US Agg Bond     | 0.62  | 6.79   | 6.98   | 4.18  | 3.64  |
| ICE BofAML 3 Mo US T-Bill | 0.04  | 0.64   | 1.10   | 1.20  | 0.64  |
| NCREIF ODCE (Gross)       | 0.48  | -0.11  | 1.39   | 6.64  | 10.27 |
| FTSE NAREIT Eq REIT (TR)  | 1.44  | -17.54 | -18.16 | 3.95  | 7.90  |
| HFRI FOF Comp             | 4.26  | 2.56   | 5.72   | 3.09  | 2.89  |
| Bloomberg Cmdty (TR)      | 9.07  | -12.08 | -8.20  | -3.09 | -6.03 |

### Treasury Yield Curve (%)





## Third Quarter Review

## Broad Market

In Q3, US markets continued their climb from the Q1 selloff, bolstered by substantial pent-up demand being released with re-openings across the country and continued accommodative monetary policy. Domestic equities continued their strong performance from Q2, albeit to a lesser extent, with the S&P 500 hitting an all-time high in early September before a slight drawback to finish the quarter. The S&P 500 ended Q3 up 8.9%, with positive YTD returns of 5.57%.

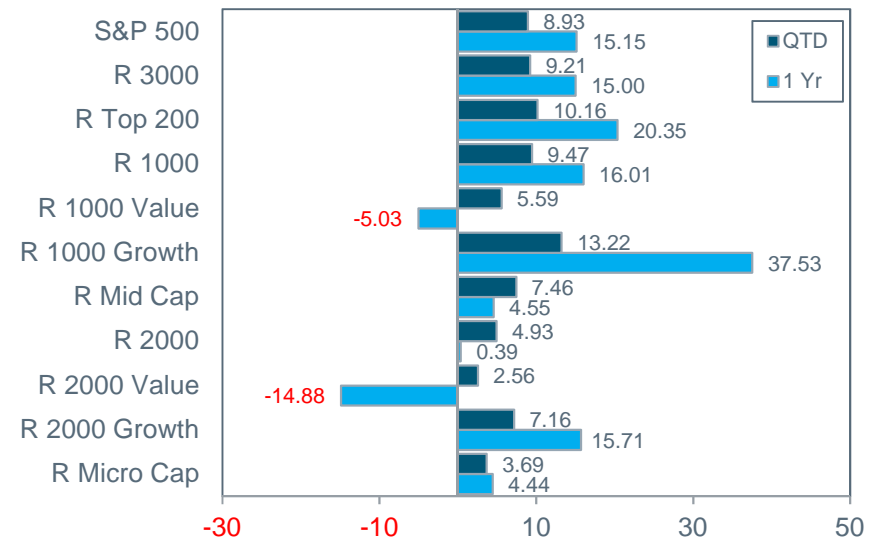
## Market Cap

Additionally, larger cap stocks fared best in Q3, a reversal of what was seen in Q2. The Russell Top 200 finished Q3 ahead of its smaller-cap counterparts, returning 10.2%, while the Russell 2000 and Mid Cap indexes returned 4.9% and 7.5%, respectively.

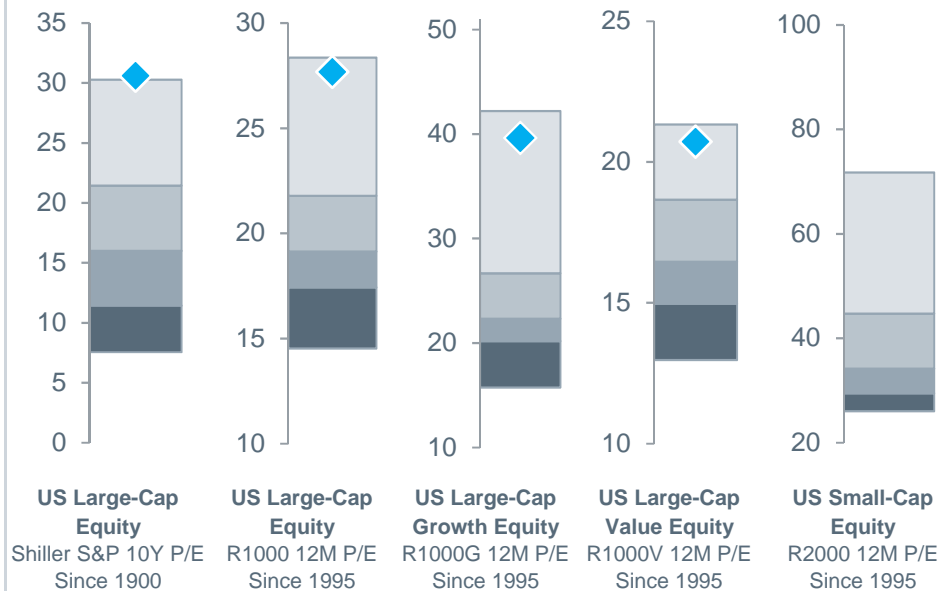
## Style and Sector

Growth led value across all market caps by a significant margin once again during Q3. Active management largely struggled once again in Q3.

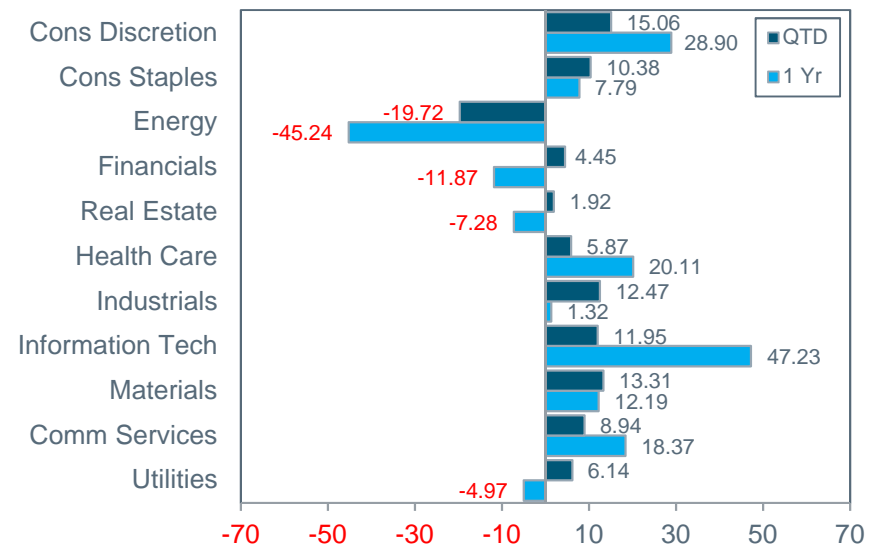
## Style and Capitalization Market Performance (%)



## Valuations



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



## Third Quarter Review

## Developed Markets

Developed international markets had a strong quarter, but remain in negative territory for the year. Growth stocks outperformed value while small outpaced large. The majority of developed market countries had positive returns for the quarter. Active management fared well, with developed equity focused managers beating the benchmark in the large and small cap universes.

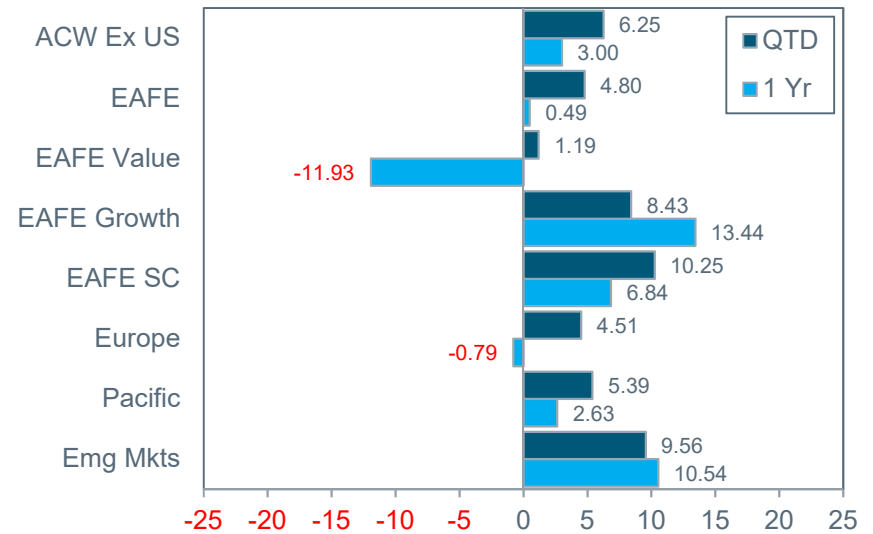
## Emerging Markets

Emerging markets outpaced developed markets during Q3. Similar to other regions, value stocks underperformed growth. However, small cap stocks did outperform large within emerging markets. By region, Asia and the Middle East saw double digits returns while Latin America and Eastern Europe delivered negative returns.

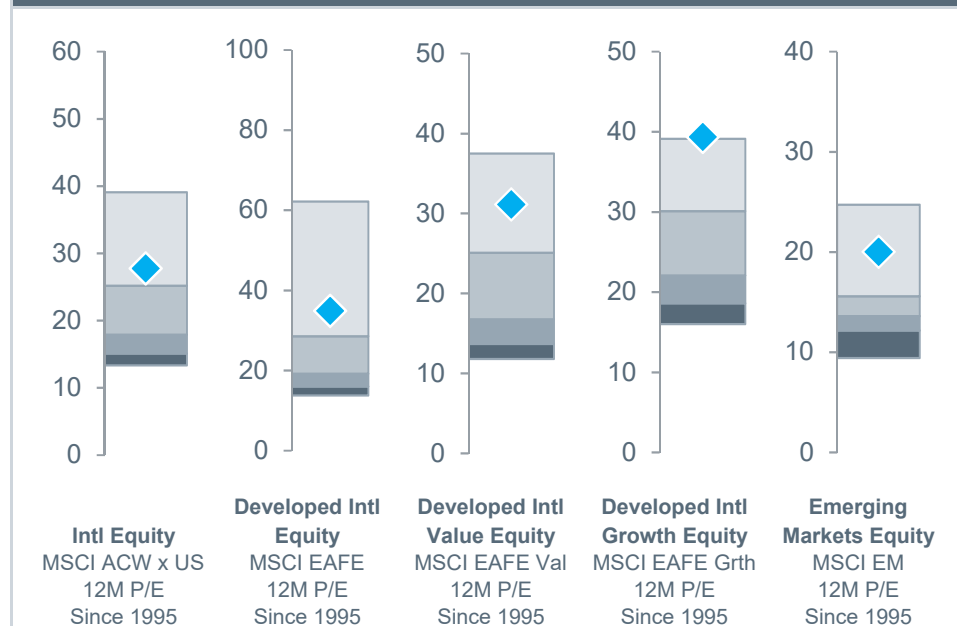
## Market Cap &amp; Style

In both developed international markets and emerging markets, value stocks continued to underperform growth, while small-cap stocks outperformed large-cap for the quarter.

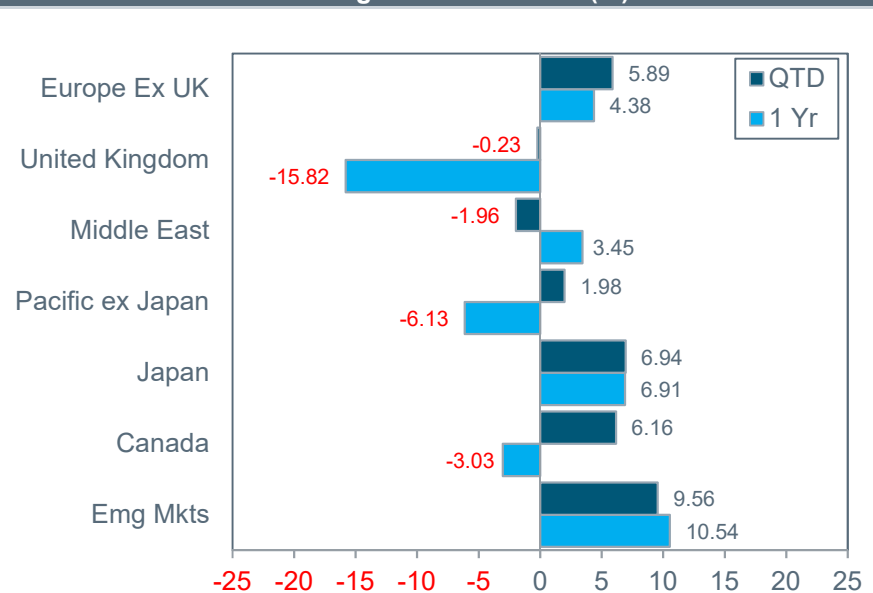
## MSCI Style and Capitalization Market Performance (%)



## 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.

## Third Quarter Review

## Broad Market

The Bloomberg US Aggregate Index returned a modest 0.6% in Q3, ending the quarter with a yield of just 1.2% as Treasury yields remained at historic lows. Although yields initially declined across the Treasury curve, longer-maturity yields rose again in August amid a record issuance of Treasury debt and the Fed's new policy announcement to shift to average inflation targeting resulting in a modest steepening of the curve.

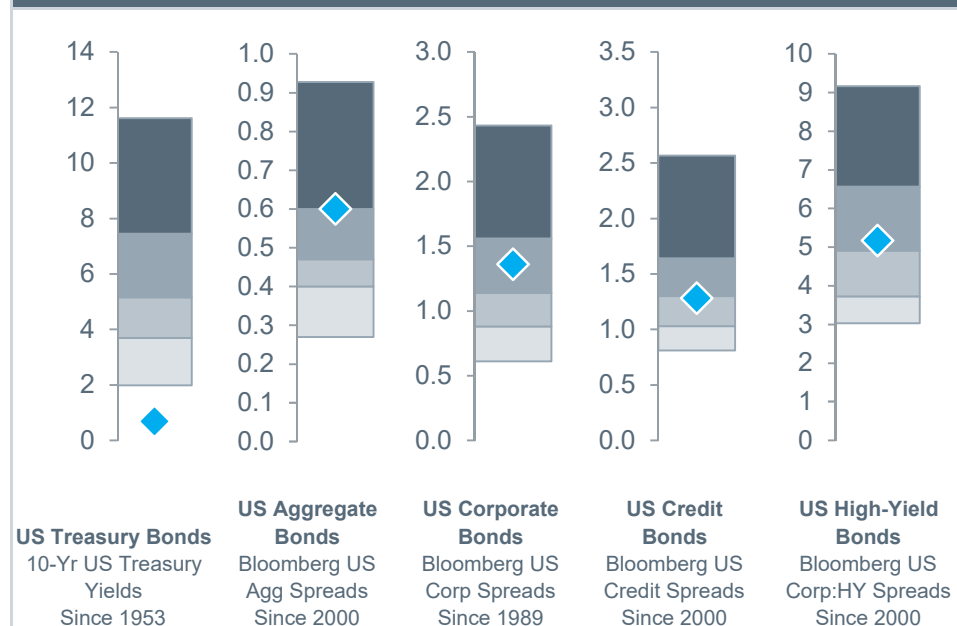
## Credit Market

Credit markets extended their rally as the hunt for yield continued, and the Bloomberg US Corporate Investment Grade Index returned 1.5% in Q3 despite record-setting issuance.

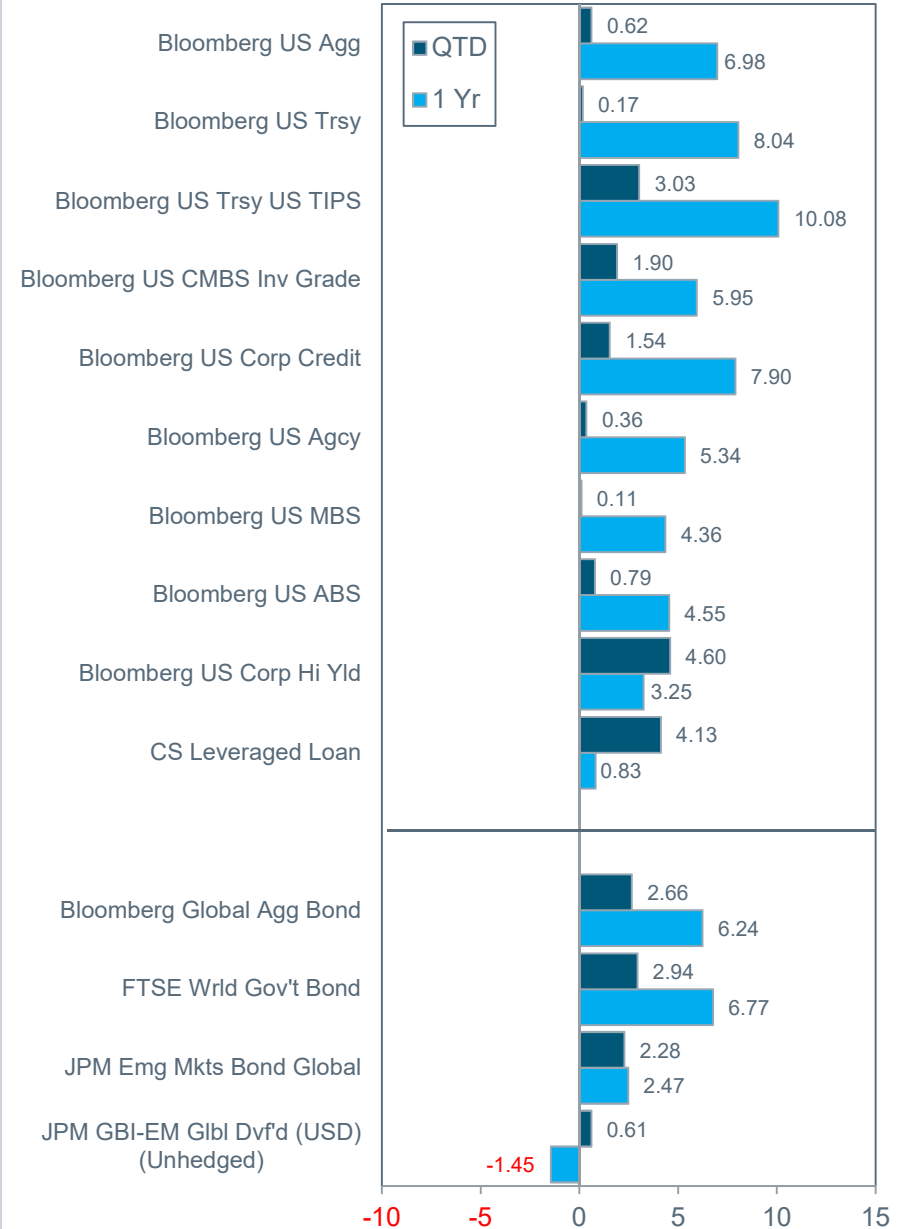
## Emerging Market Debt

Emerging market debt also extended its rally, as the JPMorgan EMBI Global Diversified Index returned 2.3% in Q3 despite momentum slowing later in the quarter as uncertainty around the global economic recovery increased.

## 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.

### Third Quarter Review - Absolute Return

#### General Market - Hedge Funds

Broad hedge fund benchmarks indicated that the industry protected capital relatively well during the heightened equity market volatility in September. The HFRI Fund Weighted Composite Index added to Q2 gains with a return of 4.1% in Q3, bringing the index return into positive territory YTD at 0.5%. Positive performance for the HFRI Hedged Equity and HFRI Event Driven indices helped contribute to the overall index returns.

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

GTAA strategies RVK follows closely generated positive returns in Q3 ranging from low to high single digits. As with past quarters, long-biased strategies reported mixed performance versus a static and less diversified blend of 60% US equity and 40% US fixed income. The value bias exhibited by some managers in emerging markets has caused them to lag peers. Strategies that have kept risk at relatively higher levels and favored US or other developed markets had a strong quarter with returns ranging from mid to high single digits.

### Third Quarter Review - Real Assets

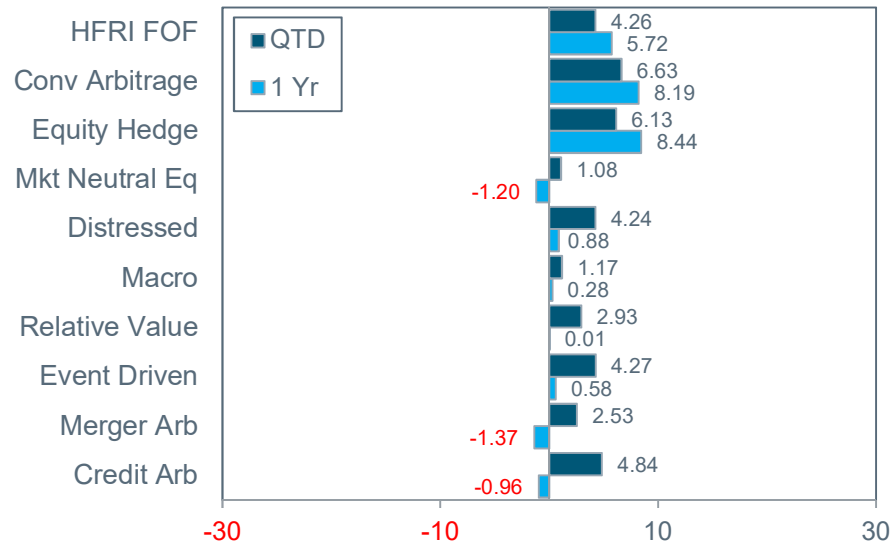
#### General Market - Diversified Inflation Strategies (DIS)

Performance for DIS managers that RVK follows closely largely saw positive absolute performance during Q3, with many strategies posting returns in the low single digits. Commodities and TIPS indices generally fared better than REITs, listed infrastructure, and global natural resource equities. Divergence across managers within the space was relatively limited when compared to the wide spread in results for the YTD period.

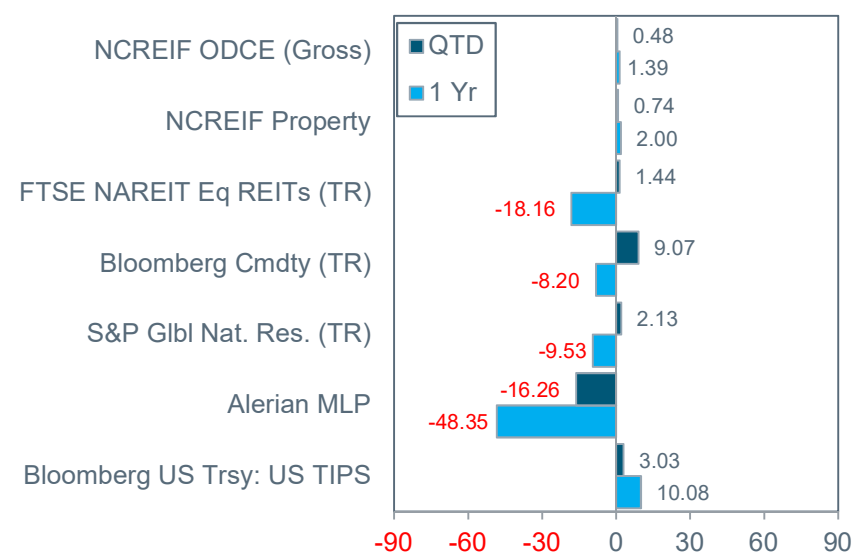
#### General Market - Real Estate

Core private real estate returned 0.5% during the third quarter, as reported by the NFI-ODCE Index, with the total return comprised of a positive contribution of 1.0% from income and a negative contribution of 0.5% from price appreciation. While the income component remained relatively healthy, price appreciation experienced a further decrease, albeit to a lesser degree relative to the prior quarter. Investors in publicly traded real estate outperformed their private market counterparts.

### HFRI Hedge Fund Performance (%)



### Real Asset Performance (%)



## Annual Asset Class Performance

As of September 30, 2020

| Calendar Year Performance |       |        |       |       |       |        |       |       |        |       |                          | Annualized Statistics (01/2006 - 09/2020)         |        |                       |                 |
|---------------------------|-------|--------|-------|-------|-------|--------|-------|-------|--------|-------|--------------------------|---|--------|-----------------------|-----------------|
|                           | 2010  | 2011   | 2012  | 2013  | 2014  | 2015   | 2016  | 2017  | 2018   | 2019  | CYTD<br>(As of<br>09/20) |   | Return | Standard<br>Deviation | Sharpe<br>Ratio |
| Best<br>↑<br>↓<br>Worst   | 35.17 | 15.99  | 18.64 | 38.82 | 14.07 | 15.02  | 21.95 | 27.19 | 10.15  | 31.49 | 6.79                     | S&P 500 Index - US Large Cap                      | 9.20   | 16.52                 | 0.54            |
|                           | 26.85 | 14.47  | 16.83 | 32.39 | 13.69 | 5.63   | 21.31 | 21.83 | 8.35   | 25.53 | 5.57                     | Russell 2000 Index - US Small Cap                 | 7.07   | 21.34                 | 0.38            |
|                           | 21.87 | 11.22  | 16.76 | 29.75 | 12.50 | 5.47   | 13.33 | 17.99 | 1.87   | 21.51 | 2.56                     | International Equity Custom Index - International | 3.29   | 19.01                 | 0.20            |
|                           | 16.36 | 7.84   | 16.35 | 21.51 | 11.35 | 1.38   | 11.96 | 15.21 | 0.44   | 17.64 | 0.97                     | Cambridge US PE Index - Private Equity            | 11.30  | 8.85                  | 1.13            |
|                           | 15.68 | 2.11   | 16.00 | 15.29 | 7.66  | 0.55   | 10.16 | 14.65 | 0.01   | 13.89 | 0.64                     | NCREIF ODCE Index - Real Estate                   | 6.44   | 7.22                  | 0.75            |
|                           | 15.06 | 1.52   | 13.46 | 13.94 | 5.97  | 0.18   | 9.94  | 9.11  | -4.02  | 13.47 | -0.11                    | HFRI FOF Comp Index                               | 2.53   | 6.99                  | 0.22            |
|                           | 14.99 | 0.66   | 10.94 | 8.96  | 4.89  | -0.27  | 8.77  | 7.77  | -4.25  | 8.72  | -0.66                    | S&P U.S. Preferred Stock Index                    | 5.13   | 18.55                 | 0.29            |
|                           | 10.17 | -1.16  | 9.66  | 5.29  | 3.37  | -0.69  | 4.50  | 7.62  | -4.38  | 8.64  | -1.61                    | MLP Custom Index                                  | 2.61   | 26.94                 | 0.20            |
|                           | 9.28  | -1.75  | 4.95  | 0.12  | 1.60  | -4.41  | 2.65  | 4.12  | -6.21  | 8.39  | -5.44                    | Bloomberg US Agg Bond Index - Fixed Income        | 4.52   | 3.24                  | 1.00            |
|                           | 6.54  | -4.18  | 4.79  | -0.17 | 0.18  | -5.66  | 1.94  | 3.54  | -11.01 | 7.55  | -5.52                    | S&P LSTA Lvgd Loan Index - Bank Loans             | 4.44   | 10.66                 | 0.34            |
|                           | 5.70  | -5.72  | 4.21  | -2.02 | -3.87 | -14.92 | 0.51  | 0.84  | -11.67 | 5.34  | -8.69                    | EMD Custom Index                                  | 4.60   | 11.65                 | 0.34            |
|                           | 0.73  | -13.71 | 0.26  | -8.98 | -5.72 | -35.07 | 0.38  | -5.58 | -14.20 | 2.47  | -41.05                   | JP Morgan Cash Custom Index - Cash Equiv          | 1.54   | 0.86                  | 1.12            |

The International Equity Custom Index consists of the MSCI EAFE Index (USD) (Gross) through July 2010 and the MSCI ACW Ex US Index (USD) (Net) thereafter.

The MLP Custom Index consists of the S&P MLP Index (TR) through 06/30/2019, the Alerian MLP Index through 12/31/2019, and 50% Alerian MLP Index / 50% Alerian Midstream Energy Index thereafter.

The EMD Custom Index consists of the JPM GBI-EM Gbl Dvf'd Index through 02/29/2020, 70% JPM GBI-EM Gbl Dvf'd Index / 30% JPM CEMBI Brd Dvf'd Index thereafter through 11/30/2020, and 1/3 JPM GBI-EM Gbl Dvf'd Index, 1/3 JPM CEMBI Brd Dvf'd Index, and 1/3 JPM EMBI Gbl Dvf'd Index thereafter.

The JP Morgan Cash Custom Index is calculated monthly using beginning of the month investment weights applied to each corresponding primary benchmark return.

The primary benchmark for JP Morgan Cash is the ICE BofAML 3 Mo US T-Bill Index and for JP Morgan Extd is the JP Morgan Blended Index through 06/30/2019, and the ICE BofAML 3 Mo US T-Bill Index thereafter.

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.



## ASSET CLASS SUMMARY

**US Equity:** The **US Equity** structure employs a core-satellite approach, which gains passive, low-cost beta exposure at its core. The core component of the portfolio utilizes passive management intended to replicate a broad market index. The Small Cap investment managers include both active management as well as passive strategies.

**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, lower leverage and higher occupancy rates, while Non-Core Real Estate investments allow for greater investment flexibility.

**Diversified Hedge Funds:** The **Diversified Hedge Funds** 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. Initial funding was completed in July 2018 for a custom fund of one, consisting of a discretionary multi-strategy FoF portfolio and a non-discretionary portfolio of direct hedge funds managed by the Treasurer's Office. An increase in the use of direct Hedge Funds is anticipated to lower external management expenses and allow for greater control over the program.

**Preferred Stock:** The **Preferred Stock** portfolio consists of a single, specialized preferred stock investment manager. The portfolio invests in a diversified portfolio of preferred securities including exchange-traded and over-the-counter preferreds and contingent convertibles (CoCos). The investment team seeks to take advantage of the various term structures of preferreds in order to optimize the yield and interest rate sensitivity of the portfolio.

**MLPs:** The **MLPs** portfolio consists of two portfolios with a specialized investment manager. The passive strategy is designed to replicate the market index, whereas the active strategy investment objective is to deliver both high yield and stable growth through the disciplined application of its fundamental bottom-up analysis as well as its trading strategies and investments in MLP and energy infrastructure assets.

**Fixed Income:** The **Fixed Income** portfolio 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. Core Fixed Income has disaggregated segments comprised of investment grade corporate, MBS, and government. The Internally Managed Portfolio also provides liquidity and safety of capital. The satellite portfolios serve as dedicated specialists. Bank Loans provide diversification from traditional fixed income investments and the potential for enhanced return. Investments in Emerging Market Debt 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

**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, Pakistan, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey, and United Arab Emirates.*

**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 US 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 US Min Vol Index (USD) (Gross) through 02/27/2020, State Street All Cap account performance on 02/28/2020, and the S&P 500 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.

**All Cap US Equity Custom Index:** The **All Cap US Equity Custom Index** consists of the Russell 3000 Index through 02/29/2020, and the S&P 500 Index thereafter.

**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 large cap and mid cap representation within the same countries that comprise the MSCI ACW Index, excluding the United States.

**MSCI ACW Ex US IM:** The **MSCI ACW (All Country World) Ex US Investable Market Index** consists of large cap, mid cap, and small cap representation within the same countries that comprise the MSCI ACW Index, excluding the United States.

**S&P US Preferred Stock:** The **S&P US Preferred Stock Index** covers the US market of capital stock that pays dividends at a specified rate and has a preference over common stock in the payment of dividends and the liquidation of assets.

**S&P MLP:** The **S&P MLP Index** is a float-adjusted, cap-weighted index of energy MLPs and publicly traded limited liability companies, which have a similar legal structure to MLPs and share the same tax benefits. Constituents must have a minimum float-adjusted market cap of USD 300 million.

**MLP Custom Index:** The **MLP Custom Index** consists of the S&P MLP Index (TR) through 06/30/2019, the Alerian MLP Index through 12/31/2019, and 50% Alerian MLP Index / 50% Alerian Midstream Energy Index thereafter.

**Alerian MLP Index:** The **Alerian MLP Index** is an index of energy infrastructure Master Limited Partnerships (MLPs). It is a capped, float-adjusted, capitalization-weighted index, whose constituents represent approximately 85% of the total float-adjusted market capitalization.

**Alerian Midstream Energy Index:** The **Alerian Midstream Energy Index** is an index of energy infrastructure Master Limited Partnerships (MLPs), whose constituents earn the majority of their cash flow from midstream activities involving energy commodities.

**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 38 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.

**HFRI FOF Comp Index:** The **HFRI FOF (Fund of Funds) Comp Index** average is created by Hedge Fund Research, Inc. and contains over 800 funds of hedge funds that are each invested in multiple investment strategies.

**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.

**Bloomberg US Agg Int Index:** The **Bloomberg US Aggregate Intermediate Index** covers the subsection of the Bloomberg US Aggregate Bond Index with remaining maturities between one and ten years.

**PIMCO Custom Index:** The **PIMCO Custom Index** consists of the Bloomberg US Agg Bond Index through February 2018, the Bloomberg US Agg Int Index through June 2019, the Bloomberg US Agg Bond Index through 03/26/2020, account performance from 03/27/2020 through 04/03/2020, and the Bloomberg US Agg Bond Index thereafter.

**Payden & Rygel Custom Index:** The **Payden & Rygel Custom Index** consists of the Bloomberg US Corp Inv Grade Index through 03/25/2020, account performance from 03/26/2020 through 03/31/2020, and Bloomberg US Corp Inv Grade Index thereafter.

**Internal Intermediate Govt Fixed Income Portfolio Index:** The **Internal Intermediate Govt Fixed Income Portfolio Index** currently consists of the Bloomberg US Treasury Index. November 2019 performance consists of the Internal Intermediate Govt Fixed Income Portfolio. Prior to November 2019, the index consists of Bloomberg US Gov't Int Term Bond Index. Prior to December 2009, the index consisted of the Bloomberg US Gov't Crdt Bond Index.

**S&P/LSTA Leveraged Loan:** The **S&P/LSTA Leveraged Loan Index** reflects the market-weighted performance of institutional leveraged loans in the US loan market.

**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.

**EMD Custom Index:** The **EMD Custom Index** consists of the JPM GBI-EM Gbl Dvf'd Index through 02/29/2020 and 70% JPM GBI-EM Gbl Dvf'd Index / 30% JPM CEMBI Brd Dvf'd Index thereafter.

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

**JP Morgan CEMBI Broad Diversified Index:** The **JP Morgan CEMBI Broad Diversified Index** is an index that is comprised of the corporate segment of emerging markets debt.

**Bloomberg US Govt/Credit: Long Trm Bond:** The **Bloomberg US Gov't/Credit Long Term Bond Index** covers the non-securitized component of the US Aggregate Index, with maturities of 10 years or more. It includes investment grade, US dollar-denominated, fixed-rate Treasuries, government-related and corporate securities.

**Bloomberg US Govt: Long Trm Bond:** The **Bloomberg US Gov't Long Term Bond Index** covers public US government obligations with remaining maturities of ten years or more.

**Bloomberg US Credit: Long Trm Bond:** The **Bloomberg US Credit Long Term Bond Index** covers public US investment grade corporate bonds with remaining maturities of ten years or more.

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

**Bloomberg US Corp Int Trm Bond:** The **Bloomberg US Corporate Intermediate Term Bond Index** covers US investment grade corporate bonds with remaining maturities between one and ten years.

**Bloomberg US Gov't/Credit 1-3 Yr Bond Index:** The **Bloomberg US Gov't/Credit 1-3 Year Bond Index** covers all medium and larger issues of U.S. government, investment-grade corporate, and investment-grade international dollar-denominated bonds that have maturities of between one and three years and are publicly issued.

**Bloomberg US Gov't 1-3 Yr Bond Index:** The **Bloomberg US Gov't 1-3 Year Bond Index** covers public US government obligations with remaining maturities between one and three years.

**Bloomberg US Credit 1-3 Yr Bond Index:** The **Bloomberg US Credit 1-3 Year Bond Index** covers public investment-grade corporate, and investment-grade international dollar-denominated bonds that have maturities of between one and three years.

**Bloomberg US MBS Index:** The **Bloomberg US MBS Index** covers the public U.S. mortgage backed securities market.

**Bloomberg US Corp Inv Grade Index:** The **Bloomberg US Corp Inv Grade Index** covers the public U.S. investment grade corporate bond market.

**Low Duration Fixed Income Custom Index:** The **Low Duration Fixed Income Custom Index** consists of the Bloomberg US Gov't Crdt 1-3 Yr Bond Index through 06/30/2019 and the Bloomberg US Gov't 1-3 Yr Bond Index thereafter.

**Opportunistic Investments Index:** The **Opportunistic Investments Index** is the weighted average of the permanent funds' target allocation indices, excluding the opportunistic allocation.

**JP Morgan Cash Custom Index:** The **JP Morgan Cash Custom Index** is calculated monthly using beginning of the month investment weights applied to each corresponding primary benchmark return. The primary benchmark for JP Morgan Cash is the ICE BofAML 3 Mo US T-Bill Index and for JP Morgan Ext'd is the JP Morgan Blended Index through 06/30/2019, and the ICE BofAML 3 Mo US T-Bill Index thereafter.

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



# Total Fund



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

As of September 30, 2020

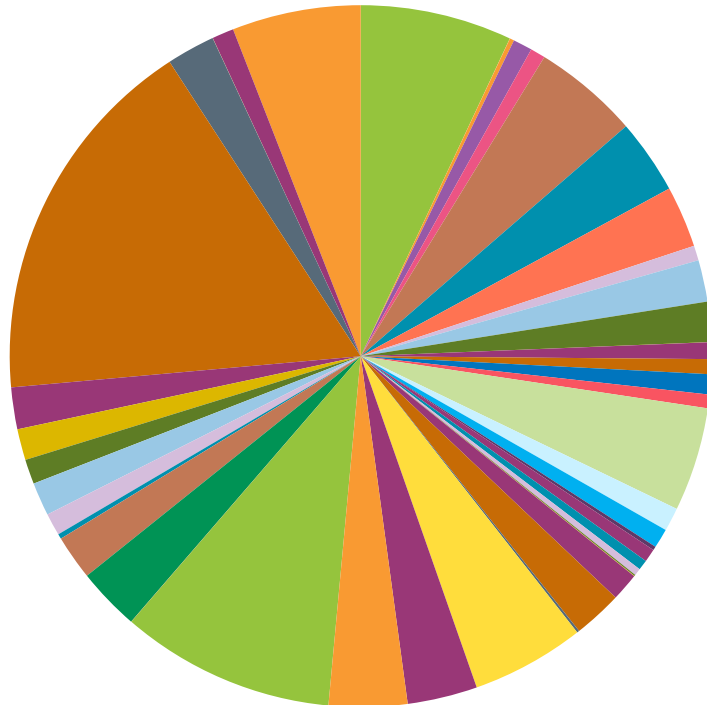
| Asset Allocation & Performance       |                       |               |                 |
|--------------------------------------|-----------------------|---------------|-----------------|
|                                      | Allocation            |               | Performance (%) |
|                                      | Market Value (\$)     | %             | FYTD            |
| <b>Total Fund</b>                    | <b>22,356,701,920</b> | <b>100.00</b> | <b>1.90</b>     |
| <b>All Cap US Equity Composite</b>   | <b>1,561,109,392</b>  | <b>6.98</b>   | <b>8.92</b>     |
| State Street All Cap                 | 1,561,109,392         | 6.98          | 8.92            |
| UW Portfolio Mgmt Program            | 1,500,094             | 0.01          | 8.26            |
| <b>Small Cap US Equity Composite</b> | <b>396,592,191</b>    | <b>1.77</b>   | <b>2.76</b>     |
| State Street Russell 2000            | 44,282,290            | 0.20          | 4.94            |
| Van Berkorn                          | 197,114,476           | 0.88          | 0.47            |
| BlackRock Small Cap                  | 154,805,009           | 0.69          | N/A             |
| Internal Small Cap                   | 390,416               | 0.00          | N/A             |
| <b>Int'l Equity Composite</b>        | <b>2,491,911,055</b>  | <b>11.15</b>  | <b>6.97</b>     |
| Northern Trust                       | 1,089,533,156         | 4.87          | 6.19            |
| Arrowstreet                          | 768,653,266           | 3.44          | 7.16            |
| Harding Loevner                      | 633,724,634           | 2.83          | 8.39            |
| <b>Preferred Stock Composite</b>     | <b>153,646,344</b>    | <b>0.69</b>   | <b>5.18</b>     |
| Cohen & Steers Preferred Stock       | 153,646,344           | 0.69          | 5.18            |
| <b>MLPs Composite</b>                | <b>840,479,637</b>    | <b>3.76</b>   | <b>-10.90</b>   |
| Harvest Fund Advisors                | 427,477,337           | 1.91          | -9.73           |
| Harvest Fund Advisors Passive        | 413,002,301           | 1.85          | -12.12          |
| <b>Private Equity Composite</b>      | <b>674,868,736</b>    | <b>3.02</b>   | <b>N/A</b>      |
| Access Venture Partners II           | 1,279,285             | 0.01          | N/A             |
| Cheyenne Equity Capital Fund, L.P.   | 173,351,945           | 0.78          | N/A             |
| Hamilton Lane Nowood Fund, L.P.      | 153,520,042           | 0.69          | N/A             |
| Neuberger Berman Sauger Fund, L.P.   | 205,850,694           | 0.92          | N/A             |
| BlackRock LTFC, L.P.                 | 140,866,770           | 0.63          | N/A             |
| <b>Real Estate Composite</b>         | <b>1,876,137,755</b>  | <b>8.39</b>   | <b>N/A</b>      |
| Clarion Lion                         | 1,071,900,258         | 4.79          | 0.53            |
| UBS Trumbull                         | 241,508,323           | 1.08          | -0.37           |
| MS Prime                             | 200,000,007           | 0.89          | N/A             |
| SC Capital                           | 104,032,062           | 0.47          | N/A             |
| Realterm                             | 72,988,016            | 0.33          | N/A             |
| M&G                                  | 37,462,549            | 0.17          | N/A             |
| Northwood                            | 136,397,605           | 0.61          | N/A             |
| WestRiver                            | 11,848,936            | 0.05          | N/A             |

| Asset Allocation & Performance              |                      |              |                 |
|---|----------------------|--------------|-----------------|
|   | Allocation           |              | Performance (%) |
|   | Market Value (\$)    | %            | FYTD            |
| <b>Diversified Hedge Funds Composite</b>    | <b>793,267,985</b>   | <b>3.55</b>  | <b>3.60</b>     |
| PAAMCO - Jackalope Fund                     | 4,288,099            | 0.02         | N/A             |
| Grosvenor Diversified Hedge Funds           | 287,408,346          | 1.29         | 4.52            |
| Internal Diversified Hedge Funds            | 501,571,540          | 2.24         | 3.11            |
| <b>Core Fixed Income Composite</b>          | <b>4,899,354,941</b> | <b>21.91</b> | <b>1.02</b>     |
| Internal Intermediate Gov't Fixed Income    | 1,166,447,014        | 5.22         | 0.27            |
| Payden & Rygel IGC                          | 719,399,640          | 3.22         | 1.79            |
| JP Morgan MBS                               | 805,651,217          | 3.60         | 0.73            |
| PIMCO                                       | 2,207,857,071        | 9.88         | 1.25            |
| <b>Laddered Treasury Composite</b>          | <b>3,857,828,618</b> | <b>17.26</b> | <b>0.10</b>     |
| Internal Ladder Portfolio                   | 3,857,828,618        | 17.26        | 0.10            |
| <b>Bank Loans Composite</b>                 | <b>1,108,206,829</b> | <b>4.96</b>  | <b>3.62</b>     |
| Credit Suisse                               | 647,609,671          | 2.90         | 3.54            |
| Octagon                                     | 460,597,158          | 2.06         | 3.72            |
| <b>Emerging Market Debt Composite</b>       | <b>826,248,923</b>   | <b>3.70</b>  | <b>1.50</b>     |
| Investec                                    | 228,720,531          | 1.02         | 1.49            |
| Global Evolution                            | 343,146,126          | 1.53         | 0.49            |
| Goldman Sachs                               | 254,382,266          | 1.14         | 2.88            |
| <b>Long Duration Fixed Income Composite</b> | <b>749,926,220</b>   | <b>3.35</b>  | <b>1.01</b>     |
| Internal Long Duration Fixed Income         | 320,041,030          | 1.43         | 0.14            |
| Logan Circle                                | 429,885,190          | 1.92         | 1.63            |
| <b>Low Duration Fixed Income Composite</b>  | <b>498,351,913</b>   | <b>2.23</b>  | <b>0.13</b>     |
| Internal Low Duration Fixed Income          | 498,351,913          | 2.23         | 0.13            |
| <b>Grosvenor Silvery Lupine Fund</b>        | <b>51,241,636</b>    | <b>0.23</b>  | <b>0.15</b>     |
| <b>Grosvenor Opportunistic Class D</b>      | <b>24,823,005</b>    | <b>0.11</b>  | <b>3.33</b>     |
| <b>Cash Equivalents</b>                     | <b>1,326,820,297</b> | <b>5.93</b>  | <b>0.01</b>     |
| Fisher Investments                          | 1,133,898            | 0.01         | N/A             |
| State Street Low Duration                   | 29,700               | 0.00         | N/A             |
| Allianz Global Investors                    | 36,298               | 0.00         | N/A             |
| Neuberger Berman Credit                     | 574,081              | 0.00         | N/A             |
| Cornerstone                                 | 2,354                | 0.00         | N/A             |
| TA Associates Realty                        | 26,118               | 0.00         | N/A             |
| Seix  | 1,520                | 0.00         | N/A             |
| Internal Equity Russell 2000                | 1,095                | 0.00         | N/A             |
| <b>Public Purpose Investments</b>           | <b>224,386,346</b>   | <b>1.00</b>  | <b>N/A</b>      |

| 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>22,455,329,030</b>       | <b>-750,891,778</b> | <b>427,878,322</b> | <b>22,132,315,574</b>    | <b>1.90</b> | <b>101.90</b> |

Allocations may not sum up to 100% exactly due to rounding. Performance shown is net of fees and excludes Public Purpose Investments (PPIs). Market value shown for Public Purpose Investments (PPIs) is as of 09/30/2020. Investment manager fees are accounted for on a quarterly basis. Wyoming State Treasurer's Office fiscal year ends on June 30th.

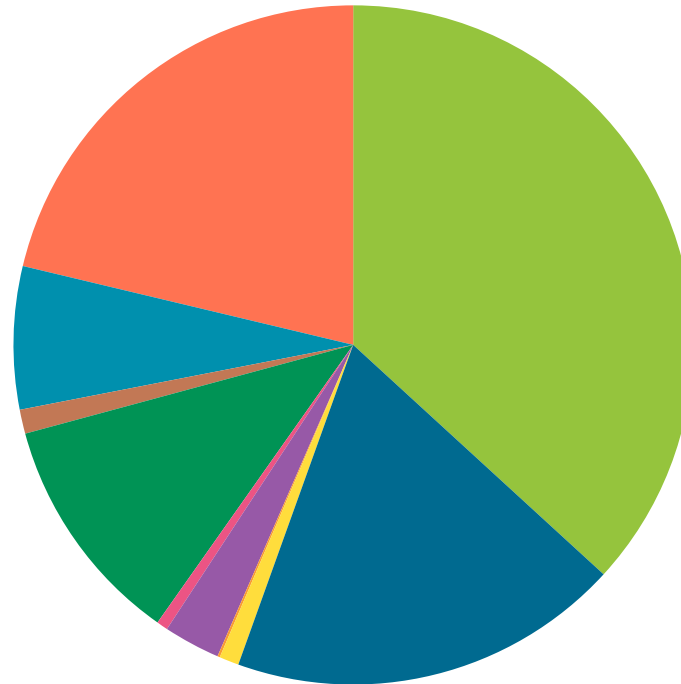
September 30, 2020 : \$22,356,701,920



|   | Market Value<br>(\$) | Allocation<br>(%) |
|---|----------------------|-------------------|
| State Street All Cap  | 1,561,109,392        | 6.98              |
| Internal Domestic Equity  | -                    | 0.00              |
| UW Portfolio Mgmt Program   | 1,500,094            | 0.01              |
| State Street Russell 2000   | 44,282,290           | 0.20              |
| Van Berkorn Small Cap   | 197,114,476          | 0.88              |
| BlackRock Small Cap   | 154,805,009          | 0.69              |
| Internal Small Cap  | 390,416              | 0.00              |
| Northern Trust  | 1,089,533,156        | 4.87              |
| Arrowstreet   | 768,653,266          | 3.44              |
| Harding Loevner   | 633,724,634          | 2.83              |
| Cohen & Steers  | 153,646,344          | 0.69              |
| Harvest   | 427,477,337          | 1.91              |
| Harvest Passive   | 413,002,301          | 1.85              |
| Access Venture Partners II  | 1,279,285            | 0.01              |
| Cheyenne Equity Capital Fund, L.P.  | 173,351,945          | 0.78              |
| Hamilton Lane Nowood Fund, L.P.   | 153,520,042          | 0.69              |
| Neuberger Berman Sauger Fund, L.P.  | 205,850,694          | 0.92              |
| BlackRock LTPC  | 140,866,770          | 0.63              |
| Clarion Lion  | 1,071,900,258        | 4.79              |
| UBS Trumbull  | 241,508,323          | 1.08              |
| MS Prime  | 200,000,007          | 0.89              |
| Cornerstone   | 2,354                | 0.00              |
| M&G   | 37,462,549           | 0.17              |
| Northwood   | 136,397,605          | 0.61              |
| SC Capital  | 104,032,062          | 0.47              |
| Realterm  | 72,988,016           | 0.33              |
| TA Associates Realty  | 26,118               | 0.00              |
| WestRiver   | 11,848,936           | 0.05              |
| PAAMCO - Jackalope Fund   | 4,288,099            | 0.02              |
| Grosvenor Diversified Hedge Funds   | 287,408,346          | 1.29              |
| Internal Diversified Hedge Funds  | 501,571,540          | 2.24              |
| Grosvenor Silvery Lupine Fund Class D   | 24,823,005           | 0.11              |
| Internal Intermediate Govt Fixed Income Portfolio                             | 1,166,447,014        | 5.22              |
| Payden & Rygel  | 719,399,640          | 3.22              |
| JP Morgan MBS   | 805,651,217          | 3.60              |
| PIMCO Core  | 2,207,857,071        | 9.88              |
| Neuberger Berman Credit   | 574,081              | 0.00              |
| Credit Suisse   | 647,609,671          | 2.90              |
| Octagon   | 460,597,158          | 2.06              |
| Grosvenor Silvery Lupine Fund   | 51,241,636           | 0.23              |
| Investec  | 228,720,531          | 1.02              |
| Global Evolution  | 343,146,126          | 1.53              |
| Goldman Sachs   | 254,382,266          | 1.14              |
| Internal Long Duration Fixed Income Portfolio                                 | 320,041,030          | 1.43              |
| Logan Circle  | 429,885,190          | 1.92              |
| Internal Ladder Portfolio   | 3,857,828,618        | 17.26             |
| Internal Low Duration Fixed Income Portfolio                                  | 498,351,913          | 2.23              |
| SS TIPS + SS Low Dur + CS McKee + IER2000 + Allianz + Heitman + Seix + Fisher | 1,202,512            | 0.01              |
| Public Purpose Investments  | 224,386,346          | 1.00              |
| JP Morgan Cash Composite  | 1,325,015,232        | 5.93              |

Allocations shown may not sum up to 100% exactly due to rounding. Heitman, Seix, State Street TIPS, CS McKee, Fisher, Allianz, Internal Equity Russell 2000, and State Street Low Duration are combined because the page shown only allows 50 managers to be included.

September 30, 2020 : \$22,356,701,920

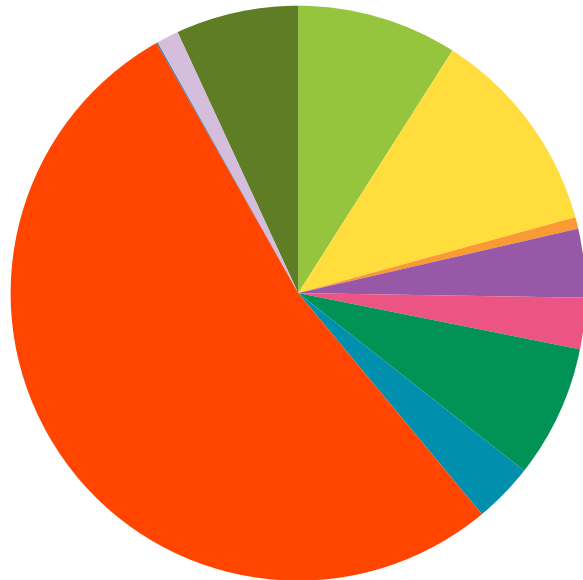


|                                | Market Value<br>(\$) | Allocation<br>(%) |
|--------------------------------|----------------------|-------------------|
| Permanent Mineral Trust        | 8,228,118,237        | 36.80             |
| Common School PLF              | 4,177,316,695        | 18.68             |
| Permanent Land Fund            | 208,629,348          | 0.93              |
| University Permanent Land Fund | 25,272,826           | 0.11              |
| Hathaway Scholarship           | 602,047,494          | 2.69              |
| Higher Education               | 120,770,651          | 0.54              |
| Workers Compensation Fund      | 2,464,685,597        | 11.02             |
| Pool A                         | 255,399,451          | 1.14              |
| LSRA                           | 1,519,159,478        | 6.80              |
| State Agency Pool              | 4,755,302,143        | 21.27             |

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

Asset Allocation by Asset Class - Prior Quarter

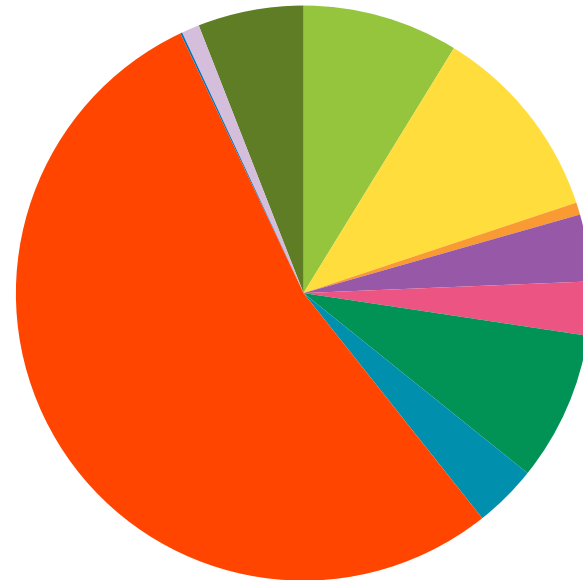
June 30, 2020 : \$22,741,032,950



|                            | Market Value<br>(\$) | Allocation<br>(%) |
|----------------------------|----------------------|-------------------|
| US Equity                  | 2,050,182,117        | 9.02              |
| International Equity       | 2,667,405,694        | 11.73             |
| Preferred Stock            | 148,949,732          | 0.65              |
| MLPs                       | 877,451,208          | 3.86              |
| Private Equity             | 655,220,721          | 2.88              |
| Real Estate                | 1,695,661,881        | 7.46              |
| Diversified Hedge Funds    | 765,719,345          | 3.37              |
| Fixed Income               | 12,013,839,104       | 52.83             |
| Opportunistic Investments  | 15,096,925           | 0.07              |
| Public Purpose Investments | 285,703,920          | 1.26              |
| Cash                       | 1,565,802,302        | 6.89              |

Asset Allocation by Asset Class - Current Quarter

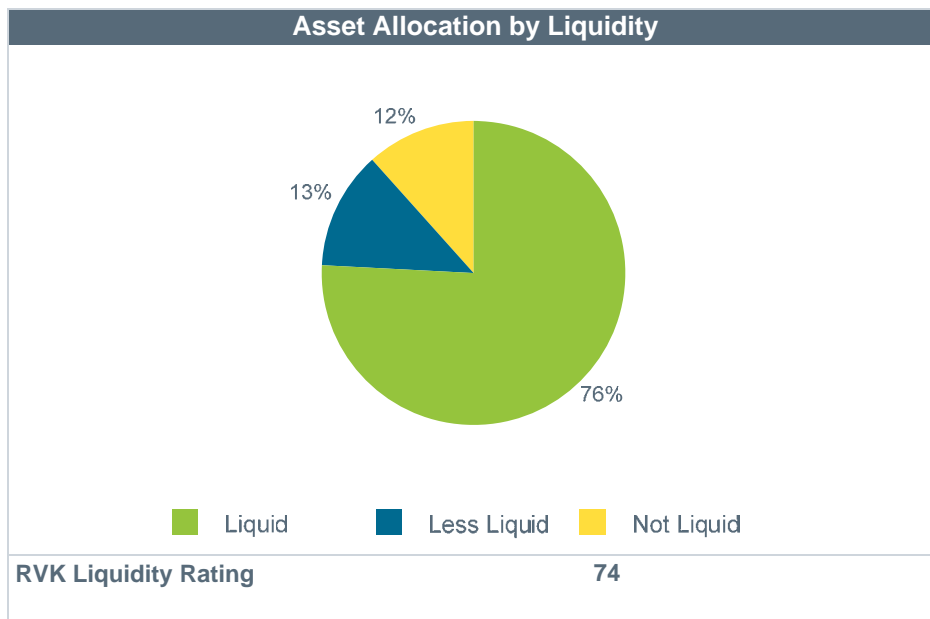
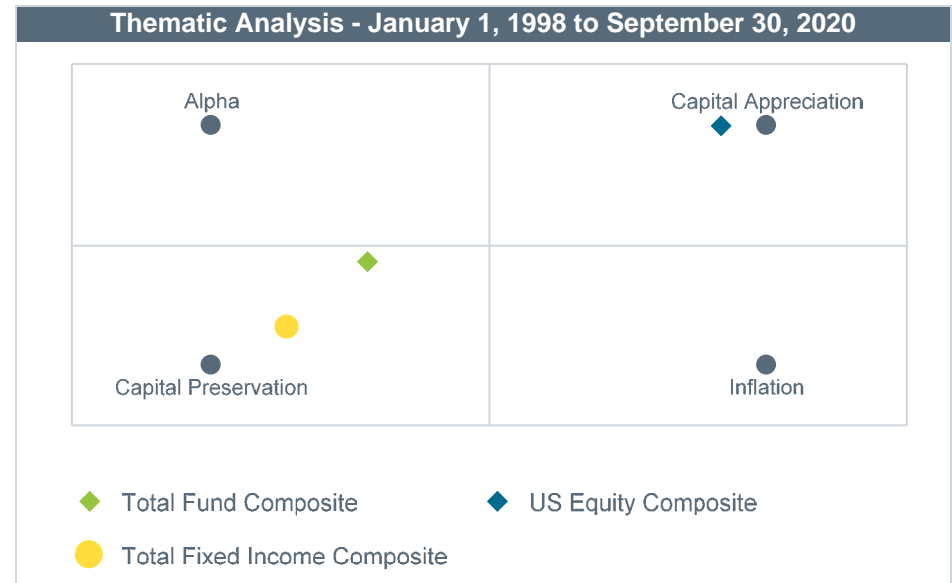
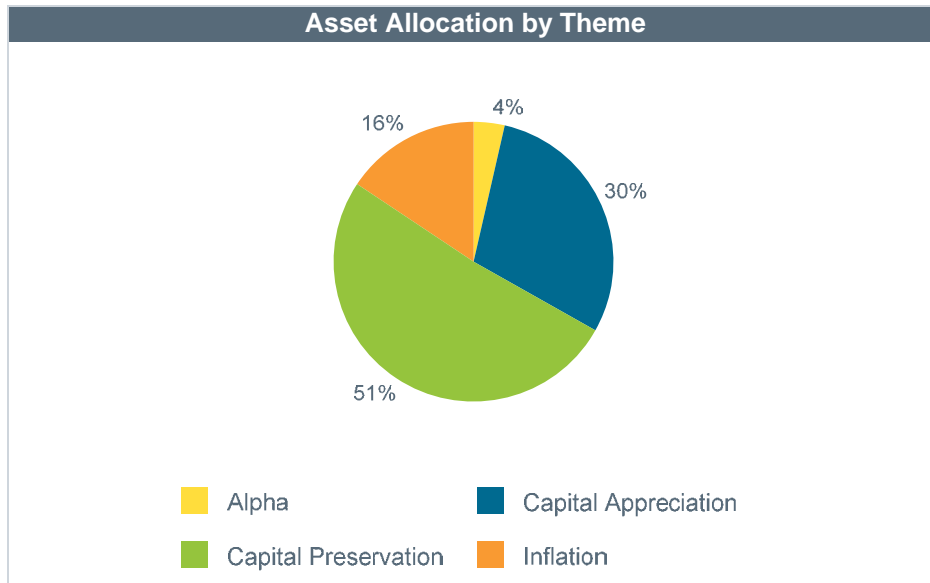
September 30, 2020 : \$22,356,701,920



|                            | Market Value<br>(\$) | Allocation<br>(%) |
|----------------------------|----------------------|-------------------|
| US Equity                  | 1,959,201,677        | 8.76              |
| International Equity       | 2,491,911,055        | 11.15             |
| Preferred Stock            | 153,646,344          | 0.69              |
| MLPs                       | 840,479,637          | 3.76              |
| Private Equity             | 674,868,736          | 3.02              |
| Real Estate                | 1,876,137,755        | 8.39              |
| Diversified Hedge Funds    | 793,267,985          | 3.55              |
| Fixed Income               | 11,991,159,082       | 53.64             |
| Opportunistic Investments  | 24,823,005           | 0.11              |
| Public Purpose Investments | 224,386,346          | 1.00              |
| Cash                       | 1,326,820,297        | 5.93              |

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





### Correlation Matrix - 10 Years

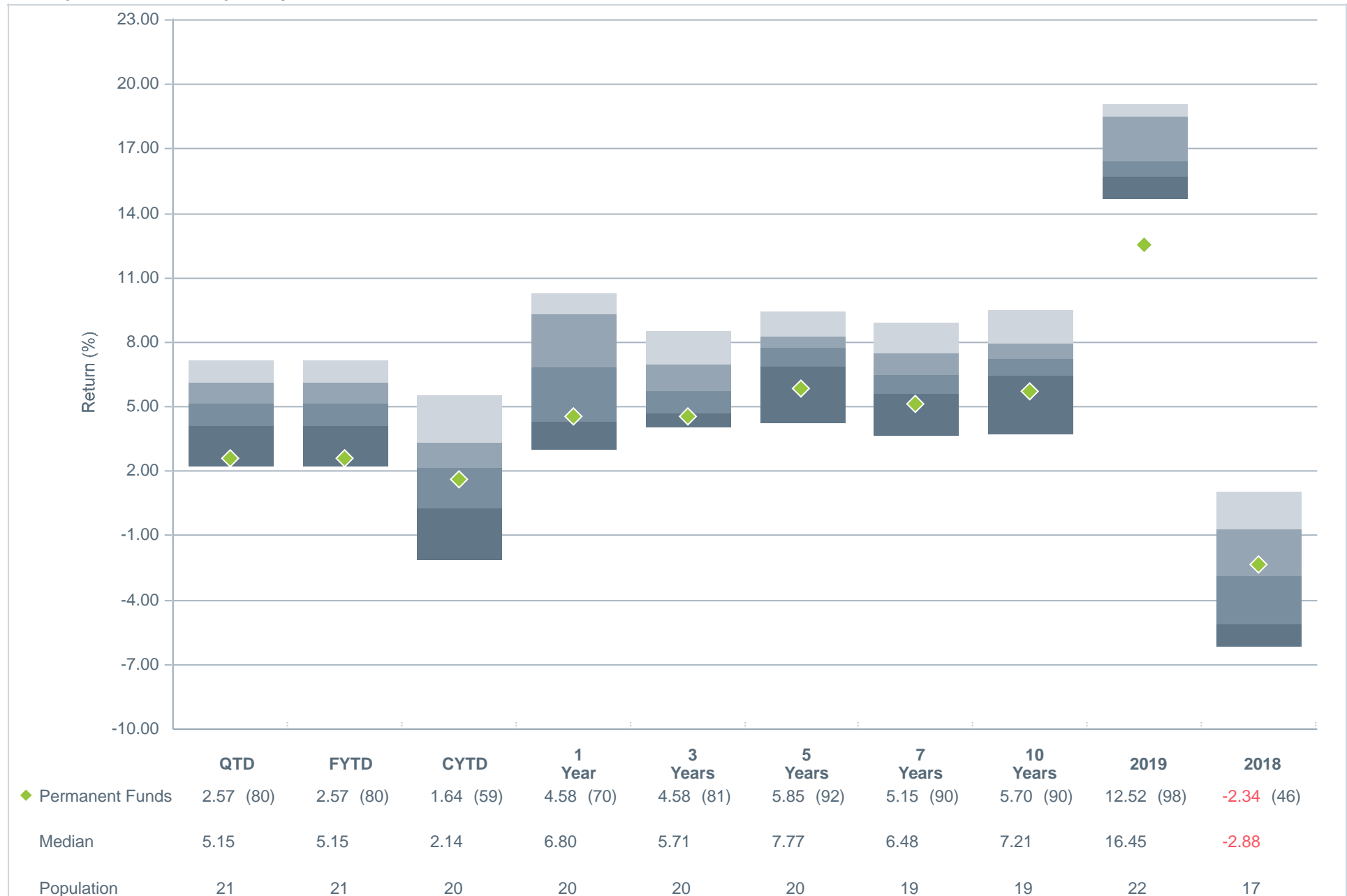
|   | A     | B     | C     | D    |
|---|-------|-------|-------|------|
| A | 1.00  |       |       |      |
| B | 0.71  | 1.00  |       |      |
| C | -0.29 | -0.42 | 1.00  |      |
| D | 0.60  | 0.79  | -0.12 | 1.00 |

A = HFRI EH: Equity Market Neutral 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 Endowment & Foundation > \$1B-Total Fund  
Plan Sponsor Peer Group Analysis

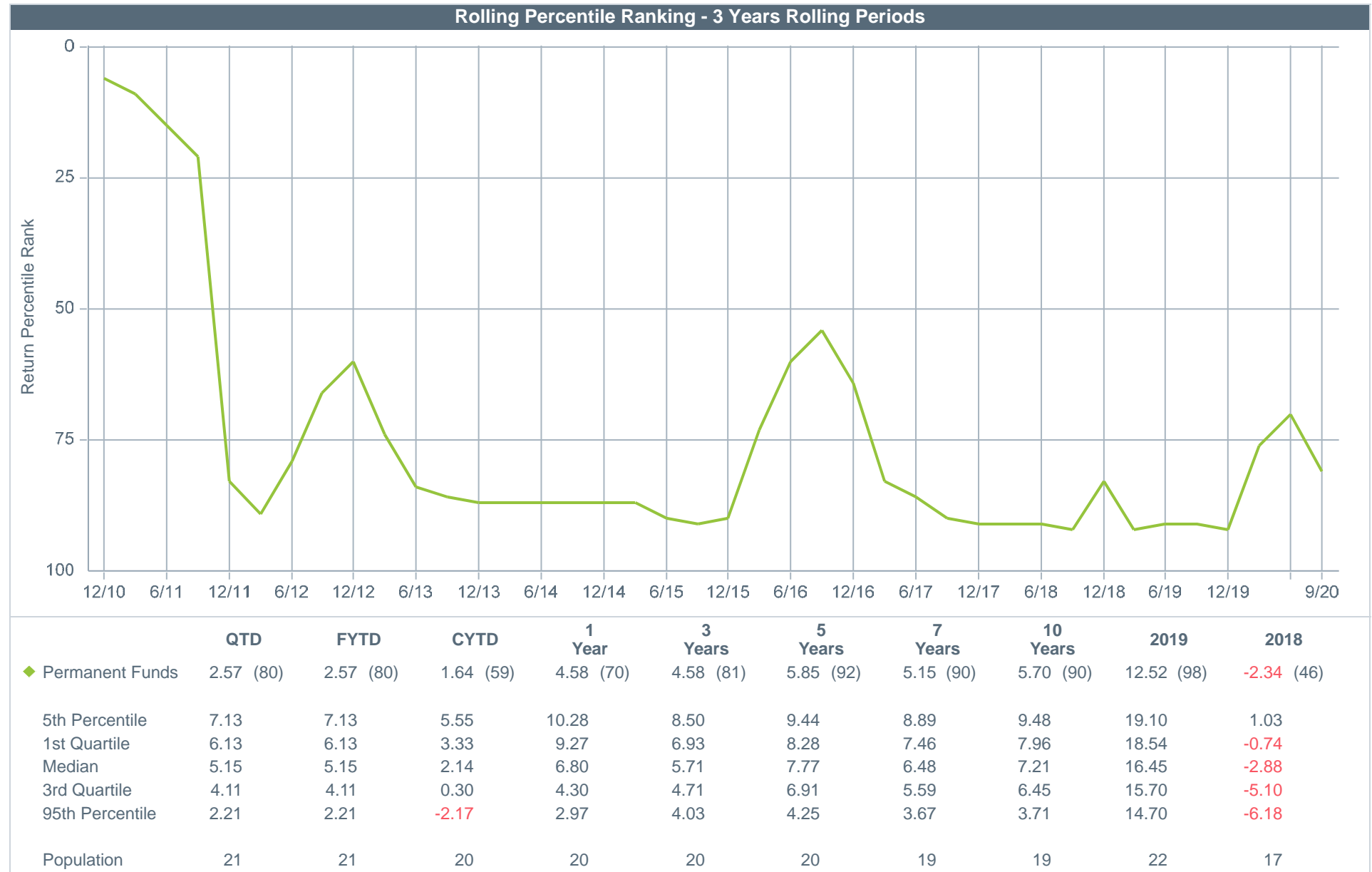
As of September 30, 2020



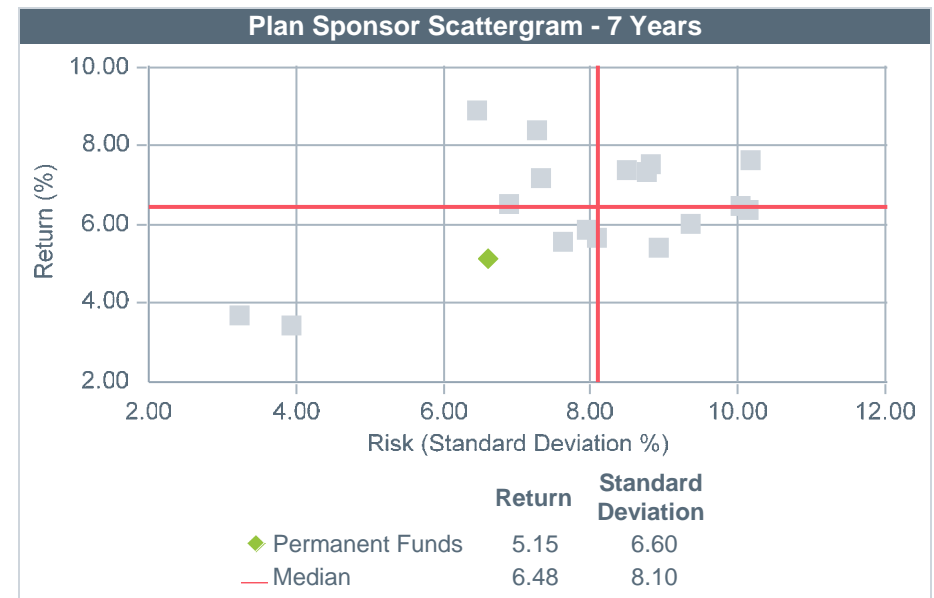
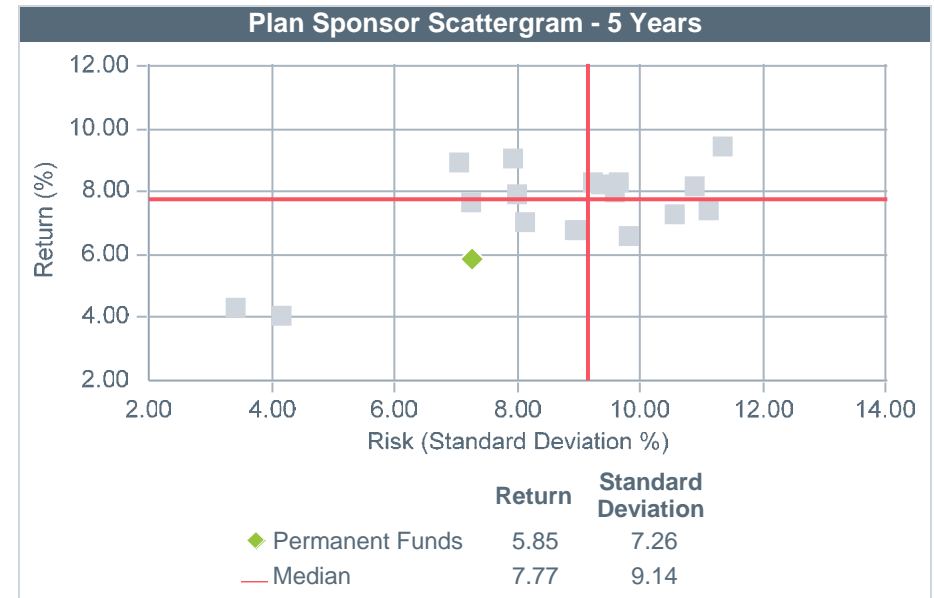
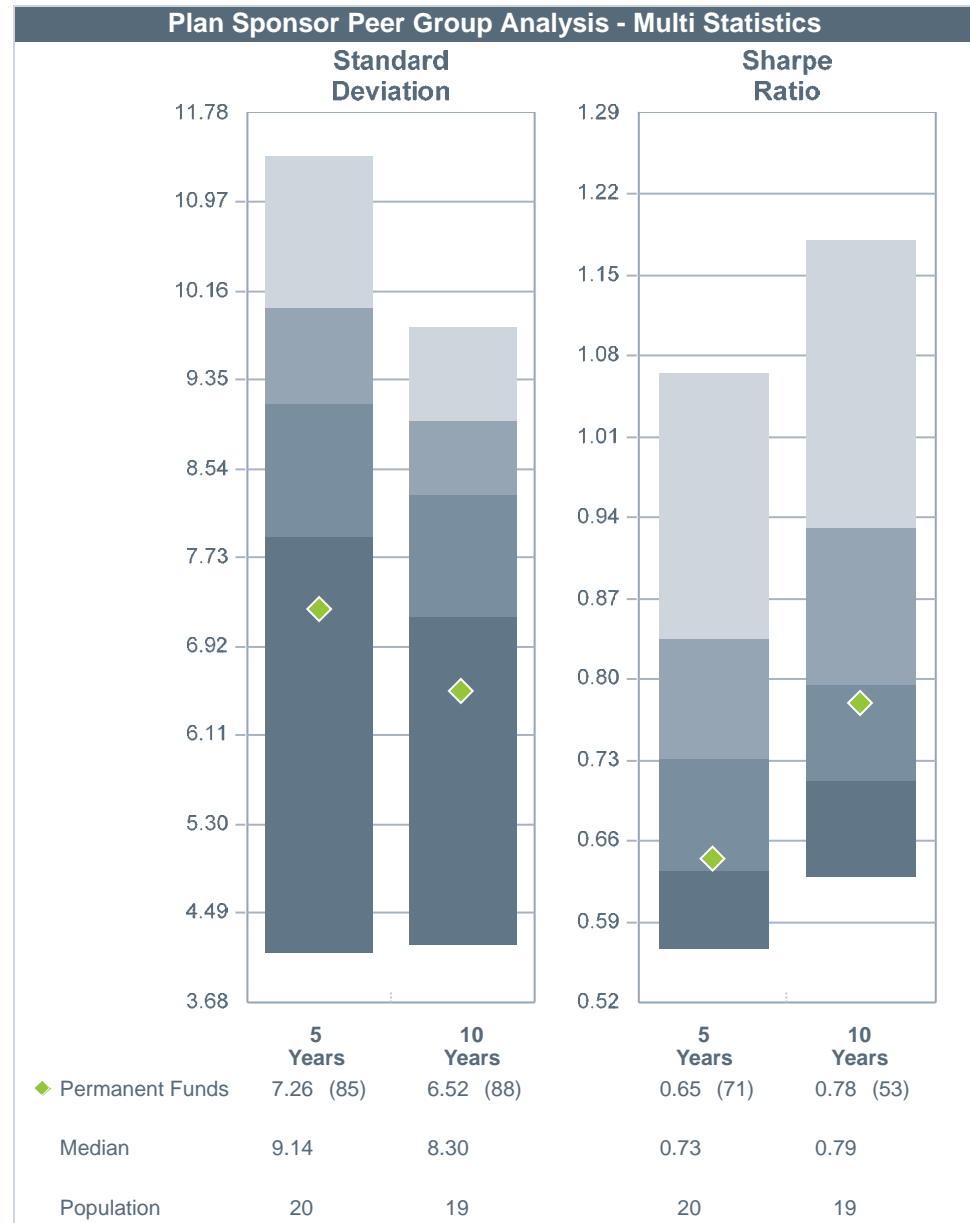
Performance shown is net of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.  
Wyoming State Treasurer's Office fiscal year ends on June 30th.

Wyoming State Treasurer's Office  
All Endowment & Foundation > \$1B-Total Fund  
Rolling Percentile Ranking and Plan Sponsor Peer Group Analysis

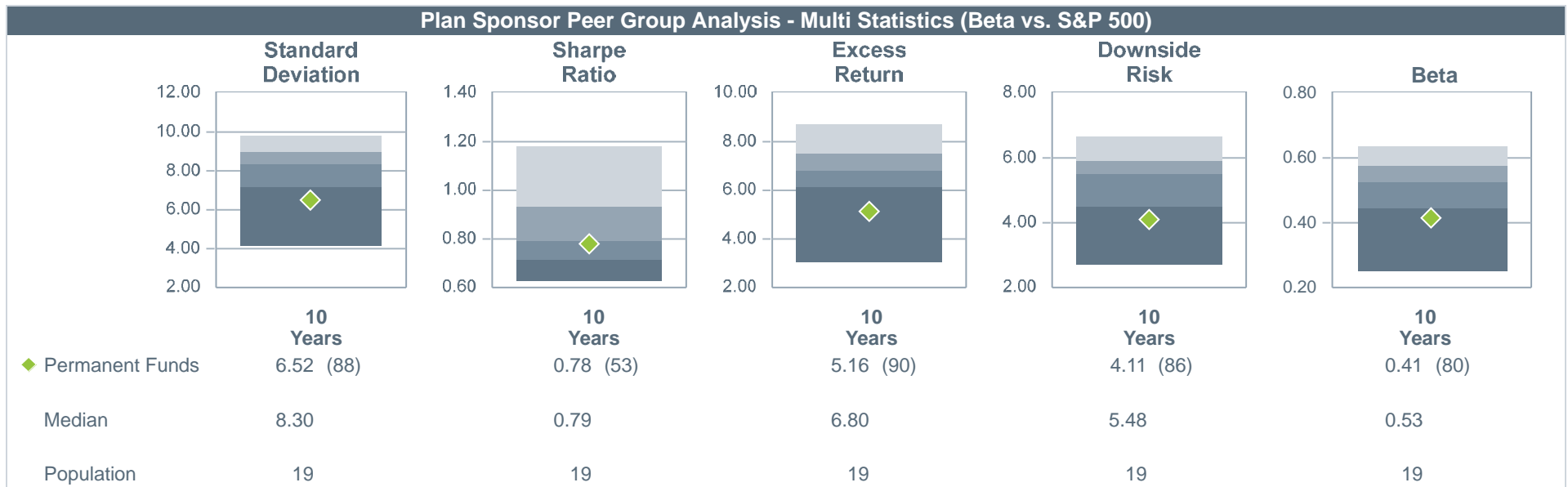
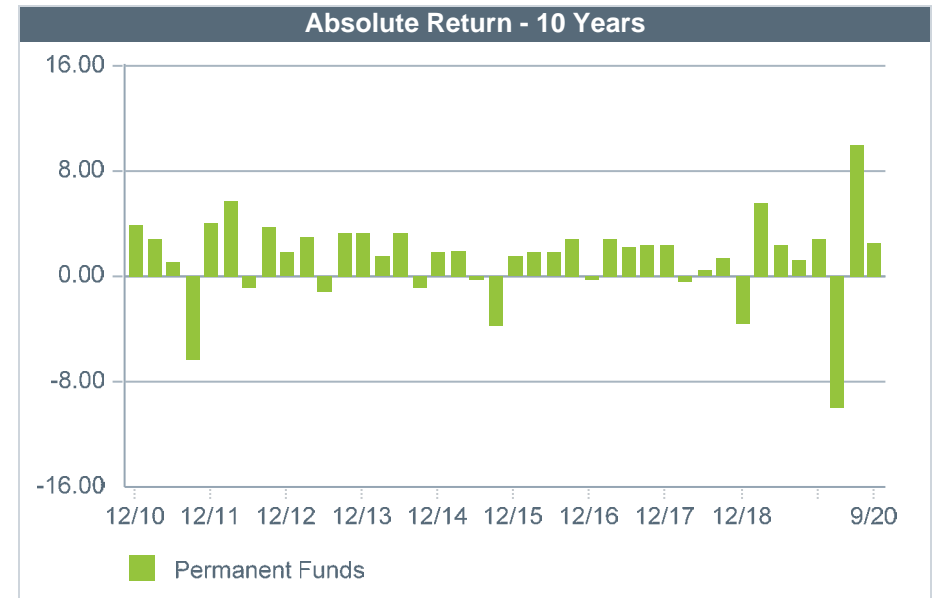
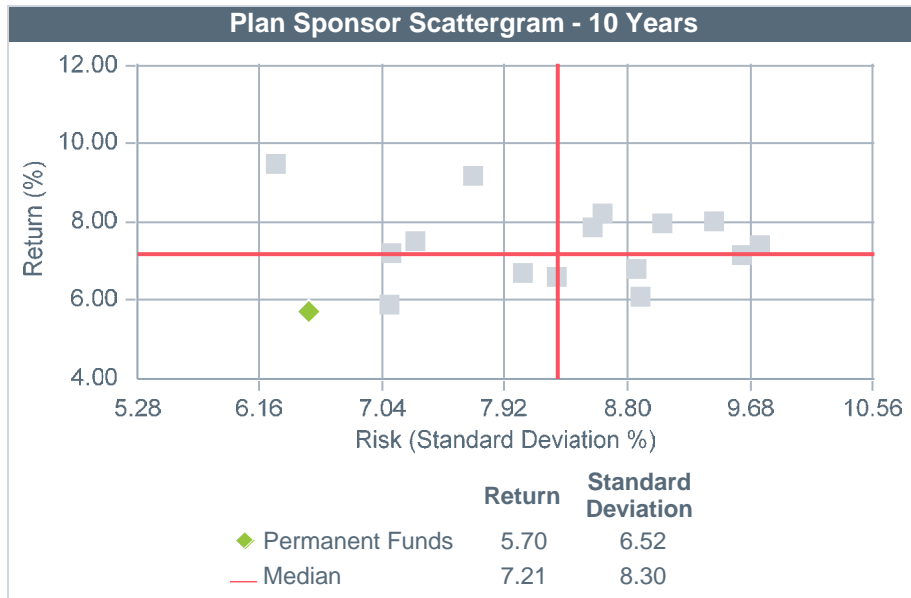
As of September 30, 2020



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



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

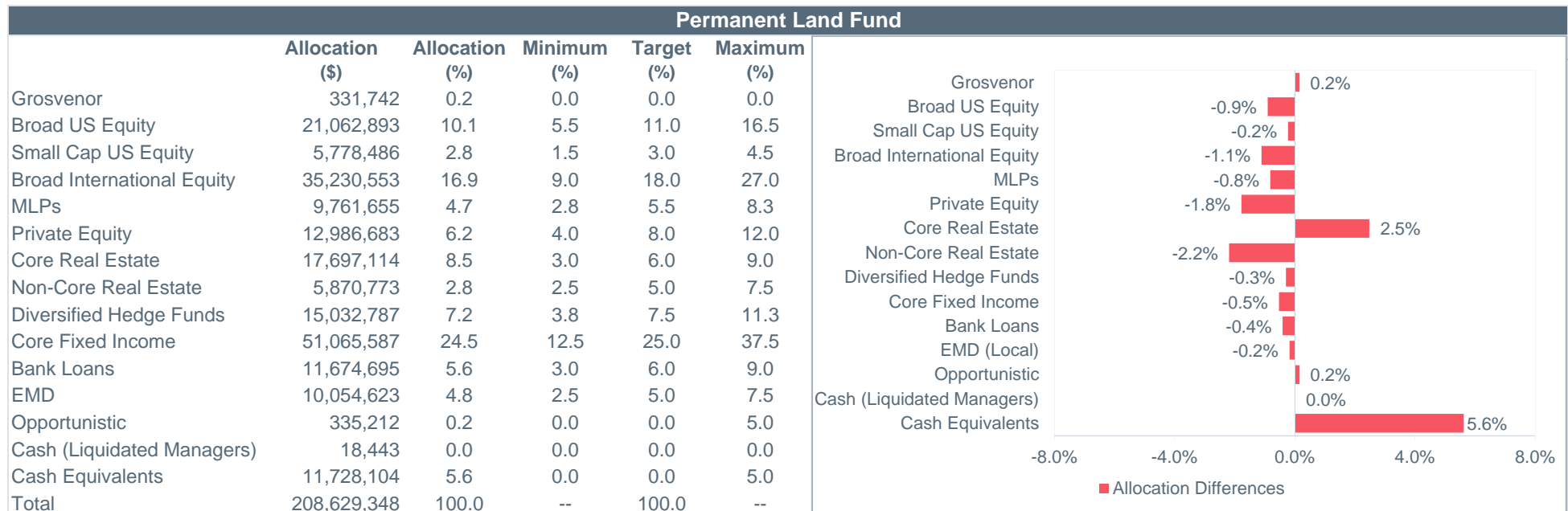
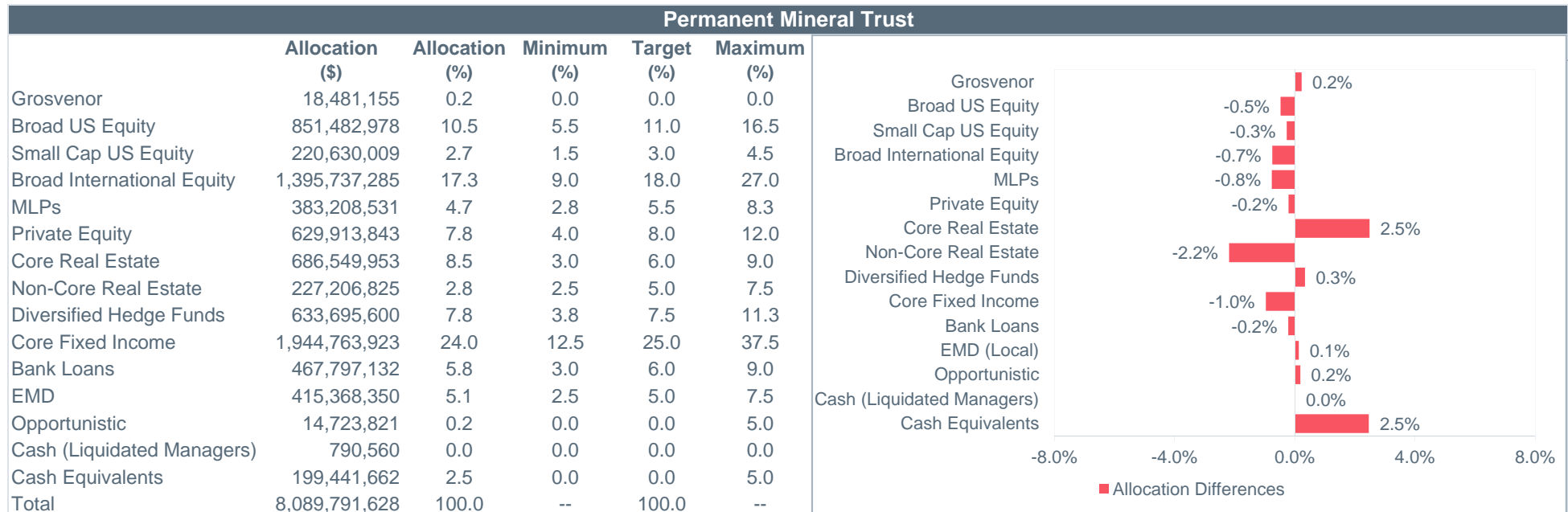


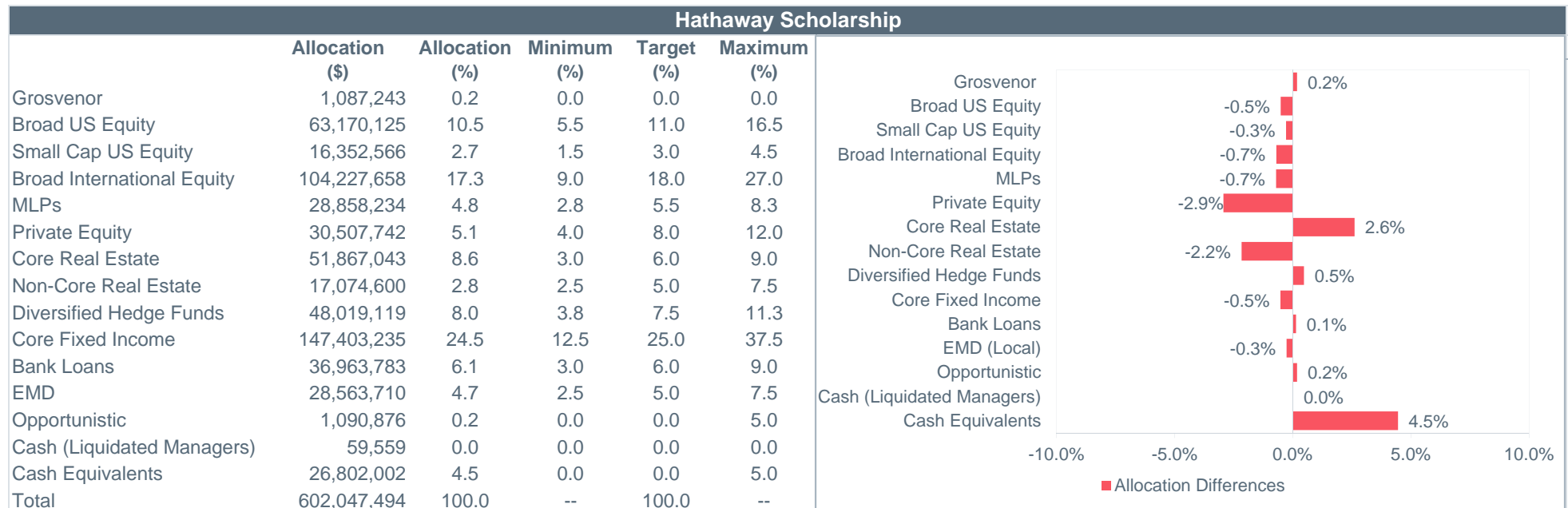
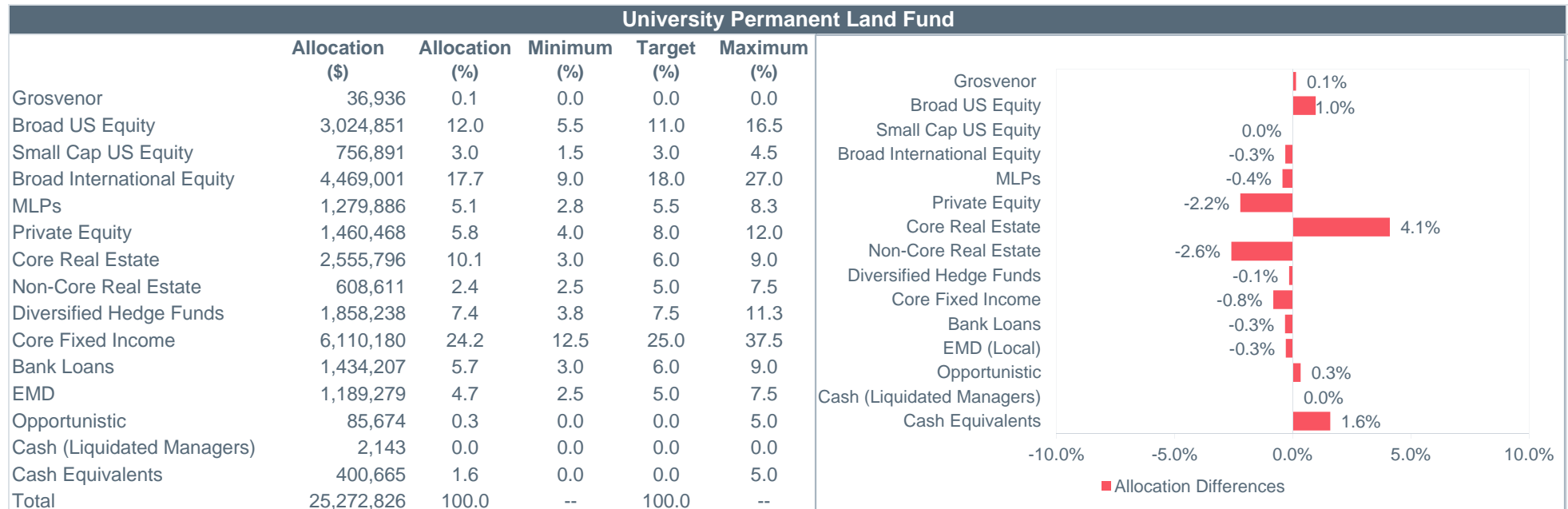
Performance shown is net of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



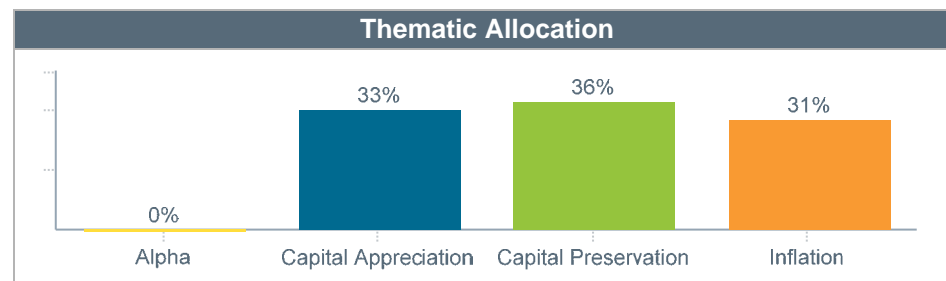
| Investment Profile   |               |                 |      |      | Long-Term Target Allocation    |            |         |                   |          |        |      |       |     |
|--|---------------|-----------------|------|------|--------------------------------|------------|---------|-------------------|----------|--------|------|-------|-----|
| <p><b>Fund Type:</b> Permanent Fund</p> <p><b>Main Objective:</b> Produce maximized long-term investment income and capital gains while providing an appropriate level of safety and liquidity.</p> <p><b>Primary Investment Goals:</b> Capital appreciation, total return, and protection against inflation. Capital preservation and liquidity are important secondary goals.</p> <p><b>Maximum Equity Allocation:</b> 70%</p> <p><b>Current Long-Term Target Equity Allocation:</b> 64%</p> <p><b>Spending Policy</b></p> <ul style="list-style-type: none"><li>• <b>Permanent Mineral Trust Fund:</b> 5% of the five-year trailing average market value, calculated on the first day of the fiscal year. In fiscal year 2023, the spending rate will be 4.75%. In fiscal year 2024 and thereafter, the spending rate will be 4.5%.</li><li>• <b>Hathaway Scholarship:</b> The amount necessary to fully fund scholarships awarded under W.S. 21-16-1301 <i>et seq.</i></li></ul> |               |                 |      |      | Minimum Range (%)              | Target (%) |         | Maximum Range (%) |          |        |      |       |     |
|  |               |                 |      |      | <b>Permanent Mineral Trust</b> |            |         |                   | -        | 100.00 |      | -     |     |
|  |               |                 |      |      | Broad US Equity                |            |         |                   | 5.50     | 11.00  |      | 16.50 |     |
|  |               |                 |      |      | Small Cap US Equity            |            |         |                   | 1.50     | 3.00   |      | 4.50  |     |
|  |               |                 |      |      | International Equity           |            |         |                   | 9.00     | 18.00  |      | 27.00 |     |
|  |               |                 |      |      | MLPs                           |            |         |                   | 2.75     | 5.50   |      | 8.25  |     |
|  |               |                 |      |      | Private Equity                 |            |         |                   | 4.00     | 8.00   |      | 12.00 |     |
|  |               |                 |      |      | Core Real Estate               |            |         |                   | 3.00     | 6.00   |      | 9.00  |     |
|  |               |                 |      |      | Non-Core Real Estate           |            |         |                   | 2.50     | 5.00   |      | 7.50  |     |
|  |               |                 |      |      | Diversified Hedge Funds        |            |         |                   | 3.75     | 7.50   |      | 11.25 |     |
|  |               |                 |      |      | Core Fixed Income              |            |         |                   | 12.50    | 25.00  |      | 37.50 |     |
|  |               |                 |      |      | Bank Loans                     |            |         |                   | 3.00     | 6.00   |      | 9.00  |     |
|  |               |                 |      |      | Opportunistic Fixed Income     |            |         |                   | 0.00     | 0.00   |      | 5.00  |     |
|  |               |                 |      |      | EMD                            |            |         |                   | 2.50     | 5.00   |      | 7.50  |     |
|  |               |                 |      |      | Opportunistic Investments      |            |         |                   | 0.00     | 0.00   |      | 5.00  |     |
|  |               |                 |      |      | Cash (inv. in SAP)             |            |         |                   | 0.00     | 0.00   |      | 5.00  |     |
| Thematic Allocation  |               |                 |      |      | Risk Metrics                   |            |         |                   |          |        |      |       |     |
|  |               |                 |      |      | 5 Years                        |            |         |                   | 10 Years |        |      |       |     |
|  |               |                 |      |      |                                |            |         |                   |          |        |      |       |     |
|  |               |                 |      |      | PMTF                           | PLF        | UPLF    | Hath              | PMTF     | PLF    | UPLF | Hath  |     |
|  |               |                 |      |      | Sharpe Ratio                   | 0.6        | 0.6     | 0.6               | 0.5      | 0.7    | 0.7  | 0.7   | 0.7 |
|  |               |                 |      |      | Standard Deviation             | 8.0        | 7.6     | 9.1               | 7.9      | 7.1    | 6.8  | 7.7   | 6.7 |
|  |               |                 |      |      | Beta                           | 0.5        | 0.5     | 0.5               | 0.5      | 0.5    | 0.4  | 0.5   | 0.4 |
| Comparative Performance  |               |                 |      |      |                                |            |         |                   |          |        |      |       |     |
| Allocation   |               | Performance (%) |      |      |                                |            |         |                   |          |        |      |       |     |
| Market Value (\$)  |               | QTD             | FYTD | CYTD | 1 Year                         | 3 Years    | 5 Years | 7 Years           | 10 Years |        |      |       |     |
| Permanent Mineral Trust  | 8,228,118,237 | 3.0             | 3.0  | 0.9  | 4.4                            | 4.3        | 5.8     | 5.1               | 5.8      |        |      |       |     |
| PMTF - Total Fund Index  |               | 2.7             | 2.7  | 0.2  | 3.8                            | 4.2        | 5.6     | 5.1               | 5.6      |        |      |       |     |
| Difference   |               | 0.3             | 0.3  | 0.7  | 0.6                            | 0.1        | 0.2     | 0.0               | 0.2      |        |      |       |     |
| Permanent Land Fund  | 208,629,348   | 2.9             | 2.9  | 1.0  | 4.5                            | 4.3        | 5.8     | 5.1               | 5.7      |        |      |       |     |
| PLF - Total Fund Index   |               | 2.7             | 2.7  | 0.2  | 3.8                            | 4.2        | 5.5     | 5.0               | 5.5      |        |      |       |     |
| Difference   |               | 0.2             | 0.2  | 0.8  | 0.7                            | 0.1        | 0.3     | 0.1               | 0.2      |        |      |       |     |
| University Permanent Land Fund   | 25,272,826    | 3.8             | 3.8  | 1.2  | 4.3                            | 4.7        | 6.3     | 5.5               | 5.9      |        |      |       |     |
| UPLF - Total Fund Index  |               | 2.7             | 2.7  | 0.2  | 3.3                            | 4.5        | 6.1     | 5.4               | 5.8      |        |      |       |     |
| Difference   |               | 1.1             | 1.1  | 1.0  | 1.0                            | 0.2        | 0.2     | 0.1               | 0.1      |        |      |       |     |
| Hathaway Scholarship   | 602,047,494   | 2.8             | 2.8  | 0.8  | 4.2                            | 4.0        | 5.3     | 4.7               | 5.2      |        |      |       |     |
| Hathaway - Total Fund Index  |               | 2.7             | 2.7  | 0.2  | 3.6                            | 3.9        | 5.2     | 4.8               | 5.1      |        |      |       |     |
| Difference   |               | 0.1             | 0.1  | 0.6  | 0.6                            | 0.1        | 0.1     | -0.1              | 0.1      |        |      |       |     |

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| Investment Profile  |
|---|
| <b>Fund Type:</b> Permanent Fund<br><b>Main Objective:</b> Produce maximized long-term investment income and capital gains while providing an appropriate level of safety and liquidity.<br><b>Primary Investment Goals:</b> Income generation, capital appreciation, total return, and protection against inflation. Capital preservation and liquidity are important secondary goals.<br><b>Maximum Equity Allocation:</b> 70%<br><b>Current Long-Term Target Equity Allocation:</b> 46%  |
| <b>Spending Policy</b> <ul style="list-style-type: none"> <li>• <b>Common School Permanent Land Fund:</b> 5% of the five-year trailing average market value, calculated on the first day of the fiscal year. In fiscal year 2025, the spending rate will be 4.75%. In fiscal year 2026 and thereafter, the spending rate will be 4.5%.</li> <li>• <b>Higher Education:</b> 4.75% of the five-year trailing average market value, calculated on the first day of the fiscal year.</li> </ul> |



| Long-Term Target Allocation |                   |               |                   |
|-----------------------------|-------------------|---------------|-------------------|
|                             | Minimum Range (%) | Target (%)    | Maximum Range (%) |
| <b>Common School PLF</b>    | -                 | <b>100.00</b> | -                 |
| Broad US Equity             | 4.00              | 8.00          | 12.00             |
| Small Cap US Equity         | 1.00              | 2.00          | 3.00              |
| International Equity        | 6.00              | 12.00         | 18.00             |
| Preferred Stock             | 1.50              | 3.00          | 4.50              |
| MLPs                        | 3.50              | 7.00          | 10.50             |
| Core Real Estate            | 5.50              | 11.00         | 16.50             |
| Non-Core Real Estate        | 1.50              | 3.00          | 4.50              |
| Core Fixed Income           | 17.50             | 35.00         | 52.50             |
| Bank Loans                  | 6.00              | 12.00         | 18.00             |
| Opportunistic Fixed Income  | 0.00              | 0.00          | 5.00              |
| EMD                         | 3.50              | 7.00          | 10.50             |
| Opportunistic Investments   | 0.00              | 0.00          | 5.00              |
| Cash (inv. in SAP)          | 0.00              | 0.00          | 5.00              |

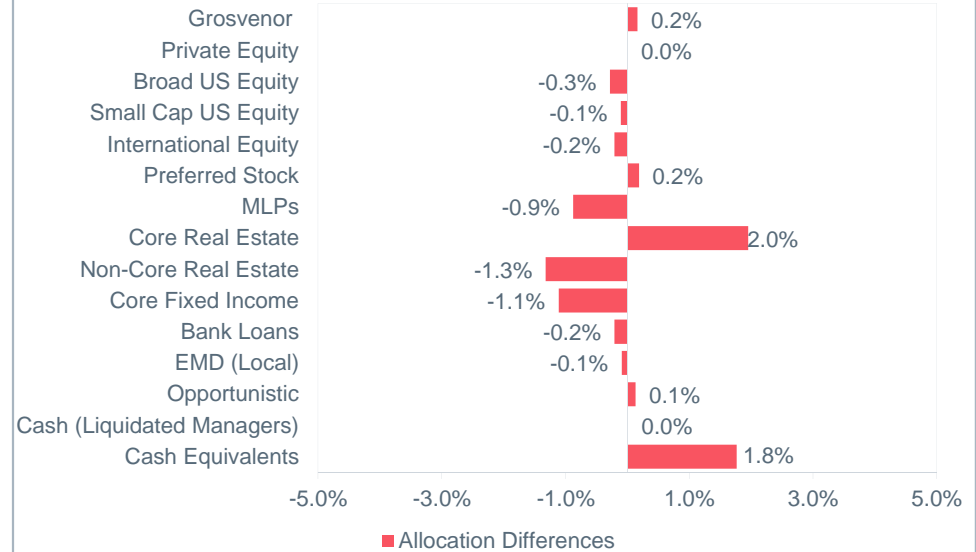
| Risk Metrics       |         |      |          |      |
|--------------------|---------|------|----------|------|
|                    | 5 Years |      | 10 Years |      |
|                    | CSPLF   | HiEd | CSPLF    | HiEd |
| Sharpe Ratio       | 0.6     | 0.5  | 0.8      | 0.7  |
| Standard Deviation | 7.3     | 7.4  | 6.7      | 6.4  |
| Beta               | 0.4     | 0.4  | 0.4      | 0.4  |

| Comparative Performance             |                      |                 |            |            |            |            |            |            |            |
|-------------------------------------|----------------------|-----------------|------------|------------|------------|------------|------------|------------|------------|
|                                     | Allocation           | Performance (%) |            |            |            |            |            |            |            |
|                                     | Market Value (\$)    | QTD             | FYTD       | CYTD       | 1 Year     | 3 Years    | 5 Years    | 7 Years    | 10 Years   |
| <b>Common School Perm Land Fund</b> | <b>4,177,316,695</b> | <b>2.0</b>      | <b>2.0</b> | <b>0.7</b> | <b>3.2</b> | <b>4.0</b> | <b>5.7</b> | <b>5.1</b> | <b>5.8</b> |
| CSPLF - Total Fund Index            |                      | 1.7             | 1.7        | -0.2       | 2.1        | 3.7        | 5.4        | 5.0        | 5.6        |
| Difference                          |                      | 0.3             | 0.3        | 0.9        | 1.1        | 0.3        | 0.3        | 0.1        | 0.2        |
| <b>Higher Education</b>             | <b>120,770,651</b>   | <b>2.1</b>      | <b>2.1</b> | <b>0.0</b> | <b>2.4</b> | <b>3.5</b> | <b>5.0</b> | <b>4.5</b> | <b>5.1</b> |
| Higher Education - Total Fund Index |                      | 1.7             | 1.7        | -0.2       | 2.1        | 3.5        | 4.9        | 4.6        | 5.0        |
| Difference                          |                      | 0.4             | 0.4        | 0.2        | 0.3        | 0.0        | 0.1        | -0.1       | 0.1        |

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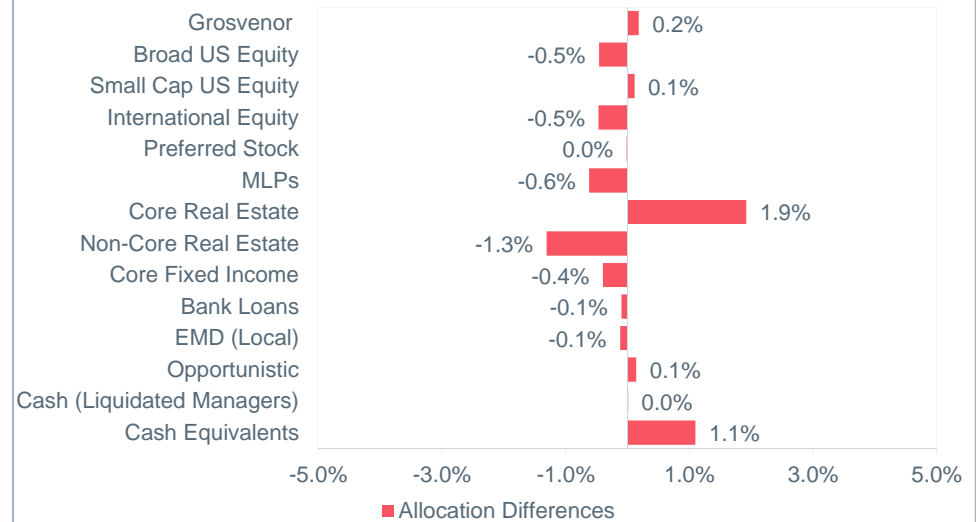
Common School Perm Land Fund

|                            | Allocation<br>(\$) | Allocation<br>(%) | Minimum<br>(%) | Target<br>(%) | Maximum<br>(%) |
|----------------------------|--------------------|-------------------|----------------|---------------|----------------|
| Grosvenor                  | 6,749,276          | 0.2               | 0.0            | 0.0           | 0.0            |
| Private Equity             | 0                  | 0.0               | 0.0            | 0.0           | 0.0            |
| Broad US Equity            | 320,912,376        | 7.7               | 4.0            | 8.0           | 12.0           |
| Small Cap US Equity        | 78,807,979         | 1.9               | 1.0            | 2.0           | 3.0            |
| International Equity       | 490,249,565        | 11.8              | 6.0            | 12.0          | 18.0           |
| Preferred Stock            | 132,510,867        | 3.2               | 1.5            | 3.0           | 4.5            |
| MLPs                       | 254,703,920        | 6.1               | 3.5            | 7.0           | 10.5           |
| Core Real Estate           | 538,726,236        | 13.0              | 5.5            | 11.0          | 16.5           |
| Non-Core Real Estate       | 69,897,705         | 1.7               | 1.5            | 3.0           | 4.5            |
| Core Fixed Income          | 1,409,386,203      | 33.9              | 17.5           | 35.0          | 52.5           |
| Bank Loans                 | 490,427,056        | 11.8              | 6.0            | 12.0          | 18.0           |
| EMD                        | 287,314,366        | 6.9               | 3.5            | 7.0           | 10.5           |
| Opportunistic              | 5,486,230          | 0.1               | 0.0            | 0.0           | 5.0            |
| Cash (Liquidated Managers) | 380,632            | 0.0               | 0.0            | 0.0           | 0.0            |
| Cash Equivalents           | 73,404,545         | 1.8               | 0.0            | 0.0           | 5.0            |
| Total                      | 4,158,956,957      | 100.0             | --             | 100.0         | --             |



Higher Education

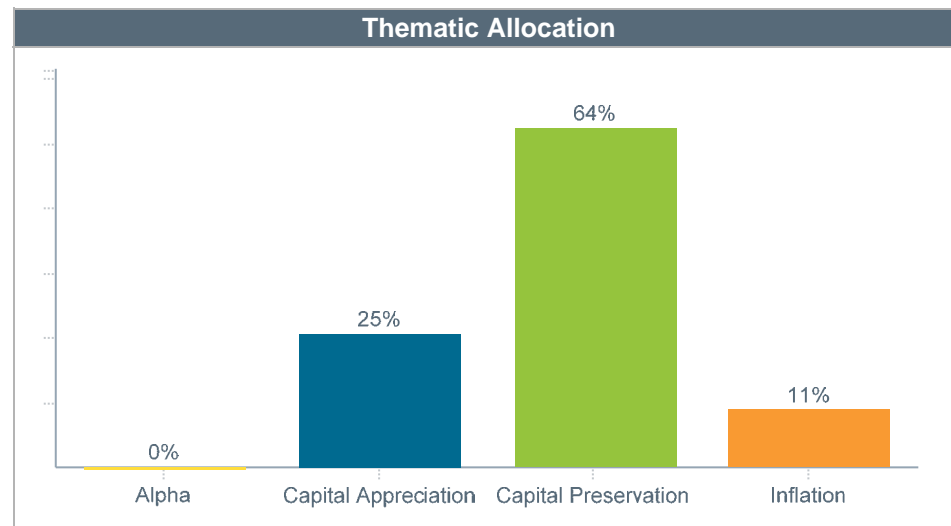
|                            | Allocation<br>(\$) | Allocation<br>(%) | Minimum<br>(%) | Target<br>(%) | Maximum<br>(%) |
|----------------------------|--------------------|-------------------|----------------|---------------|----------------|
| Grosvenor                  | 224,564            | 0.2               | 0.0            | 0.0           | 0.0            |
| Broad US Equity            | 9,106,424          | 7.5               | 4.0            | 8.0           | 12.0           |
| Small Cap US Equity        | 2,553,410          | 2.1               | 1.0            | 2.0           | 3.0            |
| International Equity       | 13,927,520         | 11.5              | 6.0            | 12.0          | 18.0           |
| Preferred Stock            | 3,608,634          | 3.0               | 1.5            | 3.0           | 4.5            |
| MLPs                       | 7,708,542          | 6.4               | 3.5            | 7.0           | 10.5           |
| Core Real Estate           | 15,605,455         | 12.9              | 5.5            | 11.0          | 16.5           |
| Non-Core Real Estate       | 2,044,736          | 1.7               | 1.5            | 3.0           | 4.5            |
| Core Fixed Income          | 41,793,356         | 34.6              | 17.5           | 35.0          | 52.5           |
| Bank Loans                 | 14,374,572         | 11.9              | 6.0            | 12.0          | 18.0           |
| EMD                        | 8,311,934          | 6.9               | 3.5            | 7.0           | 10.5           |
| Opportunistic              | 169,493            | 0.1               | 0.0            | 0.0           | 5.0            |
| Cash (Liquidated Managers) | 12,254             | 0.0               | 0.0            | 0.0           | 0.0            |
| Cash Equivalents           | 1,329,757          | 1.1               | 0.0            | 0.0           | 5.0            |
| Total                      | 120,770,651        | 100.0             | --             | 100.0         | --             |



Wyoming State Treasurer's Office  
Permanent Funds - Workers' Compensation Fund

As of September 30, 2020

| Investment Profile   |
|--|
| <b>Fund Type:</b> Permanent Fund<br><b>Main Objective:</b> Provide a return that assures the Workers' Compensation Fund will be self-funding or nearly self-funding in order to substantially reduce or eliminate the need for employer contributions.<br><b>Primary Investment Goals:</b> Long-term return, safety of capital, yield and capital appreciation.<br><b>Maximum Equity Allocation:</b> 70%<br><b>Current Long-Term Target Equity Allocation:</b> 38%<br><b>Actuarial Discount Rate:</b> 2.5%*<br><b>Funded Status:</b> >100%*<br><b>Duration of Liabilities:</b> 11.4 years* |
| *As of the most recent report.   |



| Comparative Performance    |                   |                 |      |      |        |         |         |         |          |
|----------------------------|-------------------|-----------------|------|------|--------|---------|---------|---------|----------|
|                            | Allocation        | Performance (%) |      |      |        |         |         |         |          |
|                            | Market Value (\$) | QTD             | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years |
| Workers' Compensation Fund | 2,464,685,597     | 1.9             | 1.9  | 6.4  | 7.8    | 6.8     | 6.4     | 5.4     | 5.4      |
| WC - Total Fund Index      |                   | 1.7             | 1.7  | 5.1  | 6.5    | 6.4     | 6.0     | 5.3     | 5.2      |
| Difference                 |                   | 0.2             | 0.2  | 1.3  | 1.3    | 0.4     | 0.4     | 0.1     | 0.2      |

Performance shown is net of fees and annualized for periods greater than one year. Wyoming State Treasurer's Office fiscal year ends on June 30th. Beta is calculated relative to the MSCI ACW Index (Net). Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

| Long-Term Target Allocation      |                   |               |                   |
|----------------------------------|-------------------|---------------|-------------------|
|                                  | Minimum Range (%) | Target (%)    | Maximum Range (%) |
| <b>Workers Compensation Fund</b> | -                 | <b>100.00</b> | -                 |
| Broad US Equity                  | 4.00              | 8.00          | 12.00             |
| Small Cap US Equity              | 1.00              | 2.00          | 3.00              |
| International Equity             | 6.25              | 12.50         | 18.75             |
| MLPs                             | 2.25              | 4.50          | 6.75              |
| Core Real Estate                 | 2.25              | 4.50          | 6.75              |
| Non-Core Real Estate             | 2.00              | 4.00          | 6.00              |
| Liability Driven Fixed Income    | 31.00             | 62.00         | 93.00             |
| Opportunistic Fixed Income       | 0.00              | 0.00          | 5.00              |
| EMD                              | 1.25              | 2.50          | 3.75              |
| Opportunistic Investments        | 0.00              | 0.00          | 5.00              |
| Cash (inv. in SAP)               | 0.00              | 0.00          | 5.00              |

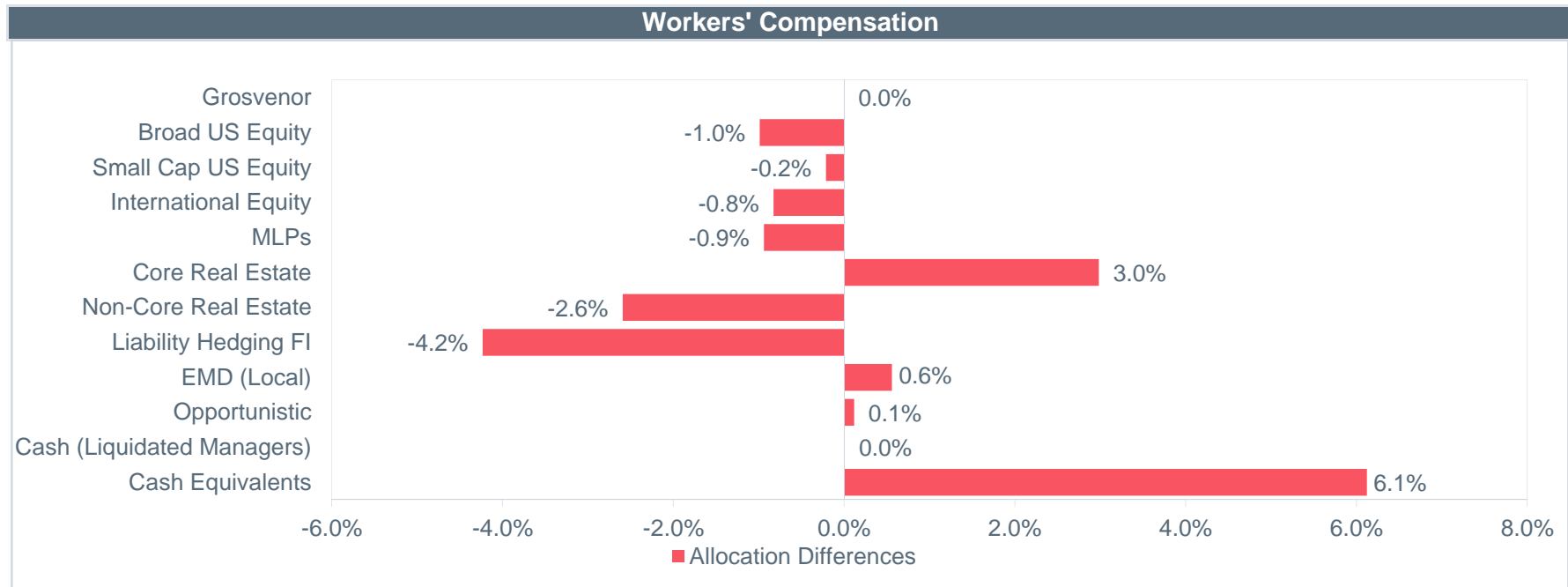
| Fixed Income Characteristics vs. BB US Agg Bond Index |           |           |
|---|-----------|-----------|
|   | Portfolio | Benchmark |
| Effective Duration                                    | 11.3      | 6.1       |
| Avg. Quality  | Aa3       | Aa1/Aa2   |
| Yield To Maturity (%)                                 | 2.1       | 1.2       |
| Coupon Rate (%)                                       | 3.2       | 2.9       |

| Risk Metrics       |         |          |
|--------------------|---------|----------|
|                    | 5 Years | 10 Years |
| Sharpe Ratio       | 1.0     | 1.1      |
| Standard Deviation | 4.9     | 4.4      |
| Beta               | 0.2     | 0.3      |



Wyoming State Treasurer's Office  
Permanent Funds - Workers' Compensation Fund  
Asset Allocation vs. Long-Term Target

As of September 30, 2020



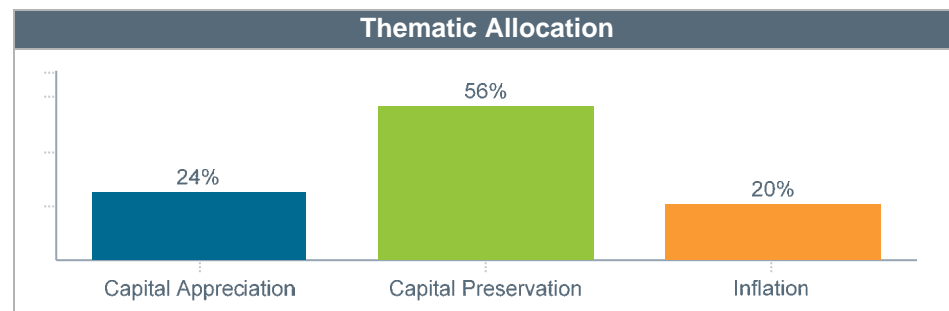
|                            | Market Value  | Allocation | Minimum | Target | Maximum |
|----------------------------|---------------|------------|---------|--------|---------|
|                            | (\$)          | (%)        | (%)     | (%)    | (%)     |
| Grosvenor                  | 13,429        | 0.0        | 0.0     | 0.0    | 0.0     |
| Broad US Equity            | 172,825,461   | 7.0        | 4.0     | 8.0    | 12.0    |
| Small Cap US Equity        | 44,100,418    | 1.8        | 1.0     | 2.0    | 3.0     |
| International Equity       | 287,699,242   | 11.7       | 6.3     | 12.5   | 18.8    |
| MLPs                       | 87,754,290    | 3.6        | 2.3     | 4.5    | 6.8     |
| Core Real Estate           | 184,416,716   | 7.5        | 2.3     | 4.5    | 6.8     |
| Non-Core Real Estate       | 34,699,181    | 1.4        | 2.0     | 4.0    | 6.0     |
| Liability Hedging FI       | 1,423,786,800 | 57.8       | 31.0    | 62.0   | 93.0    |
| EMD                        | 75,446,662    | 3.1        | 1.3     | 2.5    | 3.8     |
| Opportunistic              | 2,931,699     | 0.1        | 0.0     | 0.0    | 5.0     |
| Cash (Liquidated Managers) | 140,539       | 0.0        | 0.0     | 0.0    | 0.0     |
| Cash Equivalents           | 150,871,160   | 6.1        | 0.0     | 0.0    | 5.0     |
| Total                      | 2,464,685,597 | 100.0      | --      | 100.0  | --      |

Wyoming State Treasurer's Office  
Pool A Investment Account

As of September 30, 2020

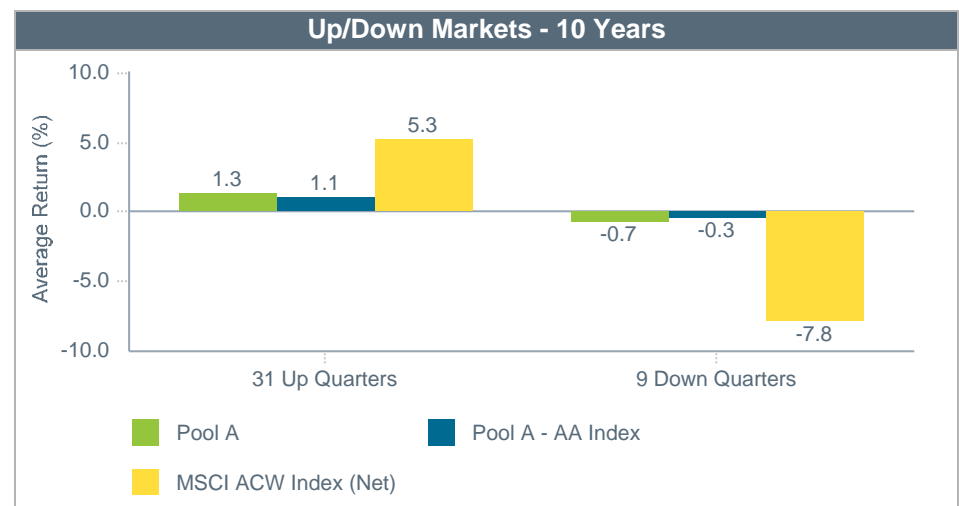
| Investment Profile  |  |
|---|--|
| <b>Fund Type:</b> Non-Permanent Fund  |  |
| <b>Main Objective:</b> Provide a diverse array of securities including equities, while maintaining adequate liquidity, stability, and return on investment. |  |
| <b>Primary Investment Goal:</b> Pool A is intended to be moderately liquid and safely invested but also be invested for return and growth.                  |  |
| <b>Maximum Equity Allocation:</b> 60%   |  |
| <b>Current Target Equity Allocation:</b> 36%  |  |
| <b>Participating Funds:</b>   |  |
| • Tobacco Settlement Trust Fund   |  |
| • Wildlife and Natural Resource Trust Account   |  |
| • Cultural Trust Fund   |  |
| • Public Television Matching Fund Account   |  |
| • Game and Fish Fund Trust Account  |  |

| Risk Metrics       |            |             |
|--------------------|------------|-------------|
|                    | 5<br>Years | 10<br>Years |
| Sharpe Ratio       | 0.5        | 0.7         |
| Standard Deviation | 5.2        | 4.1         |
| Beta               | 0.3        | 0.2         |



| Comparative Performance   |                    |                 |            |            |            |            |            |            |            |
|---------------------------|--------------------|-----------------|------------|------------|------------|------------|------------|------------|------------|
|                           | Allocation         | Performance (%) |            |            |            |            |            |            |            |
|                           | Market Value (\$)  | QTD             | FYTD       | CYTD       | 1 Year     | 3 Years    | 5 Years    | 7 Years    | 10 Years   |
| <b>Pool A</b>             | <b>255,399,451</b> | <b>2.0</b>      | <b>2.0</b> | <b>3.2</b> | <b>4.8</b> | <b>4.0</b> | <b>3.8</b> | <b>3.4</b> | <b>3.4</b> |
| Pool A - Total Fund Index |                    | 1.8             | 1.8        | 1.9        | 3.5        | 3.3        | 3.1        | 3.2        | 3.1        |
| Difference                |                    | 0.2             | 0.2        | 1.3        | 1.3        | 0.7        | 0.7        | 0.2        | 0.3        |

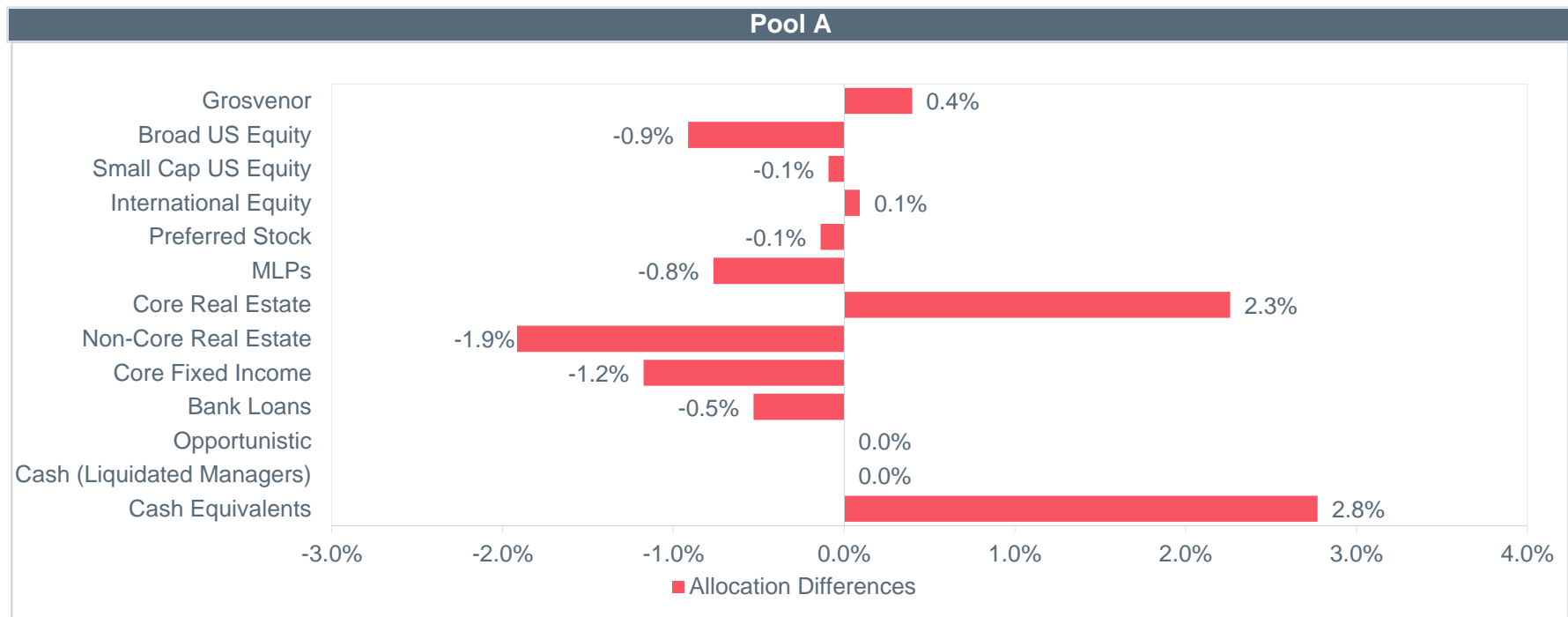
| Long-Term Target Allocation |                   |               |                   |
|-----------------------------|-------------------|---------------|-------------------|
|                             | Minimum Range (%) | Target (%)    | Maximum Range (%) |
| <b>Pool A</b>               | -                 | <b>100.00</b> | -                 |
| Broad US Equity             | 3.75              | 7.50          | 11.25             |
| Small Cap US Equity         | 0.50              | 1.00          | 1.50              |
| International Equity        | 3.75              | 7.50          | 11.25             |
| Preferred Stock             | 3.50              | 7.00          | 10.50             |
| MLPs                        | 2.50              | 5.00          | 7.50              |
| Core Real Estate            | 2.00              | 4.00          | 6.00              |
| Non-Core Real Estate        | 2.00              | 4.00          | 6.00              |
| Core Fixed Income           | 24.50             | 49.00         | 73.50             |
| Bank Loans                  | 5.00              | 10.00         | 15.00             |
| Opportunistic Investments   | 0.00              | 0.00          | 5.00              |
| Cash (inv. in SAP)          | 2.50              | 5.00          | 7.50              |



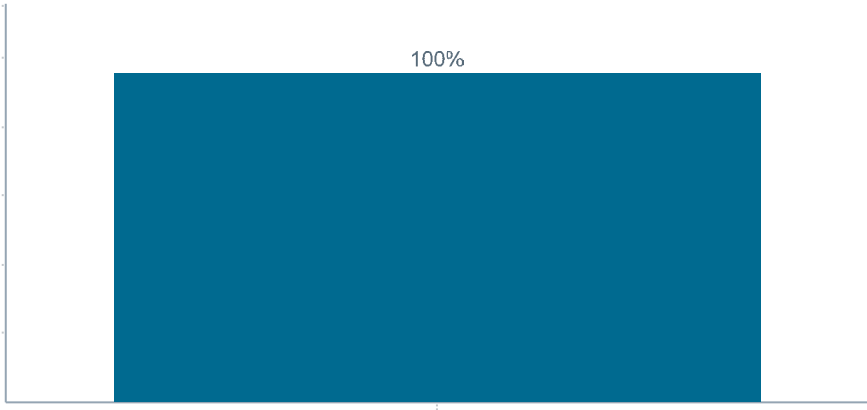
Performance shown is net of fees and annualized for periods greater than one year. Wyoming State Treasurer's Office fiscal year ends on June 30th. Beta is calculated relative to the MSCI ACW Index (Net). Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

## Pool A

## Asset Allocation vs. Long-Term Target

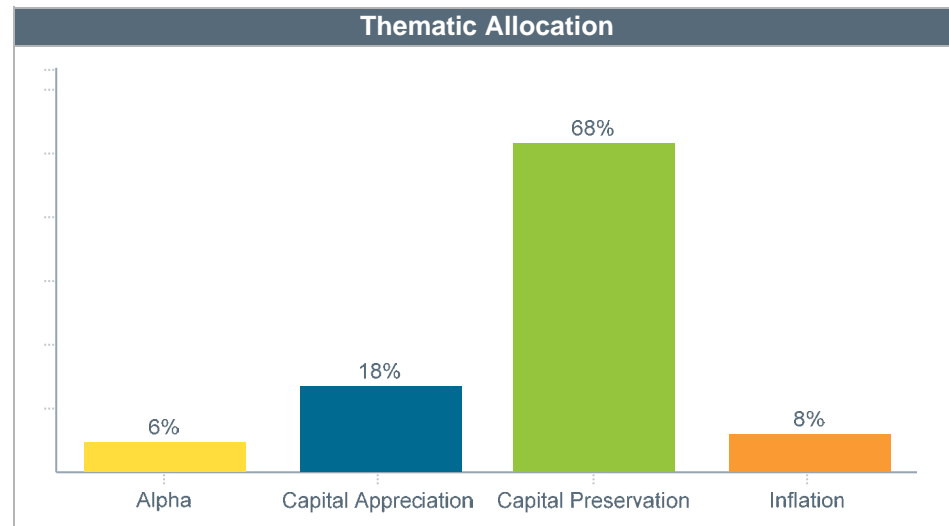


|                            | Market Value | Allocation | Minimum | Target | Maximum |
|----------------------------|--------------|------------|---------|--------|---------|
|                            | (\$)         | (%)        | (%)     | (%)    | (%)     |
| Grosvenor                  | 1,017,805    | 0.4        | 0.0     | 0.0    | 0.0     |
| Broad US Equity            | 16,823,304   | 6.6        | 3.8     | 7.5    | 11.3    |
| Small Cap US Equity        | 2,320,679    | 0.9        | 0.5     | 1.0    | 1.5     |
| International Equity       | 19,391,537   | 7.6        | 3.8     | 7.5    | 11.3    |
| Preferred Stock            | 17,526,843   | 6.9        | 3.5     | 7.0    | 10.5    |
| MLPs                       | 10,817,970   | 4.2        | 2.5     | 5.0    | 7.5     |
| Core Real Estate           | 15,990,275   | 6.3        | 2.0     | 4.0    | 6.0     |
| Non-Core Real Estate       | 5,326,737    | 2.1        | 2.0     | 4.0    | 6.0     |
| Core Fixed Income          | 122,148,068  | 47.8       | 24.5    | 49.0   | 73.5    |
| Bank Loans                 | 24,185,970   | 9.5        | 5.0     | 10.0   | 15.0    |
| Opportunistic              | 0            | 0.0        | 0.0     | 0.0    | 5.0     |
| Cash (Liquidated Managers) | 677          | 0.0        | 0.0     | 0.0    | 0.0     |
| Cash Equivalents           | 19,849,588   | 7.8        | 2.5     | 5.0    | 7.5     |
| Total                      | 255,399,451  | 100.0      | --      | 100.0  | --      |

| Investment Profile  |                   |                 |      |      | Long-Term Target Allocation                           |                        |                       |                        |          |
|---|-------------------|-----------------|------|------|---|------------------------|-----------------------|------------------------|----------|
| <b>Fund Type:</b> Non-Permanent Fund<br><b>Main Objective:</b> Produce an investment return so that State agencies have the advantage of better income from their invested funds, while maintaining stability.<br><b>Primary Investment Goal:</b> Capital preservation, yield, and liquidity<br><b>Liquidity Constraints:</b> The Fund must meet the day-to-day cash flow needs of the State<br><b>Maximum Equity Allocation:</b> 0%<br><b>Current Target Equity Allocation:</b> 0% |                   |                 |      |      |   | Minimum Allocation (%) | Target Allocation (%) | Maximum Allocation (%) |          |
|   |                   |                 |      |      | <b>State Agency Pool Excluding PPI</b>                | -                      | 100.00                | -                      |          |
|   |                   |                 |      |      | Laddered Short-Term Treasury                          | 100.00                 | 100.00                | 100.00                 |          |
|   |                   |                 |      |      | Core Fixed Income                                     | 0.00                   | 0.00                  | 0.00                   |          |
|   |                   |                 |      |      | Low Duration Fixed Income                             | 0.00                   | 0.00                  | 0.00                   |          |
|   |                   |                 |      |      | Bank Loans  | 0.00                   | 0.00                  | 0.00                   |          |
|   |                   |                 |      |      | Opportunistic Fixed Income                            | 0.00                   | 0.00                  | 0.00                   |          |
|   |                   |                 |      |      | EMD   | 0.00                   | 0.00                  | 0.00                   |          |
|   |                   |                 |      |      | Cash Equivalents                                      | 0.00                   | 0.00                  | 0.00                   |          |
| Thematic Allocation   |                   |                 |      |      | Fixed Income Characteristics vs. BB US Agg Bond Index |                        |                       |                        |          |
|  <p>100%</p> <p>Capital Preservation</p>  |                   |                 |      |      |   | Portfolio              | Benchmark             |                        |          |
|   |                   |                 |      |      | Effective Duration                                    | 1.9                    | 6.1                   |                        |          |
|   |                   |                 |      |      | Avg. Quality  | Aaa                    | Aa1/Aa2               |                        |          |
|   |                   |                 |      |      | Yield To Maturity (%)                                 | 0.1                    | 1.2                   |                        |          |
|   |                   |                 |      |      | Coupon Rate (%)                                       | 1.1                    | 2.9                   |                        |          |
|   |                   |                 |      |      | Risk Metrics  |                        |                       |                        |          |
|   |                   |                 |      |      |   | 5 Years                | 10 Years              |                        |          |
|   |                   |                 |      |      | Sharpe Ratio  | 0.9                    | 1.0                   |                        |          |
|   |                   |                 |      |      | Standard Deviation                                    | 2.1                    | 2.1                   |                        |          |
|   |                   |                 |      |      | Beta  | 0.0                    | 0.0                   |                        |          |
| Comparative Performance   |                   |                 |      |      |   |                        |                       |                        |          |
|   | Allocation        | Performance (%) |      |      |   |                        |                       |                        |          |
|   | Market Value (\$) | QTD             | FYTD | CYTD | 1 Year  | 3 Years                | 5 Years               | 7 Years                | 10 Years |
| State Agency Pool   | 4,755,302,143     | 0.2             | 0.2  | 2.7  | 3.1   | 2.9                    | 2.9                   | 2.7                    | 2.7      |
| State Agency Pool - Actual Allocation Index   |                   | 0.2             | 0.2  | 2.6  | 3.0   | 2.6                    | 2.6                   | 2.7                    | 2.6      |
| Difference  |                   | 0.0             | 0.0  | 0.1  | 0.1   | 0.3                    | 0.3                   | 0.0                    | 0.1      |

Performance shown is net of fees and annualized for periods greater than one year. Wyoming State Treasurer's Office fiscal year ends on June 30th. Beta is calculated relative to the MSCI ACW Index (Net). Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

| Investment Profile  |
|---|
| <b>Fund Type:</b> Non-Permanent Fund<br><b>Main Objective:</b> LSRA will be invested to obtain the highest possible return while seeking to preserve the balance necessary to address potential budget shortfalls or a budget deficit.<br><b>Primary Investment Goal:</b> liquidity, capital preservation, and capital appreciation.<br><b>Maximum Equity Allocation:</b> 36%<br><b>Current Target Equity Allocation:</b> 29.17%<br><b>Spending Policy:</b> Legislative Appropriation<br><b>Participating Funds:</b> <ul style="list-style-type: none"> <li>• Long Term Reserve</li> <li>• Intermediate Term Reserve</li> <li>• Short Term Reserve</li> </ul> |



| Long-Term Target Allocation   |                   |               |                   |
|-------------------------------|-------------------|---------------|-------------------|
|                               | Minimum Range (%) | Target (%)    | Maximum Range (%) |
| <b>LSRA Long Term Reserve</b> | -                 | <b>100.00</b> | -                 |
| Broad US Equity               | 17.00             | 22.00         | 27.00             |
| Small Cap US Equity           | 4.00              | 6.00          | 8.00              |
| International Equity          | 21.00             | 28.00         | 35.00             |
| Bank Loans                    | 10.00             | 12.50         | 15.00             |
| MLPs                          | 10.00             | 12.50         | 15.00             |
| Diversified Hedge Funds       | 15.00             | 19.00         | 23.00             |
| Opportunistic Investments     | 0.00              | 0.00          | 0.00              |
| Cash (inv. in SAP)            | 0.00              | 0.00          | 0.00              |

| Risk Metrics       |              |                |
|--------------------|--------------|----------------|
|                    | Since Incep. | Inception Date |
| Standard Deviation | 9.1          | 07/01/2019     |
| Beta               | 0.3          |                |
| Sharpe Ratio       | 0.2          |                |

| Comparative Performance |                      |                 |            |            |            |            |            |            |            |
|-------------------------|----------------------|-----------------|------------|------------|------------|------------|------------|------------|------------|
|                         | Allocation           | Performance (%) |            |            |            |            |            |            |            |
|                         | Market Value (\$)    | QTD             | FYTD       | CYTD       | 1 Year     | 3 Years    | 5 Years    | 7 Years    | 10 Years   |
| <b>LSRA</b>             | <b>1,519,159,478</b> | <b>1.6</b>      | <b>1.6</b> | <b>0.6</b> | <b>2.6</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> |
| LSRA - Total Fund Index |                      | 1.6             | 1.6        | 1.2        | 3.4        | N/A        | N/A        | N/A        | N/A        |
| Difference              |                      | 0.0             | 0.0        | -0.6       | -0.8       | N/A        | N/A        | N/A        | N/A        |

Performance shown is net of fees and annualized for periods greater than one year. Wyoming State Treasurer's Office fiscal year ends on June 30th. Beta is calculated relative to the MSCI ACW Index (Net). Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. Long-Term Target Allocation represents long term reserve.

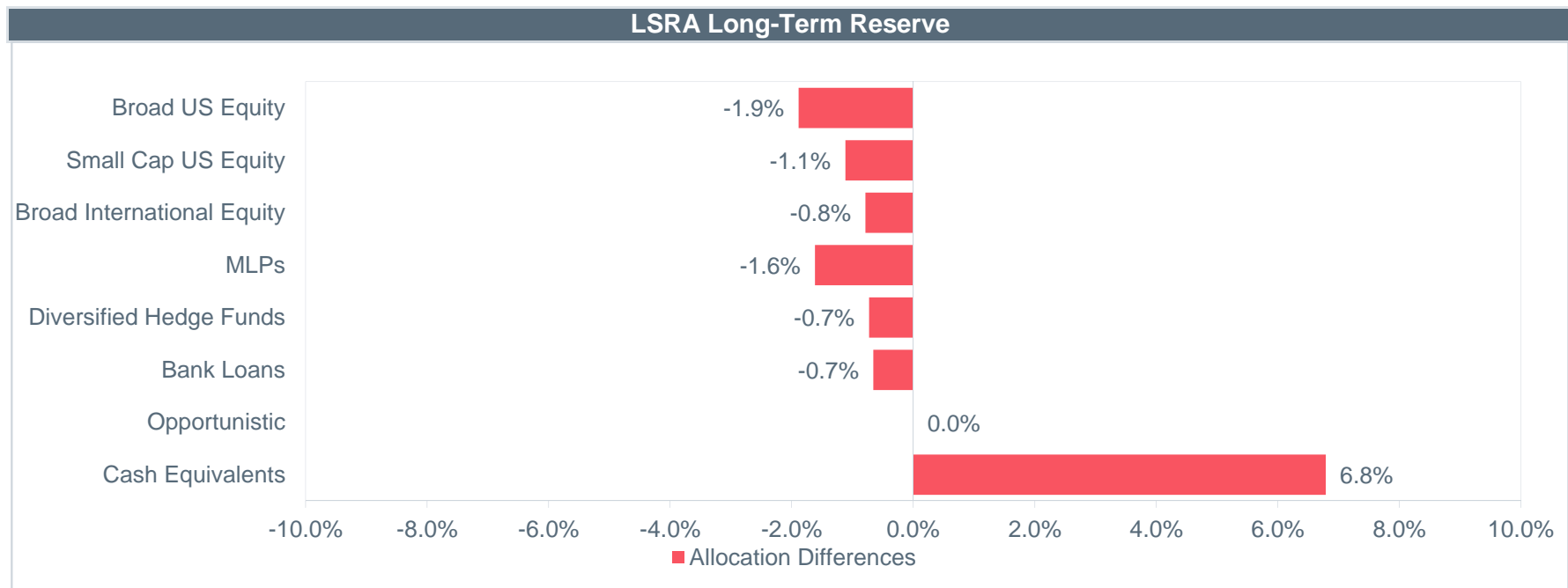
## Total LSRA

## Asset Allocation vs. Long-Term Target

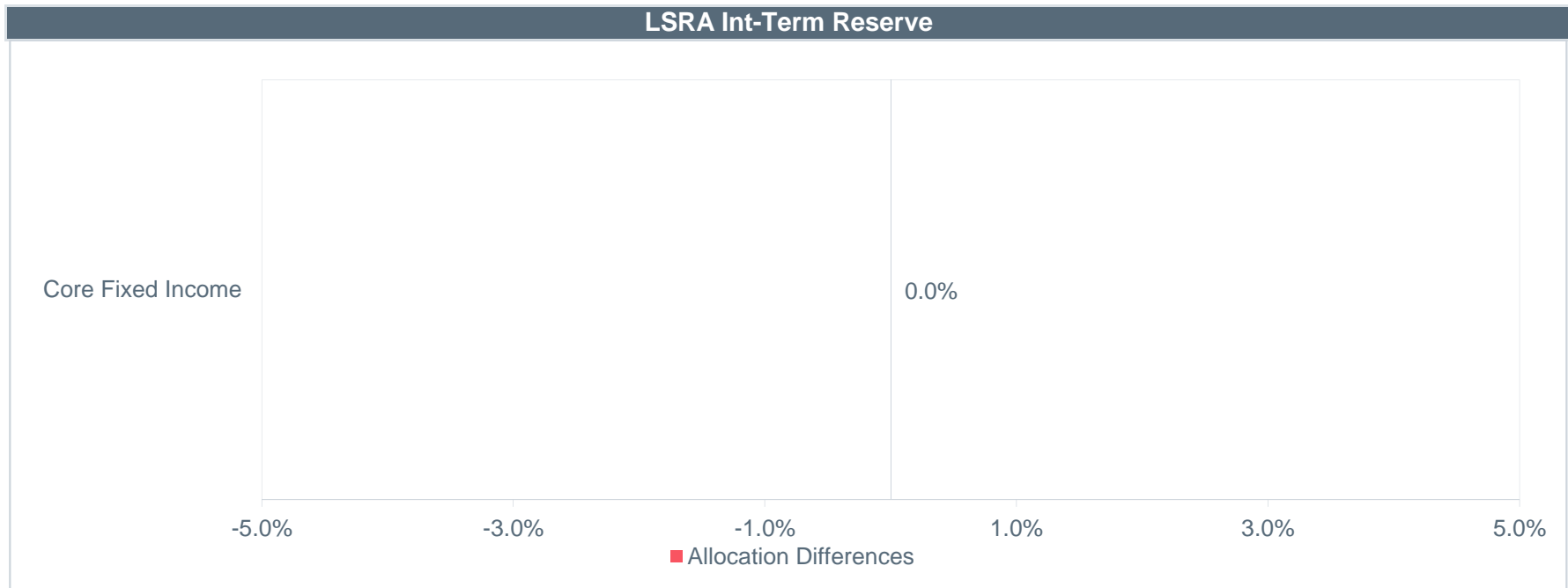
| Total LSRA                 |               |            |        |
|----------------------------|---------------|------------|--------|
|                            | Market Value  | Allocation | Target |
|                            | (\$)          | (%)        | (%)    |
| Broad US Equity            | 104,201,074   | 6.9        | N/A    |
| Small Cap US Equity        | 25,291,754    | 1.7        | N/A    |
| Broad International Equity | 140,978,694   | 9.3        | N/A    |
| MLPs                       | 56,386,610    | 3.7        | N/A    |
| Diversified Hedge Funds    | 94,662,240    | 6.2        | N/A    |
| Core Fixed Income          | 502,823,810   | 33.1       | N/A    |
| Low Duration Fixed Income  | 498,291,345   | 32.8       | N/A    |
| Bank Loans                 | 61,349,414    | 4.0        | N/A    |
| Opportunistic              | 0             | 0.0        | N/A    |
| Cash Equivalents           | 35,174,536    | 2.3        | N/A    |
| Total                      | 1,519,159,478 | 100.0      | N/A    |

The Total LSRA pool has no target allocation.

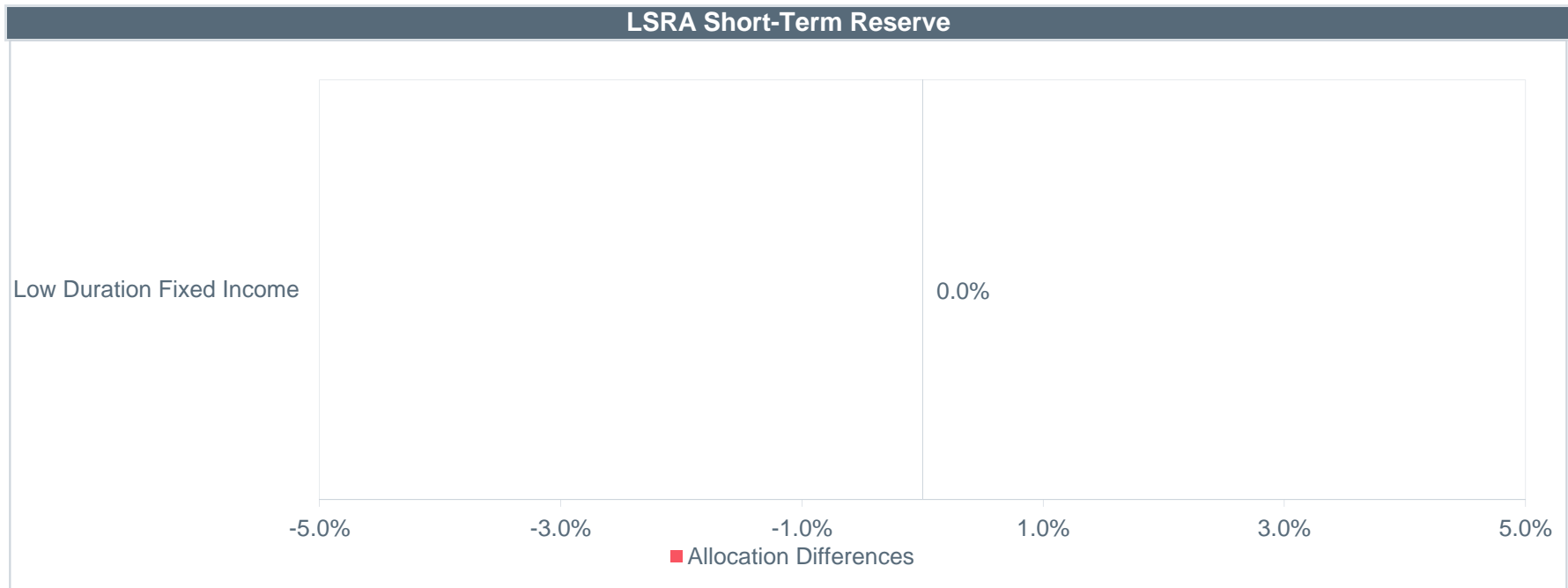




|                            | Market Value<br>(\$) | Allocation<br>(%) | Minimum<br>(%) | Target<br>(%) | Maximum<br>(%) |
|----------------------------|----------------------|-------------------|----------------|---------------|----------------|
| Broad US Equity            | 104,201,074          | 20.1              | 17.0           | 22.0          | 27.0           |
| Small Cap US Equity        | 25,291,754           | 4.9               | 4.0            | 6.0           | 8.0            |
| Broad International Equity | 140,978,694          | 27.2              | 21.0           | 28.0          | 35.0           |
| MLPs                       | 56,386,610           | 10.9              | 10.0           | 12.5          | 15.0           |
| Diversified Hedge Funds    | 94,662,240           | 18.3              | 15.0           | 19.0          | 23.0           |
| Bank Loans                 | 61,349,414           | 11.8              | 10.0           | 12.5          | 15.0           |
| Opportunistic              | 0                    | 0.0               | 0.0            | 0.0           | 0.0            |
| Cash Equivalents           | 35,174,536           | 6.8               | 0.0            | 0.0           | 0.0            |
| Total                      | 518,044,323          | 100.0             | --             | 100.0         | --             |

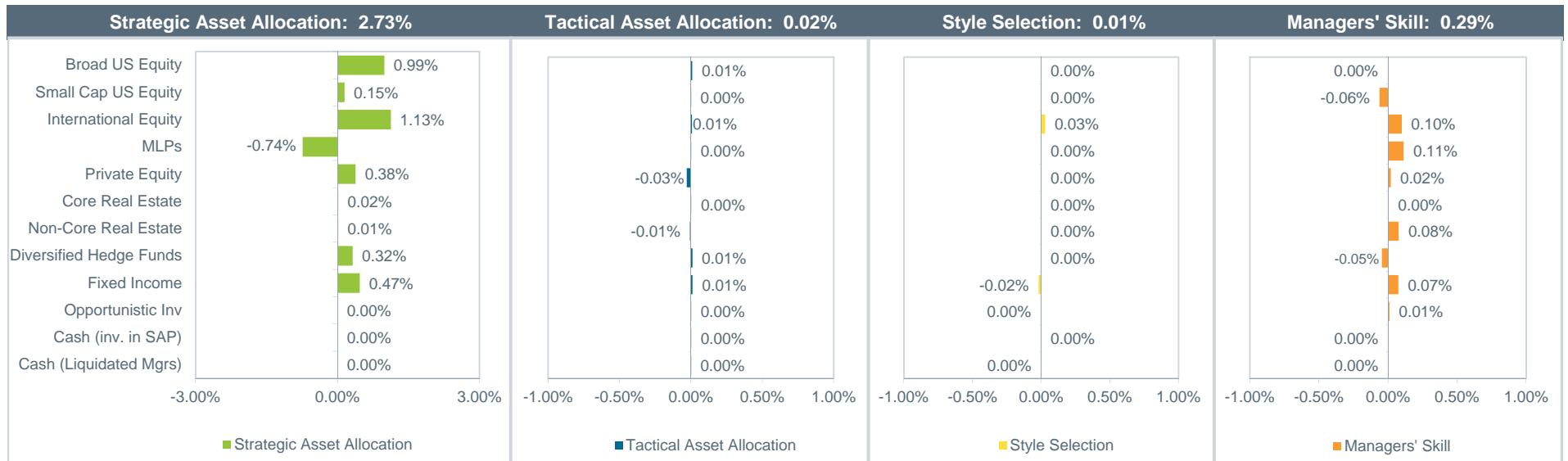
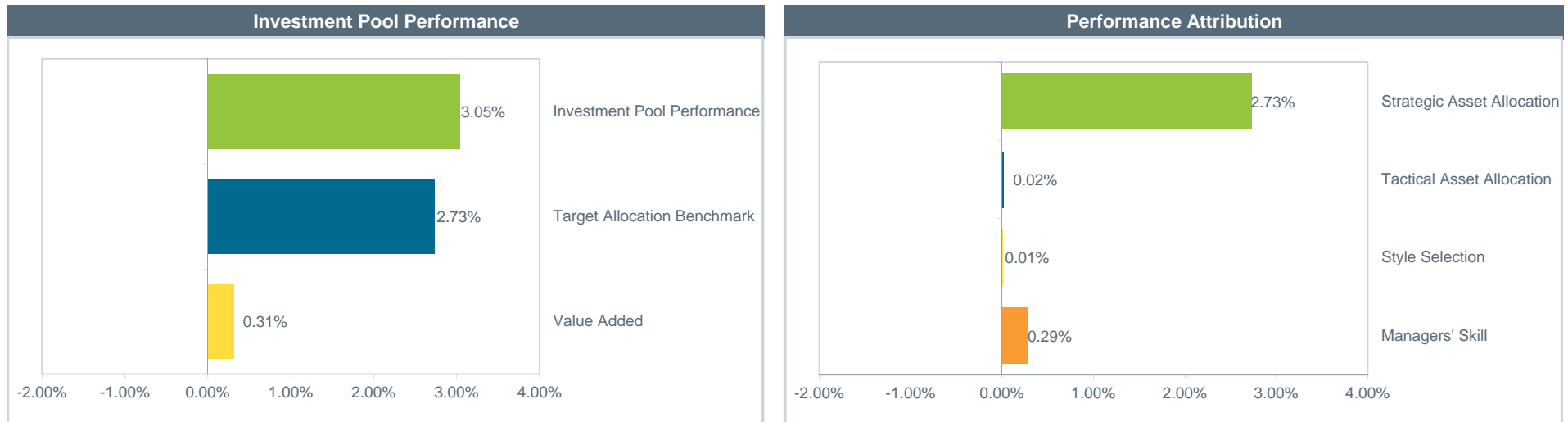


|                   | Market Value<br>(\$) | Allocation<br>(%) | Minimum<br>(%) | Target<br>(%) | Maximum<br>(%) |
|-------------------|----------------------|-------------------|----------------|---------------|----------------|
| Core Fixed Income | 502,823,810          | 100.0             | 100.0          | 100.0         | 100.0          |
| Total             | 502,823,810          | 100.0             | --             | 100.0         | --             |



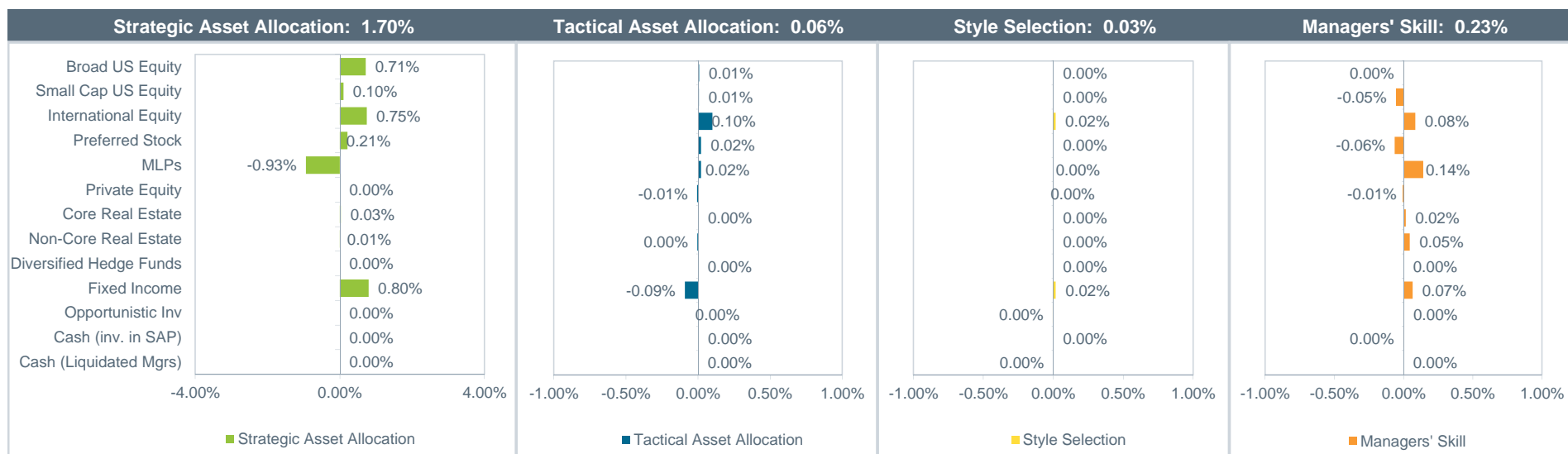
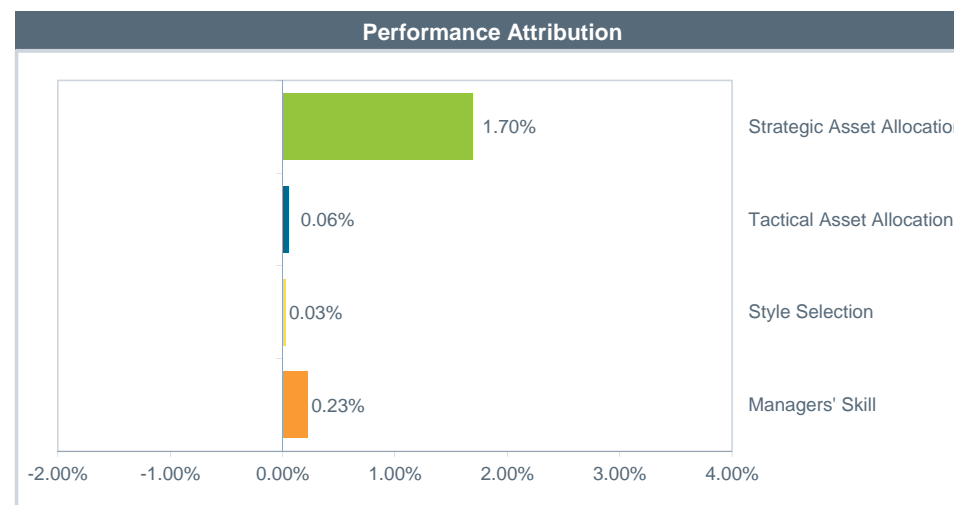
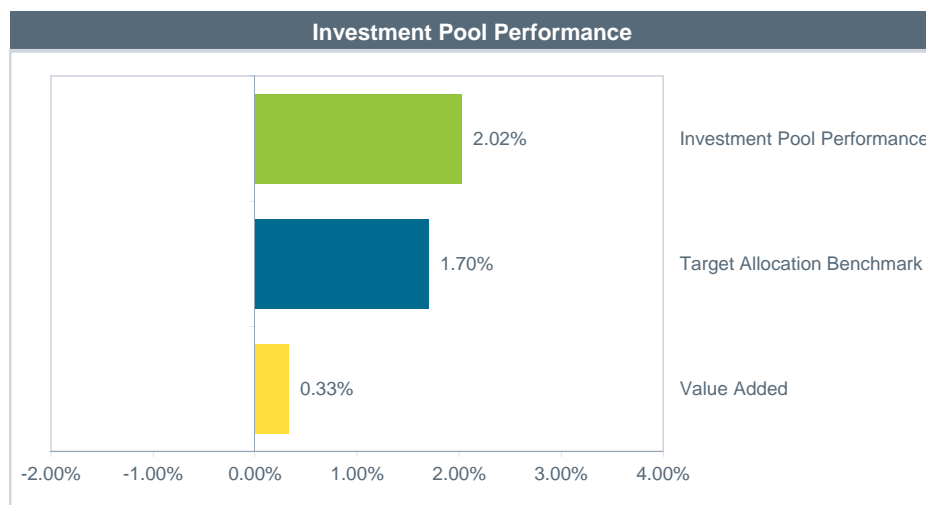
|                           | Market Value<br>(\$) | Allocation<br>(%) | Minimum<br>(%) | Target<br>(%) | Maximum<br>(%) |
|---------------------------|----------------------|-------------------|----------------|---------------|----------------|
| Low Duration Fixed Income | 498,291,345          | 100.0             | 100.0          | 100.0         | 100.0          |
| Total                     | 498,291,345          | 100.0             | --             | 100.0         | --             |

**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Permanent Mineral Trust Fund vs. Target Allocation Index**  
**1 Quarter Ending September 30, 2020**



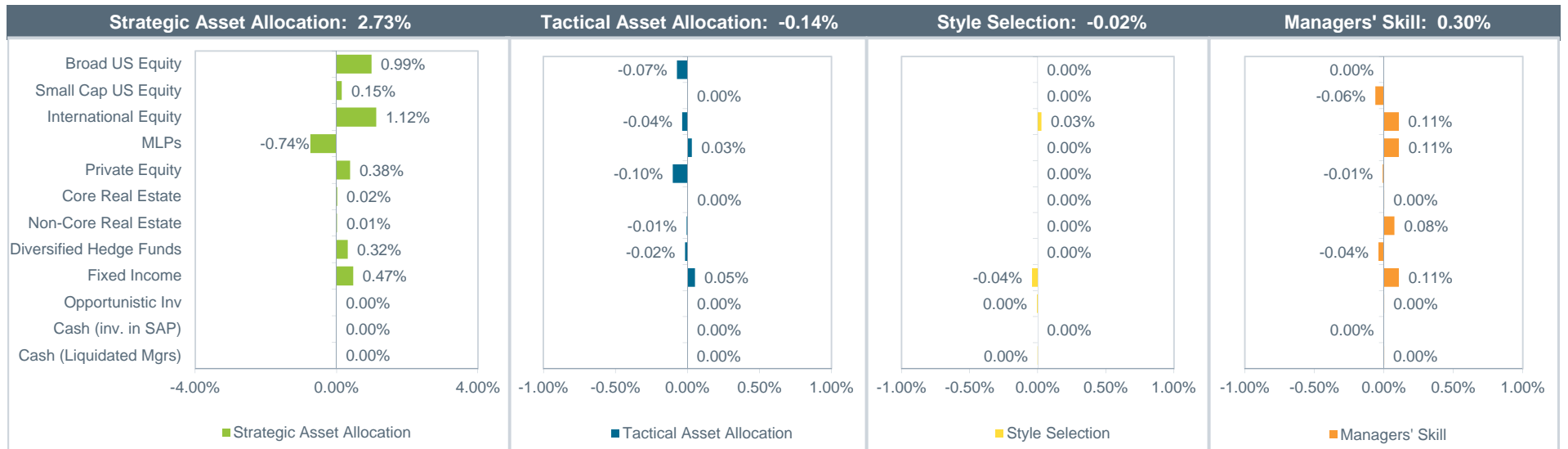
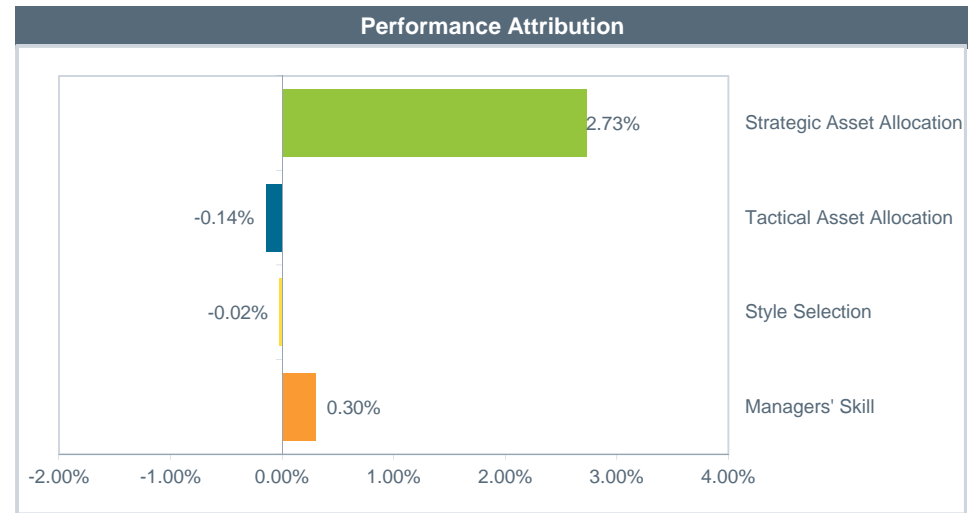
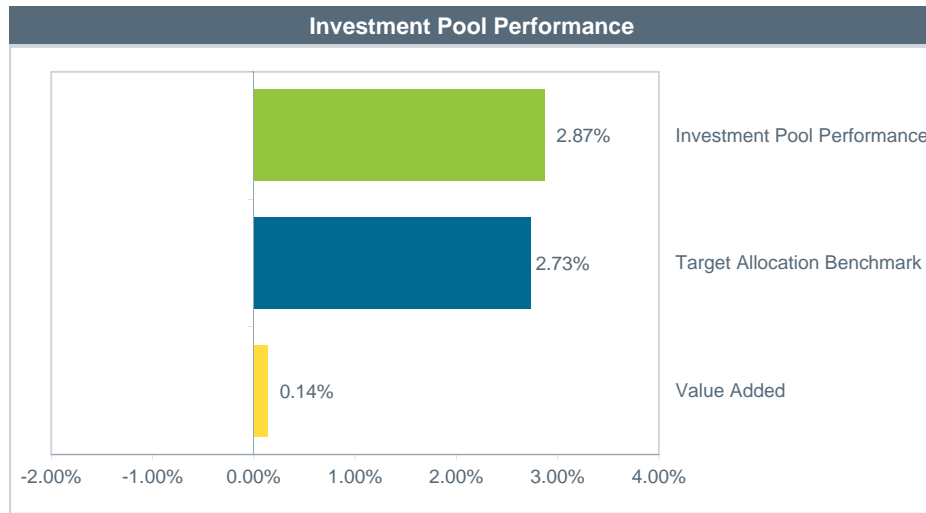
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index.  
 Actual Allocation 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 September 30, 2020**



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net 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.

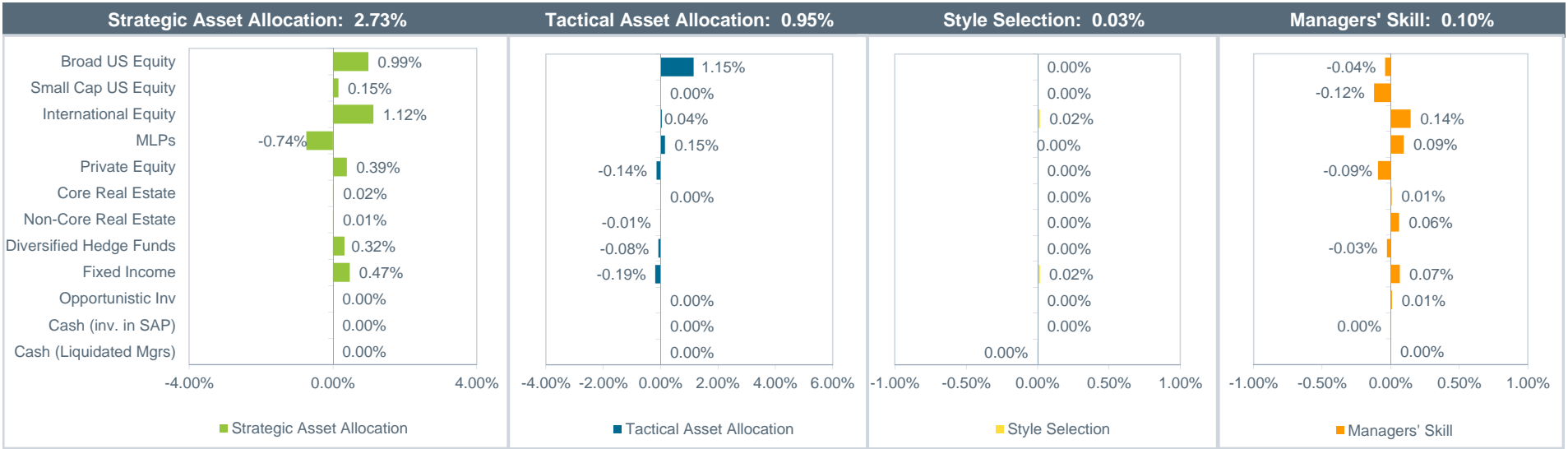
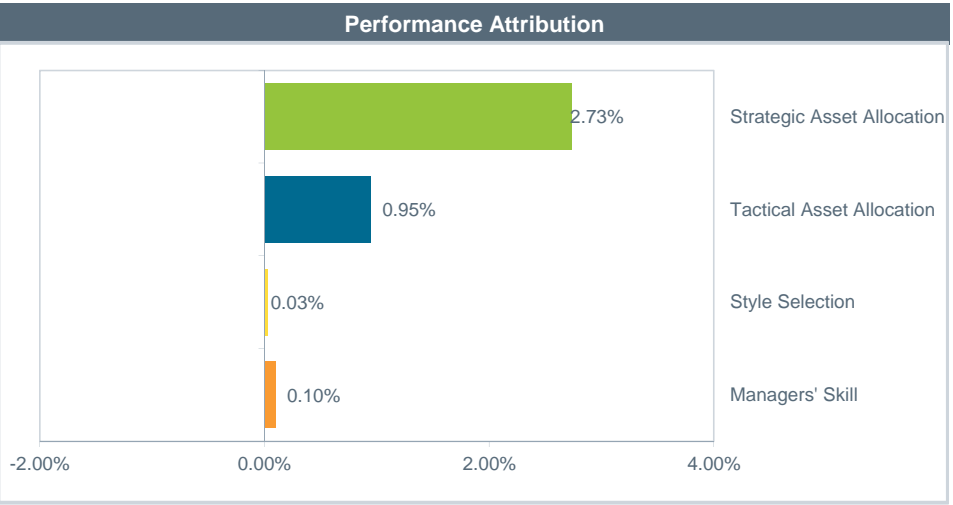
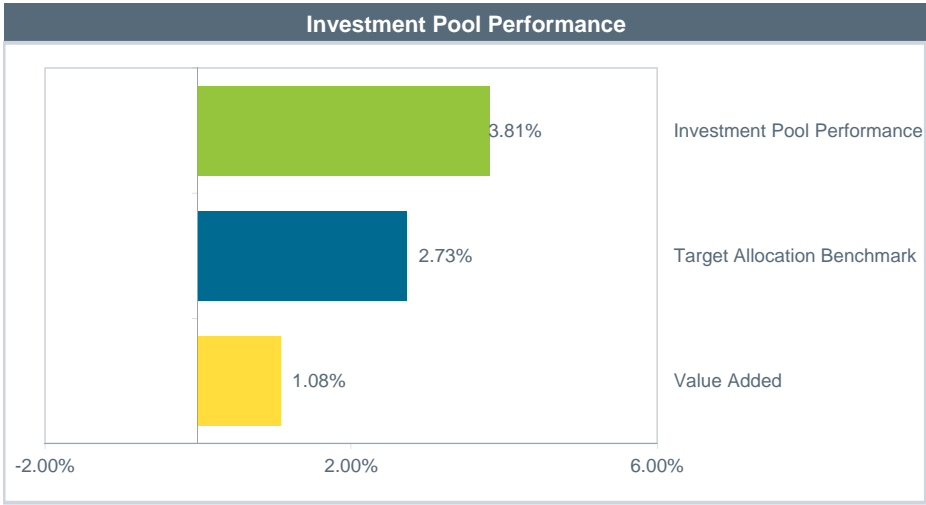
**Wyoming State Treasurer's Office**  
**Pool Attribution - IDP Methodology**  
**Permanent Land Fund vs. Target Allocation Index**  
**1 Quarter Ending September 30, 2020**



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net 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.

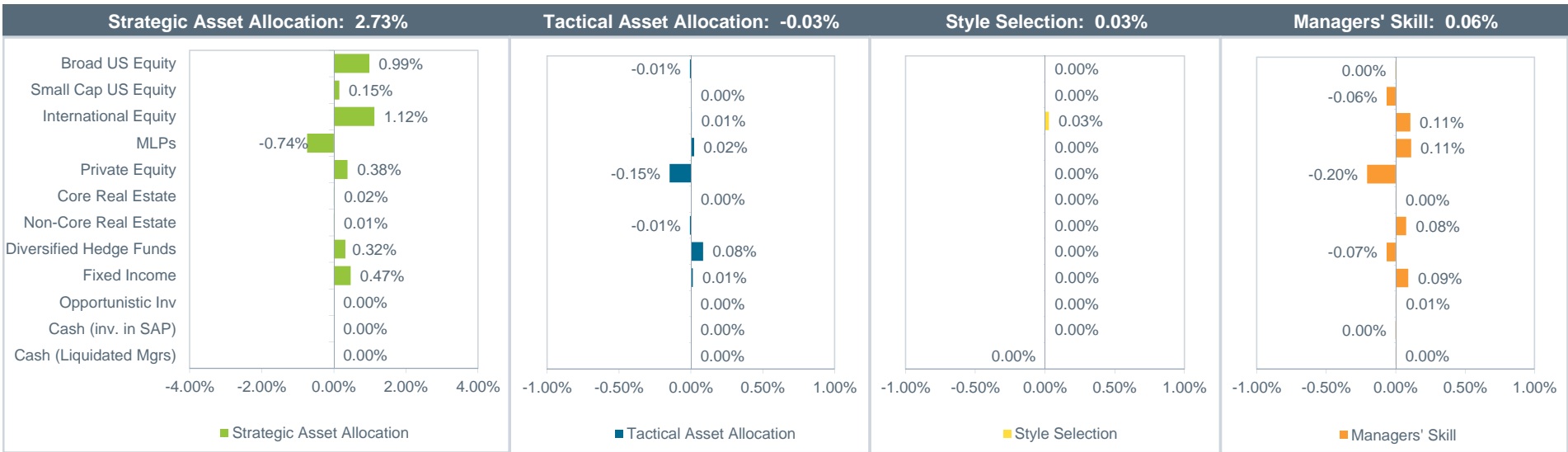
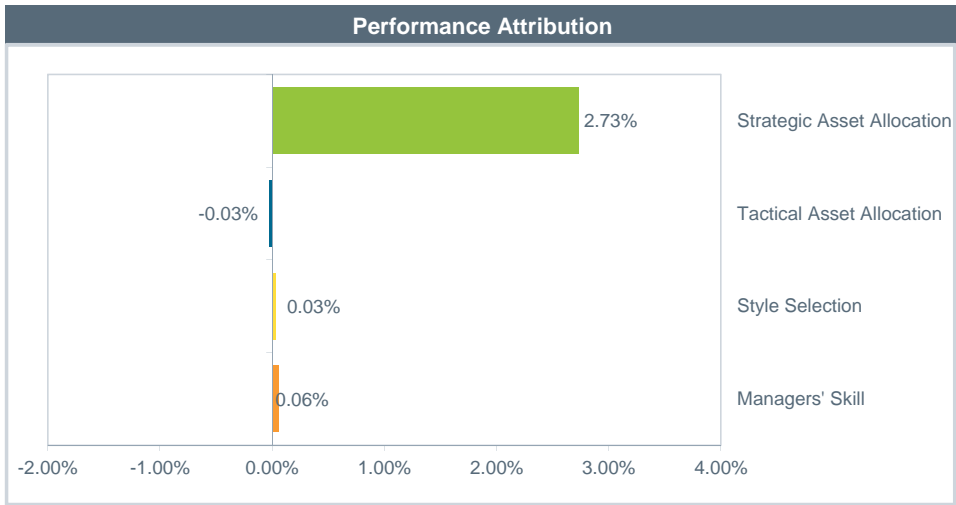
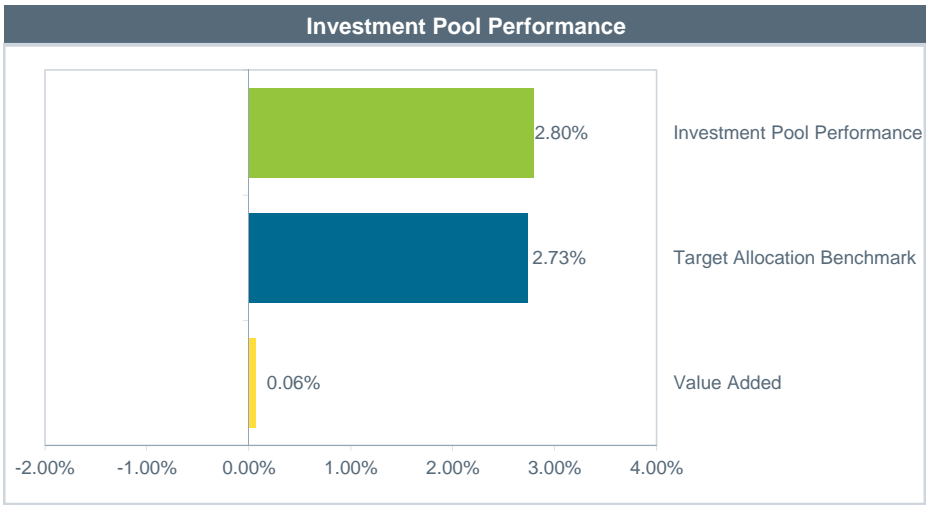


Wyoming State Treasurer's Office  
Pool Attribution - IDP Methodology  
University Permanent Land Fund vs. Target Allocation Index  
1 Quarter Ending September 30, 2020



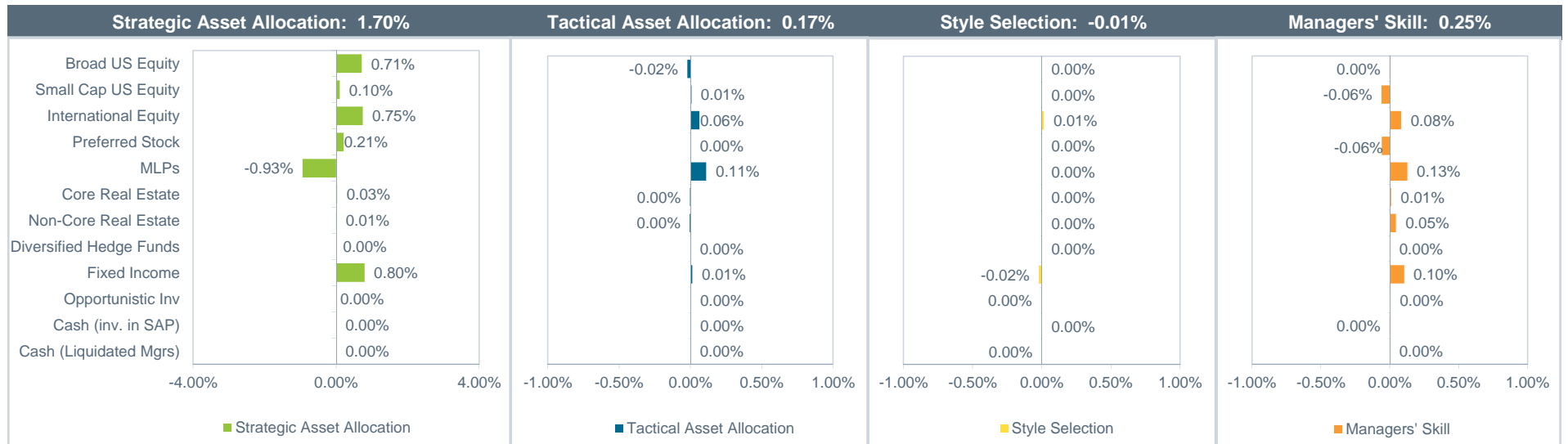
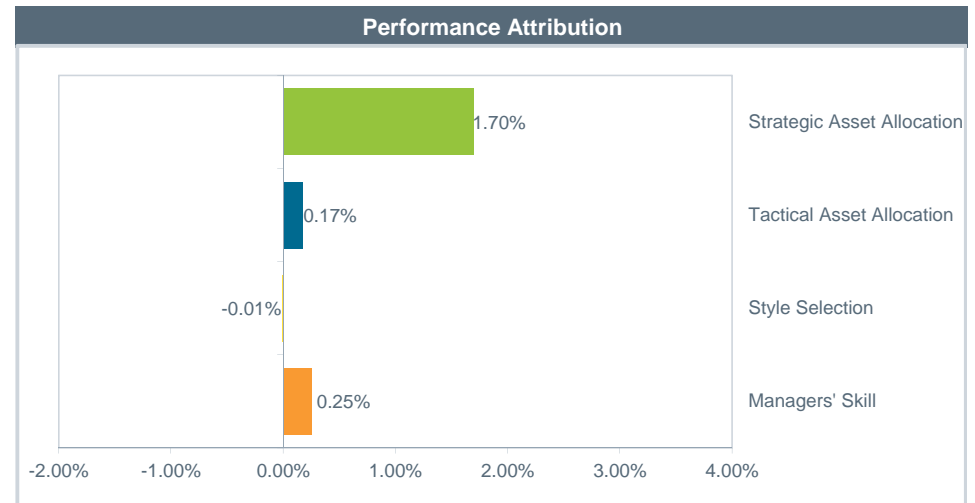
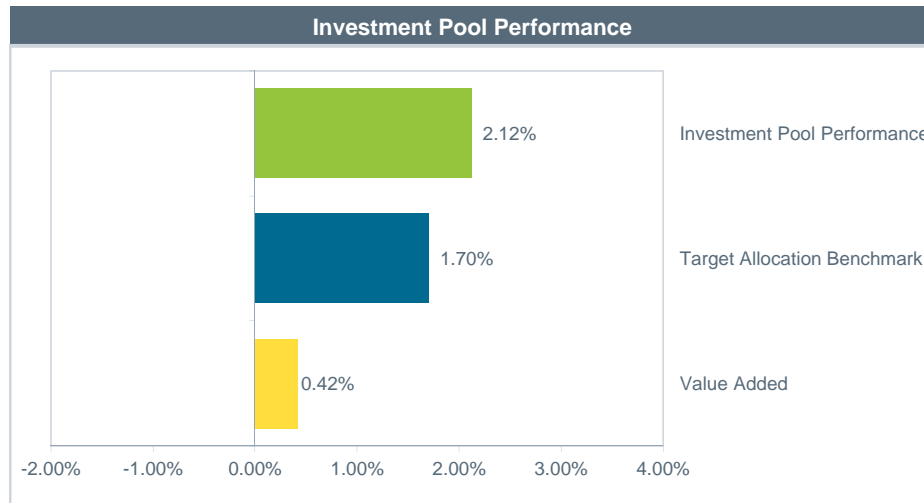
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index.  
Actual Allocation 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 September 30, 2020



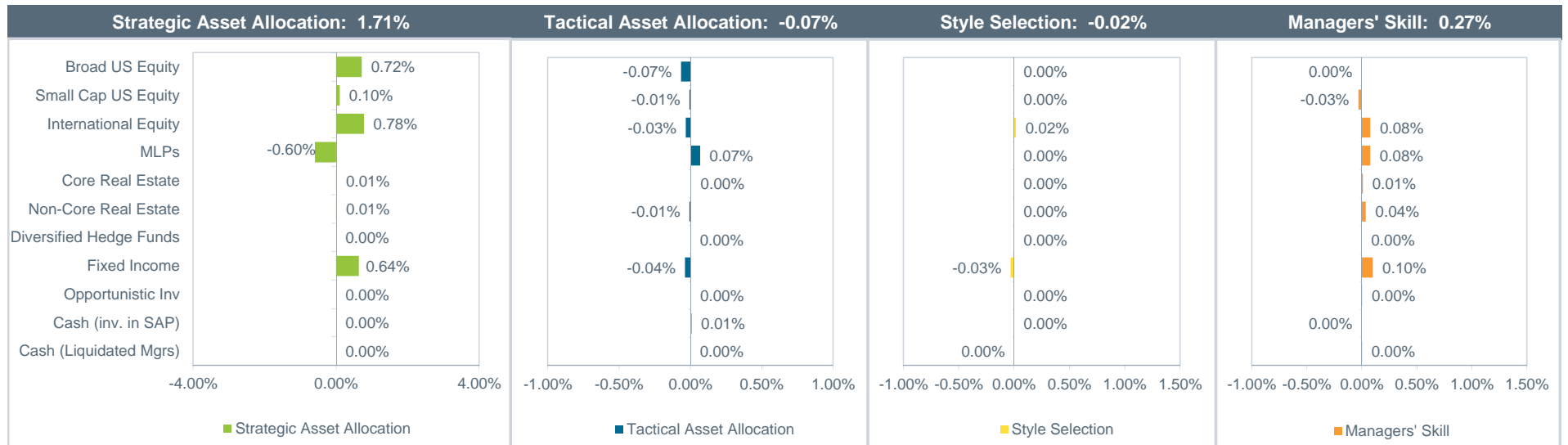
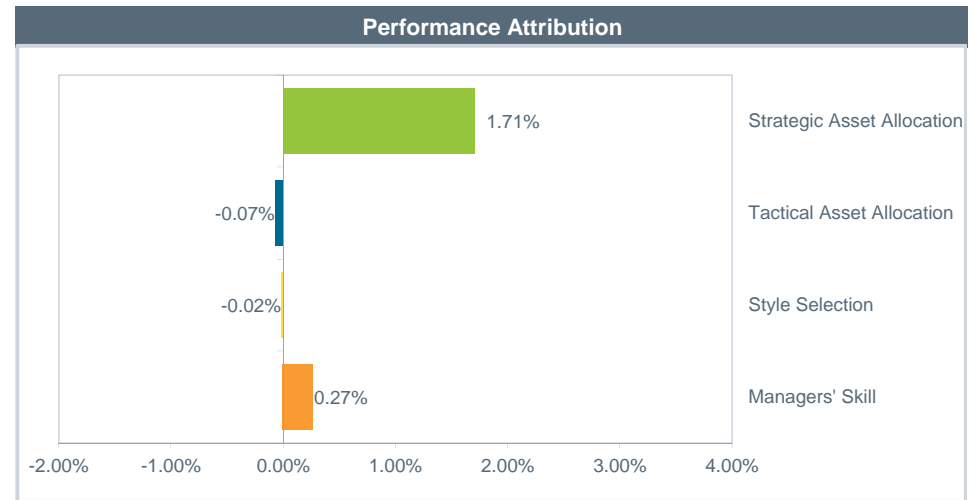
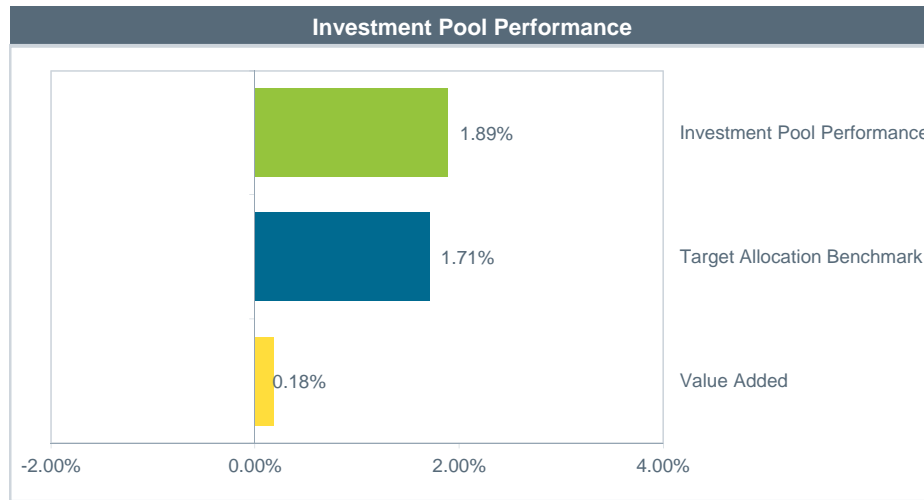
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index.  
Actual Allocation 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 September 30, 2020**



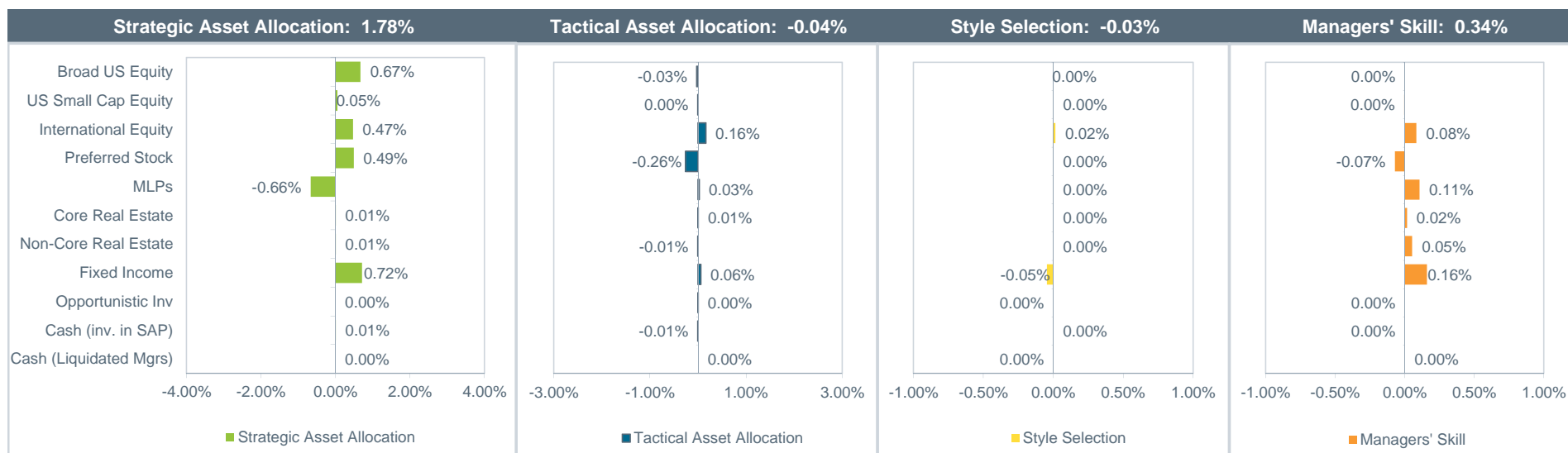
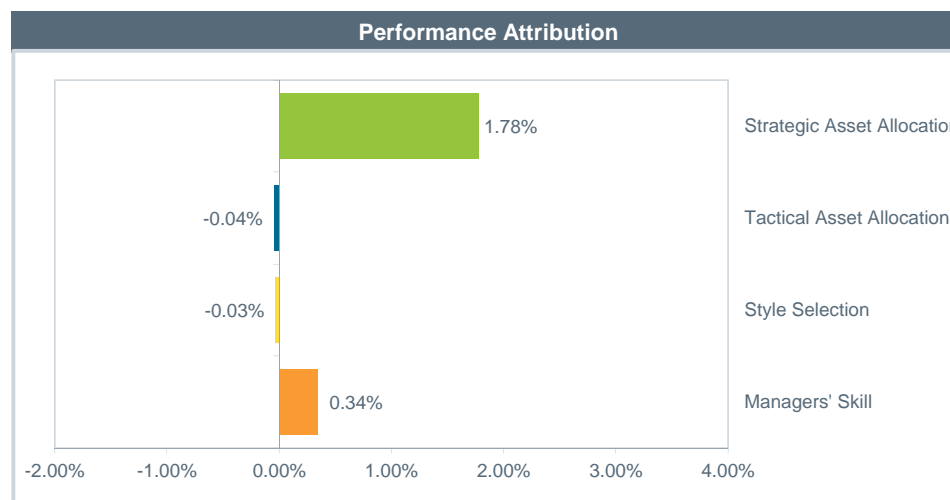
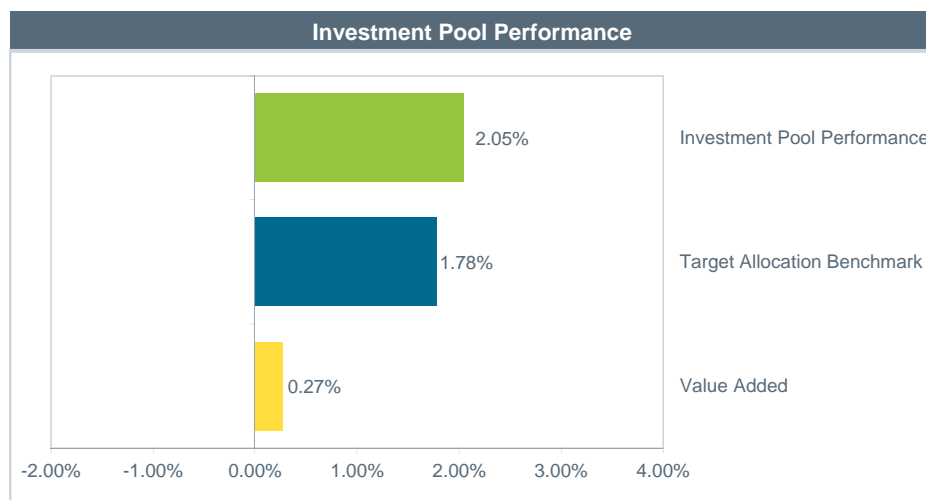
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation 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 September 30, 2020**



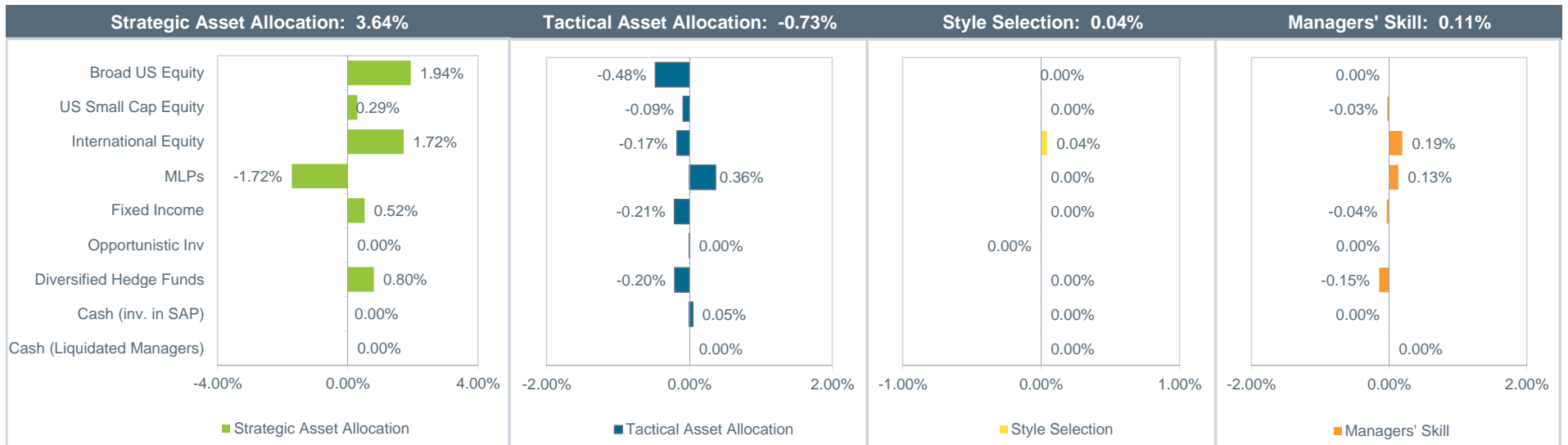
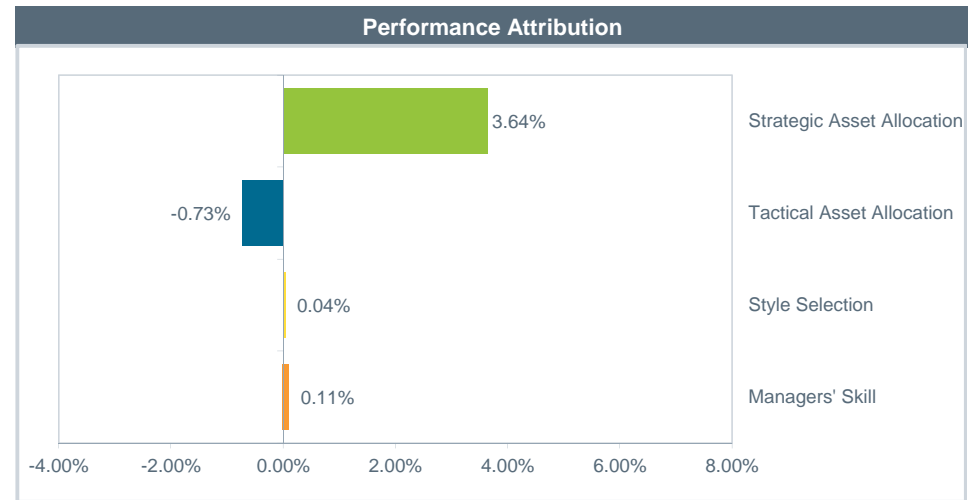
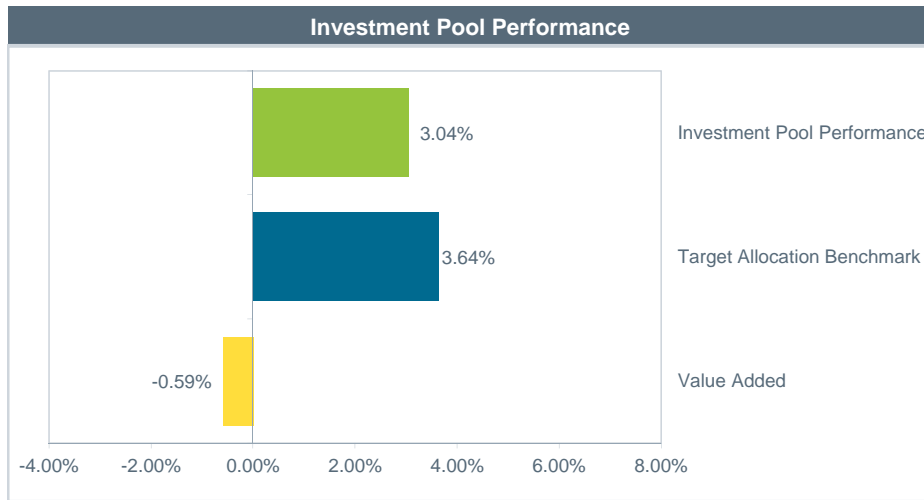
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation 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  
Pool A vs. Target Allocation Index  
1 Quarter Ending September 30, 2020



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net 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**  
**LSRA LT Reserve vs. Target Allocation Index**  
**1 Quarter Ending September 30, 2020**



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net 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.



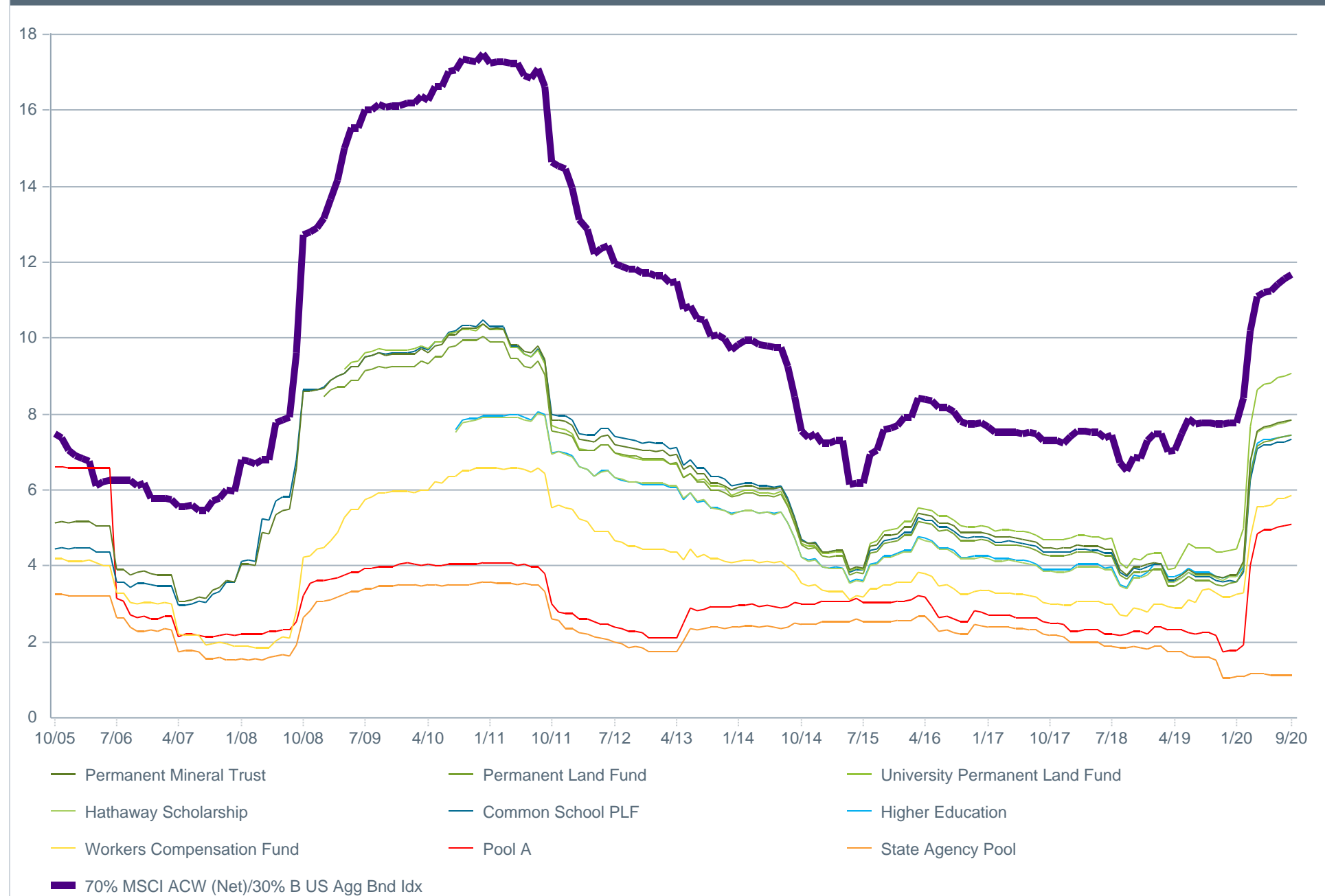
Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of September 30, 2020

|   | Allocation            |              | Performance (%) |            |             |             |            |            |            |            |              |                   |
|---|-----------------------|--------------|-----------------|------------|-------------|-------------|------------|------------|------------|------------|--------------|-------------------|
|   | Market Value (\$)     | %            | QTD             | FYTD       | CYTD        | 1 Year      | 3 Years    | 5 Years    | 7 Years    | 10 Years   | Since Incep. | Inception Date    |
| <b>Permanent Funds</b>                      | <b>15,826,840,847</b> | <b>70.8</b>  | <b>2.6</b>      | <b>2.6</b> | <b>1.6</b>  | <b>4.6</b>  | <b>4.6</b> | <b>5.9</b> | <b>5.1</b> | <b>5.7</b> | <b>6.0</b>   | <b>07/01/2002</b> |
| <b>Permanent Mineral Trust</b>              | <b>8,228,118,237</b>  | <b>36.8</b>  | <b>3.0</b>      | <b>3.0</b> | <b>0.9</b>  | <b>4.4</b>  | <b>4.3</b> | <b>5.8</b> | <b>5.1</b> | <b>5.8</b> | <b>5.9</b>   | <b>06/01/2001</b> |
| PMTF - Total Fund Index                     |                       |              | 2.7             | 2.7        | 0.2         | 3.8         | 4.2        | 5.6        | 5.1        | 5.6        | 5.3          |                   |
| Difference                                  |                       |              | 0.3             | 0.3        | 0.7         | 0.6         | 0.1        | 0.2        | 0.0        | 0.2        | 0.6          |                   |
| <b>Common School Permanent Land Fund</b>    | <b>4,177,316,695</b>  | <b>18.7</b>  | <b>2.0</b>      | <b>2.0</b> | <b>0.7</b>  | <b>3.2</b>  | <b>4.0</b> | <b>5.7</b> | <b>5.1</b> | <b>5.8</b> | <b>6.0</b>   | <b>06/01/2001</b> |
| Common School - Total Fund Index            |                       |              | 1.7             | 1.7        | -0.2        | 2.1         | 3.7        | 5.4        | 5.0        | 5.6        | 5.2          |                   |
| Difference                                  |                       |              | 0.3             | 0.3        | 0.9         | 1.1         | 0.3        | 0.3        | 0.1        | 0.2        | 0.8          |                   |
| <b>Permanent Land Fund</b>                  | <b>208,629,348</b>    | <b>0.9</b>   | <b>2.9</b>      | <b>2.9</b> | <b>1.0</b>  | <b>4.5</b>  | <b>4.3</b> | <b>5.8</b> | <b>5.1</b> | <b>5.7</b> | <b>5.2</b>   | <b>02/01/2006</b> |
| PLF - Total Fund Index                      |                       |              | 2.7             | 2.7        | 0.2         | 3.8         | 4.2        | 5.5        | 5.0        | 5.5        | 4.8          |                   |
| Difference                                  |                       |              | 0.2             | 0.2        | 0.8         | 0.7         | 0.1        | 0.3        | 0.1        | 0.2        | 0.4          |                   |
| <b>University Permanent Land Fund</b>       | <b>25,272,826</b>     | <b>0.1</b>   | <b>3.8</b>      | <b>3.8</b> | <b>1.2</b>  | <b>4.3</b>  | <b>4.7</b> | <b>6.3</b> | <b>5.5</b> | <b>5.9</b> | <b>5.1</b>   | <b>05/01/2006</b> |
| University PLF - Total Fund Index           |                       |              | 2.7             | 2.7        | 0.2         | 3.3         | 4.5        | 6.1        | 5.4        | 5.8        | 5.0          |                   |
| Difference                                  |                       |              | 1.1             | 1.1        | 1.0         | 1.0         | 0.2        | 0.2        | 0.1        | 0.1        | 0.1          |                   |
| <b>Hathaway Scholarship</b>                 | <b>602,047,494</b>    | <b>2.7</b>   | <b>2.8</b>      | <b>2.8</b> | <b>0.8</b>  | <b>4.2</b>  | <b>4.0</b> | <b>5.3</b> | <b>4.7</b> | <b>5.2</b> | <b>5.2</b>   | <b>09/01/2007</b> |
| Hathaway - Total Fund Index                 |                       |              | 2.7             | 2.7        | 0.2         | 3.6         | 3.9        | 5.2        | 4.8        | 5.1        | 4.9          |                   |
| Difference                                  |                       |              | 0.1             | 0.1        | 0.6         | 0.6         | 0.1        | 0.1        | -0.1       | 0.1        | 0.3          |                   |
| <b>Higher Education</b>                     | <b>120,770,651</b>    | <b>0.5</b>   | <b>2.1</b>      | <b>2.1</b> | <b>0.0</b>  | <b>2.4</b>  | <b>3.5</b> | <b>5.0</b> | <b>4.5</b> | <b>5.1</b> | <b>5.0</b>   | <b>09/01/2007</b> |
| Higher Education - Total Fund Index         |                       |              | 1.7             | 1.7        | -0.2        | 2.1         | 3.5        | 4.9        | 4.6        | 5.0        | 4.8          |                   |
| Difference                                  |                       |              | 0.4             | 0.4        | 0.2         | 0.3         | 0.0        | 0.1        | -0.1       | 0.1        | 0.2          |                   |
| <b>Workers Compensation Fund</b>            | <b>2,464,685,597</b>  | <b>11.0</b>  | <b>1.9</b>      | <b>1.9</b> | <b>6.4</b>  | <b>7.8</b>  | <b>6.8</b> | <b>6.4</b> | <b>5.4</b> | <b>5.4</b> | <b>5.8</b>   | <b>06/01/2001</b> |
| Workers Comp - Total Fund Index             |                       |              | 1.7             | 1.7        | 5.1         | 6.5         | 6.4        | 6.0        | 5.3        | 5.2        | 5.4          |                   |
| Difference                                  |                       |              | 0.2             | 0.2        | 1.3         | 1.3         | 0.4        | 0.4        | 0.1        | 0.2        | 0.4          |                   |
| <b>Non-Permanent Funds</b>                  | <b>6,529,861,073</b>  | <b>29.2</b>  | <b>0.5</b>      | <b>0.5</b> | <b>1.9</b>  | <b>2.8</b>  | <b>2.8</b> | <b>2.8</b> | <b>2.6</b> | <b>2.6</b> | <b>3.8</b>   | <b>07/01/2002</b> |
| <b>Pool A</b>                               | <b>255,399,451</b>    | <b>1.1</b>   | <b>2.0</b>      | <b>2.0</b> | <b>3.2</b>  | <b>4.8</b>  | <b>4.0</b> | <b>3.8</b> | <b>3.4</b> | <b>3.4</b> | <b>4.3</b>   | <b>01/01/2000</b> |
| Pool A - Total Fund Index                   |                       |              | 1.8             | 1.8        | 1.9         | 3.5         | 3.3        | 3.1        | 3.2        | 3.1        | 4.9          |                   |
| Difference                                  |                       |              | 0.2             | 0.2        | 1.3         | 1.3         | 0.7        | 0.7        | 0.2        | 0.3        | -0.6         |                   |
| <b>LSRA</b>                                 | <b>1,519,159,478</b>  | <b>6.8</b>   | <b>1.6</b>      | <b>1.6</b> | <b>0.6</b>  | <b>2.6</b>  | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>2.5</b>   | <b>07/01/2019</b> |
| LSRA - Total Fund Index                     |                       |              | 1.6             | 1.6        | 1.2         | 3.4         | N/A        | N/A        | N/A        | N/A        | 2.9          |                   |
| Difference                                  |                       |              | 0.0             | 0.0        | -0.6        | -0.8        | N/A        | N/A        | N/A        | N/A        | -0.4         |                   |
| <b>LSRA Long Term Reserve</b>               | <b>518,044,323</b>    | <b>2.3</b>   | <b>3.0</b>      | <b>3.0</b> | <b>-7.2</b> | <b>-3.7</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>-2.5</b>  | <b>07/01/2019</b> |
| LSRA Long Term Reserve - Total Fund Index   |                       |              | 3.6             | 3.6        | -5.3        | -1.5        | N/A        | N/A        | N/A        | N/A        | -0.9         |                   |
| Difference                                  |                       |              | -0.6            | -0.6       | -1.9        | -2.2        | N/A        | N/A        | N/A        | N/A        | -1.6         |                   |
| <b>LSRA Intermediate Term Reserve</b>       | <b>502,823,810</b>    | <b>2.2</b>   | <b>1.2</b>      | <b>1.2</b> | <b>8.2</b>  | <b>8.3</b>  | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>9.0</b>   | <b>08/01/2019</b> |
| LSRA Int Term Reserve - Total Fund Index    |                       |              | 0.6             | 0.6        | 6.8         | 7.0         | N/A        | N/A        | N/A        | N/A        | 7.8          |                   |
| Difference                                  |                       |              | 0.6             | 0.6        | 1.4         | 1.3         | N/A        | N/A        | N/A        | N/A        | 1.2          |                   |
| <b>LSRA Short Term Reserve</b>              | <b>498,291,345</b>    | <b>2.2</b>   | <b>0.1</b>      | <b>0.1</b> | <b>3.1</b>  | <b>N/A</b>  | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>3.1</b>   | <b>01/01/2020</b> |
| LSRA Short Term Reserve - Total Fund Index  |                       |              | 0.1             | 0.1        | 3.1         | N/A         | N/A        | N/A        | N/A        | N/A        | 3.1          |                   |
| Difference                                  |                       |              | 0.0             | 0.0        | 0.0         | N/A         | N/A        | N/A        | N/A        | N/A        | 0.0          |                   |
| <b>State Agency Pool</b>                    | <b>4,755,302,143</b>  | <b>21.3</b>  | <b>0.2</b>      | <b>0.2</b> | <b>2.7</b>  | <b>3.1</b>  | <b>2.9</b> | <b>2.9</b> | <b>2.7</b> | <b>2.7</b> | <b>3.9</b>   | <b>06/01/2001</b> |
| State Agency Pool - Actual Allocation Index |                       |              | 0.2             | 0.2        | 2.6         | 3.0         | 2.6        | 2.6        | 2.7        | 2.6        | 3.8          |                   |
| Difference                                  |                       |              | 0.0             | 0.0        | 0.1         | 0.1         | 0.3        | 0.3        | 0.0        | 0.1        | 0.1          |                   |
| <b>Total Fund</b>                           | <b>22,356,701,920</b> | <b>100.0</b> | <b>1.9</b>      | <b>1.9</b> | <b>1.4</b>  | <b>3.8</b>  | <b>4.0</b> | <b>5.0</b> | <b>4.4</b> | <b>4.8</b> | <b>5.4</b>   | <b>10/01/1996</b> |
| Wyoming State Total Fund Index              |                       |              | 1.7             | 1.7        | 1.0         | 3.4         | 3.9        | 4.7        | 4.4        | 4.6        | 5.3          |                   |
| Difference                                  |                       |              | 0.2             | 0.2        | 0.4         | 0.4         | 0.1        | 0.3        | 0.0        | 0.2        | 0.1          |                   |

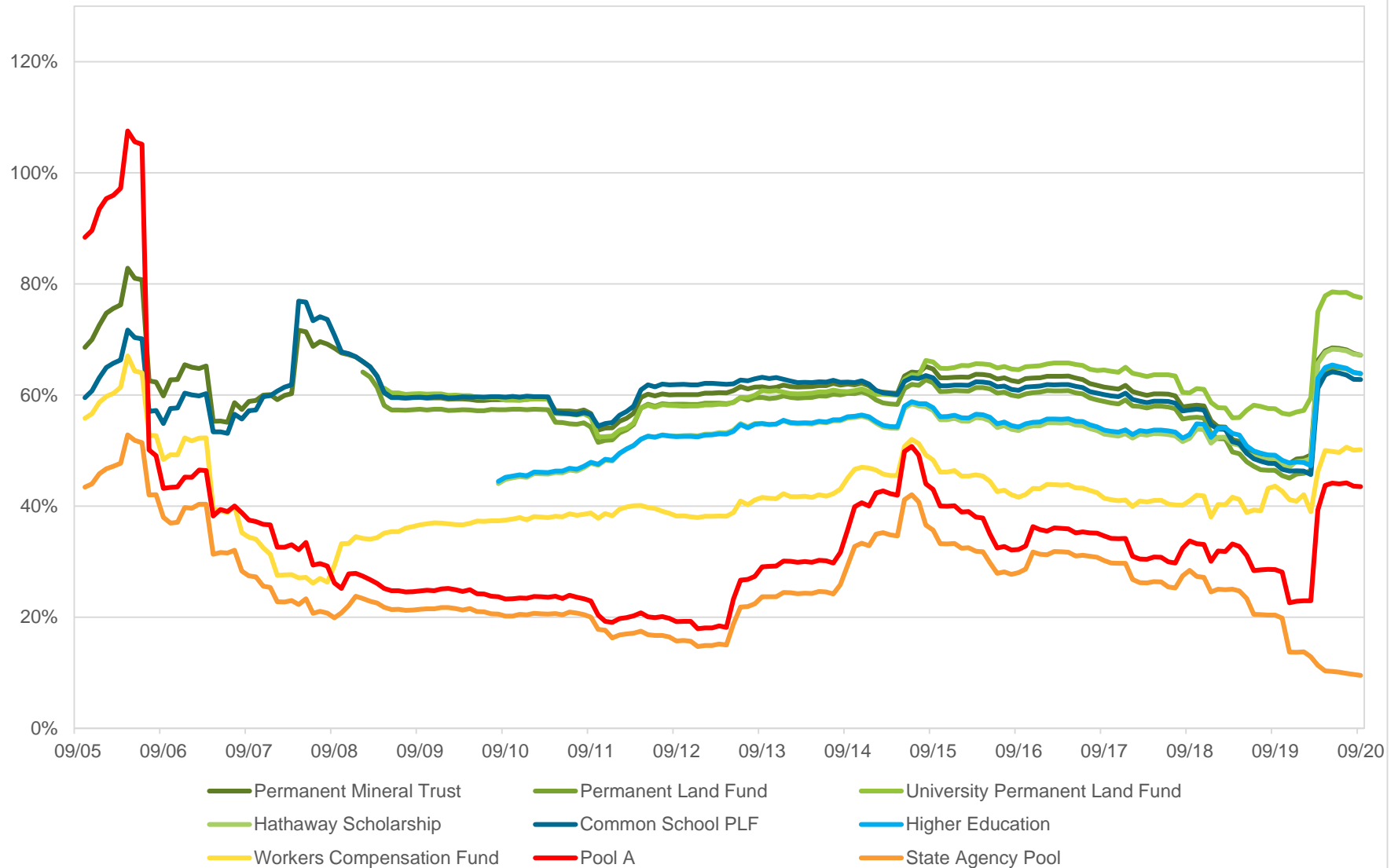
Performance shown is net of fees. Wyoming State Treasurer's Office fiscal year ends on June 30th.

## Standard Deviation



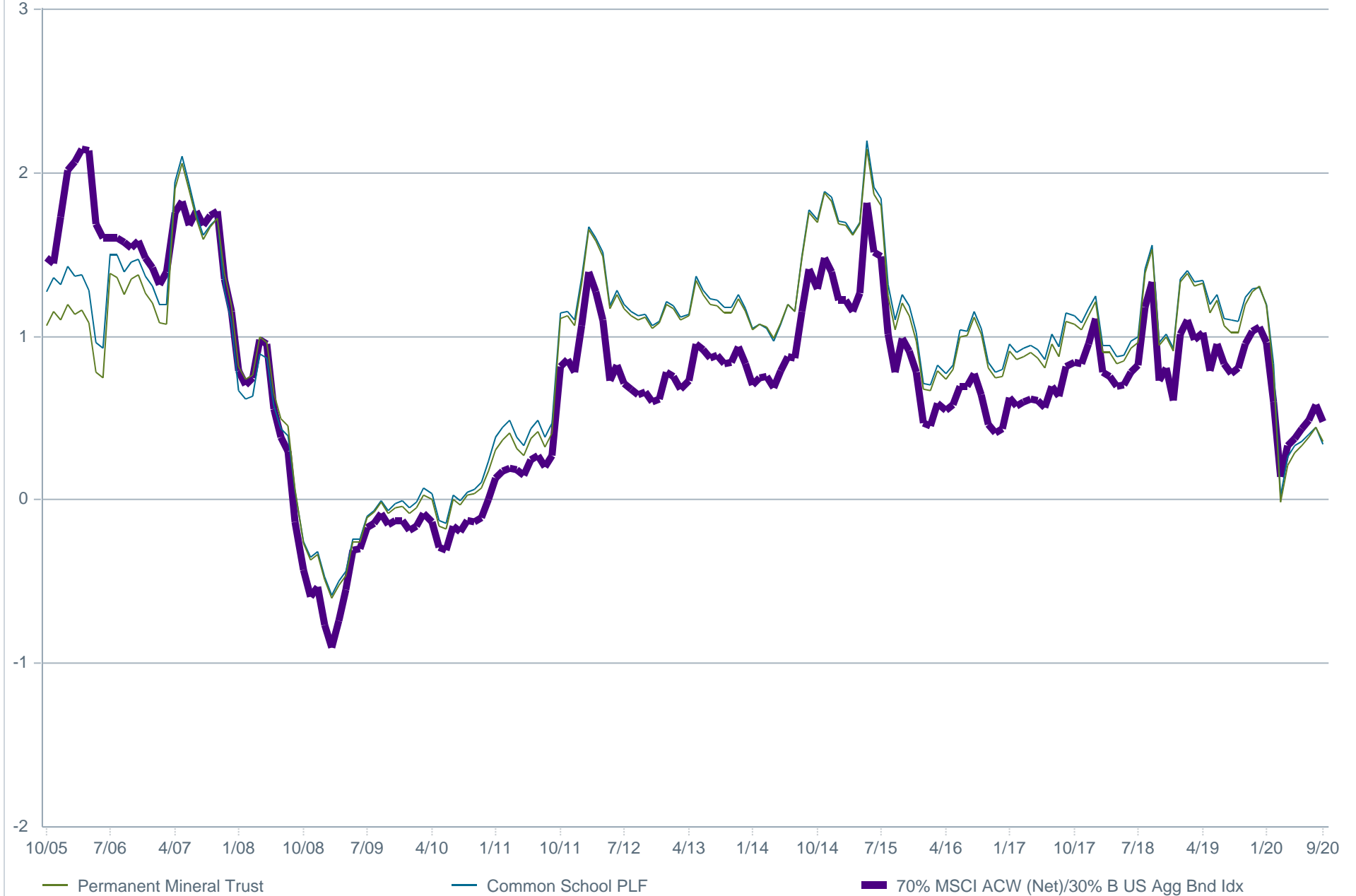
Performance shown is net of fees. Calculation is based on monthly periodicity.

## Volatility as a Percentage of 70% MSCI ACW / 30% BB US Agg Index



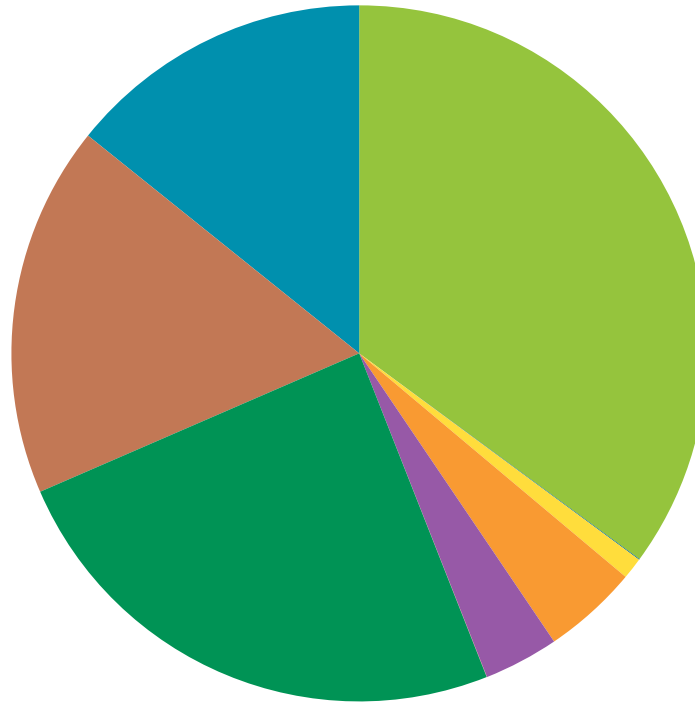
Performance shown is net of fees. Calculation is based on monthly periodicity.

## Sharpe Ratio



Performance shown is net of fees. Calculation is based on monthly periodicity.

September 30, 2020 : \$4,451,112,733



|                           | Market Value<br>(\$) | Allocation<br>(%) |
|---------------------------|----------------------|-------------------|
| State Street All Cap      | 1,561,109,392        | 35.07             |
| UW Portfolio Mgmt Program | 1,500,094            | 0.03              |
| State Street Russell 2000 | 44,282,290           | 0.99              |
| Van Borkom                | 197,114,476          | 4.43              |
| BlackRock Small Cap       | 154,805,009          | 3.48              |
| Internal Small Cap        | 390,416              | 0.01              |
| Northern Trust            | 1,089,533,156        | 24.48             |
| Arrowstreet               | 768,653,266          | 17.27             |
| Harding Loevner           | 633,724,634          | 14.24             |

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

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of September 30, 2020

|                                      | Allocation           |              | Performance (%) |             |               |              |              |              |              |             |              |              |                   |
|--------------------------------------|----------------------|--------------|-----------------|-------------|---------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|-------------------|
|                                      | Market Value (\$)    | %            | QTD             | FYTD        | CYTD          | 1 Year       | 3 Years      | 5 Years      | 7 Years      | 10 Years    | 2019         | Since Incep. | Inception Date    |
| <b>All Cap US Equity Composite</b>   | <b>1,561,109,392</b> | <b>35.07</b> | <b>8.92</b>     | <b>8.92</b> | <b>4.82</b>   | <b>13.74</b> | <b>10.79</b> | <b>12.72</b> | <b>N/A</b>   | <b>N/A</b>  | <b>30.40</b> | <b>11.20</b> | <b>11/01/2014</b> |
| All Cap US Equity Custom Index       |                      |              | 8.93            | 8.93        | 5.55          | 15.15        | 11.69        | 13.72        | 12.13        | 13.50       | 31.02        | 10.87        |                   |
| Difference                           |                      |              | -0.01           | -0.01       | -0.73         | -1.41        | -0.90        | -1.00        | N/A          | N/A         | -0.62        | 0.33         |                   |
| <b>State Street All Cap</b>          | <b>1,561,109,392</b> | <b>35.07</b> | <b>8.92</b>     | <b>8.92</b> | <b>4.82</b>   | <b>13.74</b> | <b>11.20</b> | <b>13.32</b> | <b>N/A</b>   | <b>N/A</b>  | <b>30.29</b> | <b>10.34</b> | <b>01/01/2015</b> |
| State Street All Cap Custom Index    |                      |              | 8.93            | 8.93        | 4.91          | 13.81        | 11.10        | 13.29        | 11.82        | 13.31       | 30.11        | 10.34        |                   |
| Difference                           |                      |              | -0.01           | -0.01       | -0.09         | -0.07        | 0.10         | 0.03         | N/A          | N/A         | 0.18         | 0.00         |                   |
| <b>UW Portfolio Mgmt Program</b>     | <b>1,500,094</b>     | <b>0.03</b>  | <b>8.26</b>     | <b>8.26</b> | <b>2.14</b>   | <b>10.39</b> | <b>7.90</b>  | <b>11.08</b> | <b>10.51</b> | <b>9.75</b> | <b>25.88</b> | <b>5.47</b>  | <b>04/01/2006</b> |
| S&P 500 Index (Cap Wtd)              |                      |              | 8.93            | 8.93        | 5.57          | 15.15        | 12.28        | 14.15        | 12.68        | 13.74       | 31.49        | 9.06         |                   |
| Difference                           |                      |              | -0.67           | -0.67       | -3.43         | -4.76        | -4.38        | -3.07        | -2.17        | -3.99       | -5.61        | -3.59        |                   |
| <b>Small Cap US Equity Composite</b> | <b>396,592,191</b>   | <b>8.91</b>  | <b>2.76</b>     | <b>2.76</b> | <b>-11.53</b> | <b>-2.75</b> | <b>-1.70</b> | <b>5.81</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>25.40</b> | <b>3.07</b>  | <b>11/01/2014</b> |
| Russell 2000 Index                   |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | 5.80         |                   |
| Difference                           |                      |              | -2.17           | -2.17       | -2.84         | -3.14        | -3.47        | -2.19        | N/A          | N/A         | -0.13        | -2.73        |                   |
| <b>State Street Russell 2000</b>     | <b>44,282,290</b>    | <b>0.99</b>  | <b>4.94</b>     | <b>4.94</b> | <b>-8.66</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>-2.19</b> | <b>11/01/2019</b> |
| Russell 2000 Index                   |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | -2.19        |                   |
| Difference                           |                      |              | 0.01            | 0.01        | 0.03          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | 0.00         |                   |
| <b>Van Berkorn</b>                   | <b>197,114,476</b>   | <b>4.43</b>  | <b>0.47</b>     | <b>0.47</b> | <b>N/A</b>    | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>-3.12</b> | <b>03/01/2020</b> |
| Russell 2000 Index                   |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | 3.01         |                   |
| Difference                           |                      |              | -4.46           | -4.46       | N/A           | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | -6.13        |                   |
| <b>BlackRock Small Cap</b>           | <b>154,805,009</b>   | <b>3.48</b>  | <b>N/A</b>      | <b>N/A</b>  | <b>N/A</b>    | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>2.51</b>  | <b>08/01/2020</b> |
| Russell 2000 Index                   |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | 2.11         |                   |
| Difference                           |                      |              | N/A             | N/A         | N/A           | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | 0.40         |                   |
| <b>Internal Small Cap</b>            | <b>390,416</b>       | <b>0.01</b>  |                 |             |               |              |              |              |              |             |              |              |                   |
| Russell 2000 Index                   |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | 4.93         |                   |
| Difference                           |                      |              | N/A             | N/A         | N/A           | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          |                   |

Performance shown is net of fees. International Equity Custom Index consists of the MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter. The All Cap US Equity Custom Index consists of the Russell 3000 Index through 02/29/2020, and the S&P 500 Index thereafter. SSGA Custom Index consists of 69% Russell 3000 Index, 24% FTSE RAFI US 1000 Index, and 7% MSCI US Min Vol Index (USD) (Gross) through 02/27/2020, State Street All Cap account performance on 02/28/2020, and the S&P 500 Index 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 September 30, 2020

|                                     | Allocation           |              | Performance (%) |             |              |             |             |             |             |             |              |              |                   |
|-------------------------------------|----------------------|--------------|-----------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------------|
|                                     | Market Value (\$)    | %            | QTD             | FYTD        | CYTD         | 1 Year      | 3 Years     | 5 Years     | 7 Years     | 10 Years    | 2019         | Since Incep. | Inception Date    |
| <b>Int'l Equity Composite</b>       | <b>2,491,911,055</b> | <b>55.98</b> | <b>6.97</b>     | <b>6.97</b> | <b>-1.66</b> | <b>7.42</b> | <b>2.60</b> | <b>7.25</b> | <b>3.89</b> | <b>4.80</b> | <b>23.33</b> | <b>5.50</b>  | <b>01/01/2004</b> |
| International Equity Custom Index   |                      |              | 6.25            | 6.25        | -5.44        | 3.00        | 1.16        | 6.23        | 3.18        | 4.00        | 21.51        | 4.87         |                   |
| Difference                          |                      |              | 0.72            | 0.72        | 3.78         | 4.42        | 1.44        | 1.02        | 0.71        | 0.80        | 1.82         | 0.63         |                   |
| <b>Northern Trust</b>               | <b>1,089,533,156</b> | <b>24.48</b> | <b>6.19</b>     | <b>6.19</b> | <b>-5.39</b> | <b>2.94</b> | <b>1.34</b> | <b>6.34</b> | <b>3.32</b> | <b>4.14</b> | <b>21.62</b> | <b>4.75</b>  | <b>08/01/2010</b> |
| MSCI ACW Ex US Index (USD) (Net)    |                      |              | 6.25            | 6.25        | -5.44        | 3.00        | 1.16        | 6.23        | 3.18        | 4.00        | 21.51        | 4.62         |                   |
| Difference                          |                      |              | -0.06           | -0.06       | 0.05         | -0.06       | 0.18        | 0.11        | 0.14        | 0.14        | 0.11         | 0.13         |                   |
| <b>Arrowstreet</b>                  | <b>768,653,266</b>   | <b>17.27</b> | <b>7.16</b>     | <b>7.16</b> | <b>-0.30</b> | <b>9.71</b> | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>22.89</b> | <b>0.95</b>  | <b>03/01/2018</b> |
| MSCI ACW Ex US IM Index (USD) (Net) |                      |              | 6.80            | 6.80        | -5.21        | 3.51        | 1.13        | 6.31        | 3.35        | 4.17        | 21.63        | -0.91        |                   |
| Difference                          |                      |              | 0.36            | 0.36        | 4.91         | 6.20        | N/A         | N/A         | N/A         | N/A         | 1.26         | 1.86         |                   |
| <b>Harding Loevner</b>              | <b>633,724,634</b>   | <b>14.24</b> | <b>8.39</b>     | <b>8.39</b> | <b>3.14</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>3.14</b>  | <b>01/01/2020</b> |
| MSCI ACW Ex US Index (USD) (Net)    |                      |              | 6.25            | 6.25        | -5.44        | 3.00        | 1.16        | 6.23        | 3.18        | 4.00        | 21.51        | -5.44        |                   |
| Difference                          |                      |              | 2.14            | 2.14        | 8.58         | N/A         | N/A         | N/A         | N/A         | N/A         | N/A          | 8.58         |                   |

Performance shown is net of fees. International Equity Custom Index consists of the MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter. The All Cap US Equity Custom Index consists of the Russell 3000 Index through 02/29/2020, and the S&P 500 Index thereafter. SSGA Custom Index consists of 69% Russell 3000 Index, 24% FTSE RAFI US 1000 Index, and 7% MSCI US Min Vol Index (USD) (Gross) through 02/27/2020, State Street All Cap account performance on 02/28/2020, and the S&P 500 Index 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 September 30, 2020

|  | Allocation           |              | Performance (%) |             |               |              |              |              |              |             |              |              |                   |
|--|----------------------|--------------|-----------------|-------------|---------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|-------------------|
|  | Market Value (\$)    | %            | QTD             | FYTD        | CYTD          | 1 Year       | 3 Years      | 5 Years      | 7 Years      | 10 Years    | 2019         | Since Incep. | Inception Date    |
| <b>All Cap US Equity Composite</b>           | <b>1,561,109,392</b> | <b>35.07</b> | <b>8.93</b>     | <b>8.93</b> | <b>4.84</b>   | <b>13.78</b> | <b>10.88</b> | <b>12.85</b> | <b>N/A</b>   | <b>N/A</b>  | <b>30.46</b> | <b>11.35</b> | <b>11/01/2014</b> |
| All Cap US Equity Custom Index               |                      |              | 8.93            | 8.93        | 5.55          | 15.15        | 11.69        | 13.72        | 12.13        | 13.50       | 31.02        | 10.87        |                   |
| Difference                                   |                      |              | 0.00            | 0.00        | -0.71         | -1.37        | -0.81        | -0.87        | N/A          | N/A         | -0.56        | 0.48         |                   |
| <b>State Street All Cap</b>                  | <b>1,561,109,392</b> | <b>35.07</b> | <b>8.93</b>     | <b>8.93</b> | <b>4.84</b>   | <b>13.78</b> | <b>11.25</b> | <b>13.36</b> | <b>N/A</b>   | <b>N/A</b>  | <b>30.34</b> | <b>10.38</b> | <b>01/01/2015</b> |
| State Street All Cap Custom Index            |                      |              | 8.93            | 8.93        | 4.91          | 13.81        | 11.10        | 13.29        | 11.82        | 13.31       | 30.11        | 10.34        |                   |
| Difference                                   |                      |              | 0.00            | 0.00        | -0.07         | -0.03        | 0.15         | 0.07         | N/A          | N/A         | 0.23         | 0.04         |                   |
| IM U.S. All Cap Equity (SA+CF) Median        |                      |              | 7.60            | 7.60        | -1.36         | 5.99         | 9.41         | 11.83        | 11.13        | 12.52       | 28.99        | 9.58         |                   |
| State Street All Cap Rank                    |                      |              | 34              | 34          | 41            | 39           | 43           | 37           | N/A          | N/A         | 44           | 44           |                   |
| <b>UW Portfolio Mgmt Program</b>             | <b>1,500,094</b>     | <b>0.03</b>  | <b>8.26</b>     | <b>8.26</b> | <b>2.14</b>   | <b>10.39</b> | <b>7.90</b>  | <b>11.08</b> | <b>10.51</b> | <b>9.75</b> | <b>25.88</b> | <b>5.47</b>  | <b>04/01/2006</b> |
| S&P 500 Index (Cap Wtd)                      |                      |              | 8.93            | 8.93        | 5.57          | 15.15        | 12.28        | 14.15        | 12.68        | 13.74       | 31.49        | 9.06         |                   |
| Difference                                   |                      |              | -0.67           | -0.67       | -3.43         | -4.76        | -4.38        | -3.07        | -2.17        | -3.99       | -5.61        | -3.59        |                   |
| IM U.S. Large Cap Core Equity (SA+CF) Median |                      |              | 8.01            | 8.01        | 3.33          | 12.62        | 10.67        | 13.11        | 12.14        | 13.54       | 30.00        | 9.10         |                   |
| UW Portfolio Mgmt Program Rank               |                      |              | 47              | 47          | 60            | 61           | 80           | 75           | 81           | 92          | 81           | 98           |                   |
| <b>Small Cap US Equity Composite</b>         | <b>396,592,191</b>   | <b>8.91</b>  | <b>2.89</b>     | <b>2.89</b> | <b>-11.31</b> | <b>-2.48</b> | <b>-1.38</b> | <b>6.28</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>25.62</b> | <b>3.55</b>  | <b>11/01/2014</b> |
| Russell 2000 Index                           |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | 5.80         |                   |
| Difference                                   |                      |              | -2.04           | -2.04       | -2.62         | -2.87        | -3.15        | -1.72        | N/A          | N/A         | 0.09         | -2.25        |                   |
| <b>State Street Russell 2000</b>             | <b>44,282,290</b>    | <b>0.99</b>  | <b>4.89</b>     | <b>4.89</b> | <b>-8.70</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>-2.22</b> | <b>11/01/2019</b> |
| Russell 2000 Index                           |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | -2.19        |                   |
| Difference                                   |                      |              | -0.04           | -0.04       | -0.01         | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | -0.03        |                   |
| <b>Van Berkorn</b>                           | <b>197,114,476</b>   | <b>4.43</b>  | <b>0.67</b>     | <b>0.67</b> | <b>N/A</b>    | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>-2.70</b> | <b>03/01/2020</b> |
| Russell 2000 Index                           |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | 3.01         |                   |
| Difference                                   |                      |              | -4.26           | -4.26       | N/A           | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | -5.71        |                   |
| IM U.S. Small Cap Core Equity (SA+CF) Median |                      |              | 4.81            | 4.81        | -9.93         | -2.28        | 2.37         | 8.31         | 7.68         | 11.08       | 25.11        | 2.20         |                   |
| Van Berkorn Rank                             |                      |              | 98              | 98          | N/A           | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | 88           |                   |
| <b>BlackRock Small Cap</b>                   | <b>154,805,009</b>   | <b>3.48</b>  | <b>N/A</b>      | <b>N/A</b>  | <b>N/A</b>    | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>2.61</b>  | <b>08/01/2020</b> |
| Russell 2000 Index                           |                      |              | 4.93            | 4.93        | -8.69         | 0.39         | 1.77         | 8.00         | 6.42         | 9.85        | 25.53        | 2.11         |                   |
| Difference                                   |                      |              | N/A             | N/A         | N/A           | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | 0.50         |                   |
| IM U.S. Small Cap Core Equity (SA+CF) Median |                      |              | 4.81            | 4.81        | -9.93         | -2.28        | 2.37         | 8.31         | 7.68         | 11.08       | 25.11        | 0.44         |                   |
| BlackRock Small Cap Rank                     |                      |              | N/A             | N/A         | N/A           | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | 16           |                   |

Performance shown is gross of fees. International Equity Custom Index consists of the MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter. The All Cap US Equity Custom Index consists of the Russell 3000 Index through 02/29/2020, and the S&P 500 Index thereafter. SSGA Custom Index consists of 69% Russell 3000 Index, 24% FTSE RAFI US 1000 Index, and 7% MSCI US Min Vol Index (USD) (Gross) through 02/27/2020, State Street All Cap account performance on 02/28/2020, and the S&P 500 Index 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 September 30, 2020

|  | Allocation        |             | Performance (%) |      |       |        |         |         |         |          |       |              | Inception Date |
|--|-------------------|-------------|-----------------|------|-------|--------|---------|---------|---------|----------|-------|--------------|----------------|
|  | Market Value (\$) | %           | QTD             | FYTD | CYTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | Since Incep. |                |
| <b>Internal Small Cap</b>                    | <b>390,416</b>    | <b>0.01</b> |                 |      |       |        |         |         |         |          |       |              |                |
| Russell 2000 Index                           |                   |             | 4.93            | 4.93 | -8.69 | 0.39   | 1.77    | 8.00    | 6.42    | 9.85     | 25.53 | 4.93         |                |
| Difference                                   |                   |             | N/A             | N/A  | N/A   | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | N/A          |                |
| IM U.S. Small Cap Core Equity (SA+CF) Median |                   |             | 4.81            | 4.81 | -9.93 | -2.28  | 2.37    | 8.31    | 7.68    | 11.08    | 25.11 | 4.81         |                |
| Internal Small Cap Rank                      |                   |             | N/A             | N/A  | N/A   | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | N/A          |                |

Performance shown is gross of fees. International Equity Custom Index consists of the MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter. The All Cap US Equity Custom Index consists of the Russell 3000 Index through 02/29/2020, and the S&P 500 Index thereafter. SSGA Custom Index consists of 69% Russell 3000 Index, 24% FTSE RAFI US 1000 Index, and 7% MSCI US Min Vol Index (USD) (Gross) through 02/27/2020, State Street All Cap account performance on 02/28/2020, and the S&P 500 Index 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 September 30, 2020

|                                     | Allocation           |              | Performance (%) |             |              |              |             |             |             |             |              |              |                   |
|-------------------------------------|----------------------|--------------|-----------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------------|
|                                     | Market Value (\$)    | %            | QTD             | FYTD        | CYTD         | 1 Year       | 3 Years     | 5 Years     | 7 Years     | 10 Years    | 2019         | Since Incep. | Inception Date    |
| <b>Int'l Equity Composite</b>       | <b>2,491,911,055</b> | <b>55.98</b> | <b>7.04</b>     | <b>7.04</b> | <b>-1.46</b> | <b>7.67</b>  | <b>2.80</b> | <b>7.48</b> | <b>4.13</b> | <b>5.05</b> | <b>23.55</b> | <b>5.70</b>  | <b>01/01/2004</b> |
| International Equity Custom Index   |                      |              | 6.25            | 6.25        | -5.44        | 3.00         | 1.16        | 6.23        | 3.18        | 4.00        | 21.51        | 4.87         |                   |
| Difference                          |                      |              | 0.79            | 0.79        | 3.98         | 4.67         | 1.64        | 1.25        | 0.95        | 1.05        | 2.04         | 0.83         |                   |
| <b>Northern Trust</b>               | <b>1,089,533,156</b> | <b>24.48</b> | <b>6.19</b>     | <b>6.19</b> | <b>-5.36</b> | <b>2.97</b>  | <b>1.36</b> | <b>6.38</b> | <b>3.35</b> | <b>4.18</b> | <b>21.66</b> | <b>4.79</b>  | <b>08/01/2010</b> |
| MSCI ACW Ex US Index (USD) (Net)    |                      |              | 6.25            | 6.25        | -5.44        | 3.00         | 1.16        | 6.23        | 3.18        | 4.00        | 21.51        | 4.62         |                   |
| Difference                          |                      |              | -0.06           | -0.06       | 0.08         | -0.03        | 0.20        | 0.15        | 0.17        | 0.18        | 0.15         | 0.17         |                   |
| <b>Arrowstreet</b>                  | <b>768,653,266</b>   | <b>17.27</b> | <b>7.27</b>     | <b>7.27</b> | <b>0.01</b>  | <b>10.17</b> | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>23.43</b> | <b>1.40</b>  | <b>03/01/2018</b> |
| MSCI ACW Ex US IM Index (USD) (Net) |                      |              | 6.80            | 6.80        | -5.21        | 3.51         | 1.13        | 6.31        | 3.35        | 4.17        | 21.63        | -0.91        |                   |
| Difference                          |                      |              | 0.47            | 0.47        | 5.22         | 6.66         | N/A         | N/A         | N/A         | N/A         | 1.80         | 2.31         |                   |
| IM All ACWI Ex US (SA+CF) Median    |                      |              | 8.08            | 8.08        | -1.18        | 7.75         | 3.02        | 7.36        | 4.82        | 6.25        | 24.92        | 1.42         |                   |
| Arrowstreet Rank                    |                      |              | 60              | 60          | 45           | 42           | N/A         | N/A         | N/A         | N/A         | 57           | 51           |                   |
| <b>Harding Loevner</b>              | <b>633,724,634</b>   | <b>14.24</b> | <b>8.50</b>     | <b>8.50</b> | <b>3.50</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>3.50</b>  | <b>01/01/2020</b> |
| MSCI ACW Ex US Index (USD) (Net)    |                      |              | 6.25            | 6.25        | -5.44        | 3.00         | 1.16        | 6.23        | 3.18        | 4.00        | 21.51        | -5.44        |                   |
| Difference                          |                      |              | 2.25            | 2.25        | 8.94         | N/A          | N/A         | N/A         | N/A         | N/A         | N/A          | 8.94         |                   |
| IM All ACWI Ex US (SA+CF) Median    |                      |              | 8.08            | 8.08        | -1.18        | 7.75         | 3.02        | 7.36        | 4.82        | 6.25        | 24.92        | -1.18        |                   |
| Harding Loevner Rank                |                      |              | 47              | 47          | 33           | N/A          | N/A         | N/A         | N/A         | N/A         | N/A          | 33           |                   |

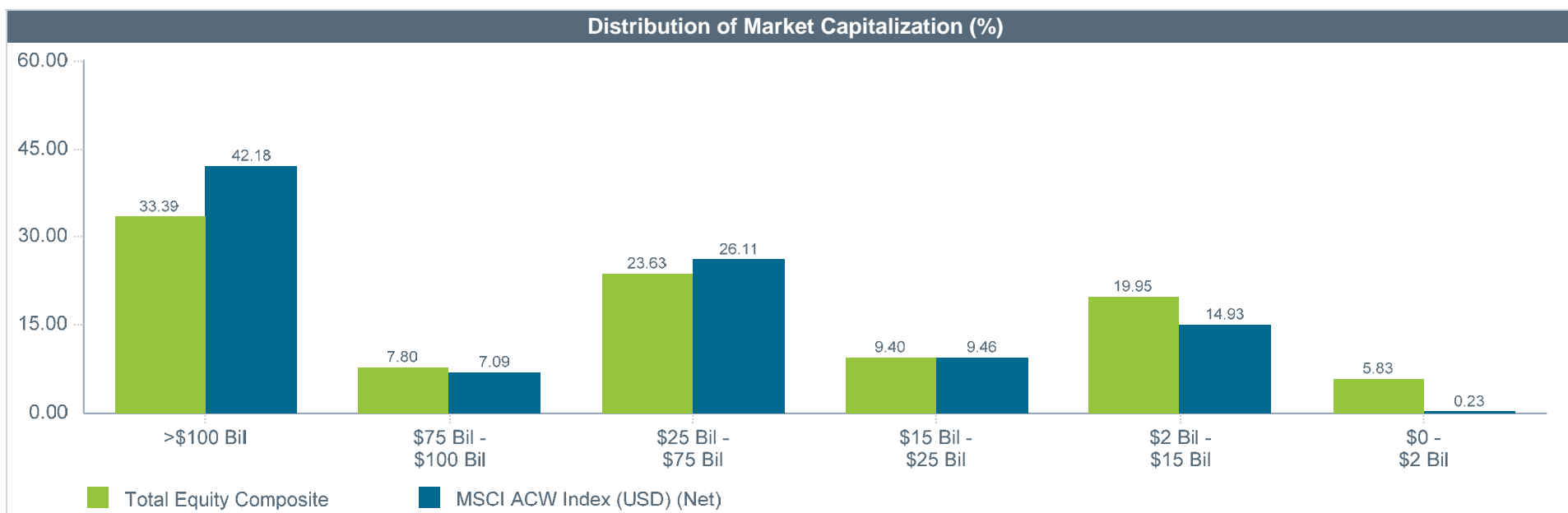
Performance shown is gross of fees. International Equity Custom Index consists of the MSCI EAFE Index (Gross) through July 2010 and the MSCI ACW Ex US Index (Net) thereafter. The All Cap US Equity Custom Index consists of the Russell 3000 Index through 02/29/2020, and the S&P 500 Index thereafter. SSGA Custom Index consists of 69% Russell 3000 Index, 24% FTSE RAFI US 1000 Index, and 7% MSCI US Min Vol Index (USD) (Gross) through 02/27/2020, State Street All Cap account performance on 02/28/2020, and the S&P 500 Index 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 September 30, 2020

| Top Ten Equity Holdings        |                      |                      |                   |                      |
|--------------------------------|----------------------|----------------------|-------------------|----------------------|
|                                | Portfolio Weight (%) | Benchmark Weight (%) | Active Weight (%) | Quarterly Return (%) |
| Apple Inc                      | 2.36                 | 3.91                 | -1.55             | 27.22                |
| Microsoft Corp                 | 2.02                 | 2.95                 | -0.93             | 3.60                 |
| Amazon.com Inc                 | 1.70                 | 2.60                 | -0.90             | 14.13                |
| Taiwan Semiconductor Mfg (ADR) | 1.28                 | 0.72                 | 0.56              | 43.55                |
| Roche Holding AG               | 1.02                 | 0.47                 | 0.55              | -0.91                |
| Tencent Holdings LTD           | 1.01                 | 0.74                 | 0.27              | 2.59                 |
| Alibaba Group Holding Ltd      | 0.88                 | 1.07                 | -0.19             | 36.29                |
| Facebook Inc                   | 0.80                 | 1.23                 | -0.43             | 15.34                |
| Ping An Insurance Group        | 0.73                 | 0.12                 | 0.61              | 3.71                 |
| Keyence Corp                   | 0.61                 | 0.16                 | 0.45              | 11.42                |
| % of Portfolio                 | 12.41                | 13.97                | -1.56             |                      |

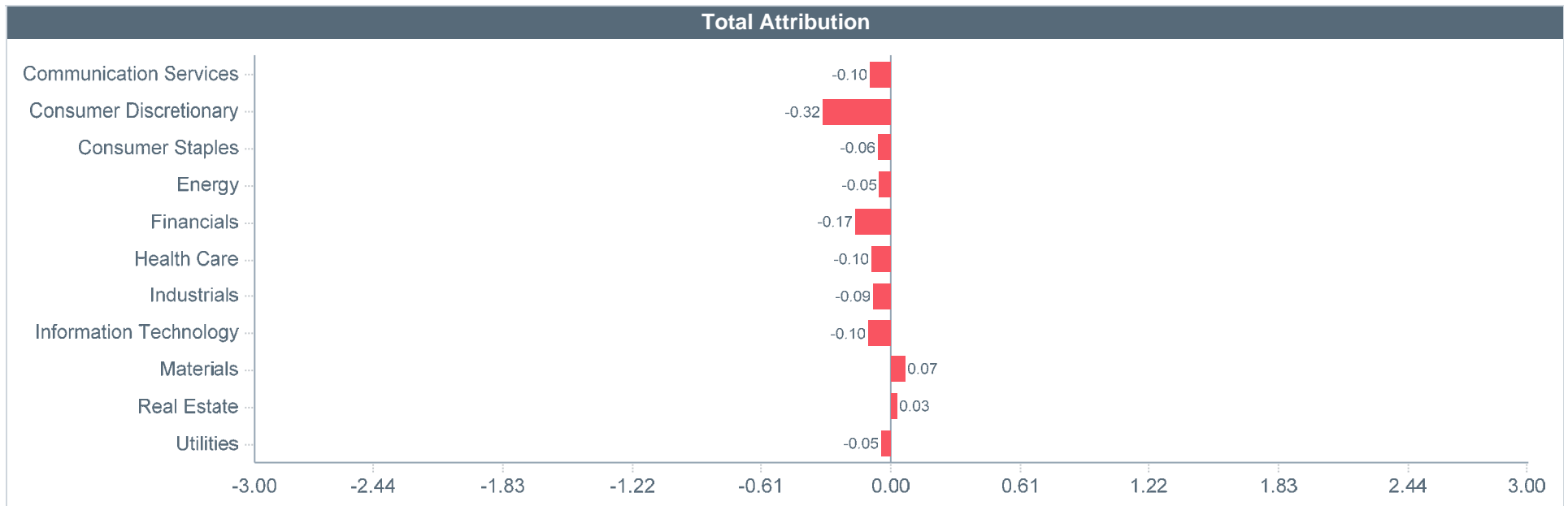
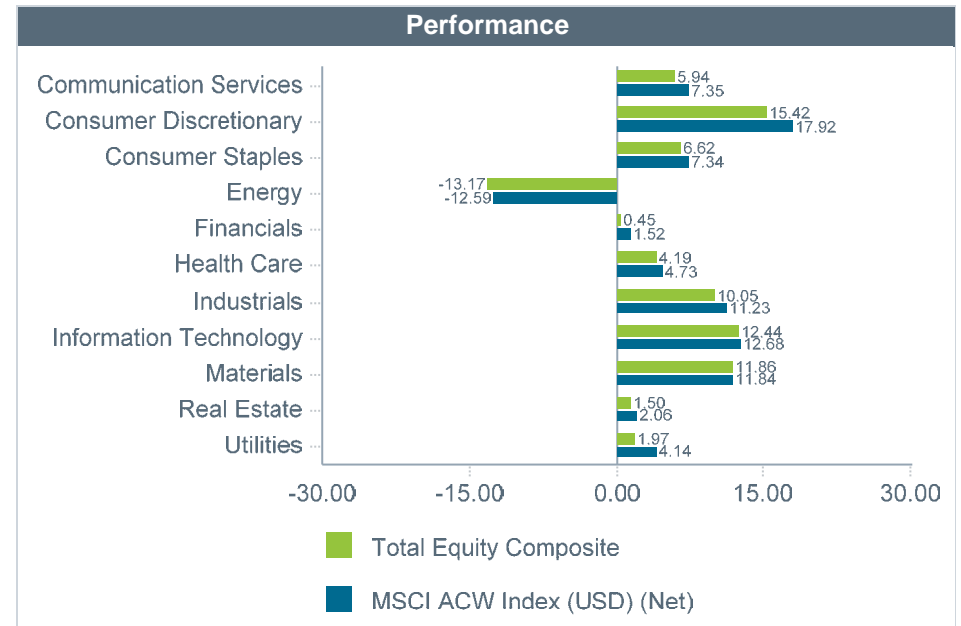
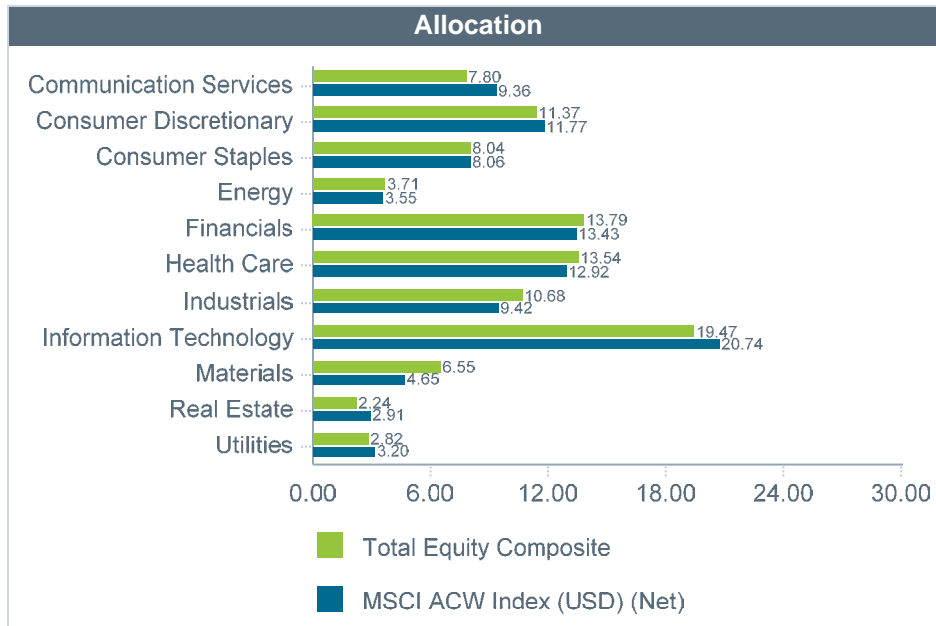
| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Wtd. Avg. Mkt. Cap (\$M)  | 210,688   | 287,850   |
| Median Mkt. Cap (\$M)     | 3,140     | 10,081    |
| Price/Earnings Ratio      | 21.56     | 22.80     |
| Price/Book Ratio          | 3.51      | 3.78      |
| 5 Yr. EPS Growth Rate (%) | 9.92      | 10.22     |
| Current Yield (%)         | 2.11      | 2.05      |
| Beta (5 Years, Monthly)   | 1.00      | 1.00      |
| Number of Securities      | 5,079     | 2,994     |



A stock with multiple share classes may be shown twice in the Top Ten Equity Holdings.

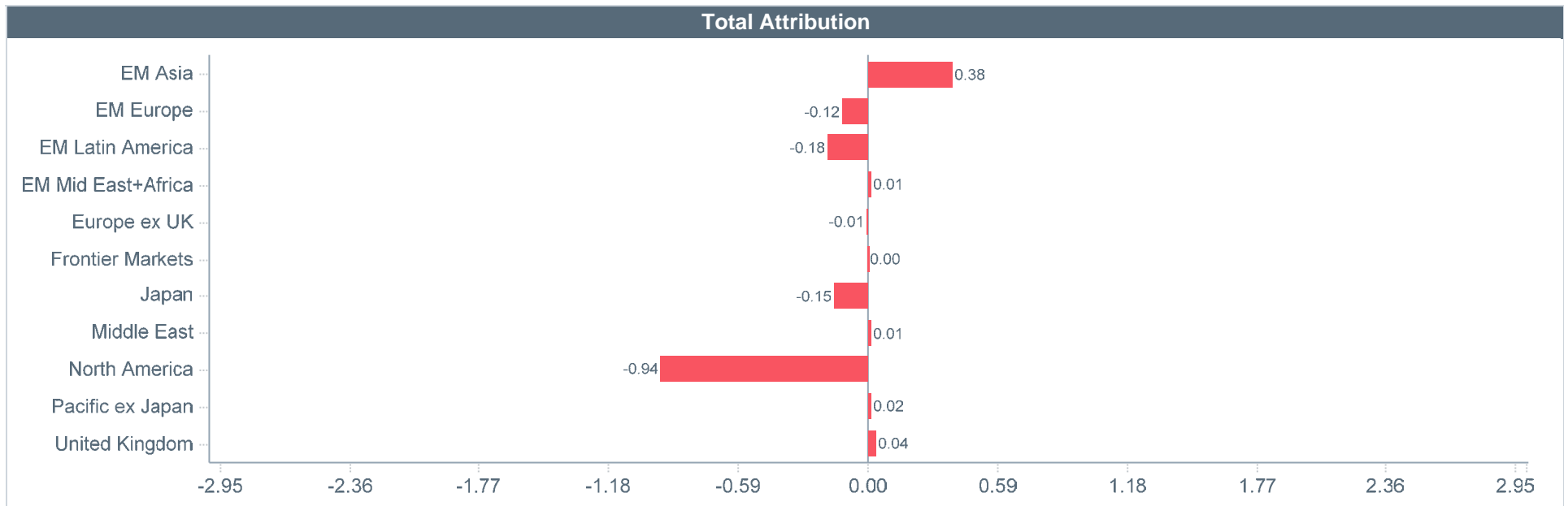
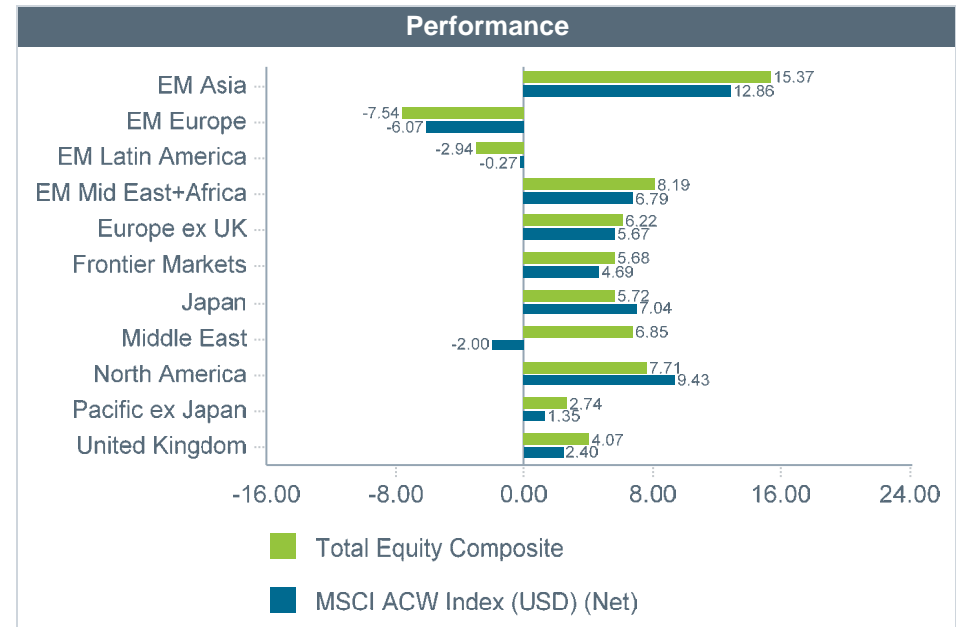
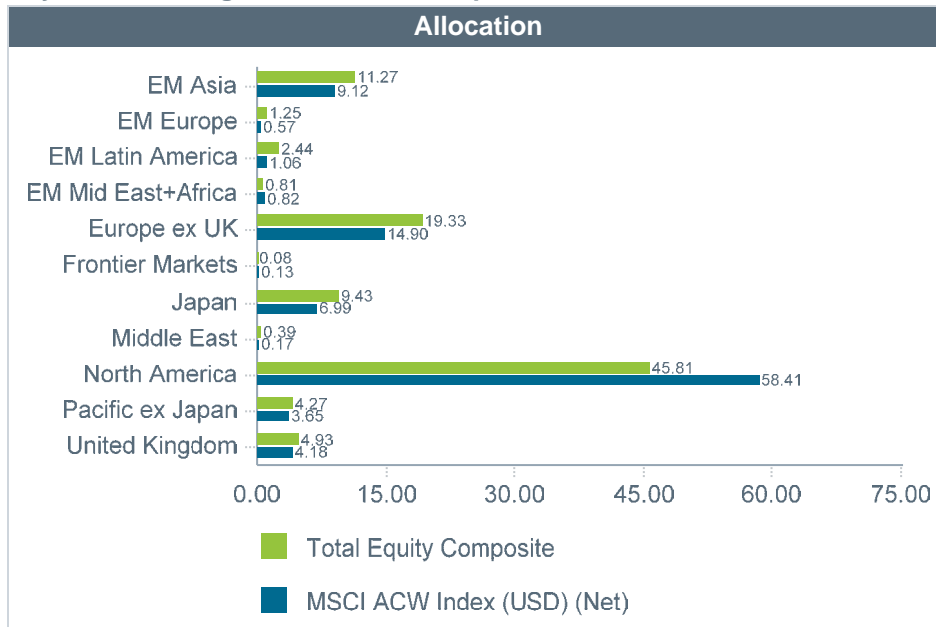
Wyoming State Treasurer's Office  
Total Equity Composite vs. MSCI ACW Index (USD) (Net)  
Buy and Hold Sector Attribution Graph

1 Quarter Ending September 30, 2020



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

1 Quarter Ending September 30, 2020

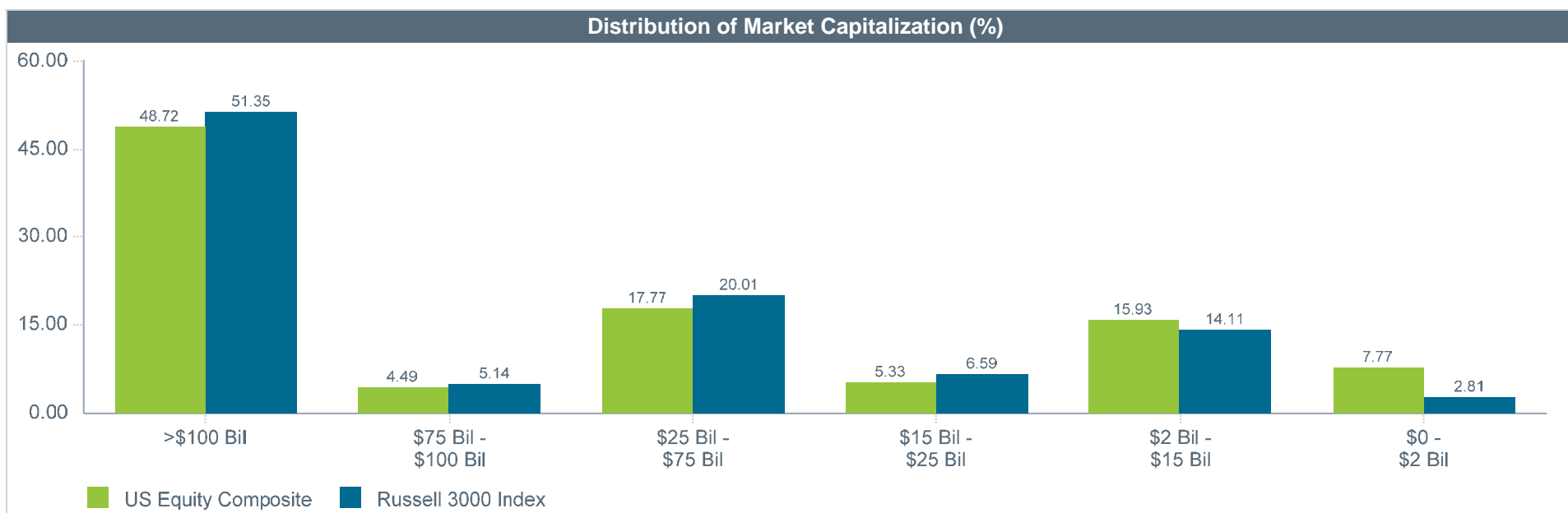


Wyoming State Treasurer's Office  
US Equity Composite vs. Russell 3000 Index  
Portfolio Characteristics

As of September 30, 2020

| Top Ten Equity Holdings   |                      |                      |                   |                      |
|---------------------------|----------------------|----------------------|-------------------|----------------------|
|                           | Portfolio Weight (%) | Benchmark Weight (%) | Active Weight (%) | Quarterly Return (%) |
| Apple Inc                 | 5.38                 | 5.62                 | -0.24             | 27.22                |
| Microsoft Corp            | 4.61                 | 4.74                 | -0.13             | 3.60                 |
| Amazon.com Inc            | 3.87                 | 4.02                 | -0.15             | 14.13                |
| Facebook Inc              | 1.82                 | 1.89                 | -0.07             | 15.34                |
| Alphabet Inc              | 1.27                 | 1.32                 | -0.05             | 3.35                 |
| Alphabet Inc              | 1.24                 | 1.31                 | -0.07             | 3.96                 |
| Berkshire Hathaway Inc    | 1.22                 | 1.23                 | -0.01             | 19.29                |
| Johnson & Johnson         | 1.14                 | 1.18                 | -0.04             | 6.57                 |
| Procter & Gamble Co (The) | 1.00                 | 1.02                 | -0.02             | 16.97                |
| Visa Inc                  | 0.98                 | 1.02                 | -0.04             | 3.68                 |
| % of Portfolio            | 22.53                | 23.35                | -0.82             |                      |

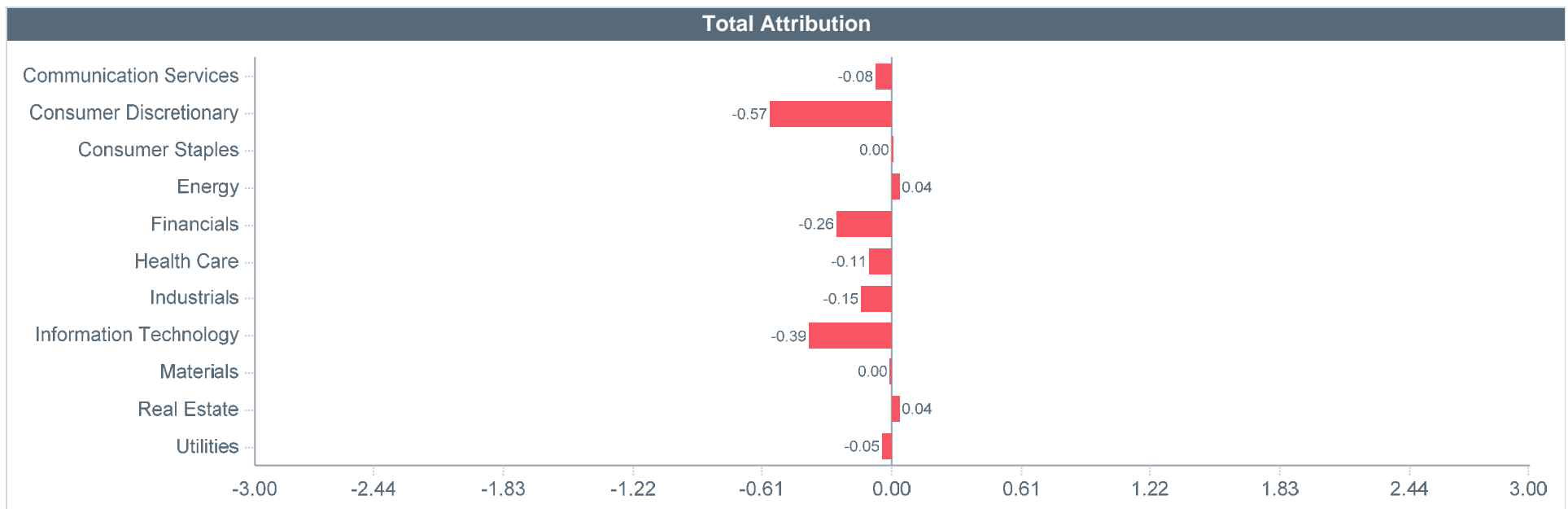
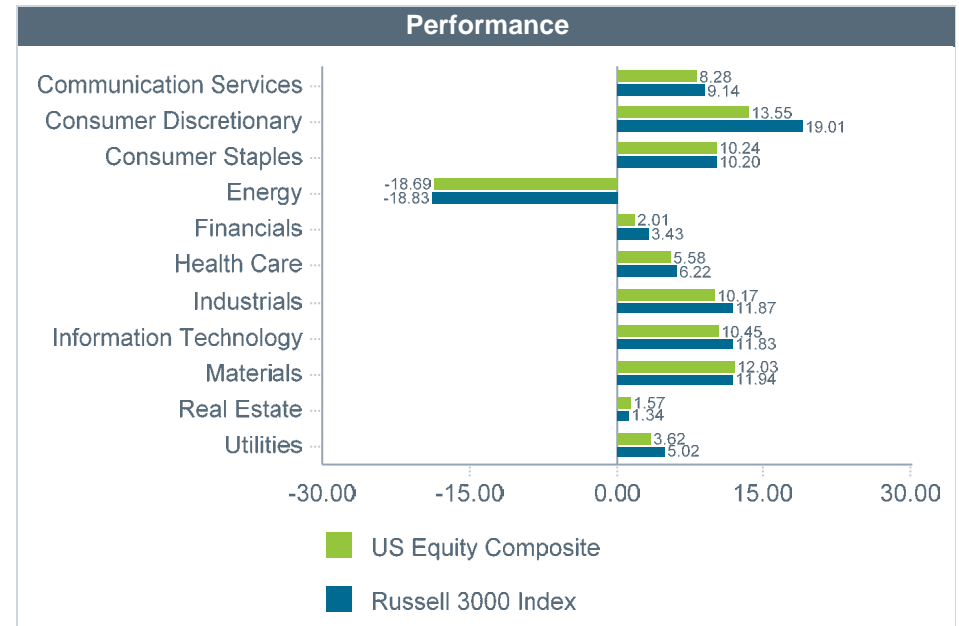
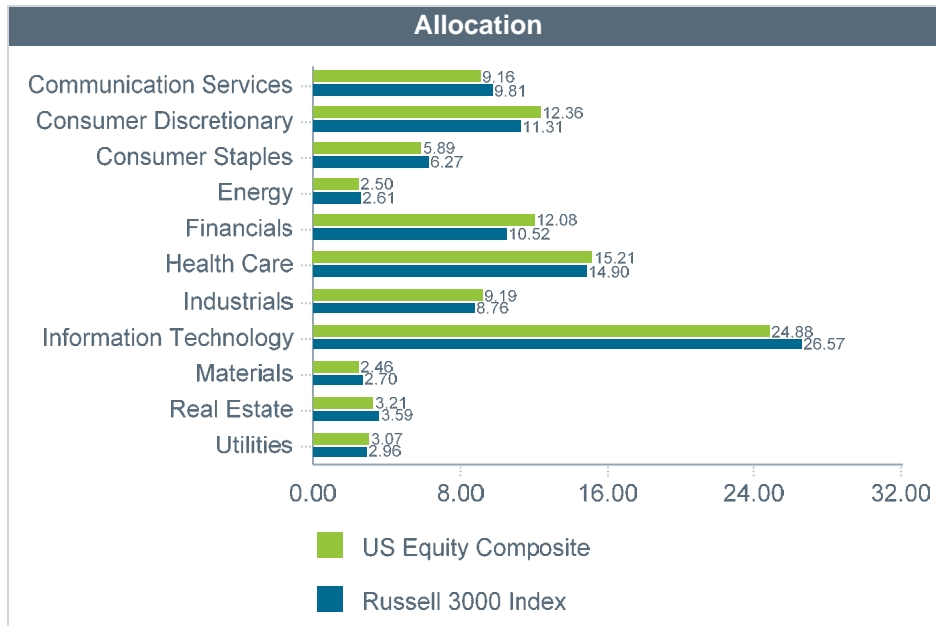
| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Wtd. Avg. Mkt. Cap (\$M)  | 360,473   | 378,976   |
| Median Mkt. Cap (\$M)     | 1,039     | 1,536     |
| Price/Earnings Ratio      | 25.47     | 26.57     |
| Price/Book Ratio          | 4.04      | 4.39      |
| 5 Yr. EPS Growth Rate (%) | 12.51     | 12.89     |
| Current Yield (%)         | 1.58      | 1.59      |
| Beta (5 Years, Monthly)   | 1.01      | 1.00      |
| Number of Securities      | 2,565     | 3,034     |



A stock with multiple share classes may be shown twice in the Top Ten Equity Holdings.

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

1 Quarter Ending September 30, 2020

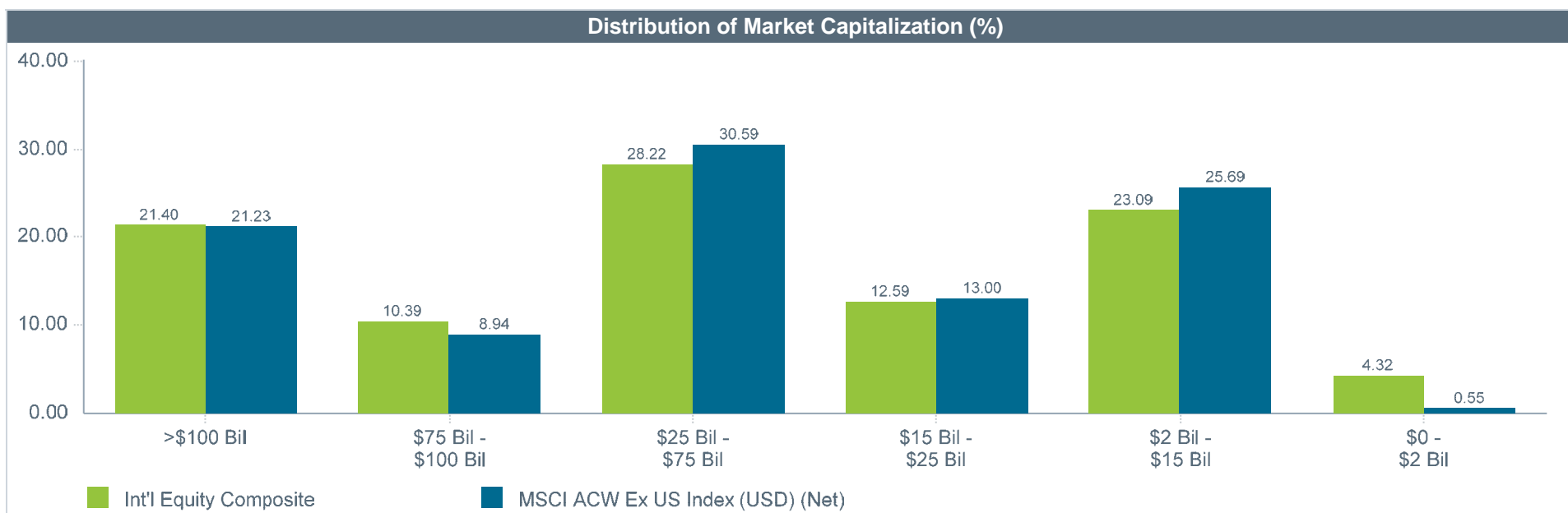


Wyoming State Treasurer's Office  
Int'l Equity Composite vs. MSCI ACW Ex US Index (USD) (Net)  
Portfolio Characteristics

As of September 30, 2020

| Top Ten Equity Holdings        |                      |                      |                   |                      |
|--------------------------------|----------------------|----------------------|-------------------|----------------------|
|                                | Portfolio Weight (%) | Benchmark Weight (%) | Active Weight (%) | Quarterly Return (%) |
| Taiwan Semiconductor Mfg (ADR) | 2.29                 | 1.72                 | 0.57              | 43.55                |
| Roche Holding AG               | 1.82                 | 1.12                 | 0.70              | -0.91                |
| Tencent Holdings LTD           | 1.79                 | 1.76                 | 0.03              | 2.59                 |
| Alibaba Group Holding Ltd      | 1.57                 | 2.57                 | -1.00             | 36.29                |
| Ping An Insurance Group        | 1.30                 | 0.28                 | 1.02              | 3.71                 |
| Keyence Corp                   | 1.09                 | 0.39                 | 0.70              | 11.42                |
| Samsung Electronics Co Ltd     | 1.03                 | 1.11                 | -0.08             | 14.25                |
| L'Oreal S.A., Paris            | 0.97                 | 0.38                 | 0.59              | 2.73                 |
| Infineon Technologies AG       | 0.96                 | 0.17                 | 0.79              | 20.53                |
| Atlas Copco AB                 | 0.93                 | 0.15                 | 0.78              | 12.83                |
| % of Portfolio                 | 13.75                | 9.65                 | 4.10              |                      |

| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Wtd. Avg. Mkt. Cap (\$M)  | 93,604    | 95,729    |
| Median Mkt. Cap (\$M)     | 7,065     | 7,795     |
| Price/Earnings Ratio      | 19.02     | 18.16     |
| Price/Book Ratio          | 3.11      | 2.84      |
| 5 Yr. EPS Growth Rate (%) | 7.69      | 6.23      |
| Current Yield (%)         | 2.52      | 2.63      |
| Beta (5 Years, Monthly)   | 0.99      | 1.00      |
| Number of Securities      | 2,522     | 2,375     |

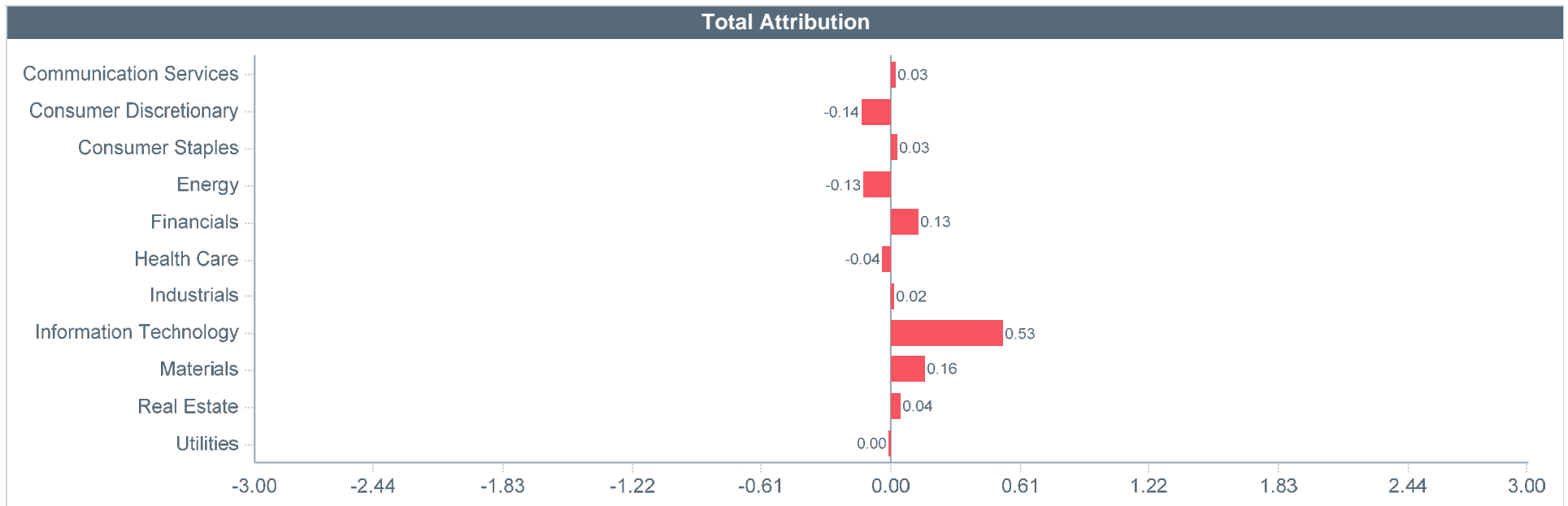
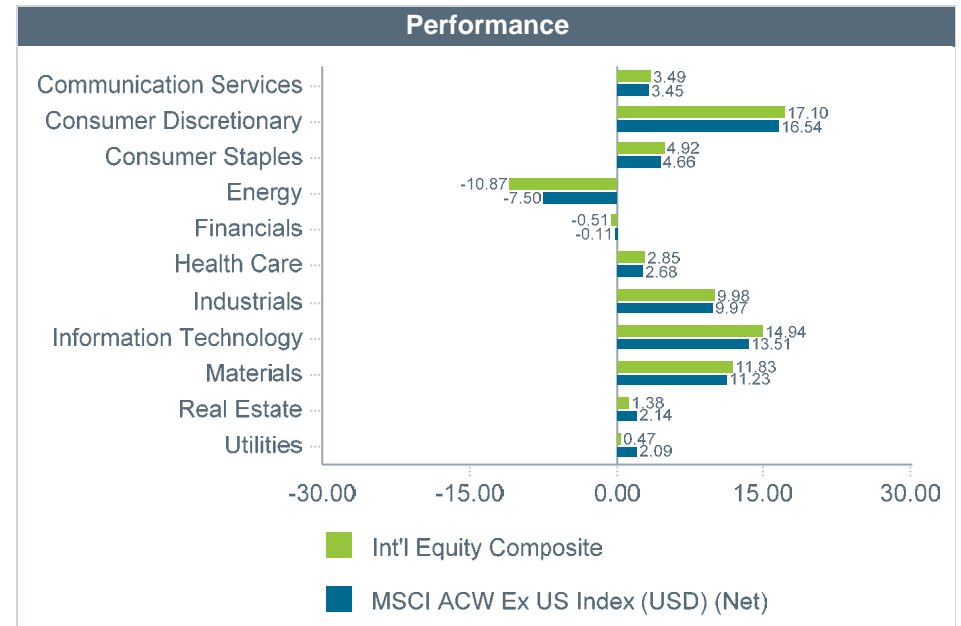
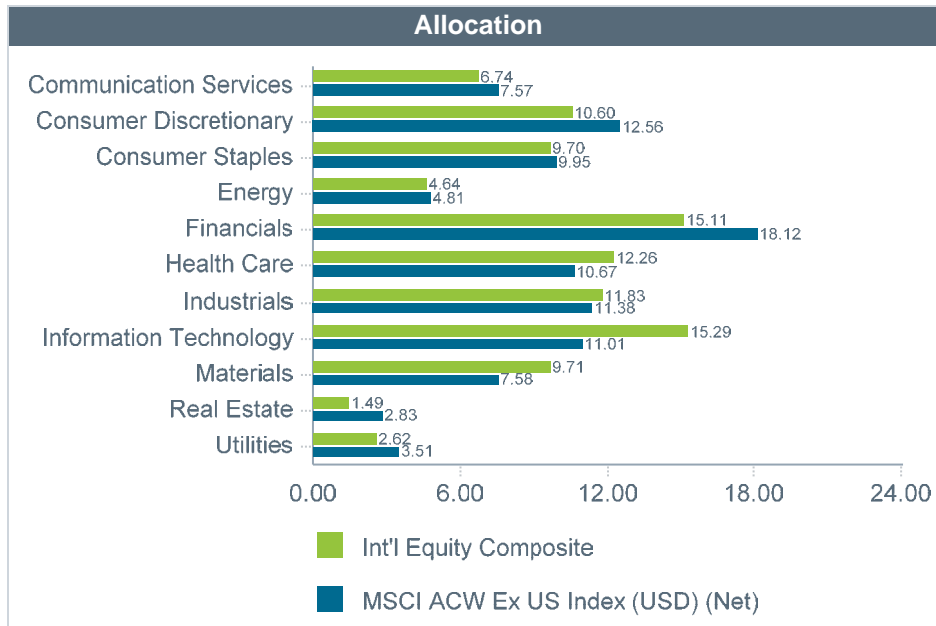


The International Equity Custom Index currently consists of the MSCI ACW Ex US Index (USD) (Net).



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

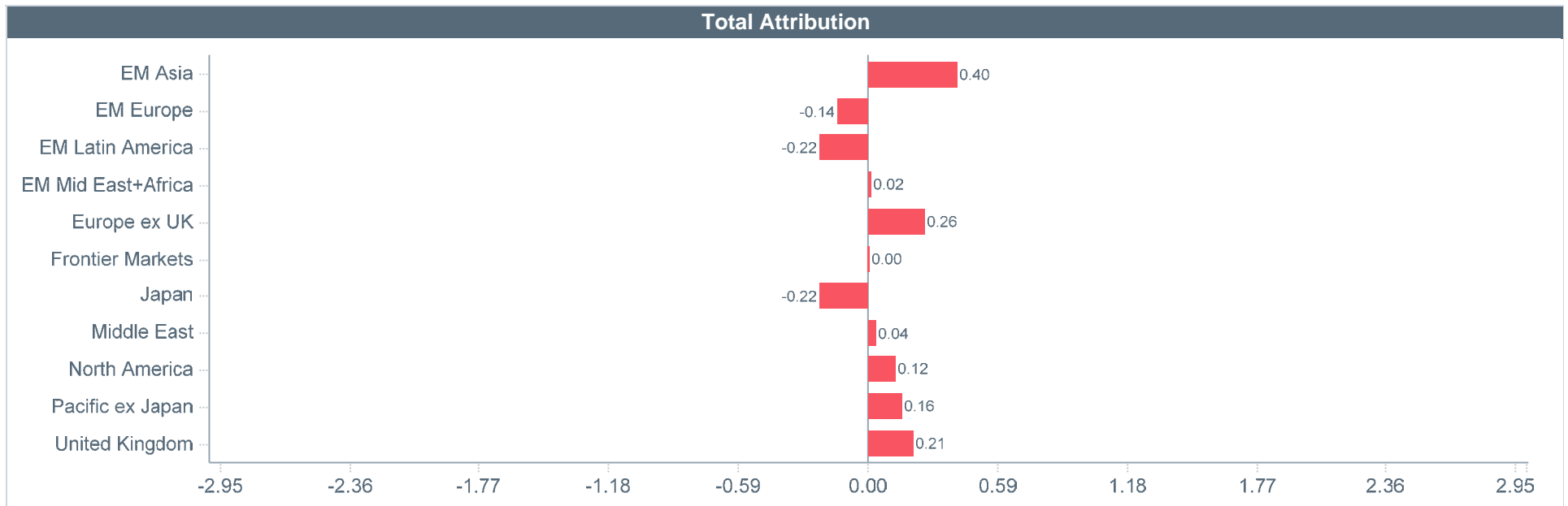
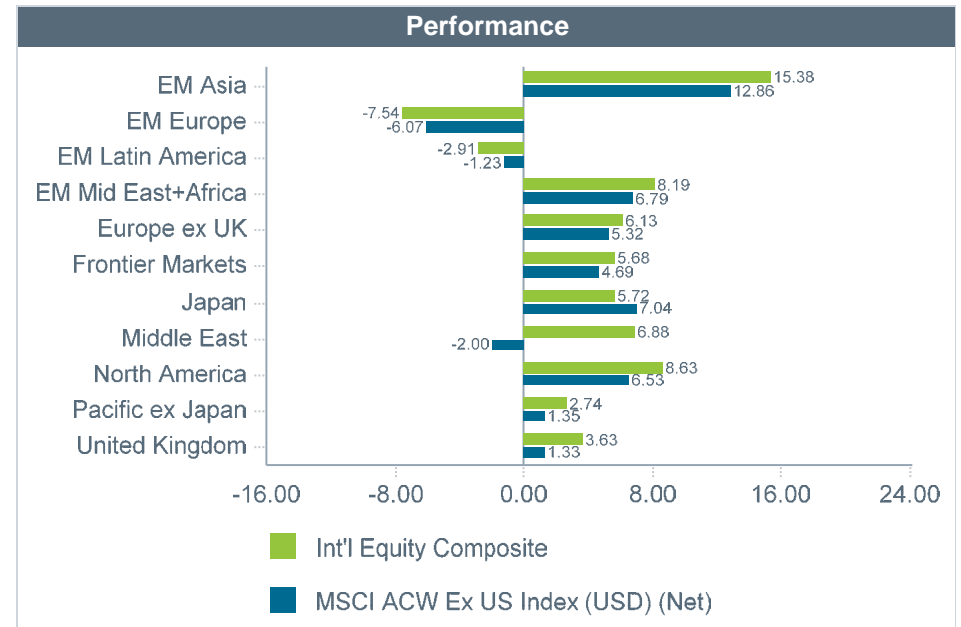
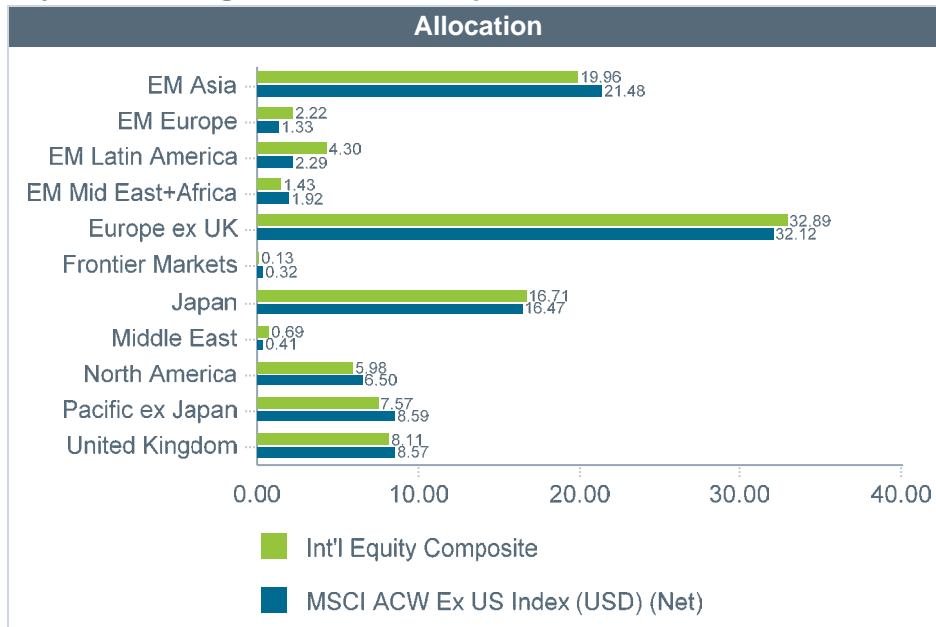
1 Quarter Ending September 30, 2020



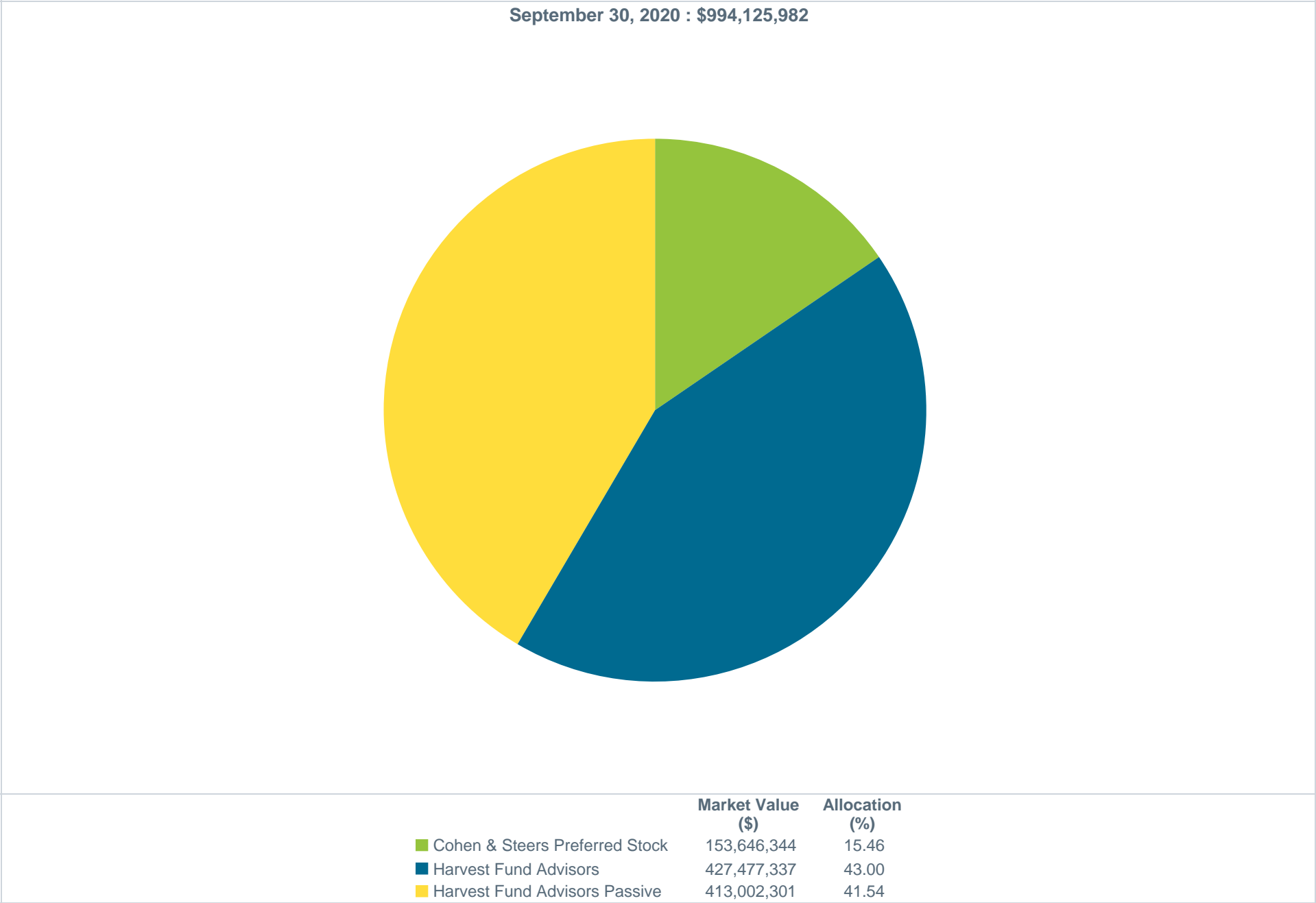
The International Equity Custom Index currently consists of the MSCI ACW Ex US Index (USD) (Net).

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

1 Quarter Ending September 30, 2020



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



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

Wyoming State Treasurer's Office  
Comparative Performance

As of September 30, 2020

|   | QTD           | FYTD          | CYTD          | 1<br>Year     | 3<br>Years | 5<br>Years | 7<br>Years | 10<br>Years | 2019         | Since<br>Incep. | Inception<br>Date |
|---|---------------|---------------|---------------|---------------|------------|------------|------------|-------------|--------------|-----------------|-------------------|
| <b>Cohen &amp; Steers Preferred Stock</b> | <b>5.18</b>   | <b>5.18</b>   | <b>1.78</b>   | <b>5.00</b>   | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>19.32</b> | <b>8.04</b>     | <b>07/01/2018</b> |
| S&P US Preferred Stock Index              | 7.11          | 7.11          | 0.97          | 3.25          | 4.41       | 5.49       | 6.26       | 6.03        | 17.64        | 5.29            |                   |
| Difference                                | -1.93         | -1.93         | 0.81          | 1.75          | N/A        | N/A        | N/A        | N/A         | 1.68         | 2.75            |                   |
| <b>MLP Composite</b>                      | <b>-10.90</b> | <b>-10.90</b> | <b>-39.18</b> | <b>-39.85</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>13.12</b> | <b>-24.70</b>   | <b>08/01/2018</b> |
| MLP Custom Index                          | -12.87        | -12.87        | -41.05        | -43.45        | -17.65     | -9.66      | -10.02     | -2.65       | 7.55         | -25.89          |                   |
| Difference                                | 1.97          | 1.97          | 1.87          | 3.60          | N/A        | N/A        | N/A        | N/A         | 5.57         | 1.19            |                   |
| <b>Harvest Fund Advisors</b>              | <b>-9.73</b>  | <b>-9.73</b>  | <b>-38.34</b> | <b>-39.02</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>13.12</b> | <b>-24.23</b>   | <b>08/01/2018</b> |
| MLP Custom Index                          | -12.87        | -12.87        | -41.05        | -43.45        | -17.65     | -9.66      | -10.02     | -2.65       | 7.55         | -25.89          |                   |
| Difference                                | 3.14          | 3.14          | 2.71          | 4.43          | N/A        | N/A        | N/A        | N/A         | 5.57         | 1.66            |                   |
| <b>Harvest Fund Advisors Passive</b>      | <b>-12.12</b> | <b>-12.12</b> | <b>N/A</b>    | <b>N/A</b>    | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>N/A</b>   | <b>-38.02</b>   | <b>02/01/2020</b> |
| MLP Custom Index                          | -12.87        | -12.87        | -41.05        | -43.45        | -17.65     | -9.66      | -10.02     | -2.65       | 7.55         | -38.39          |                   |
| Difference                                | 0.75          | 0.75          | N/A           | N/A           | N/A        | N/A        | N/A        | N/A         | N/A          | 0.37            |                   |

Performance shown is 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. The MLP Custom Index consists of the S&P MLP Index (TR) through 06/30/2019, the Alerian MLP Index through 12/31/2019, and 50% Alerian MLP Index / 50% Alerian Midstream Energy Index thereafter.

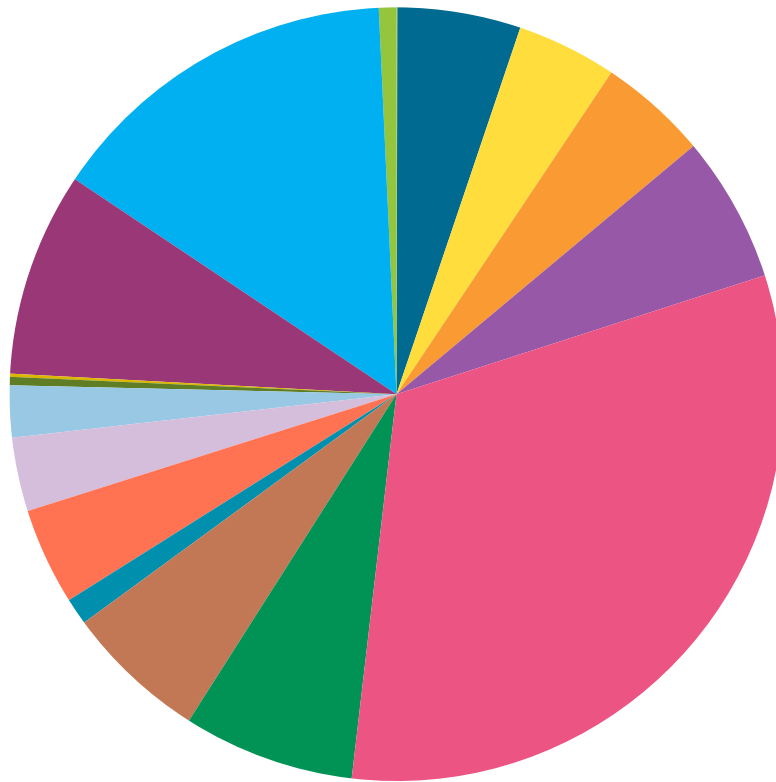
Wyoming State Treasurer's Office  
Comparative Performance

As of September 30, 2020

|   | QTD           | FYTD          | CYTD          | 1<br>Year     | 3<br>Years | 5<br>Years | 7<br>Years | 10<br>Years | 2019         | Since<br>Incep. | Inception<br>Date |
|---|---------------|---------------|---------------|---------------|------------|------------|------------|-------------|--------------|-----------------|-------------------|
| <b>Cohen &amp; Steers Preferred Stock</b> | <b>5.26</b>   | <b>5.26</b>   | <b>2.01</b>   | <b>5.32</b>   | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>19.68</b> | <b>8.38</b>     | <b>07/01/2018</b> |
| S&P US Preferred Stock Index              | 7.11          | 7.11          | 0.97          | 3.25          | 4.41       | 5.49       | 6.26       | 6.03        | 17.64        | 5.29            |                   |
| Difference                                | -1.85         | -1.85         | 1.04          | 2.07          | N/A        | N/A        | N/A        | N/A         | 2.04         | 3.09            |                   |
| <b>MLP Composite</b>                      | <b>-10.83</b> | <b>-10.83</b> | <b>-39.05</b> | <b>-39.62</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>13.82</b> | <b>-24.31</b>   | <b>08/01/2018</b> |
| MLP Custom Index                          | -12.87        | -12.87        | -41.05        | -43.45        | -17.65     | -9.66      | -10.02     | -2.65       | 7.55         | -25.89          |                   |
| Difference                                | 2.04          | 2.04          | 2.00          | 3.83          | N/A        | N/A        | N/A        | N/A         | 6.27         | 1.58            |                   |
| <b>Harvest Fund Advisors</b>              | <b>-9.59</b>  | <b>-9.59</b>  | <b>-38.07</b> | <b>-38.66</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>13.82</b> | <b>-23.76</b>   | <b>08/01/2018</b> |
| MLP Custom Index                          | -12.87        | -12.87        | -41.05        | -43.45        | -17.65     | -9.66      | -10.02     | -2.65       | 7.55         | -25.89          |                   |
| Difference                                | 3.28          | 3.28          | 2.98          | 4.79          | N/A        | N/A        | N/A        | N/A         | 6.27         | 2.13            |                   |
| <b>Harvest Fund Advisors Passive</b>      | <b>-12.12</b> | <b>-12.12</b> | <b>N/A</b>    | <b>N/A</b>    | <b>N/A</b> | <b>N/A</b> | <b>N/A</b> | <b>N/A</b>  | <b>N/A</b>   | <b>-38.02</b>   | <b>02/01/2020</b> |
| MLP Custom Index                          | -12.87        | -12.87        | -41.05        | -43.45        | -17.65     | -9.66      | -10.02     | -2.65       | 7.55         | -38.39          |                   |
| Difference                                | 0.75          | 0.75          | N/A           | N/A           | N/A        | N/A        | N/A        | N/A         | N/A          | 0.37            |                   |

Performance shown is gross of fees. Wyoming State Treasurer's Office fiscal year ends June 30th. Since Inception date shown represents the first full month following initial funding. The MLP Custom Index consists of the S&P MLP Index (TR) through 06/30/2019, the Alerian MLP Index through 12/31/2019, and 50% Alerian MLP Index / 50% Alerian Midstream Energy Index thereafter.

September 30, 2020 : \$3,369,097,481



|                                       | Market Value<br>(\$) | Allocation<br>(%) |
|---------------------------------------|----------------------|-------------------|
| Access Venture Partners II            | 1,279,285            | 0.04              |
| Cheyenne Equity Capital Fund, L.P.    | 173,351,945          | 5.15              |
| BlackRock Long Term Private Capital   | 140,866,770          | 4.18              |
| Hamilton Lane Nowood Fund, L.P.       | 153,520,042          | 4.56              |
| Neuberger Berman Sauger Fund, L.P.    | 205,850,694          | 6.11              |
| Clarion Lion                          | 1,071,900,258        | 31.82             |
| UBS Trumbull                          | 241,508,323          | 7.17              |
| MS Prime                              | 200,000,007          | 5.94              |
| M&G                                   | 37,462,549           | 1.11              |
| Northwood                             | 136,397,605          | 4.05              |
| SC Capital                            | 104,032,062          | 3.09              |
| Realterm                              | 72,988,016           | 2.17              |
| WestRiver                             | 11,848,936           | 0.35              |
| PAAMCO - Jackalope Fund               | 4,288,099            | 0.13              |
| Grosvenor Diversified Hedge Funds     | 287,408,346          | 8.53              |
| Internal Diversified Hedge Funds      | 501,571,540          | 14.89             |
| Grosvenor Silvery Lupine Fund Class D | 24,823,005           | 0.74              |

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

Wyoming State Treasurer's Office  
Comparative Performance

As of September 30, 2020

|  | QTD          | FYTD         | CYTD         | 1<br>Year    | 3<br>Years  | 5<br>Years  | 7<br>Years  | 10<br>Years  | 2019         | Since<br>Incep. | Inception<br>Date |
|--|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|-----------------|-------------------|
| <b>Core Real Estate Composite</b>                | <b>0.36</b>  | <b>0.36</b>  | <b>-0.66</b> | <b>0.70</b>  | <b>3.87</b> | <b>5.37</b> | <b>7.36</b> | <b>8.84</b>  | <b>2.68</b>  | <b>5.28</b>     | <b>01/01/2006</b> |
| NCREIF ODCE Index (AWA) (Net)                    | 0.27         | 0.27         | -0.74        | 0.52         | 4.25        | 5.69        | 7.62        | 9.26         | 4.39         | 5.47            |                   |
| Difference                                       | 0.09         | 0.09         | 0.08         | 0.18         | -0.38       | -0.32       | -0.26       | -0.42        | -1.71        | -0.19           |                   |
| <b>Clarion Lion</b>                              | <b>0.53</b>  | <b>0.53</b>  | <b>-0.21</b> | <b>1.64</b>  | <b>5.70</b> | <b>7.00</b> | <b>8.82</b> | <b>10.49</b> | <b>6.61</b>  | <b>5.26</b>     | <b>01/01/2006</b> |
| NCREIF ODCE Index (AWA) (Net)                    | 0.27         | 0.27         | -0.74        | 0.52         | 4.25        | 5.69        | 7.62        | 9.26         | 4.39         | 5.47            |                   |
| Difference                                       | 0.26         | 0.26         | 0.53         | 1.12         | 1.45        | 1.31        | 1.20        | 1.23         | 2.22         | -0.21           |                   |
| <b>UBS Trumbull</b>                              | <b>-0.37</b> | <b>-0.37</b> | <b>-2.72</b> | <b>-2.85</b> | <b>0.84</b> | <b>2.92</b> | <b>5.11</b> | <b>6.71</b>  | <b>-2.81</b> | <b>4.48</b>     | <b>07/01/2006</b> |
| NCREIF ODCE Index (AWA) (Net)                    | 0.27         | 0.27         | -0.74        | 0.52         | 4.25        | 5.69        | 7.62        | 9.26         | 4.39         | 5.14            |                   |
| Difference                                       | -0.64        | -0.64        | -1.98        | -3.37        | -3.41       | -2.77       | -2.51       | -2.55        | -7.20        | -0.66           |                   |
| <b>MS Prime</b>                                  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>      | <b>10/01/2020</b> |
| NCREIF ODCE Index (AWA) (Net)                    | 0.27         | 0.27         | -0.74        | 0.52         | 4.25        | 5.69        | 7.62        | 9.26         | 4.39         | N/A             |                   |
| Difference                                       | N/A          | N/A          | N/A          | N/A          | N/A         | N/A         | N/A         | N/A          | N/A          | N/A             |                   |
| <b>Diversified Hedge Funds Composite</b>         | <b>3.60</b>  | <b>3.60</b>  | <b>0.39</b>  | <b>2.08</b>  | <b>1.63</b> | <b>1.69</b> | <b>2.20</b> | <b>3.14</b>  | <b>4.07</b>  | <b>2.24</b>     | <b>12/01/2007</b> |
| HFRI FOF Comp Index                              | 4.26         | 4.26         | 2.56         | 5.72         | 2.88        | 3.09        | 3.07        | 2.89         | 8.39         | 1.39            |                   |
| Difference                                       | -0.66        | -0.66        | -2.17        | -3.64        | -1.25       | -1.40       | -0.87       | 0.25         | -4.32        | 0.85            |                   |
| <b>Grosvenor Diversified Hedge Funds</b>         | <b>4.52</b>  | <b>4.52</b>  | <b>3.12</b>  | <b>5.74</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>5.67</b>  | <b>2.41</b>     | <b>07/01/2018</b> |
| HFRI FOF Comp Index                              | 4.26         | 4.26         | 2.56         | 5.72         | 2.88        | 3.09        | 3.07        | 2.89         | 8.39         | 2.59            |                   |
| Difference                                       | 0.26         | 0.26         | 0.56         | 0.02         | N/A         | N/A         | N/A         | N/A          | -2.72        | -0.18           |                   |
| <b>Internal Diversified Hedge Funds</b>          | <b>3.11</b>  | <b>3.11</b>  | <b>-1.07</b> | <b>0.40</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>6.08</b>  | <b>2.56</b>     | <b>07/01/2018</b> |
| HFRI FOF Comp Index                              | 4.26         | 4.26         | 2.56         | 5.72         | 2.88        | 3.09        | 3.07        | 2.89         | 8.39         | 2.59            |                   |
| Difference                                       | -1.15        | -1.15        | -3.63        | -5.32        | N/A         | N/A         | N/A         | N/A          | -2.31        | -0.03           |                   |
| <b>Grosvenor Opportunistic Class D</b>           | <b>3.33</b>  | <b>3.33</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>3.33</b>     | <b>07/01/2020</b> |
| Grosvenor Opportunistic Class D Custom Benchmark | 2.29         | 2.29         | N/A          | N/A          | N/A         | N/A         | N/A         | N/A          | N/A          | 2.29            |                   |
| Difference                                       | 1.04         | 1.04         | N/A          | N/A          | N/A         | N/A         | N/A         | N/A          | N/A          | 1.04            |                   |

Performance shown is 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.

Wyoming State Treasurer's Office  
Comparative Performance

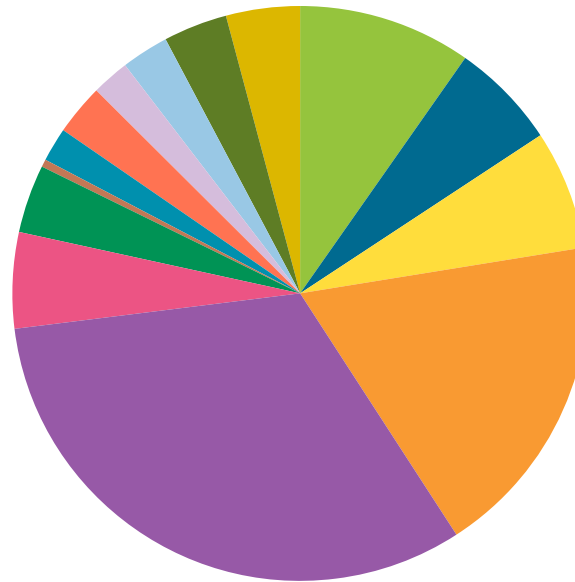
As of September 30, 2020

|  | QTD          | FYTD         | CYTD         | 1<br>Year    | 3<br>Years  | 5<br>Years  | 7<br>Years  | 10<br>Years  | 2019         | Since<br>Incep. | Inception<br>Date |
|--|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|-----------------|-------------------|
| <b>Core Real Estate Composite</b>                | <b>0.51</b>  | <b>0.51</b>  | <b>-0.23</b> | <b>1.28</b>  | <b>4.54</b> | <b>6.11</b> | <b>8.16</b> | <b>9.70</b>  | <b>3.33</b>  | <b>6.12</b>     | <b>01/01/2006</b> |
| NCREIF ODCE Index (AWA) (Gross)                  | 0.48         | 0.48         | -0.11        | 1.39         | 5.18        | 6.64        | 8.60        | 10.27        | 5.34         | 6.44            |                   |
| Difference                                       | 0.03         | 0.03         | -0.12        | -0.11        | -0.64       | -0.53       | -0.44       | -0.57        | -2.01        | -0.32           |                   |
| <b>Clarion Lion</b>                              | <b>0.67</b>  | <b>0.67</b>  | <b>0.21</b>  | <b>2.20</b>  | <b>6.36</b> | <b>7.70</b> | <b>9.56</b> | <b>11.27</b> | <b>7.26</b>  | <b>6.04</b>     | <b>01/01/2006</b> |
| NCREIF ODCE Index (AWA) (Gross)                  | 0.48         | 0.48         | -0.11        | 1.39         | 5.18        | 6.64        | 8.60        | 10.27        | 5.34         | 6.44            |                   |
| Difference                                       | 0.19         | 0.19         | 0.32         | 0.81         | 1.18        | 1.06        | 0.96        | 1.00         | 1.92         | -0.40           |                   |
| <b>UBS Trumbull</b>                              | <b>-0.19</b> | <b>-0.19</b> | <b>-2.19</b> | <b>-2.14</b> | <b>1.59</b> | <b>3.74</b> | <b>6.02</b> | <b>7.68</b>  | <b>-2.11</b> | <b>5.42</b>     | <b>07/01/2006</b> |
| NCREIF ODCE Index (AWA) (Gross)                  | 0.48         | 0.48         | -0.11        | 1.39         | 5.18        | 6.64        | 8.60        | 10.27        | 5.34         | 6.11            |                   |
| Difference                                       | -0.67        | -0.67        | -2.08        | -3.53        | -3.59       | -2.90       | -2.58       | -2.59        | -7.45        | -0.69           |                   |
| <b>MS Prime</b>                                  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>      | <b>10/01/2020</b> |
| NCREIF ODCE Index (AWA) (Gross)                  | 0.48         | 0.48         | -0.11        | 1.39         | 5.18        | 6.64        | 8.60        | 10.27        | 5.34         | N/A             |                   |
| Difference                                       | N/A          | N/A          | N/A          | N/A          | N/A         | N/A         | N/A         | N/A          | N/A          | N/A             |                   |
| <b>Diversified Hedge Funds Composite</b>         | <b>3.60</b>  | <b>3.60</b>  | <b>0.39</b>  | <b>2.08</b>  | <b>1.63</b> | <b>1.69</b> | <b>2.20</b> | <b>3.14</b>  | <b>4.07</b>  | <b>2.24</b>     | <b>12/01/2007</b> |
| HFRI FOF Comp Index                              | 4.26         | 4.26         | 2.56         | 5.72         | 2.88        | 3.09        | 3.07        | 2.89         | 8.39         | 1.39            |                   |
| Difference                                       | -0.66        | -0.66        | -2.17        | -3.64        | -1.25       | -1.40       | -0.87       | 0.25         | -4.32        | 0.85            |                   |
| <b>Grosvenor Diversified Hedge Funds</b>         | <b>4.52</b>  | <b>4.52</b>  | <b>3.12</b>  | <b>5.74</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>5.67</b>  | <b>2.41</b>     | <b>07/01/2018</b> |
| HFRI FOF Comp Index                              | 4.26         | 4.26         | 2.56         | 5.72         | 2.88        | 3.09        | 3.07        | 2.89         | 8.39         | 2.59            |                   |
| Difference                                       | 0.26         | 0.26         | 0.56         | 0.02         | N/A         | N/A         | N/A         | N/A          | -2.72        | -0.18           |                   |
| <b>Internal Diversified Hedge Funds</b>          | <b>3.11</b>  | <b>3.11</b>  | <b>-1.07</b> | <b>0.40</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>6.08</b>  | <b>2.56</b>     | <b>07/01/2018</b> |
| HFRI FOF Comp Index                              | 4.26         | 4.26         | 2.56         | 5.72         | 2.88        | 3.09        | 3.07        | 2.89         | 8.39         | 2.59            |                   |
| Difference                                       | -1.15        | -1.15        | -3.63        | -5.32        | N/A         | N/A         | N/A         | N/A          | -2.31        | -0.03           |                   |
| <b>Grosvenor Opportunistic Class D</b>           | <b>3.33</b>  | <b>3.33</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b>   | <b>3.33</b>     | <b>07/01/2020</b> |
| Grosvenor Opportunistic Class D Custom Benchmark | 2.29         | 2.29         | N/A          | N/A          | N/A         | N/A         | N/A         | N/A          | N/A          | 2.29            |                   |
| Difference                                       | 1.04         | 1.04         | N/A          | N/A          | N/A         | N/A         | N/A         | N/A          | N/A          | 1.04            |                   |

Performance shown is gross of fees for the Core Real Estate Composite and Core Real Estate managers. Performance shown is net of fees for the Diversified Hedge Funds Composite and managers and opportunistic managers. Wyoming State Treasurer's Office fiscal year ends June 30th. Since Inception date shown represents the first full month following initial funding.



September 30, 2020 : \$11,991,159,082



|  | Market Value<br>(\$) | Allocation<br>(%) |
|--|----------------------|-------------------|
| Internal Intermediate Govt Fixed Income Portfolio  | 1,166,447,014        | 9.73              |
| Payden & Rygel IGC                                 | 719,399,640          | 6.00              |
| JP Morgan MBS                                      | 805,651,217          | 6.72              |
| PIMCO Core   | 2,207,857,071        | 18.41             |
| Internal Ladder Portfolio                          | 3,857,828,618        | 32.17             |
| Credit Suisse                                      | 647,609,671          | 5.40              |
| Octagon  | 460,597,158          | 3.84              |
| Grosvenor Silvery Lupine Fund                      | 51,241,636           | 0.43              |
| Investec   | 228,720,531          | 1.91              |
| Global Evolution                                   | 343,146,126          | 2.86              |
| Goldman Sachs                                      | 254,382,266          | 2.12              |
| Internal Long Duration Govt Fixed Income Portfolio | 320,041,030          | 2.67              |
| Logan Circle                                       | 429,885,190          | 3.59              |
| Internal Low Duration Fixed Income Portfolio       | 498,351,913          | 4.16              |

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

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of September 30, 2020

|  | Allocation           |              | Performance (%) |             |               |              |             |             |             |             |             |              |                   |
|--|----------------------|--------------|-----------------|-------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------------|
|  | Market Value (\$)    | %            | QTD             | FYTD        | CYTD          | 1 Year       | 3 Years     | 5 Years     | 7 Years     | 10 Years    | 2019        | Since Incep. | Inception Date    |
| <b>Core Fixed Income Composite</b>                       | <b>4,899,354,941</b> | <b>40.86</b> | <b>1.02</b>     | <b>1.02</b> | <b>7.75</b>   | <b>7.79</b>  | <b>5.52</b> | <b>4.35</b> | <b>4.07</b> | <b>N/A</b>  | <b>8.01</b> | <b>3.39</b>  | <b>01/01/2013</b> |
| Bloomberg US Agg Bond Index                              |                      |              | 0.62            | 0.62        | 6.79          | 6.98         | 5.24        | 4.18        | 3.97        | 3.64        | 8.72        | 3.32         |                   |
| Difference   |                      |              | 0.40            | 0.40        | 0.96          | 0.81         | 0.28        | 0.17        | 0.10        | N/A         | -0.71       | 0.07         |                   |
| <b>Internal Aggregate Core Fixed Income</b>              | <b>2,691,497,871</b> | <b>22.45</b> | <b>0.82</b>     | <b>0.82</b> | <b>7.57</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>7.43</b>  | <b>11/01/2019</b> |
| Bloomberg US Agg Bond Index                              |                      |              | 0.62            | 0.62        | 6.79          | 6.98         | 5.24        | 4.18        | 3.97        | 3.64        | 8.72        | 6.66         |                   |
| Difference   |                      |              | 0.20            | 0.20        | 0.78          | N/A          | N/A         | N/A         | N/A         | N/A         | N/A         | 0.77         |                   |
| <b>Internal Intermediate Govt Fixed Income Portfolio</b> | <b>1,166,447,014</b> | <b>9.73</b>  | <b>0.27</b>     | <b>0.27</b> | <b>8.75</b>   | <b>8.22</b>  | <b>4.92</b> | <b>3.52</b> | <b>3.42</b> | <b>2.78</b> | <b>4.53</b> | <b>4.79</b>  | <b>10/01/1996</b> |
| Internal Intermediate Govt Fixed Income Portfolio Index  |                      |              | 0.17            | 0.17        | 8.90          | 8.40         | 4.82        | 3.23        | 2.89        | 2.55        | 4.70        | 4.79         |                   |
| Difference   |                      |              | 0.10            | 0.10        | -0.15         | -0.18        | 0.10        | 0.29        | 0.53        | 0.23        | -0.17       | 0.00         |                   |
| <b>Payden &amp; Rygel IGC</b>                            | <b>719,399,640</b>   | <b>6.00</b>  | <b>1.79</b>     | <b>1.79</b> | <b>7.26</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>7.74</b>  | <b>11/01/2019</b> |
| Payden & Rygel Custom Index                              |                      |              | 1.54            | 1.54        | 5.72          | 6.97         | 6.10        | 5.79        | 5.33        | 5.05        | 14.54       | 6.32         |                   |
| Difference   |                      |              | 0.25            | 0.25        | 1.54          | N/A          | N/A         | N/A         | N/A         | N/A         | N/A         | 1.42         |                   |
| <b>JP Morgan MBS</b>                                     | <b>805,651,217</b>   | <b>6.72</b>  | <b>0.73</b>     | <b>0.73</b> | <b>5.09</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>5.26</b>  | <b>11/01/2019</b> |
| Bloomberg US MBS Index (Unhgd)                           |                      |              | 0.11            | 0.11        | 3.62          | 4.36         | 3.68        | 2.98        | 3.16        | 3.01        | 6.35        | 3.99         |                   |
| Difference   |                      |              | 0.62            | 0.62        | 1.47          | N/A          | N/A         | N/A         | N/A         | N/A         | N/A         | 1.27         |                   |
| <b>PIMCO Core</b>  | <b>2,207,857,071</b> | <b>18.41</b> | <b>1.25</b>     | <b>1.25</b> | <b>8.11</b>   | <b>8.03</b>  | <b>5.54</b> | <b>4.52</b> | <b>4.10</b> | <b>N/A</b>  | <b>7.60</b> | <b>3.40</b>  | <b>01/01/2013</b> |
| PIMCO Custom Index                                       |                      |              | 0.62            | 0.62        | 7.42          | 7.61         | 5.09        | 4.09        | 3.91        | 3.59        | 7.30        | 3.27         |                   |
| Difference   |                      |              | 0.63            | 0.63        | 0.69          | 0.42         | 0.45        | 0.43        | 0.19        | N/A         | 0.30        | 0.13         |                   |
| <b>Opportunistic Fixed Income</b>                        |                      |              |                 |             |               |              |             |             |             |             |             |              |                   |
| <b>Grosvenor Silvery Lupine Fund</b>                     | <b>51,241,636</b>    | <b>0.43</b>  | <b>0.15</b>     | <b>0.15</b> | <b>-11.19</b> | <b>-9.89</b> | <b>0.38</b> | <b>3.42</b> | <b>N/A</b>  | <b>N/A</b>  | <b>6.59</b> | <b>3.40</b>  | <b>07/01/2014</b> |
| CS Western Euro Hi Yld Index                             |                      |              | 3.00            | 3.00        | -2.04         | 0.43         | 3.80        | 6.23        | 5.69        | 6.91        | 14.41       | 4.93         |                   |
| Difference   |                      |              | -2.85           | -2.85       | -9.15         | -10.32       | -3.42       | -2.81       | N/A         | N/A         | -7.82       | -1.53        |                   |

Performance shown is net of fees. Fiscal year ends on June 30th. The Internal Int Govt Fixed Income Portfolio Index currently consists of the BB US Treasury Index. Nov 2019 performance consists of the Internal Int Govt Fixed Income Portfolio. Prior to November 2019, the index consists of BB US Gov't Int Term Bond Index. Prior to December 2009, the index consisted of the BB US Gov't Crdt Bond Index. The PIMCO Custom Index consists of the BB US Agg Bond Index through February 2018, the BB US Agg Int Index through June 2019, the BB US Agg Bond Index through 03/26/2020, account performance from 03/27/2020 through 04/03/2020, and the BB US Agg Bond Index thereafter. The Payden & Rygel Custom Index consists of the BB US Corp Inv Grade Index through 03/25/2020, account performance from 03/26/2020 through 03/31/2020, and BB US Corp Inv Grade Index thereafter.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of September 30, 2020

|  | Allocation           |             | Performance (%) |             |              |              |              |             |              |            |              |              |                   |
|--|----------------------|-------------|-----------------|-------------|--------------|--------------|--------------|-------------|--------------|------------|--------------|--------------|-------------------|
|  | Market Value (\$)    | %           | QTD             | FYTD        | CYTD         | 1 Year       | 3 Years      | 5 Years     | 7 Years      | 10 Years   | 2019         | Since Incep. | Inception Date    |
| <b>Bank Loans</b>                                  | <b>1,108,206,829</b> | <b>9.24</b> | <b>3.62</b>     | <b>3.62</b> | <b>0.46</b>  | <b>2.13</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>2.39</b>  | <b>09/01/2019</b> |
| S&P/LSTA Lvg'd Loan Index                          |                      |             | 4.14            | 4.14        | -0.66        | 1.06         | 3.10         | 4.01        | 3.54         | 4.26       | 8.64         | 1.41         |                   |
| Difference   |                      |             | -0.52           | -0.52       | 1.12         | 1.07         | N/A          | N/A         | N/A          | N/A        | N/A          | 0.98         |                   |
| <b>Credit Suisse</b>                               | <b>647,609,671</b>   | <b>5.40</b> | <b>3.54</b>     | <b>3.54</b> | <b>-0.62</b> | <b>1.04</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>1.44</b>  | <b>09/01/2019</b> |
| S&P/LSTA Lvg'd Loan Index                          |                      |             | 4.14            | 4.14        | -0.66        | 1.06         | 3.10         | 4.01        | 3.54         | 4.26       | 8.64         | 1.41         |                   |
| Difference   |                      |             | -0.60           | -0.60       | 0.04         | -0.02        | N/A          | N/A         | N/A          | N/A        | N/A          | 0.03         |                   |
| <b>Octagon</b>                                     | <b>460,597,158</b>   | <b>3.84</b> | <b>3.72</b>     | <b>3.72</b> | <b>-0.26</b> | <b>1.73</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>2.19</b>  | <b>09/01/2019</b> |
| S&P/LSTA Lvg'd Loan Index                          |                      |             | 4.14            | 4.14        | -0.66        | 1.06         | 3.10         | 4.01        | 3.54         | 4.26       | 8.64         | 1.41         |                   |
| Difference   |                      |             | -0.42           | -0.42       | 0.40         | 0.67         | N/A          | N/A         | N/A          | N/A        | N/A          | 0.78         |                   |
| <b>Emerging Market Debt Fixed Income Composite</b> | <b>826,248,923</b>   | <b>6.89</b> | <b>1.50</b>     | <b>1.50</b> | <b>-5.03</b> | <b>0.15</b>  | <b>-0.54</b> | <b>3.98</b> | <b>-0.88</b> | <b>N/A</b> | <b>12.98</b> | <b>-1.92</b> | <b>04/01/2013</b> |
| EMD Custom Benchmark                               |                      |             | 1.25            | 1.25        | -5.52        | -0.60        | 0.46         | 4.95        | 0.09         | 0.61       | 13.47        | -0.95        |                   |
| Difference   |                      |             | 0.25            | 0.25        | 0.49         | 0.75         | -1.00        | -0.97       | -0.97        | N/A        | -0.49        | -0.97        |                   |
| <b>Investec</b>                                    | <b>228,720,531</b>   | <b>1.91</b> | <b>1.49</b>     | <b>1.49</b> | <b>-5.66</b> | <b>-0.52</b> | <b>-0.13</b> | <b>4.00</b> | <b>-0.52</b> | <b>N/A</b> | <b>13.55</b> | <b>-1.48</b> | <b>04/01/2013</b> |
| JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (Unhedged)   |                      |             | 0.61            | 0.61        | -6.32        | -1.45        | 0.17         | 4.78        | -0.04        | 0.52       | 13.47        | -1.06        |                   |
| Difference   |                      |             | 0.88            | 0.88        | 0.66         | 0.93         | -0.30        | -0.78       | -0.48        | N/A        | 0.08         | -0.42        |                   |
| <b>Global Evolution</b>                            | <b>343,146,126</b>   | <b>2.86</b> | <b>0.49</b>     | <b>0.49</b> | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>-5.82</b> | <b>02/01/2020</b> |
| JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (Unhedged)   |                      |             | 0.61            | 0.61        | -6.32        | -1.45        | 0.17         | 4.78        | -0.04        | 0.52       | 13.47        | -5.10        |                   |
| Difference   |                      |             | -0.12           | -0.12       | N/A          | N/A          | N/A          | N/A         | N/A          | N/A        | N/A          | -0.72        |                   |
| <b>Goldman Sachs</b>                               | <b>254,382,266</b>   | <b>2.12</b> | <b>2.88</b>     | <b>2.88</b> | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>0.43</b>  | <b>03/01/2020</b> |
| JPM CEMBI Brd Dvf'd Index                          |                      |             | 2.75            | 2.75        | 2.58         | 4.85         | 4.73         | 6.29        | 5.60         | 5.32       | 13.09        | 1.04         |                   |
| Difference   |                      |             | 0.13            | 0.13        | N/A          | N/A          | N/A          | N/A         | N/A          | N/A        | N/A          | -0.61        |                   |

Performance shown is 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 EMD Custom Index consists of the JPM GBI-EM Gbl Dvf'd Index through 02/29/2020, 70% JPM GBI-EM Gbl Dvf'd Index / 30% JPM CEMBI Brd Dvf'd Index thereafter through 11/30/2020, and 1/3 JPM GBI-EM Gbl Dvf'd Index, 1/3 JPM CEMBI Brd Dvf'd Index, and 1/3 JPM EMBI Gbl Dvf'd Index thereafter.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of September 30, 2020

|  | Allocation        |       | Performance (%) |       |       |        |         |         |         |          |       |              |                |  |
|--|-------------------|-------|-----------------|-------|-------|--------|---------|---------|---------|----------|-------|--------------|----------------|--|
|  | Market Value (\$) | %     | QTD             | FYTD  | CYTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | Since Incep. | Inception Date |  |
| Laddered Treasury Composite                        | 3,857,828,618     | 32.17 | 0.10            | 0.10  | 3.15  | 3.62   | N/A     | N/A     | N/A     | N/A      | N/A   | 3.62         | 10/01/2019     |  |
| Internal Ladder Portfolio                          | 3,857,828,618     | 32.17 | 0.10            | 0.10  | 3.15  | 3.62   | N/A     | N/A     | N/A     | N/A      | N/A   | 3.62         | 10/01/2019     |  |
| Long Duration Fixed Income Composite               | 749,926,220       | 6.25  | 1.01            | 1.01  | 16.62 | 14.77  | N/A     | N/A     | N/A     | N/A      | 19.11 | 20.66        | 01/01/2019     |  |
| Bloomberg US Gov't Crdt Lng Trm Bond Index         |                   |       | 1.22            | 1.22  | 14.20 | 12.92  | 10.21   | 8.78    | 8.51    | 7.36     | 19.59 | 19.49        |                |  |
| Difference   |                   |       | -0.21           | -0.21 | 2.42  | 1.85   | N/A     | N/A     | N/A     | N/A      | -0.48 | 1.17         |                |  |
| Internal Long Duration Govt Fixed Income Portfolio | 320,041,030       | 2.67  | 0.14            | 0.14  | 20.71 | 15.86  | N/A     | N/A     | N/A     | N/A      | 14.61 | 20.38        | 01/01/2019     |  |
| Bloomberg US Gov't Lng Trm Bond Index              |                   |       | 0.13            | 0.13  | 21.13 | 16.21  | 11.79   | 8.18    | 8.73    | 7.18     | 14.75 | 20.70        |                |  |
| Difference   |                   |       | 0.01            | 0.01  | -0.42 | -0.35  | N/A     | N/A     | N/A     | N/A      | -0.14 | -0.32        |                |  |
| Logan Circle Long Credit                           | 429,885,190       | 3.59  | 1.63            | 1.63  | 11.41 | 12.56  | N/A     | N/A     | N/A     | N/A      | 23.48 | 19.32        | 11/01/2018     |  |
| Bloomberg US Lng Crdt Index                        |                   |       | 1.97            | 1.97  | 8.00  | 9.28   | 8.63    | 8.82    | 8.17    | 7.32     | 23.36 | 17.38        |                |  |
| Difference   |                   |       | -0.34           | -0.34 | 3.41  | 3.28   | N/A     | N/A     | N/A     | N/A      | 0.12  | 1.94         |                |  |
| Low Duration Fixed Income Composite                | 498,351,913       | 4.16  | 0.13            | 0.13  | 3.08  | 3.97   | N/A     | N/A     | N/A     | N/A      | 3.96  | 4.24         | 12/01/2018     |  |
| Low Duration Fixed Income Custom Index             |                   |       | 0.10            | 0.10  | 3.09  | 3.62   | 2.77    | 2.05    | 1.74    | 1.55     | 3.84  | 4.22         |                |  |
| Difference   |                   |       | 0.03            | 0.03  | -0.01 | 0.35   | N/A     | N/A     | N/A     | N/A      | 0.12  | 0.02         |                |  |
| Internal Low Duration Fixed Income Portfolio       | 498,351,913       | 4.16  | 0.13            | 0.13  | 3.08  | 3.97   | N/A     | N/A     | N/A     | N/A      | 3.80  | 3.40         | 03/01/2018     |  |
| Bloomberg US Gov't 1-3 Yr Bond Index               |                   |       | 0.10            | 0.10  | 3.09  | 3.62   | 2.66    | 1.82    | 1.54    | 1.30     | 3.59  | 3.34         |                |  |
| Difference   |                   |       | 0.03            | 0.03  | -0.01 | 0.35   | N/A     | N/A     | N/A     | N/A      | 0.21  | 0.06         |                |  |

Performance shown is 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 Low Duration Fixed Income Custom Index consists of the Bloomberg US Gov't Crdt 1-3 Yr Bond Index through 06/30/2019 and the Bloomberg US Gov't 1-3 Yr Bond Index thereafter.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

As of September 30, 2020

|   | Allocation        |       | Performance (%) |      |       |        |         |         |         |          |       |              |                |
|---|-------------------|-------|-----------------|------|-------|--------|---------|---------|---------|----------|-------|--------------|----------------|
|   | Market Value (\$) | %     | QTD             | FYTD | CYTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | Since Incep. | Inception Date |
| Core Fixed Income Composite                             | 4,899,354,941     | 40.86 | 1.04            | 1.04 | 7.82  | 7.88   | 5.63    | 4.47    | 4.20    | N/A      | 8.12  | 3.52         | 01/01/2013     |
| Bloomberg US Agg Bond Index                             |                   |       | 0.62            | 0.62 | 6.79  | 6.98   | 5.24    | 4.18    | 3.97    | 3.64     | 8.72  | 3.32         |                |
| Difference  |                   |       | 0.42            | 0.42 | 1.03  | 0.90   | 0.39    | 0.29    | 0.23    | N/A      | -0.60 | 0.20         |                |
| IM U.S. Broad Mkt Core Fixed Income (SA+CF) Median      |                   |       | 1.10            | 1.10 | 7.31  | 7.52   | 5.62    | 4.70    | 4.43    | 4.16     | 9.18  | 3.74         |                |
| Core Fixed Income Composite Rank                        |                   |       | 55              | 55   | 32    | 38     | 50      | 70      | 71      | N/A      | 92    | 72           |                |
| Internal Aggregate Core Fixed Income                    | 2,691,497,871     | 22.45 | 0.84            | 0.84 | 7.63  | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 7.50         | 11/01/2019     |
| Bloomberg US Agg Bond Index                             |                   |       | 0.62            | 0.62 | 6.79  | 6.98   | 5.24    | 4.18    | 3.97    | 3.64     | 8.72  | 6.66         |                |
| Difference  |                   |       | 0.22            | 0.22 | 0.84  | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 0.84         |                |
| IM U.S. Broad Market Core Fixed Income (SA+CF) Median   |                   |       | 1.10            | 1.10 | 7.31  | 7.52   | 5.62    | 4.70    | 4.43    | 4.16     | 9.18  | 7.23         |                |
| Internal Aggregate Core Fixed Income Rank               |                   |       | 67              | 67   | 39    | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 41           |                |
| Internal Intermediate Govt Fixed Income Portfolio       | 1,166,447,014     | 9.73  | 0.27            | 0.27 | 8.75  | 8.22   | 4.92    | 3.52    | 3.42    | 2.78     | 4.53  | 4.79         | 10/01/1996     |
| Internal Intermediate Govt Fixed Income Portfolio Index |                   |       | 0.17            | 0.17 | 8.90  | 8.40   | 4.82    | 3.23    | 2.89    | 2.55     | 4.70  | 4.79         |                |
| Difference  |                   |       | 0.10            | 0.10 | -0.15 | -0.18  | 0.10    | 0.29    | 0.53    | 0.23     | -0.17 | 0.00         |                |
| IM U.S. Government Bonds (SA+CF) Median                 |                   |       | 0.20            | 0.20 | 7.31  | 7.00   | 4.81    | 3.00    | 2.78    | 2.52     | 5.84  | 5.14         |                |
| Internal Intermediate Govt Fixed Income Portfolio Rank  |                   |       | 30              | 30   | 47    | 46     | 50      | 49      | 46      | 46       | 74    | 55           |                |
| Payden & Rygel IGC                                      | 719,399,640       | 6.00  | 1.83            | 1.83 | 7.43  | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 7.91         | 11/01/2019     |
| Payden & Rygel Custom Index                             |                   |       | 1.54            | 1.54 | 5.72  | 6.97   | 6.10    | 5.79    | 5.33    | 5.05     | 14.54 | 6.32         |                |
| Difference  |                   |       | 0.29            | 0.29 | 1.71  | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 1.59         |                |
| IM U.S. Corporate Bonds (SA+CF) Median                  |                   |       | 1.92            | 1.92 | 7.73  | 9.05   | 7.07    | 6.79    | 6.12    | 6.01     | 15.08 | 8.40         |                |
| Payden & Rygel IGC Rank                                 |                   |       | 61              | 61   | 54    | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 57           |                |
| JP Morgan MBS   | 805,651,217       | 6.72  | 0.75            | 0.75 | 5.15  | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 5.35         | 11/01/2019     |
| Bloomberg US MBS Index (Unhgd)                          |                   |       | 0.11            | 0.11 | 3.62  | 4.36   | 3.68    | 2.98    | 3.16    | 3.01     | 6.35  | 3.99         |                |
| Difference  |                   |       | 0.64            | 0.64 | 1.53  | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 1.36         |                |
| IM U.S. Mortgage Backed Bonds (SA+CF) Median            |                   |       | 0.77            | 0.77 | 3.69  | 4.20   | 3.89    | 3.37    | 3.63    | 3.82     | 6.56  | 3.85         |                |
| JP Morgan MBS Rank                                      |                   |       | 52              | 52   | 8     | N/A    | N/A     | N/A     | N/A     | N/A      | N/A   | 11           |                |
| PIMCO Core  | 2,207,857,071     | 18.41 | 1.27            | 1.27 | 8.20  | 8.14   | 5.65    | 4.64    | 4.25    | N/A      | 7.71  | 3.55         | 01/01/2013     |
| PIMCO Custom Index                                      |                   |       | 0.62            | 0.62 | 7.42  | 7.61   | 5.09    | 4.09    | 3.91    | 3.59     | 7.30  | 3.27         |                |
| Difference  |                   |       | 0.65            | 0.65 | 0.78  | 0.53   | 0.56    | 0.55    | 0.34    | N/A      | 0.41  | 0.28         |                |
| IM U.S. Broad Mkt Core Fixed Income (SA+CF) Median      |                   |       | 1.10            | 1.10 | 7.31  | 7.52   | 5.62    | 4.70    | 4.43    | 4.16     | 9.18  | 3.74         |                |
| PIMCO Core Rank   |                   |       | 32              | 32   | 19    | 29     | 50      | 52      | 67      | N/A      | 95    | 70           |                |

Performance shown is gross of fees. Fiscal year ends on June 30th. The Internal Int Govt Fixed Income Portfolio Index currently consists of the BB US Treasury Index. Nov 2019 performance consists of the Internal Int Govt Fixed Income Portfolio. Prior to November 2019, the index consists of BB US Gov't Int Term Bond Index. Prior to December 2009, the index consisted of the BB US Gov't Crdt Bond Index. The PIMCO Custom Index consists of the BB US Agg Bond Index through February 2018, the BB US Agg Int Index through June 2019, the BB US Agg Bond Index through 03/26/2020, account performance from 03/27/2020 through 04/03/2020, and the BB US Agg Bond Index thereafter. The Payden & Rygel Custom Index consists of the BB US Corp Inv Grade Index through 03/25/2020, account performance from 03/26/2020 through 03/31/2020, and BB US Corp Inv Grade Index thereafter.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

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|                                   | Allocation        |      | Performance (%) |       |        |        |         |         |         |          |       |              |                |  |
|-----------------------------------|-------------------|------|-----------------|-------|--------|--------|---------|---------|---------|----------|-------|--------------|----------------|--|
|                                   | Market Value (\$) | %    | QTD             | FYTD  | CYTD   | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | Since Incep. | Inception Date |  |
| Opportunistic Fixed Income        |                   |      |                 |       |        |        |         |         |         |          |       |              |                |  |
| Grosvenor Silvery Lupine Fund     | 51,241,636        | 0.43 | 0.15            | 0.15  | -11.19 | -9.89  | 0.38    | 3.42    | N/A     | N/A      | 6.59  | 3.40         | 07/01/2014     |  |
| CS Western Euro Hi Yld Index      |                   |      | 3.00            | 3.00  | -2.04  | 0.43   | 3.80    | 6.23    | 5.69    | 6.91     | 14.41 | 4.93         |                |  |
| Difference                        |                   |      | -2.85           | -2.85 | -9.15  | -10.32 | -3.42   | -2.81   | N/A     | N/A      | -7.82 | -1.53        |                |  |
|                                   |                   |      |                 |       |        |        |         |         |         |          |       |              |                |  |
| Bank Loans                        | 1,108,206,829     | 9.24 | 3.70            | 3.70  | 0.71   | 2.44   | N/A     | N/A     | N/A     | N/A      | N/A   | 2.68         | 09/01/2019     |  |
| S&P/LSTA Lvg'd Loan Index         |                   |      | 4.14            | 4.14  | -0.66  | 1.06   | 3.10    | 4.01    | 3.54    | 4.26     | 8.64  | 1.41         |                |  |
| Difference                        |                   |      | -0.44           | -0.44 | 1.37   | 1.38   | N/A     | N/A     | N/A     | N/A      | N/A   | 1.27         |                |  |
| IM U.S. Bank Loans (SA+CF) Median |                   |      | 3.78            | 3.78  | -0.89  | 0.81   | 3.16    | 3.99    | 3.67    | 4.54     | 8.71  | 1.40         |                |  |
| Bank Loans Rank                   |                   |      | 54              | 54    | 7      | 11     | N/A     | N/A     | N/A     | N/A      | N/A   | 16           |                |  |
|                                   |                   |      |                 |       |        |        |         |         |         |          |       |              |                |  |
| Credit Suisse                     | 647,609,671       | 5.40 | 3.61            | 3.61  | -0.40  | 1.25   | N/A     | N/A     | N/A     | N/A      | N/A   | 1.66         | 09/01/2019     |  |
| S&P/LSTA Lvg'd Loan Index         |                   |      | 4.14            | 4.14  | -0.66  | 1.06   | 3.10    | 4.01    | 3.54    | 4.26     | 8.64  | 1.41         |                |  |
| Difference                        |                   |      | -0.53           | -0.53 | 0.26   | 0.19   | N/A     | N/A     | N/A     | N/A      | N/A   | 0.25         |                |  |
| IM U.S. Bank Loans (SA+CF) Median |                   |      | 3.78            | 3.78  | -0.89  | 0.81   | 3.16    | 3.99    | 3.67    | 4.54     | 8.71  | 1.40         |                |  |
| Credit Suisse Rank                |                   |      | 59              | 59    | 30     | 41     | N/A     | N/A     | N/A     | N/A      | N/A   | 39           |                |  |
|                                   |                   |      |                 |       |        |        |         |         |         |          |       |              |                |  |
| Octagon                           | 460,597,158       | 3.84 | 3.84            | 3.84  | 0.06   | 2.18   | N/A     | N/A     | N/A     | N/A      | N/A   | 2.60         | 09/01/2019     |  |
| S&P/LSTA Lvg'd Loan Index         |                   |      | 4.14            | 4.14  | -0.66  | 1.06   | 3.10    | 4.01    | 3.54    | 4.26     | 8.64  | 1.41         |                |  |
| Difference                        |                   |      | -0.30           | -0.30 | 0.72   | 1.12   | N/A     | N/A     | N/A     | N/A      | N/A   | 1.19         |                |  |
| IM U.S. Bank Loans (SA+CF) Median |                   |      | 3.78            | 3.78  | -0.89  | 0.81   | 3.16    | 3.99    | 3.67    | 4.54     | 8.71  | 1.40         |                |  |
| Octagon Rank                      |                   |      | 43              | 43    | 17     | 17     | N/A     | N/A     | N/A     | N/A      | N/A   | 17           |                |  |

Performance shown is gross of fees with the exception of Grosvenor SLF, 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.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

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|  | Allocation           |              | Performance (%) |             |              |              |              |             |              |            |              |              |                   |
|--|----------------------|--------------|-----------------|-------------|--------------|--------------|--------------|-------------|--------------|------------|--------------|--------------|-------------------|
|  | Market Value (\$)    | %            | QTD             | FYTD        | CYTD         | 1 Year       | 3 Years      | 5 Years     | 7 Years      | 10 Years   | 2019         | Since Incep. | Inception Date    |
| <b>Emerging Market Debt Fixed Income Composite</b> | <b>826,248,923</b>   | <b>6.89</b>  | <b>1.51</b>     | <b>1.51</b> | <b>-4.95</b> | <b>0.31</b>  | <b>-0.18</b> | <b>4.44</b> | <b>-0.38</b> | <b>N/A</b> | <b>13.42</b> | <b>-1.41</b> | <b>04/01/2013</b> |
| EMD Custom Benchmark                               |                      |              | 1.25            | 1.25        | -5.52        | -0.60        | 0.46         | 4.95        | 0.09         | 0.61       | 13.47        | -0.95        |                   |
| Difference   |                      |              | 0.26            | 0.26        | 0.57         | 0.91         | -0.64        | -0.51       | -0.47        | N/A        | -0.05        | -0.46        |                   |
| IM Emerging Markets Debt (SA+CF) Median            |                      |              | 2.55            | 2.55        | -1.23        | 2.10         | 2.66         | 6.42        | 4.81         | 5.01       | 14.24        | 3.65         |                   |
| Emerging Market Debt Fixed Income Composite Rank   |                      |              | 73              | 73          | 73           | 67           | 89           | 91          | 97           | N/A        | 68           | 96           |                   |
| <b>Investec</b>                                    | <b>228,720,531</b>   | <b>1.91</b>  | <b>1.51</b>     | <b>1.51</b> | <b>-5.59</b> | <b>-0.37</b> | <b>0.31</b>  | <b>4.53</b> | <b>0.02</b>  | <b>N/A</b> | <b>14.10</b> | <b>-0.95</b> | <b>04/01/2013</b> |
| JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (Unhedged)   |                      |              | 0.61            | 0.61        | -6.32        | -1.45        | 0.17         | 4.78        | -0.04        | 0.52       | 13.47        | -1.06        |                   |
| Difference   |                      |              | 0.90            | 0.90        | 0.73         | 1.08         | 0.14         | -0.25       | 0.06         | N/A        | 0.63         | 0.11         |                   |
| IM Emerging Markets Debt (SA+CF) Median            |                      |              | 2.55            | 2.55        | -1.23        | 2.10         | 2.66         | 6.42        | 4.81         | 5.01       | 14.24        | 3.65         |                   |
| Investec Rank                                      |                      |              | 73              | 73          | 79           | 79           | 84           | 89          | 94           | N/A        | 54           | 94           |                   |
| <b>Global Evolution</b>                            | <b>343,146,126</b>   | <b>2.86</b>  | <b>0.50</b>     | <b>0.50</b> | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>-5.70</b> | <b>02/01/2020</b> |
| JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (Unhedged)   |                      |              | 0.61            | 0.61        | -6.32        | -1.45        | 0.17         | 4.78        | -0.04        | 0.52       | 13.47        | -5.10        |                   |
| Difference   |                      |              | -0.11           | -0.11       | N/A          | N/A          | N/A          | N/A         | N/A          | N/A        | N/A          | -0.60        |                   |
| IM Emerging Markets Debt (SA+CF) Median            |                      |              | 2.55            | 2.55        | -1.23        | 2.10         | 2.66         | 6.42        | 4.81         | 5.01       | 14.24        | -2.17        |                   |
| Global Evolution Rank                              |                      |              | 94              | 94          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A        | N/A          | 87           |                   |
| <b>Goldman Sachs</b>                               | <b>254,382,266</b>   | <b>2.12</b>  | <b>2.88</b>     | <b>2.88</b> | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>0.43</b>  | <b>03/01/2020</b> |
| JPM CEMBI Brd Dvf'd Index                          |                      |              | 2.75            | 2.75        | 2.58         | 4.85         | 4.73         | 6.29        | 5.60         | 5.32       | 13.09        | 1.04         |                   |
| Difference   |                      |              | 0.13            | 0.13        | N/A          | N/A          | N/A          | N/A         | N/A          | N/A        | N/A          | -0.61        |                   |
| IM Emerging Markets Debt (SA+CF) Median            |                      |              | 2.55            | 2.55        | -1.23        | 2.10         | 2.66         | 6.42        | 4.81         | 5.01       | 14.24        | -0.69        |                   |
| Goldman Sachs Rank                                 |                      |              | 42              | 42          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A        | N/A          | 31           |                   |
| <b>Laddered Treasury Composite</b>                 | <b>3,857,828,618</b> | <b>32.17</b> | <b>0.10</b>     | <b>0.10</b> | <b>3.15</b>  | <b>3.62</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>3.62</b>  | <b>10/01/2019</b> |
| <b>Internal Ladder Portfolio</b>                   | <b>3,857,828,618</b> | <b>32.17</b> | <b>0.10</b>     | <b>0.10</b> | <b>3.15</b>  | <b>3.62</b>  | <b>N/A</b>   | <b>N/A</b>  | <b>N/A</b>   | <b>N/A</b> | <b>N/A</b>   | <b>3.62</b>  | <b>10/01/2019</b> |

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. The EMD Custom Index consists of the JPM GBI-EM Gbl Dvf'd Index through 02/29/2020, 70% JPM GBI-EM Gbl Dvf'd Index / 30% JPM CEMBI Brd Dvf'd Index thereafter through 11/30/2020, and 1/3 JPM GBI-EM Gbl Dvf'd Index, 1/3 JPM CEMBI Brd Dvf'd Index, and 1/3 JPM EMBI Gbl Dvf'd Index thereafter.

Wyoming State Treasurer's Office  
Asset Allocation & Performance

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|   | Allocation        |      | Performance (%) |       |       |        |         |         |         |          |       |              |            | Inception Date |
|---|-------------------|------|-----------------|-------|-------|--------|---------|---------|---------|----------|-------|--------------|------------|----------------|
|   | Market Value (\$) | %    | QTD             | FYTD  | CYTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | Since Incep. |            |                |
| Long Duration Fixed Income Composite                    | 749,926,220       | 6.25 | 1.04            | 1.04  | 16.71 | 14.89  | N/A     | N/A     | N/A     | N/A      | 19.24 | 20.78        | 01/01/2019 |                |
| Bloomberg US Gov't Crdt Lng Trm Bond Index              |                   |      | 1.22            | 1.22  | 14.20 | 12.92  | 10.21   | 8.78    | 8.51    | 7.36     | 19.59 | 19.49        |            |                |
| Difference  |                   |      | -0.18           | -0.18 | 2.51  | 1.97   | N/A     | N/A     | N/A     | N/A      | -0.35 | 1.29         |            |                |
| IM U.S. Long Duration (SA+CF) Median                    |                   |      | 1.54            | 1.54  | 13.84 | 12.60  | 10.36   | 9.25    | 8.85    | 7.91     | 20.14 | 19.79        |            |                |
| Long Duration Fixed Income Composite Rank               |                   |      | 91              | 91    | 12    | 22     | N/A     | N/A     | N/A     | N/A      | 76    | 27           |            |                |
| Internal Long Duration Govt Fixed Income Portfolio      | 320,041,030       | 2.67 | 0.14            | 0.14  | 20.71 | 15.86  | N/A     | N/A     | N/A     | N/A      | 14.61 | 20.38        | 01/01/2019 |                |
| Bloomberg US Gov't Lng Trm Bond Index                   |                   |      | 0.13            | 0.13  | 21.13 | 16.21  | 11.79   | 8.18    | 8.73    | 7.18     | 14.75 | 20.70        |            |                |
| Difference  |                   |      | 0.01            | 0.01  | -0.42 | -0.35  | N/A     | N/A     | N/A     | N/A      | -0.14 | -0.32        |            |                |
| IM U.S. Long Duration (SA+CF) Median                    |                   |      | 1.54            | 1.54  | 13.84 | 12.60  | 10.36   | 9.25    | 8.85    | 7.91     | 20.14 | 19.79        |            |                |
| Internal Long Duration Govt Fixed Income Portfolio Rank |                   |      | 100             | 100   | 1     | 9      | N/A     | N/A     | N/A     | N/A      | 91    | 39           |            |                |
| Logan Circle  | 429,885,190       | 3.59 | 1.68            | 1.68  | 11.57 | 12.78  | N/A     | N/A     | N/A     | N/A      | 23.73 | 19.57        | 11/01/2018 |                |
| Bloomberg US Lng Crdt Index                             |                   |      | 1.97            | 1.97  | 8.00  | 9.28   | 8.63    | 8.82    | 8.17    | 7.32     | 23.36 | 17.38        |            |                |
| Difference  |                   |      | -0.29           | -0.29 | 3.57  | 3.50   | N/A     | N/A     | N/A     | N/A      | 0.37  | 2.19         |            |                |
| IM U.S. Long Duration (SA+CF) Median                    |                   |      | 1.54            | 1.54  | 13.84 | 12.60  | 10.36   | 9.25    | 8.85    | 7.91     | 20.14 | 20.14        |            |                |
| Logan Circle Rank                                       |                   |      | 49              | 49    | 63    | 49     | N/A     | N/A     | N/A     | N/A      | 10    | 61           |            |                |
| Low Duration Fixed Income Composite                     | 498,351,913       | 4.16 | 0.13            | 0.13  | 3.08  | 3.97   | N/A     | N/A     | N/A     | N/A      | 3.96  | 4.24         | 12/01/2018 |                |
| Low Duration Fixed Income Custom Index                  |                   |      | 0.10            | 0.10  | 3.09  | 3.62   | 2.77    | 2.05    | 1.74    | 1.55     | 3.84  | 4.22         |            |                |
| Difference  |                   |      | 0.03            | 0.03  | -0.01 | 0.35   | N/A     | N/A     | N/A     | N/A      | 0.12  | 0.02         |            |                |
| IM U.S. Short Duration Fixed Income (SA+CF) Median      |                   |      | 0.55            | 0.55  | 3.30  | 3.99   | 3.14    | 2.52    | 2.19    | 2.04     | 4.51  | 4.61         |            |                |
| Low Duration Fixed Income Composite Rank                |                   |      | 98              | 98    | 67    | 51     | N/A     | N/A     | N/A     | N/A      | 79    | 73           |            |                |
| Internal Low Duration Fixed Income Portfolio            | 498,351,913       | 4.16 | 0.13            | 0.13  | 3.08  | 3.97   | N/A     | N/A     | N/A     | N/A      | 3.80  | 3.40         | 03/01/2018 |                |
| Bloomberg US Gov't 1-3 Yr Bond Index                    |                   |      | 0.10            | 0.10  | 3.09  | 3.62   | 2.66    | 1.82    | 1.54    | 1.30     | 3.59  | 3.34         |            |                |
| Difference  |                   |      | 0.03            | 0.03  | -0.01 | 0.35   | N/A     | N/A     | N/A     | N/A      | 0.21  | 0.06         |            |                |
| IM U.S. Short Duration Fixed Income (SA+CF) Median      |                   |      | 0.55            | 0.55  | 3.30  | 3.99   | 3.14    | 2.52    | 2.19    | 2.04     | 4.51  | 3.84         |            |                |
| Internal Low Duration Fixed Income Portfolio Rank       |                   |      | 98              | 98    | 67    | 51     | N/A     | N/A     | N/A     | N/A      | 83    | 83           |            |                |

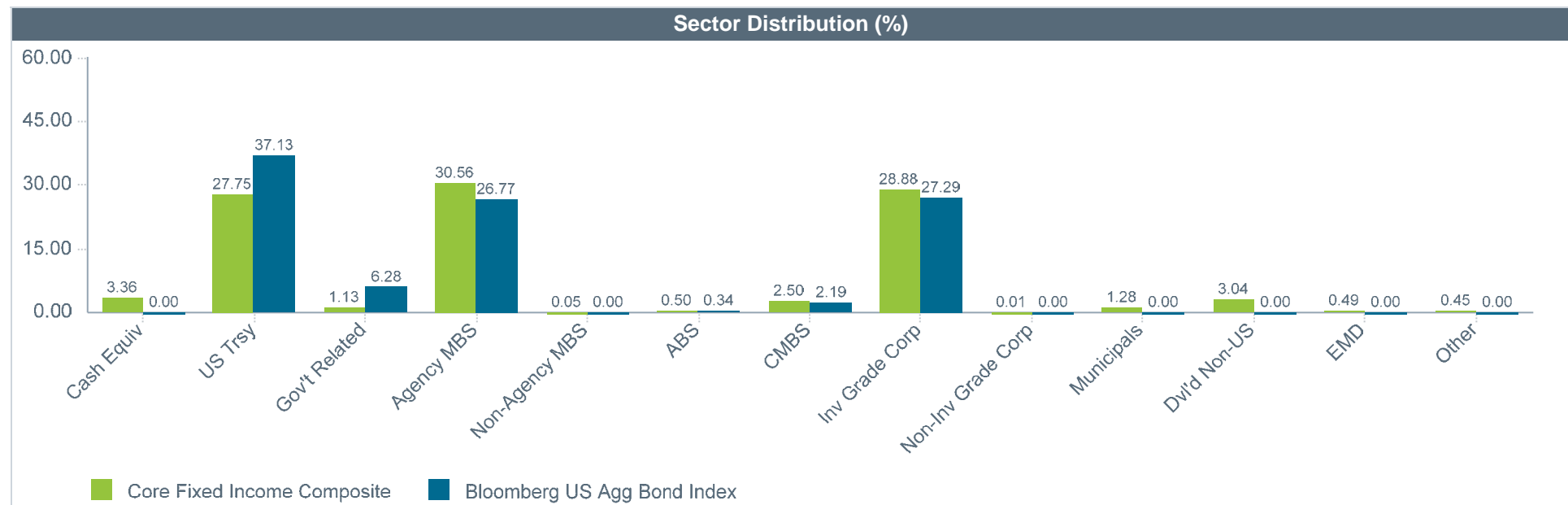
Performance shown is gross of fees. Wyoming State Treasurer's Office fiscal year ends on June 30th. Since Inception date shown represents the first full month following initial funding. The Low Duration Fixed Income Custom Index consists of the Bloomberg US Gov't Crdt 1-3 Yr Bond Index through 06/30/2019 and the Bloomberg US Gov't 1-3 Yr Bond Index thereafter.



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

As of September 30, 2020

| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 6.04      | 6.12      |
| Convexity                 | 0.40      | 0.43      |
| Avg. Maturity             | 7.87      | 8.18      |
| Avg. Quality              | Aa2       | Aa1/Aa2   |
| Yield To Maturity (%)     | 1.34      | 1.19      |
| Coupon Rate (%)           | 2.70      | 2.90      |
| Current Yield (%)         | 2.63      | N/A       |

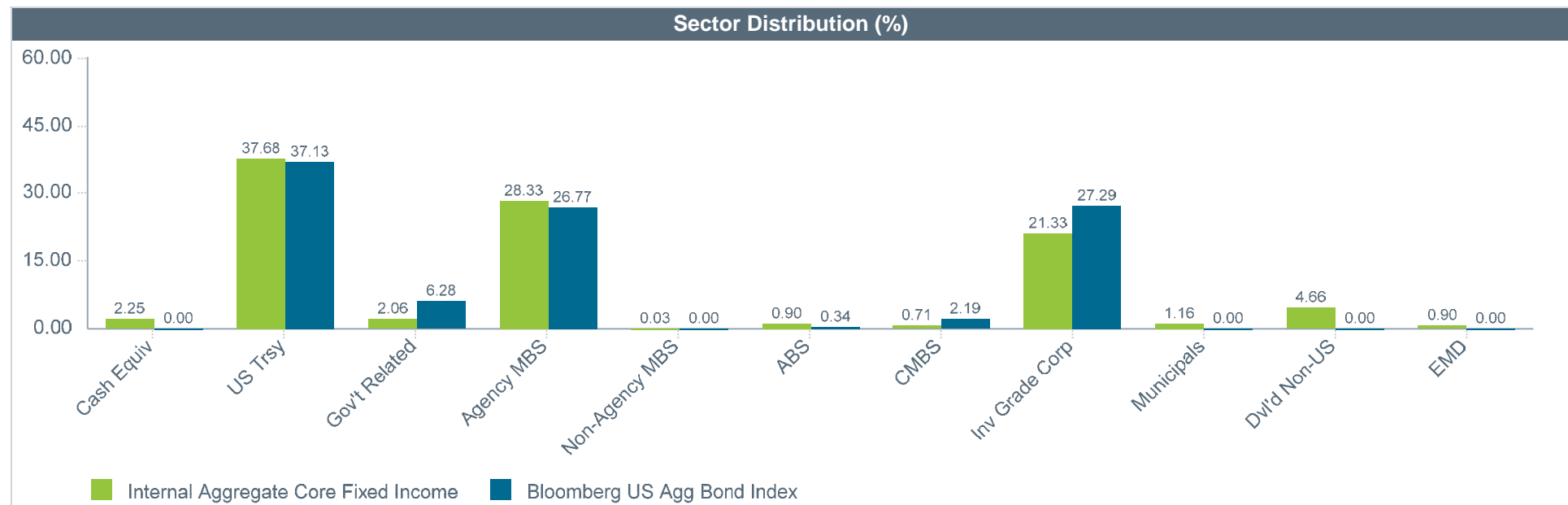


The statistics are calculated based on a weighted average of the underlying managers. Allocation to "Other" consists of Euro/Yankee securities.

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

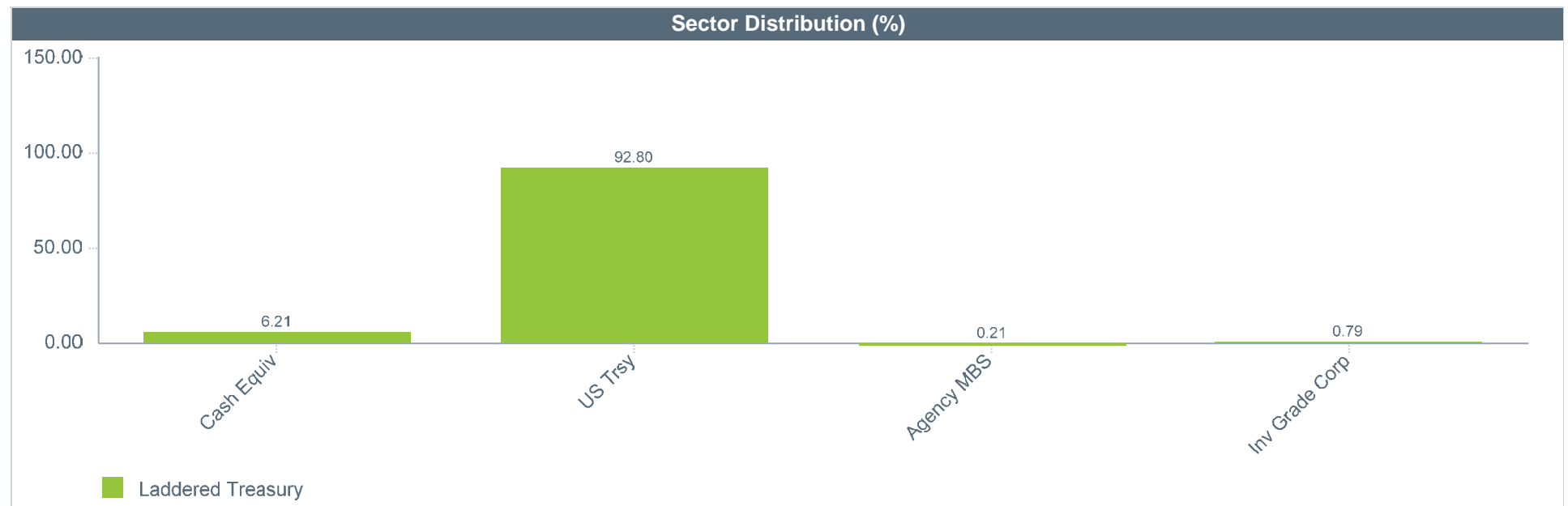
As of September 30, 2020

| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 5.98      | 6.12      |
| Convexity                 | 0.77      | 0.43      |
| Avg. Maturity             | 8.32      | 8.18      |
| Avg. Quality              | Aa2       | Aa1/Aa2   |
| Yield To Maturity (%)     | 1.07      | 1.19      |
| Coupon Rate (%)           | 2.98      | 2.90      |
| Current Yield (%)         | 2.96      | N/A       |



The statistics are calculated based on a weighted average of the underlying managers.

| Portfolio Characteristics |           |
|---------------------------|-----------|
|                           | Portfolio |
| Effective Duration        | 1.90      |
| Convexity                 | 0.05      |
| Avg. Maturity             | 1.93      |
| Avg. Quality              | Aaa       |
| Yield To Maturity (%)     | 0.14      |
| Coupon Rate (%)           | 1.12      |

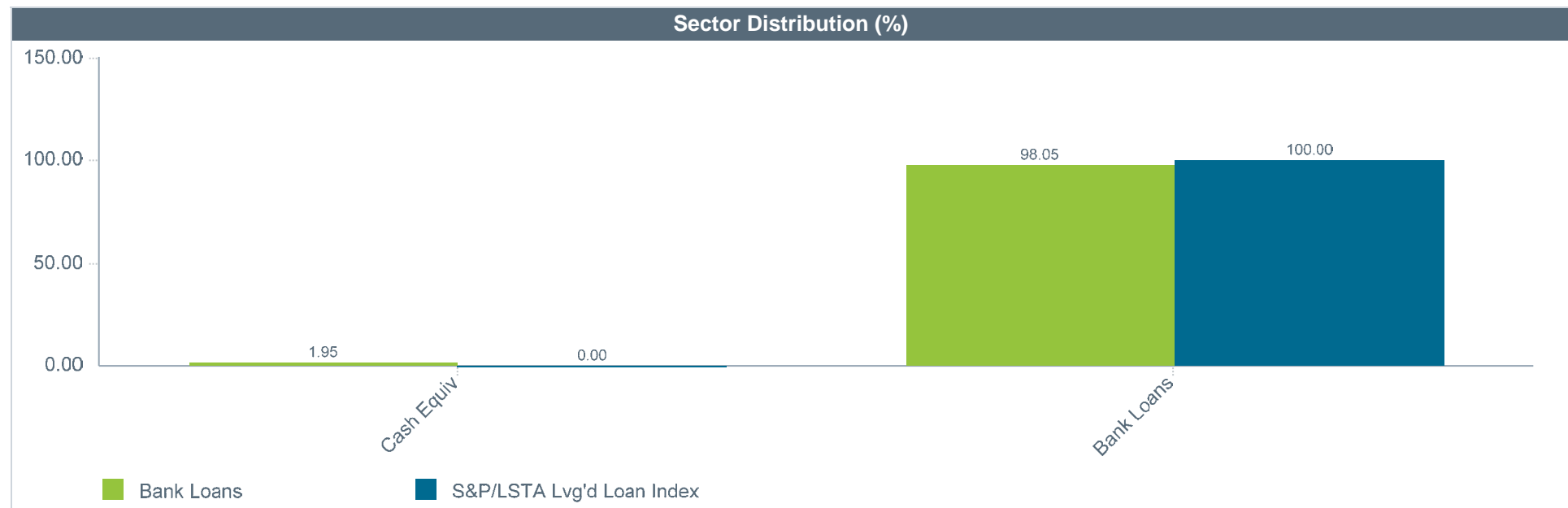


The statistics are calculated based on a weighted average of the underlying managers.

Wyoming State Treasurer's Office  
Bank Loans vs. S&P/LSTA Lvg'd Loan Index  
Portfolio Characteristics

As of September 30, 2020

| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 0.25      | N/A       |
| Avg. Maturity             | 5.06      | 4.67      |
| Avg. Quality              | B1        | B1        |
| Yield To Maturity (%)     | 5.04      | 6.40      |
| Coupon Rate (%)           | 3.86      | 4.28      |
| Current Yield (%)         | 4.05      | 6.40      |

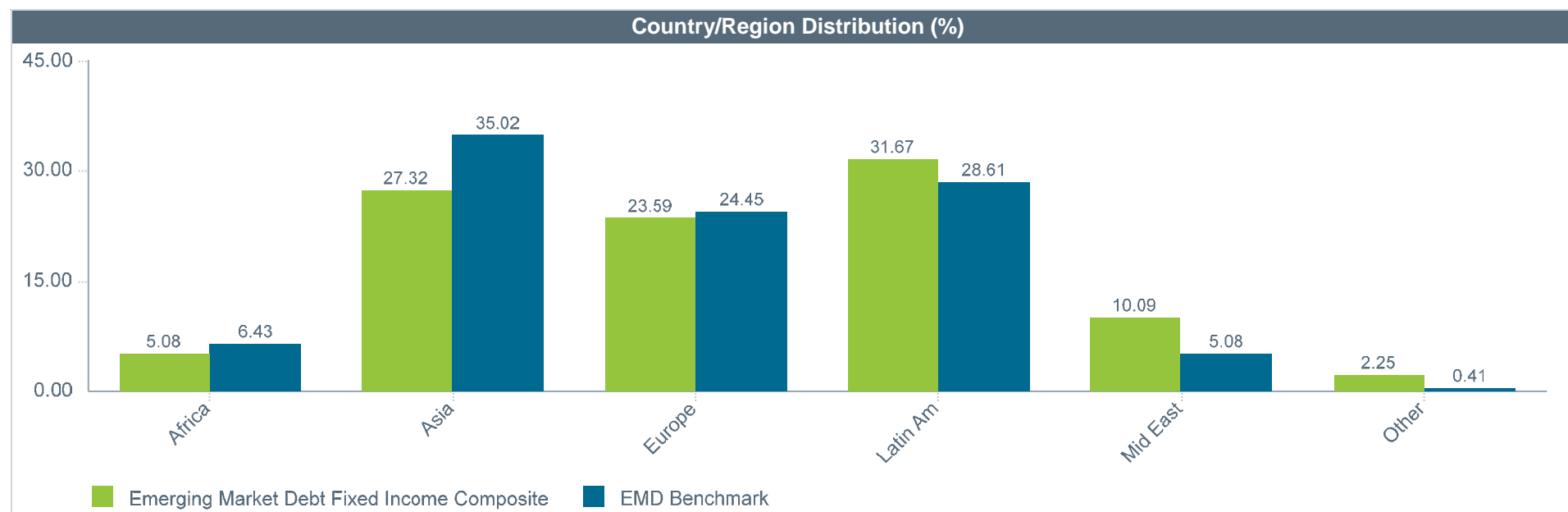


The statistics are calculated based on a weighted average of the underlying managers.

Wyoming State Treasurer's Office  
Emerging Market Debt Fixed Income Composite vs. EMD Benchmark  
Portfolio Characteristics

As of September 30, 2020

| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 5.68      | 5.26      |
| Convexity                 | N/A       | 0.40      |
| Avg. Maturity             | 11.19     | 8.00      |
| Avg. Quality              | Ba1       | Ba2       |
| Yield To Maturity (%)     | 5.14      | 4.35      |
| Coupon Rate (%)           | 5.54      | 5.54      |
| Yield To Worst (%)        | 5.13      | 4.31      |
| Current Yield (%)         | 5.16      | 5.10      |

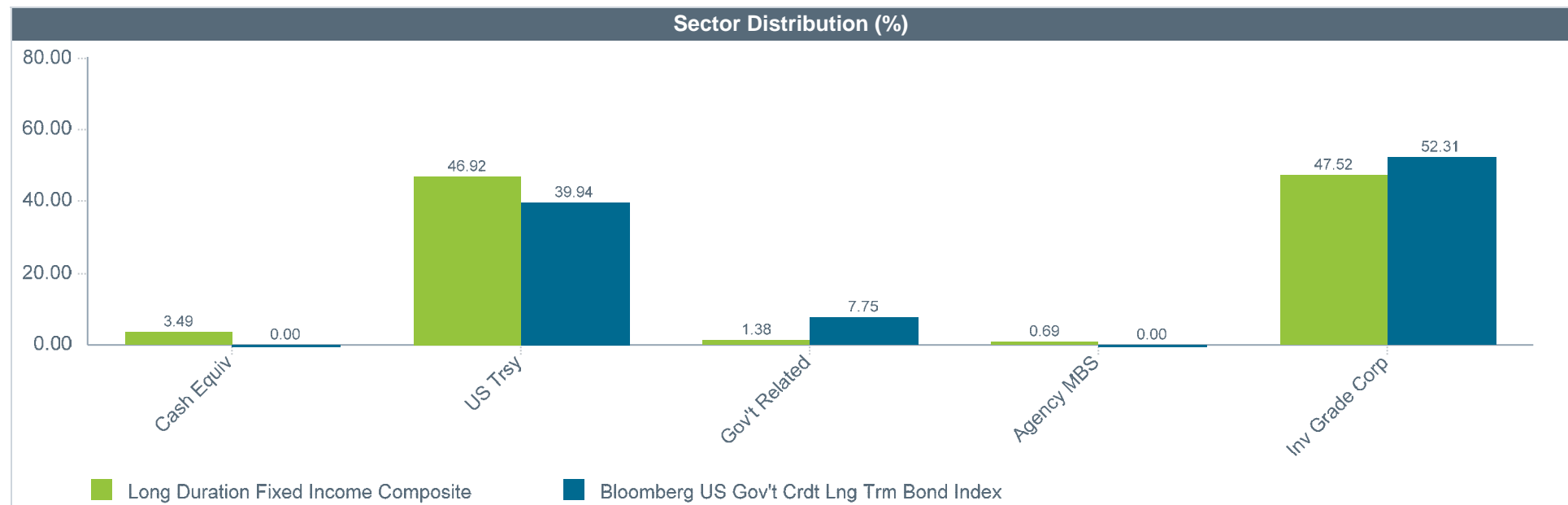


The statistics are calculated based on a weighted average of the underlying managers. Region allocation to "Other" consists of cash. The EMD Custom Index consists of the JPM GBI-EM Gbl Dvf'd Index through 02/29/2020, 70% JPM GBI-EM Gbl Dvf'd Index / 30% JPM CEMBI Brd Dvf'd Index thereafter through 11/30/2020, and 1/3 JPM GBI-EM Gbl Dvf'd Index, 1/3 JPM CEMBI Brd Dvf'd Index, and 1/3 JPM EMBI Gbl Dvf'd Index thereafter.

Wyoming State Treasurer's Office  
Long Duration Fixed Income Composite vs. Bloomberg US Gov't Crdt Lng Trm Bond Index  
Portfolio Characteristics

As of September 30, 2020

| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 16.52     | 16.81     |
| Convexity                 | 3.58      | 3.75      |
| Avg. Quality              | A1        | Aa3/A1    |
| Yield To Maturity (%)     | 2.28      | 2.36      |
| Coupon Rate (%)           | 3.62      | 3.92      |

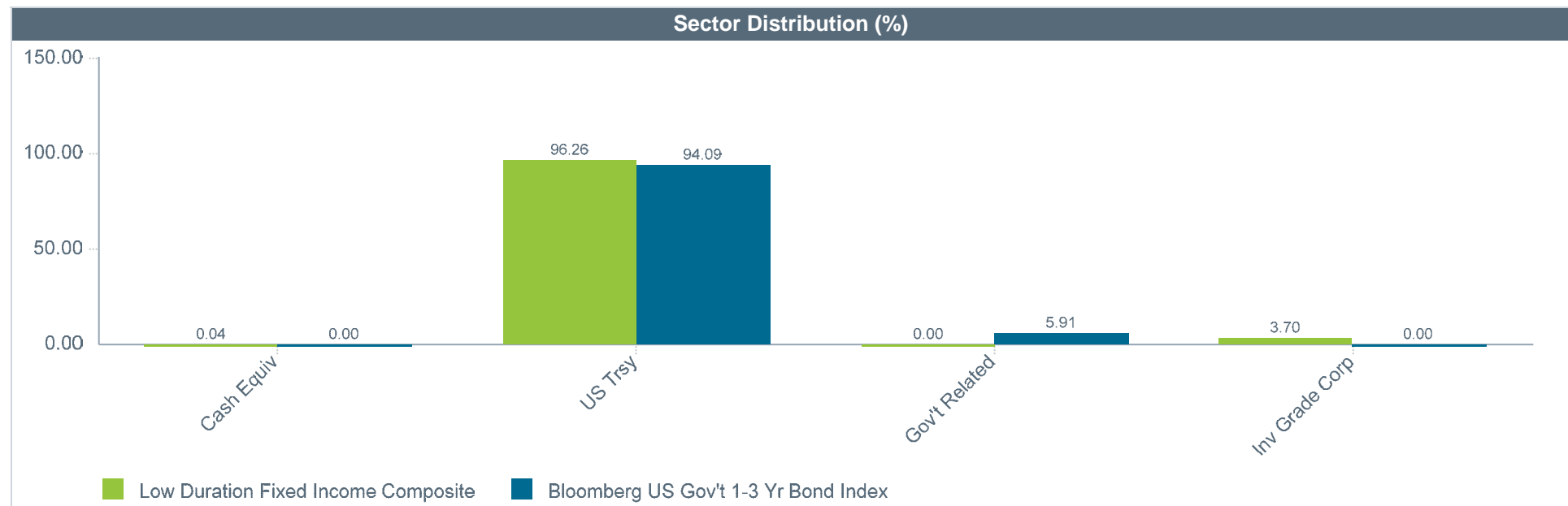


The statistics are calculated based on a weighted average of the underlying managers.

Wyoming State Treasurer's Office  
Low Duration Fixed Income Composite vs. Bloomberg US Gov't 1-3 Yr Bond Index  
Portfolio Characteristics

As of September 30, 2020

| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 1.97      | 1.92      |
| Convexity                 | 0.05      | 0.01      |
| Avg. Quality              | Aaa       | Aaa/Aa1   |
| Yield To Maturity (%)     | 0.12      | 0.14      |
| Coupon Rate (%)           | 1.36      | 1.57      |



The statistics are calculated based on a weighted average of the underlying managers.

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

**As of September 30, 2020**

|                                 | QTD         | FYTD        | CYTD        | 1<br>Year   | 3<br>Years  | 5<br>Years  | 7<br>Years  | 10<br>Years | 2019        | Since<br>Incep. | Inception<br>Date |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------------|
| <b>JP Morgan Cash Composite</b> | <b>0.01</b> | <b>0.01</b> | <b>0.41</b> | <b>0.92</b> | <b>1.63</b> | <b>1.19</b> | <b>0.90</b> | <b>0.69</b> | <b>2.42</b> | <b>1.51</b>     | <b>01/01/2006</b> |
| JP Morgan Cash Custom Index     | 0.04        | 0.04        | 0.64        | 1.10        | 1.74        | 1.24        | 0.94        | 0.77        | 2.47        | 1.54            |                   |
| Difference                      | -0.03       | -0.03       | -0.23       | -0.18       | -0.11       | -0.05       | -0.04       | -0.08       | -0.05       | -0.03           |                   |
| <b>Wyo-Star Cash Composite</b>  | <b>0.05</b> | <b>0.05</b> | <b>1.13</b> | <b>1.55</b> | <b>1.86</b> | <b>1.31</b> | <b>1.02</b> | <b>0.80</b> | <b>2.57</b> | <b>3.17</b>     | <b>10/01/1996</b> |
| Wyo-Star Cash Custom Index      | 0.09        | 0.09        | 1.31        | 1.80        | 2.01        | 1.41        | 1.10        | 0.89        | 2.81        | 2.62            |                   |
| Difference                      | -0.04       | -0.04       | -0.18       | -0.25       | -0.15       | -0.10       | -0.08       | -0.09       | -0.24       | 0.55            |                   |
| <b>WYO STAR II Total Fund</b>   | <b>0.38</b> | <b>0.38</b> | <b>2.97</b> | <b>3.77</b> | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>4.97</b> | <b>4.54</b>     | <b>01/01/2019</b> |
| Bloomberg US Corp 1-3 Yr Index  | 0.60        | 0.60        | 3.10        | 3.99        | 3.30        | 2.80        | 2.42        | 2.43        | 5.30        | 4.81            |                   |
| Difference                      | -0.22       | -0.22       | -0.13       | -0.22       | N/A         | N/A         | N/A         | N/A         | -0.33       | -0.27           |                   |

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. The primary benchmark for JP Morgan Cash is the ICE BofAML 3 Mo US T-Bill Index and for JP Morgan Extd is the JP Morgan Blended Index through 06/30/2019, and the ICE BofAML 3 Mo US T-Bill Index thereafter.

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 ICE BofAML 3 Mo US T-Bill Index and for Wyo-Star Extd is the JP Morgan Blended Index.

Performance shown is 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.



Wyoming State Treasurer's Office  
Comparative Performance

As of September 30, 2020

|                                 | QTD         | FYTD        | CYTD        | 1<br>Year   | 3<br>Years  | 5<br>Years  | 7<br>Years  | 10<br>Years | 2019        | Since<br>Incep. | Inception<br>Date |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------------|
| <b>JP Morgan Cash Composite</b> | <b>0.01</b> | <b>0.01</b> | <b>0.42</b> | <b>0.95</b> | <b>1.67</b> | <b>1.25</b> | <b>0.98</b> | <b>0.79</b> | <b>2.47</b> | <b>1.58</b>     | <b>01/01/2006</b> |
| JP Morgan Cash Custom Index     | 0.04        | 0.04        | 0.64        | 1.10        | 1.74        | 1.24        | 0.94        | 0.77        | 2.47        | 1.54            |                   |
| Difference                      | -0.03       | -0.03       | -0.22       | -0.15       | -0.07       | 0.01        | 0.04        | 0.02        | 0.00        | 0.04            |                   |
| <b>Wyo-Star Cash Composite</b>  | <b>0.07</b> | <b>0.07</b> | <b>1.17</b> | <b>1.61</b> | <b>1.92</b> | <b>1.38</b> | <b>1.09</b> | <b>0.88</b> | <b>2.63</b> | <b>3.21</b>     | <b>10/01/1996</b> |
| Wyo-Star Cash Custom Index      | 0.09        | 0.09        | 1.31        | 1.80        | 2.01        | 1.41        | 1.10        | 0.89        | 2.81        | 2.62            |                   |
| Difference                      | -0.02       | -0.02       | -0.14       | -0.19       | -0.09       | -0.03       | -0.01       | -0.01       | -0.18       | 0.59            |                   |
| <b>WYO STAR II Total Fund</b>   | <b>0.40</b> | <b>0.40</b> | <b>3.02</b> | <b>3.84</b> | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>N/A</b>  | <b>5.03</b> | <b>4.61</b>     | <b>01/01/2019</b> |
| Bloomberg US Corp 1-3 Yr Index  | 0.60        | 0.60        | 3.10        | 3.99        | 3.30        | 2.80        | 2.42        | 2.43        | 5.30        | 4.81            |                   |
| Difference                      | -0.20       | -0.20       | -0.08       | -0.15       | N/A         | N/A         | N/A         | N/A         | -0.27       | -0.20           |                   |

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. The primary benchmark for JP Morgan Cash is the ICE BofAML 3 Mo US T-Bill Index and for JP Morgan Extd is the JP Morgan Blended Index through 06/30/2019, and the ICE BofAML 3 Mo US T-Bill Index thereafter.

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 ICE BofAML 3 Mo US T-Bill Index and for Wyo-Star Extd is the JP Morgan Blended Index.

**Wyoming State Treasurer's Office**  
**Investment Values by Fund**  
September 30, 2020

|  | Total<br>Investment Value | Fiscal Year Ending<br>06/30/20 Market Value | Current<br>Market Value | % of<br>MV    |
|--|---------------------------|---|-------------------------|---------------|
| <b>Wyoming State Total Fund</b>        | <b>\$21,369,111,361</b>   | <b>\$22,741,032,950</b>                     | <b>\$22,356,701,920</b> | <b>100.0%</b> |
| <b>Permanent Mineral Trust</b>         | <b>\$7,671,872,452</b>    | <b>\$7,990,956,831</b>                      | <b>\$8,228,118,237</b>  | <b>100.0%</b> |
| US Equity                              | \$805,705,898             | \$1,120,037,056                             | \$1,072,112,987         | 13.0%         |
| International Equity                   | \$1,273,116,206           | \$1,450,187,580                             | \$1,395,737,285         | 17.0%         |
| MLPs                                   | \$488,278,283             | \$411,164,093                               | \$383,208,531           | 4.7%          |
| Private Equity                         | \$474,141,245             | \$504,572,829                               | \$629,913,843           | 7.7%          |
| Real Estate                            | \$838,470,285             | \$817,221,309                               | \$913,756,778           | 11.1%         |
| Diversified Hedge Funds                | \$616,430,087             | \$611,293,123                               | \$633,695,600           | 7.7%          |
| Fixed Income                           | \$2,826,121,398           | \$2,881,829,152                             | \$2,846,410,561         | 34.6%         |
| Opportunistic                          | \$14,257,532              | \$8,284,086                                 | \$14,723,821            | 0.2%          |
| Public Purpose Investments             | \$138,441,225             | \$134,894,182                               | \$138,326,608           | 1.7%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$775,904                                   | \$790,560               | 0.0%          |
| Cash (invested in State Agency Pool)   | \$196,910,293             | \$50,697,517                                | \$199,441,662           | 2.4%          |
| <b>Common School Perm Land Fund</b>    | <b>\$4,029,730,721</b>    | <b>\$4,125,664,118</b>                      | <b>\$4,177,316,695</b>  | <b>100.0%</b> |
| US Equity                              | \$282,231,431             | \$431,786,613                               | \$399,720,356           | 9.6%          |
| International Equity                   | \$443,907,832             | \$571,017,771                               | \$490,249,565           | 11.7%         |
| Preferred Stock                        | \$110,918,559             | \$136,896,867                               | \$132,510,867           | 3.2%          |
| MLPs                                   | \$323,469,437             | \$264,856,326                               | \$254,703,920           | 6.1%          |
| Private Equity                         | \$0                       | \$106,894,965                               | \$0                     | 0.0%          |
| Real Estate                            | \$577,867,579             | \$569,776,232                               | \$608,623,941           | 14.6%         |
| Diversified Hedge Funds                | \$0                       | \$0   | \$0                     | 0.0%          |
| Fixed Income                           | \$2,195,190,784           | \$1,984,541,051                             | \$2,193,876,900         | 52.5%         |
| Opportunistic                          | \$5,312,487               | \$3,029,610                                 | \$5,486,230             | 0.1%          |
| Public Purpose Investments             | \$18,359,738              | \$18,359,738                                | \$18,359,738            | 0.4%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$373,592                                   | \$380,632               | 0.0%          |
| Cash (invested in State Agency Pool)   | \$72,472,874              | \$38,131,354                                | \$73,404,545            | 1.8%          |
| <b>Permanent Land Fund</b>             | <b>\$199,433,614</b>      | <b>\$202,823,913</b>                        | <b>\$208,629,348</b>    | <b>100.0%</b> |
| US Equity                              | \$24,781,631              | \$26,357,892                                | \$26,841,378            | 12.9%         |
| International Equity                   | \$32,249,340              | \$36,024,093                                | \$35,230,553            | 16.9%         |
| MLPs                                   | \$12,406,924              | \$10,174,773                                | \$9,761,655             | 4.7%          |
| Private Equity                         | \$9,421,732               | \$12,533,798                                | \$12,986,683            | 6.2%          |
| Real Estate                            | \$21,694,297              | \$20,345,582                                | \$23,567,887            | 11.3%         |
| Diversified Hedge Funds                | \$14,600,977              | \$14,496,493                                | \$15,032,787            | 7.2%          |
| Fixed Income                           | \$72,374,870              | \$80,418,728                                | \$73,126,646            | 35.1%         |
| Opportunistic                          | \$324,596                 | \$192,157                                   | \$335,212               | 0.2%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$18,107                                    | \$18,443                | 0.0%          |
| Cash (invested in State Agency Pool)   | \$11,579,248              | \$2,262,290                                 | \$11,728,104            | 5.6%          |
| <b>University Permanent Land Fund</b>  | <b>\$22,655,916</b>       | <b>\$26,615,611</b>                         | <b>\$25,272,826</b>     | <b>100.0%</b> |
| US Equity                              | \$1,665,488               | \$7,746,560                                 | \$3,781,742             | 15.0%         |
| International Equity                   | \$4,138,551               | \$5,026,537                                 | \$4,469,001             | 17.7%         |
| MLPs                                   | \$1,621,429               | \$1,121,367                                 | \$1,279,886             | 5.1%          |
| Private Equity                         | \$1,108,677               | \$1,413,897                                 | \$1,460,468             | 5.8%          |
| Real Estate                            | \$2,945,705               | \$2,712,270                                 | \$3,164,407             | 12.5%         |
| Diversified Hedge Funds                | \$1,811,386               | \$1,524,638                                 | \$1,858,238             | 7.4%          |
| Fixed Income                           | \$8,886,139               | \$6,421,657                                 | \$8,770,602             | 34.7%         |
| Opportunistic                          | \$82,960                  | \$46,271                                    | \$85,674                | 0.3%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$2,103                                     | \$2,143                 | 0.0%          |
| Cash (invested in State Agency Pool)   | \$395,580                 | \$600,311                                   | \$400,665               | 1.6%          |

**Wyoming State Treasurer's Office**  
**Investment Values by Fund**  
September 30, 2020

|  | Total<br>Investment Value | Fiscal Year Ending<br>06/30/20 Market Value | Current<br>Market Value | % of<br>MV    |
|--|---------------------------|---|-------------------------|---------------|
| <b>Wyoming State Total Fund</b>        | <b>\$21,369,111,361</b>   | <b>\$22,741,032,950</b>                     | <b>\$22,356,701,920</b> | <b>100.0%</b> |
| <b>Hathaway Scholarship</b>            | <b>\$567,677,230</b>      | <b>\$592,278,846</b>                        | <b>\$602,047,494</b>    | <b>100.0%</b> |
| US Equity                              | \$59,874,493              | \$83,725,477                                | \$79,522,691            | 13.2%         |
| International Equity                   | \$95,131,927              | \$109,180,435                               | \$104,227,658           | 17.3%         |
| MLPs                                   | \$36,750,827              | \$30,044,142                                | \$28,858,234            | 4.8%          |
| Private Equity                         | \$26,498,025              | \$29,805,233                                | \$30,507,742            | 5.1%          |
| Real Estate                            | \$63,002,327              | \$61,310,651                                | \$68,941,642            | 11.5%         |
| Diversified Hedge Funds                | \$46,962,331              | \$56,302,857                                | \$48,019,119            | 8.0%          |
| Fixed Income                           | \$211,939,148             | \$217,927,539                               | \$214,017,972           | 35.5%         |
| Opportunistic                          | \$1,056,329               | \$613,228                                   | \$1,090,876             | 0.2%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$58,480                                    | \$59,559                | 0.0%          |
| Cash (invested in State Agency Pool)   | \$26,461,823              | \$3,310,805                                 | \$26,802,002            | 4.5%          |
| <b>Higher Education</b>                | <b>\$115,864,981</b>      | <b>\$119,493,551</b>                        | <b>\$120,770,651</b>    | <b>100.0%</b> |
| US Equity                              | \$8,131,194               | \$11,880,131                                | \$11,659,834            | 9.7%          |
| International Equity                   | \$12,625,220              | \$16,098,931                                | \$13,927,520            | 11.5%         |
| Preferred Stock                        | \$2,992,219               | \$3,615,540                                 | \$3,608,634             | 3.0%          |
| MLPs                                   | \$9,463,652               | \$6,858,964                                 | \$7,708,542             | 6.4%          |
| Real Estate                            | \$16,578,160              | \$15,055,391                                | \$17,650,191            | 14.6%         |
| Diversified Hedge Funds                | \$0                       | \$0   | \$0                     | 0.0%          |
| Fixed Income                           | \$64,597,531              | \$65,489,749                                | \$64,704,425            | 53.6%         |
| Opportunistic                          | \$164,126                 | \$94,921                                    | \$169,493               | 0.1%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$12,032                                    | \$12,254                | 0.0%          |
| Cash (invested in State Agency Pool)   | \$1,312,880               | \$387,893                                   | \$1,329,757             | 1.1%          |
| <b>Workers Compensation Fund</b>       | <b>\$2,278,527,030</b>    | <b>\$2,435,825,765</b>                      | <b>\$2,464,685,597</b>  | <b>100.0%</b> |
| US Equity                              | \$170,665,151             | \$225,494,197                               | \$216,925,879           | 8.8%          |
| International Equity                   | \$266,632,356             | \$298,231,850                               | \$287,699,242           | 11.7%         |
| MLPs                                   | \$112,556,679             | \$92,124,054                                | \$87,754,290            | 3.6%          |
| Real Estate                            | \$211,881,695             | \$188,888,293                               | \$219,115,897           | 8.9%          |
| Diversified Hedge Funds                | \$0                       | \$0   | \$0                     | 0.0%          |
| Fixed Income                           | \$1,364,996,031           | \$1,508,044,796                             | \$1,499,246,891         | 60.8%         |
| Opportunistic                          | \$2,838,855               | \$1,624,788                                 | \$2,931,699             | 0.1%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$138,257                                   | \$140,539               | 0.0%          |
| Cash (invested in State Agency Pool)   | \$148,956,262             | \$121,279,529                               | \$150,871,160           | 6.1%          |
| <b>Pool A</b>                          | <b>\$258,996,727</b>      | <b>\$241,213,542</b>                        | <b>\$255,399,451</b>    | <b>100.0%</b> |
| US Equity                              | \$17,223,688              | \$19,934,042                                | \$19,143,983            | 7.5%          |
| International Equity                   | \$17,741,972              | \$24,783,825                                | \$19,391,537            | 7.6%          |
| Preferred Stock                        | \$26,462,155              | \$8,437,326                                 | \$17,526,843            | 6.9%          |
| MLPs                                   | \$13,384,715              | \$11,195,190                                | \$10,817,970            | 4.2%          |
| Real Estate                            | \$21,445,477              | \$20,352,153                                | \$21,317,012            | 8.3%          |
| Fixed Income                           | \$143,141,068             | \$153,198,832                               | \$147,351,843           | 57.7%         |
| Opportunistic                          | \$0                       | \$160,988                                   | \$0                     | 0.0%          |
| Cash Equivalents (Liquidated Managers) | \$0                       | \$677                                       | \$677                   | 0.0%          |
| Cash (invested in State Agency Pool)   | \$19,597,652              | \$3,150,508                                 | \$19,849,588            | 7.8%          |
| <b>LSRA</b>                            | <b>\$1,529,406,155</b>    | <b>\$1,551,541,169</b>                      | <b>\$1,519,159,478</b>  | <b>100.0%</b> |
| US Equity                              | \$119,326,223             | \$123,220,149                               | \$129,492,828           | 8.5%          |
| International Equity                   | \$133,852,756             | \$156,854,672                               | \$140,978,694           | 9.3%          |
| MLPs                                   | \$73,474,803              | \$49,912,298                                | \$56,386,610            | 3.7%          |
| Diversified Hedge Funds                | \$93,573,584              | \$82,102,235                                | \$94,662,240            | 6.2%          |
| Fixed Income                           | \$1,074,450,698           | \$955,309,111                               | \$1,062,464,570         | 69.9%         |
| Opportunistic                          | \$0                       | \$1,050,876                                 | \$0                     | 0.0%          |
| Cash (invested in State Agency Pool)   | \$34,728,091              | \$183,091,827                               | \$35,174,536            | 2.3%          |
| <b>State Agency Pool</b>               | <b>\$4,694,946,535</b>    | <b>\$5,454,619,605</b>                      | <b>\$4,755,302,143</b>  | <b>100.0%</b> |
| Fixed Income                           | \$3,407,102,552           | \$3,874,466,372                             | \$3,499,271,987         | 73.6%         |
| Public Purpose Investments             | \$65,230,616              | \$123,339,388                               | \$61,038,185            | 1.3%          |
| Cash Equivalents                       | \$1,222,613,367           | \$1,456,813,845                             | \$1,194,991,970         | 25.1%         |

**Wyoming State Treasurer's Office**  
**Investment Values by Manager**  
September 30, 2020

|                                       | Total<br>Investment Value | Fiscal Year Ending<br>06/30/20 Market Value | Current<br>Market Value | % of<br>MV    |
|---------------------------------------|---------------------------|---|-------------------------|---------------|
| <b>Wyoming State Total Fund</b>       | <b>\$21,369,111,361</b>   | <b>\$22,741,032,950</b>                     | <b>\$22,356,701,920</b> | <b>100.0%</b> |
| <b>US Equity</b>                      | <b>\$1,489,605,196</b>    | <b>\$2,050,182,117</b>                      | <b>\$1,959,201,677</b>  | <b>8.8%</b>   |
| State Street All Cap                  | \$1,142,397,782           | \$1,614,943,234                             | \$1,561,109,392         |               |
| UW Portfolio Management Program       | \$1,000,000               | \$1,389,900                                 | \$1,500,094             |               |
| Van Berkorn                           | \$156,745,762             | \$202,424,251                               | \$197,114,476           |               |
| State Street Small Cap                | \$39,257,884              | \$231,424,731                               | \$44,282,290            |               |
| BlackRock Small Cap                   | \$149,777,831             | \$0   | \$154,805,009           |               |
| Wyoming Internal Small Cap            | \$425,938                 | \$0   | \$390,416               |               |
| <b>International Equity</b>           | <b>\$2,279,396,160</b>    | <b>\$2,667,405,694</b>                      | <b>\$2,491,911,055</b>  | <b>11.1%</b>  |
| Northern Trust                        | \$1,008,606,203           | \$1,295,468,268                             | \$1,089,533,156         |               |
| Harding Loevner                       | \$585,331,843             | \$654,671,093                               | \$633,724,634           |               |
| Arrowstreet                           | \$685,458,114             | \$717,266,333                               | \$768,653,266           |               |
| <b>Mixed Assets</b>                   | <b>\$1,211,779,683</b>    | <b>\$1,026,400,941</b>                      | <b>\$994,125,982</b>    | <b>4.4%</b>   |
| Cohen & Steers                        | \$140,372,932             | \$148,949,732                               | \$153,646,344           |               |
| Harvest                               | \$539,863,210             | \$419,163,914                               | \$427,477,337           |               |
| Harvest Passive                       | \$531,543,540             | \$458,287,294                               | \$413,002,301           |               |
| <b>Private Equity</b>                 | <b>\$511,169,680</b>      | <b>\$655,220,721</b>                        | <b>\$674,868,736</b>    | <b>3.0%</b>   |
| Access Venture Partners II            | \$2,226,749               | \$1,755,169                                 | \$1,279,285             |               |
| Cheyenne Capital                      | \$116,164,915             | \$165,839,306                               | \$173,351,945           |               |
| Hamilton Lane Nowood                  | \$135,605,313             | \$142,888,665                               | \$153,520,042           |               |
| BlackRock LTFC                        | \$140,284,027             | \$147,953,066                               | \$140,866,770           |               |
| Neuberger Berman Sauger               | \$116,888,676             | \$196,784,515                               | \$205,850,694           |               |
| <b>Real Estate</b>                    | <b>\$1,750,469,955</b>    | <b>\$1,695,661,881</b>                      | <b>\$1,876,137,755</b>  | <b>8.4%</b>   |
| Clarion Lion                          | \$996,825,224             | \$1,136,011,809                             | \$1,071,900,258         |               |
| Morgan Stanley Prime                  | \$200,000,000             | \$0   | \$200,000,007           |               |
| UBS Trumbull                          | \$226,050,421             | \$243,815,177                               | \$241,508,323           |               |
| M&G                                   | \$56,188,796              | \$36,244,862                                | \$37,462,549            |               |
| Northwood                             | \$97,822,401              | \$133,728,445                               | \$136,397,605           |               |
| SC Capital                            | \$99,592,288              | \$102,534,813                               | \$104,032,062           |               |
| Realterm                              | \$70,712,887              | \$31,519,959                                | \$72,988,016            |               |
| WestRiver                             | \$3,277,938               | \$11,806,817                                | \$11,848,936            |               |
| <b>Diversified Hedge Funds</b>        | <b>\$773,378,364</b>      | <b>\$765,719,345</b>                        | <b>\$793,267,985</b>    | <b>3.5%</b>   |
| PAAMCO - Jackalope                    | \$8,370,646               | \$4,277,742                                 | \$4,288,099             |               |
| Grosvenor Diversified Hedge Funds     | \$274,000,000             | \$274,987,673                               | \$287,408,346           |               |
| Internal Diversified Hedge Funds      | \$491,007,718             | \$486,453,930                               | \$501,571,540           |               |
| <b>Fixed Income</b>                   | <b>\$11,721,642,889</b>   | <b>\$12,013,839,104</b>                     | <b>\$11,991,159,082</b> | <b>53.6%</b>  |
| PIMCO                                 | \$2,136,553,681           | \$2,261,419,729                             | \$2,207,857,071         |               |
| Payden & Rygel                        | \$688,088,234             | \$716,381,745                               | \$719,399,640           |               |
| JPM MBS                               | \$786,675,508             | \$807,441,873                               | \$805,651,217           |               |
| Credit Suisse                         | \$671,473,938             | \$655,626,364                               | \$647,609,671           |               |
| Octagon                               | \$462,552,523             | \$465,803,874                               | \$460,597,158           |               |
| Grosvenor Silvery Lupine Fund         | \$41,916,242              | \$70,930,128                                | \$51,241,636            |               |
| Investec                              | \$271,966,632             | \$228,135,522                               | \$228,720,531           |               |
| Global Evolution                      | \$372,385,185             | \$345,149,949                               | \$343,146,126           |               |
| Goldman Sachs                         | \$259,733,299             | \$250,884,818                               | \$254,382,266           |               |
| Internal Long Duration Govt Portfolio | \$257,897,174             | \$308,589,453                               | \$320,041,030           |               |
| Logan Circle                          | \$371,189,939             | \$428,906,762                               | \$429,885,190           |               |
| Internal Int. Duration Govt Portfolio | \$1,136,447,441           | \$1,170,677,551                             | \$1,166,447,014         |               |
| Internal Low Duration Govt Portfolio  | \$506,076,688             | \$485,244,029                               | \$498,351,913           |               |
| Wyoming Internal Ladder Portfolio     | \$3,758,686,405.66        | \$3,818,647,307                             | \$3,857,828,618         |               |
| <b>Opportunistic</b>                  | <b>\$24,036,885</b>       | <b>\$15,096,925</b>                         | <b>\$24,823,005</b>     | <b>0.1%</b>   |
| Grosvenor D                           | \$24,036,885              | \$15,096,925                                | \$24,823,005            |               |
| <b>Public Purpose Investments</b>     | <b>\$229,150,963</b>      | <b>\$285,703,920</b>                        | <b>\$224,386,346</b>    | <b>1.0%</b>   |
| <b>Cash &amp; Cash Equivalents</b>    | <b>\$1,378,481,586</b>    | <b>\$1,565,802,302</b>                      | <b>\$1,326,820,297</b>  | <b>5.9%</b>   |
| Epoch                                 | \$0                       | \$0   | \$0                     |               |
| Internal Equity Russell 2000          | \$0                       | \$1,095                                     | \$1,095                 |               |
| Fisher Investments                    | \$0                       | \$1,108,212                                 | \$1,133,898             |               |
| Cornerstone                           | \$83,682                  | \$2,363                                     | \$2,354                 |               |
| Heitman                               | \$1,759,375               | \$3   | \$0                     |               |
| TA Realty                             | \$1,572,513               | \$26,122                                    | \$26,118                |               |
| Allianz Global Investors              | \$0                       | \$36,305                                    | \$36,298                |               |
| C.S. McKee                            | \$4,588,726               | \$2   | \$0                     |               |
| JP Morgan Core                        | \$12,476,418              | \$0   | \$0                     |               |
| Neuberger Berman Credit               | \$0                       | \$574,113                                   | \$574,081               |               |
| Seix                                  | \$0                       | \$1,520                                     | \$1,520                 |               |
| State Street TIPS                     | \$1,798,617               | \$0   | \$0                     |               |
| State Street Low Duration             | \$0                       | \$29,707                                    | \$29,700                |               |
| Stone Harbor                          | \$150,719                 | \$1   | \$0                     |               |
| JP Morgan Cash Composite              | \$1,356,051,535           | \$1,564,022,859                             | \$1,325,015,232         |               |



# Investment Manager Profiles



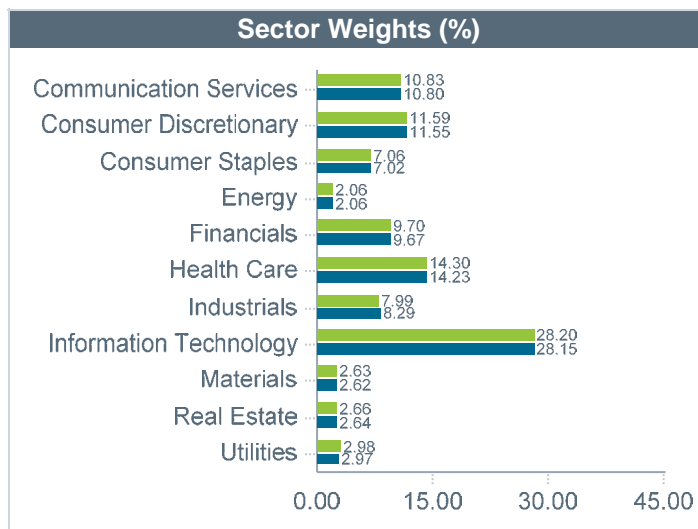
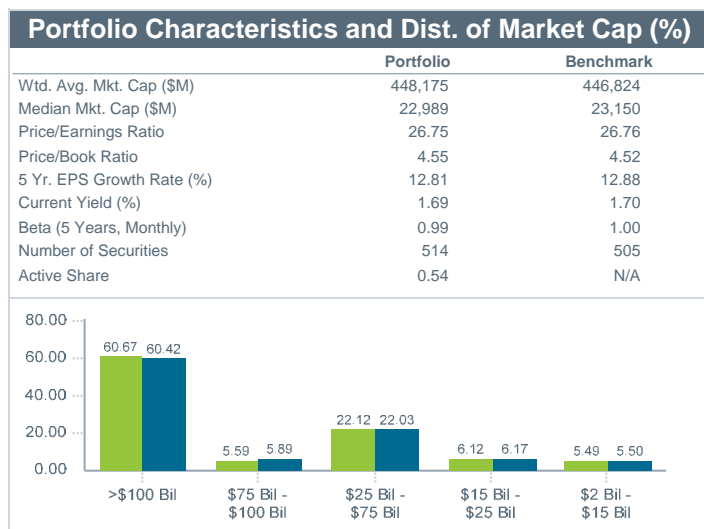
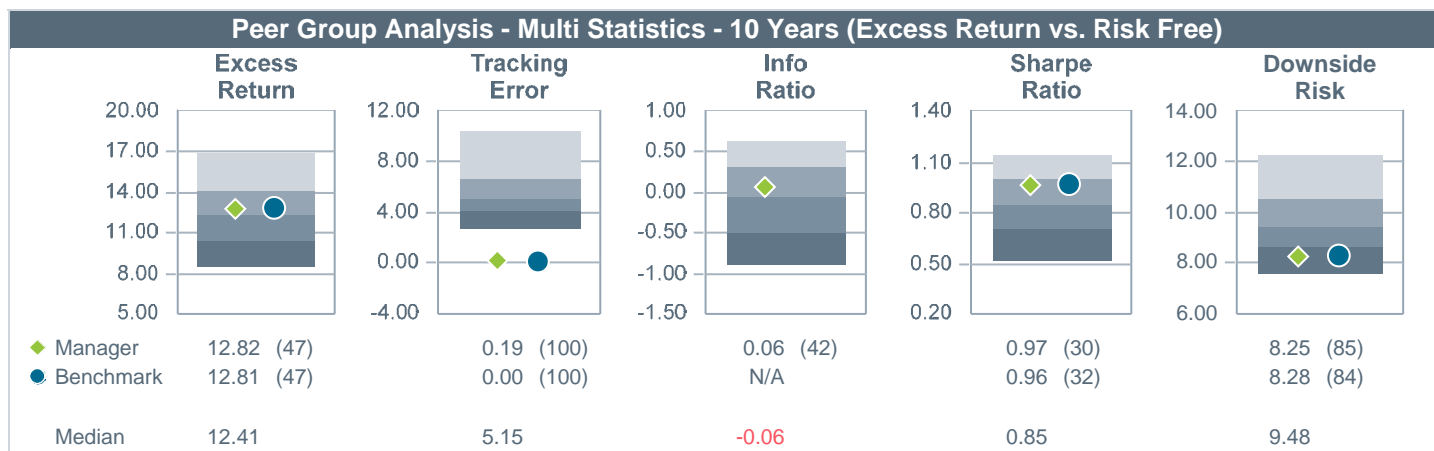
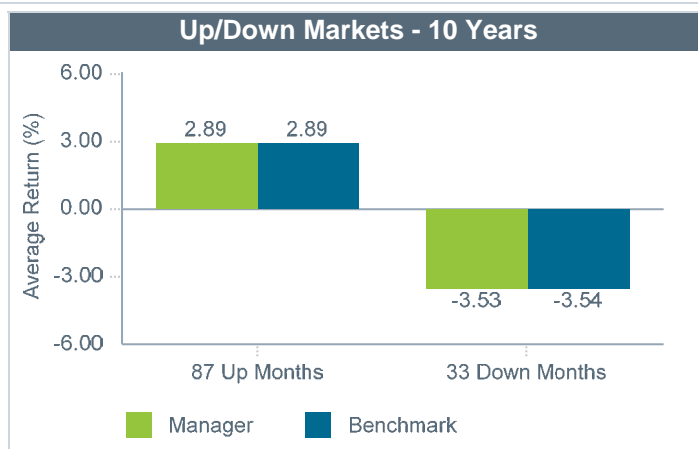
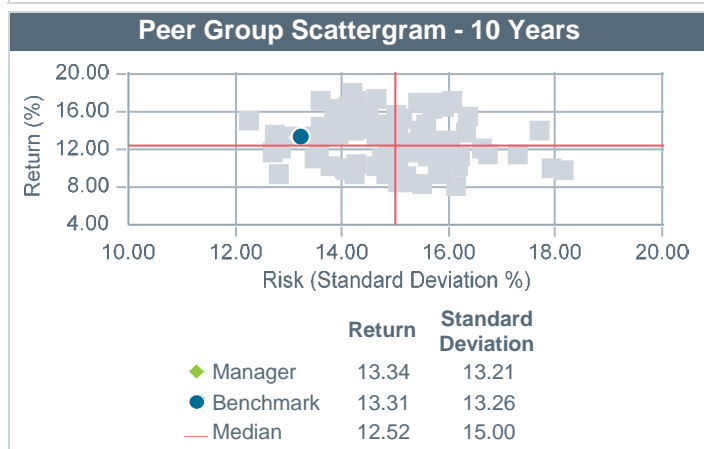
Manager: State Street All Cap

As of September 30, 2020

Benchmark: State Street All Cap Custom Index

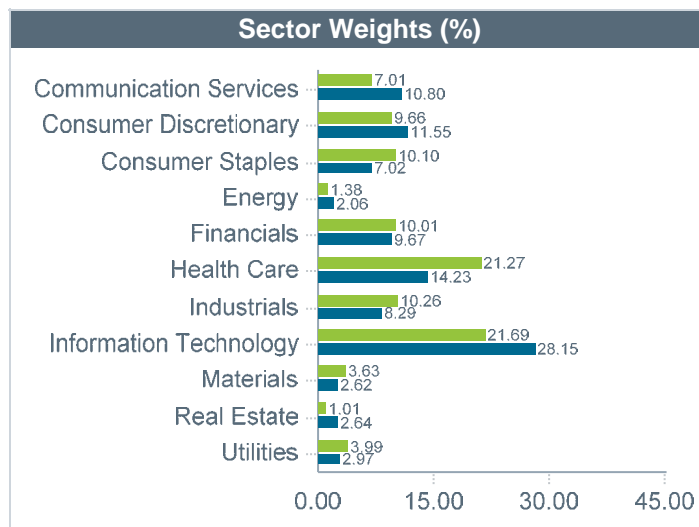
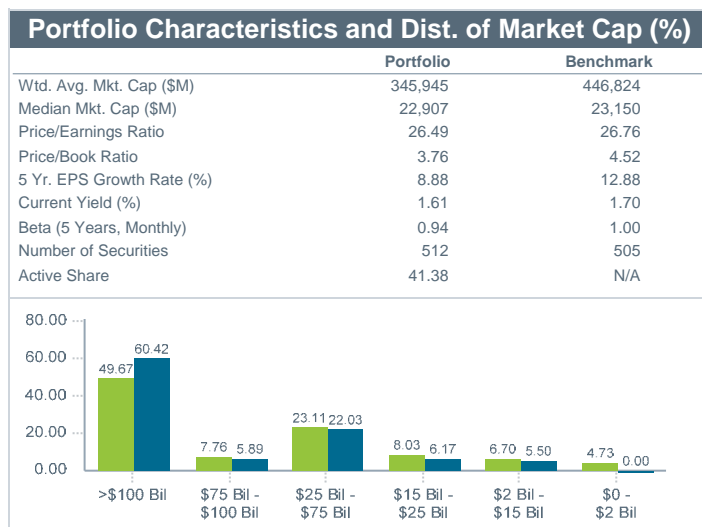
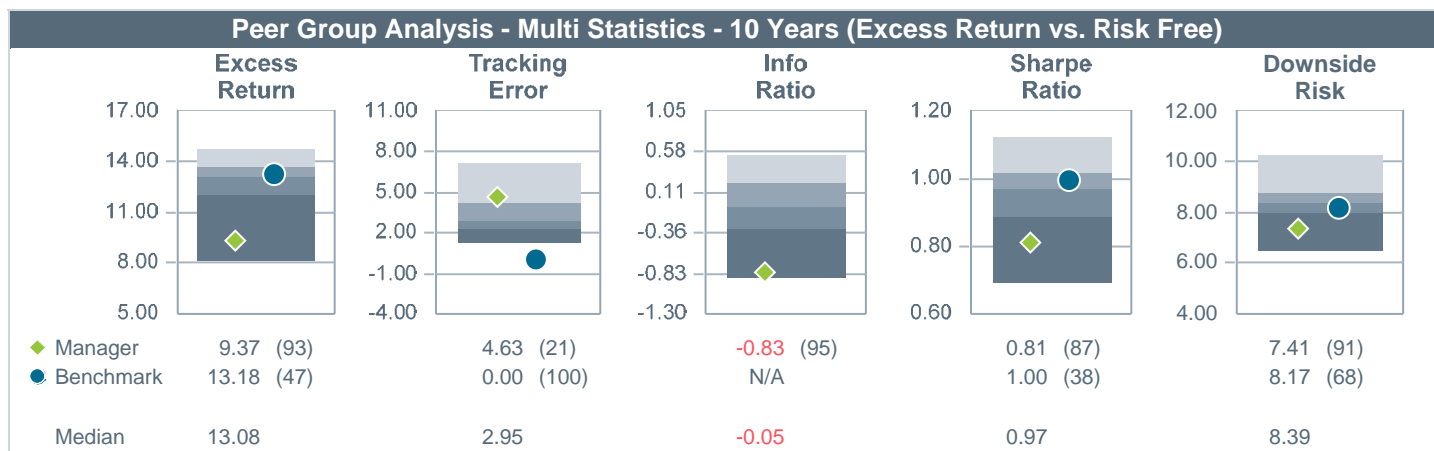
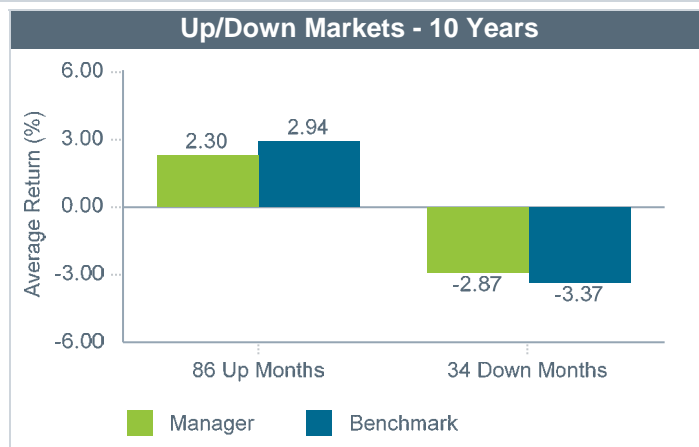
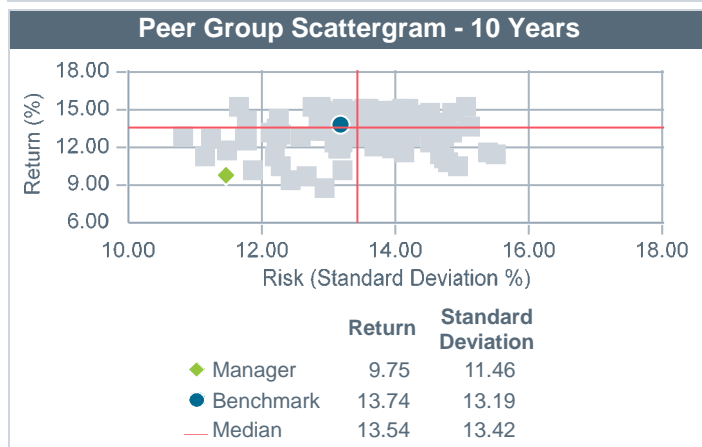
Peer Group: IM U.S. All Cap Equity (SA+CF)

| Performance       |      |        |         |         |         |          |       |       |       |       |       |
|-------------------|------|--------|---------|---------|---------|----------|-------|-------|-------|-------|-------|
|                   | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017  | 2016  | 2015  |
| Manager           | 8.93 | 13.78  | 11.25   | 13.36   | 11.85   | 13.34    | 30.34 | -5.25 | 19.79 | 13.77 | -0.02 |
| Benchmark         | 8.93 | 13.81  | 11.10   | 13.29   | 11.82   | 13.31    | 30.11 | -5.50 | 19.85 | 13.78 | 0.12  |
| Difference        | 0.00 | -0.03  | 0.15    | 0.07    | 0.03    | 0.03     | 0.23  | 0.25  | -0.06 | -0.01 | -0.14 |
| Peer Group Median | 7.60 | 5.99   | 9.41    | 11.83   | 10.95   | 12.46    | 28.99 | -5.70 | 20.24 | 12.51 | -0.35 |
| Rank              | 34   | 39     | 43      | 37      | 40      | 42       | 44    | 47    | 55    | 43    | 48    |
| Population        | 152  | 150    | 146     | 140     | 130     | 111      | 166   | 173   | 180   | 195   | 197   |



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.

| Performance       |       |        |         |         |         |          |       |       |       |       |       |
|-------------------|-------|--------|---------|---------|---------|----------|-------|-------|-------|-------|-------|
|                   | QTD   | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017  | 2016  | 2015  |
| Manager           | 8.26  | 10.39  | 7.90    | 11.08   | 10.51   | 9.75     | 25.88 | -8.04 | 21.83 | 10.87 | 1.03  |
| Benchmark         | 8.93  | 15.15  | 12.28   | 14.15   | 12.68   | 13.74    | 31.49 | -4.38 | 21.83 | 11.96 | 1.38  |
| Difference        | -0.67 | -4.76  | -4.38   | -3.07   | -2.17   | -3.99    | -5.61 | -3.66 | 0.00  | -1.09 | -0.35 |
| Peer Group Median | 8.01  | 12.77  | 10.67   | 13.11   | 12.14   | 13.54    | 30.00 | -5.15 | 21.84 | 10.54 | 1.43  |
| Rank              | 47    | 61     | 80      | 76      | 81      | 93       | 81    | 85    | 51    | 48    | 55    |
| Population        | 209   | 209    | 207     | 196     | 191     | 167      | 245   | 274   | 297   | 317   | 333   |



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

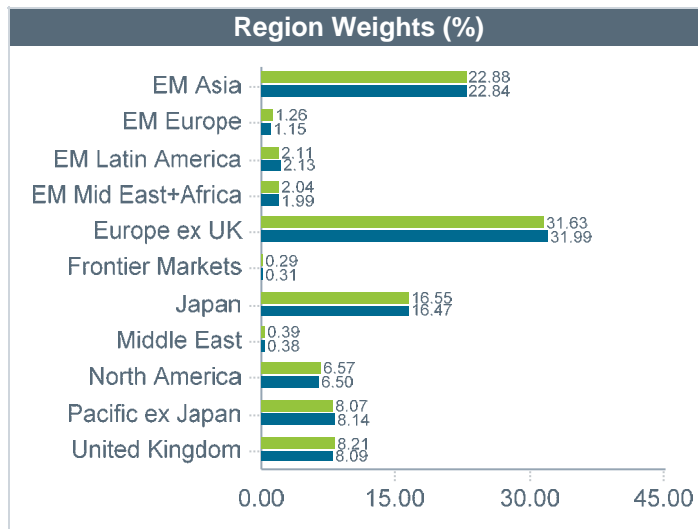
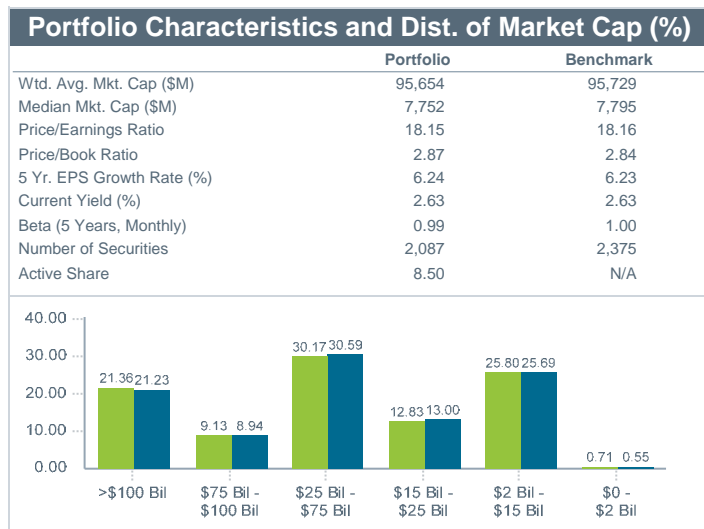
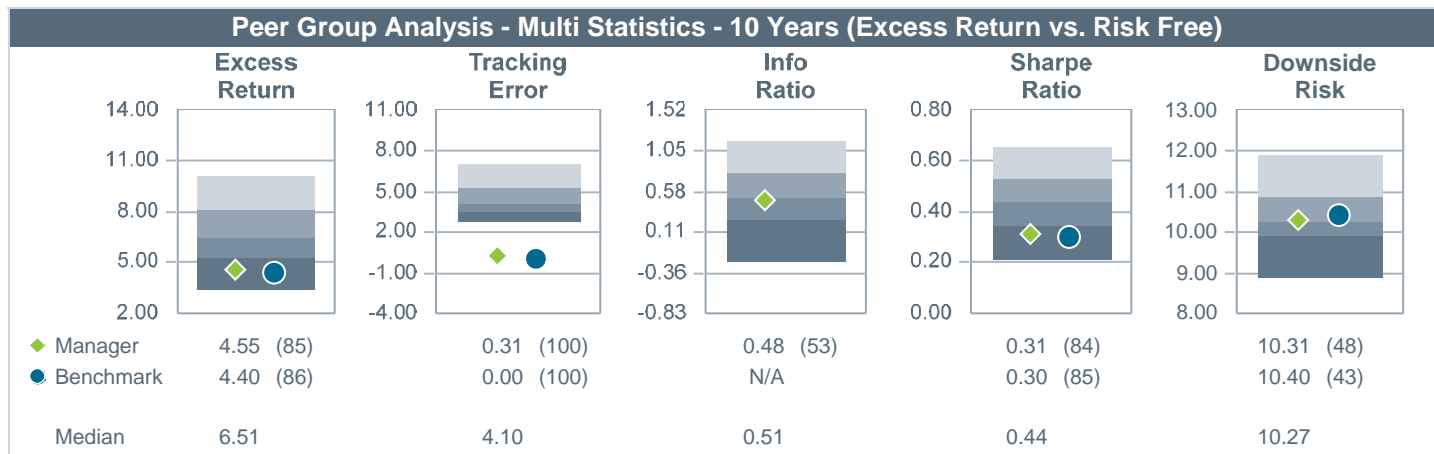
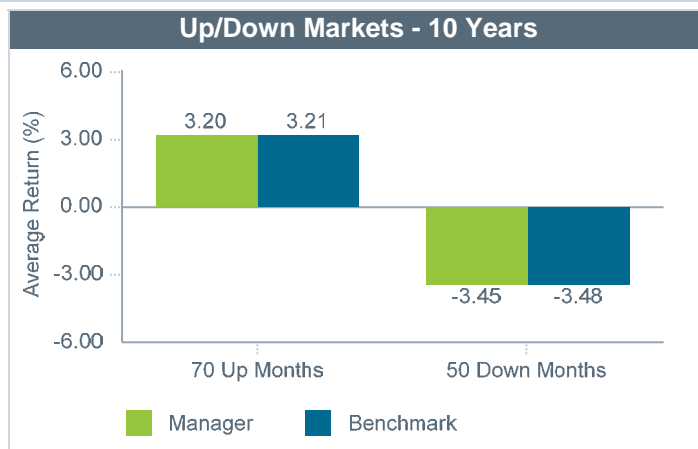
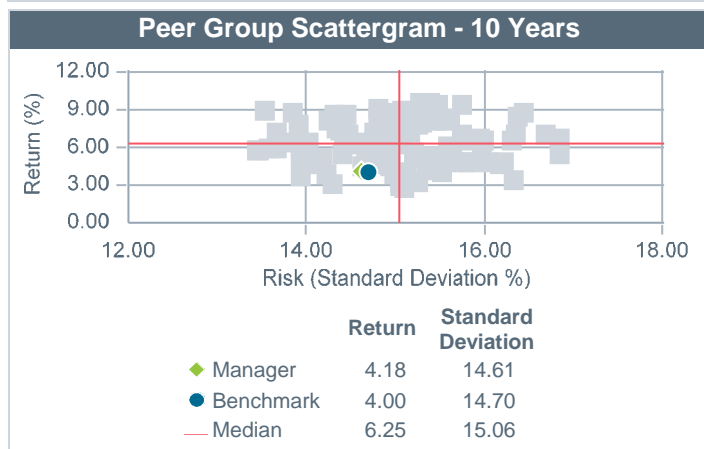
Manager: Northern Trust

As of September 30, 2020

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

Peer Group: IM All ACWI Ex US (SA+CF)

| Performance       |       |        |         |         |         |          |       |        |       |       |       |
|-------------------|-------|--------|---------|---------|---------|----------|-------|--------|-------|-------|-------|
|                   | QTD   | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018   | 2017  | 2016  | 2015  |
| Manager           | 6.19  | 2.97   | 1.36    | 6.38    | 3.35    | 4.18     | 21.66 | -13.81 | 27.51 | 4.48  | -5.70 |
| Benchmark         | 6.25  | 3.00   | 1.16    | 6.23    | 3.18    | 4.00     | 21.51 | -14.20 | 27.19 | 4.50  | -5.66 |
| Difference        | -0.06 | -0.03  | 0.20    | 0.15    | 0.17    | 0.18     | 0.15  | 0.39   | 0.32  | -0.02 | -0.04 |
| Peer Group Median | 8.08  | 7.75   | 3.02    | 7.36    | 4.82    | 6.25     | 24.92 | -14.64 | 28.74 | 2.11  | -0.59 |
| Rank              | 72    | 65     | 64      | 60      | 73      | 85       | 67    | 41     | 62    | 30    | 86    |
| Population        | 160   | 160    | 160     | 159     | 149     | 130      | 170   | 181    | 191   | 205   | 216   |



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



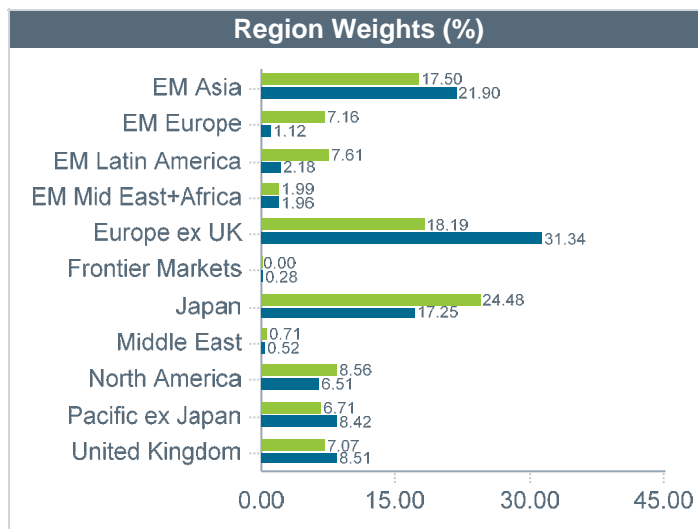
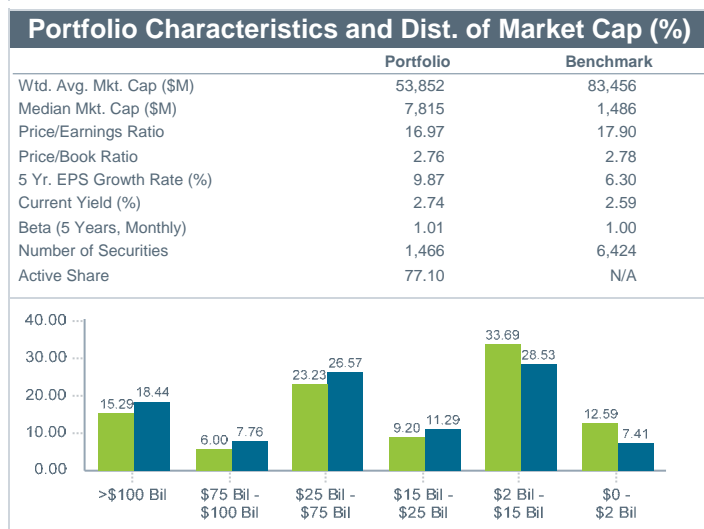
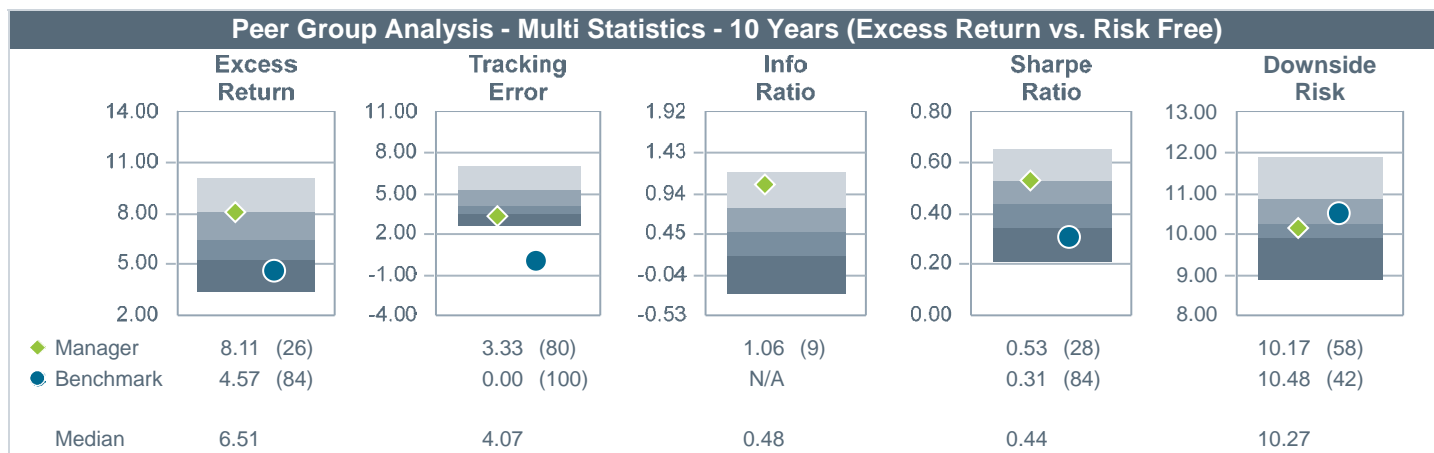
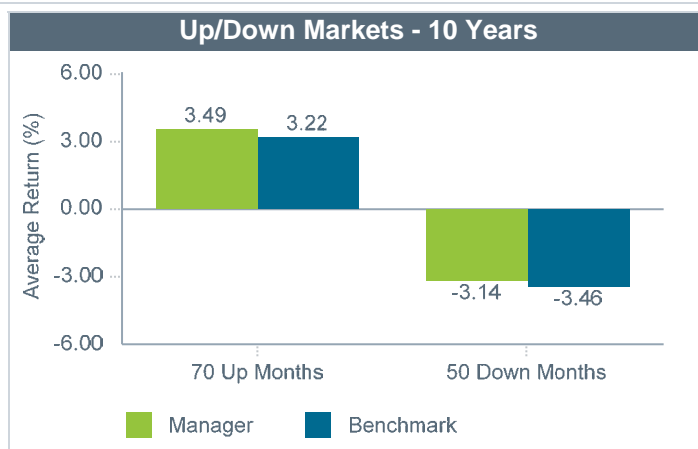
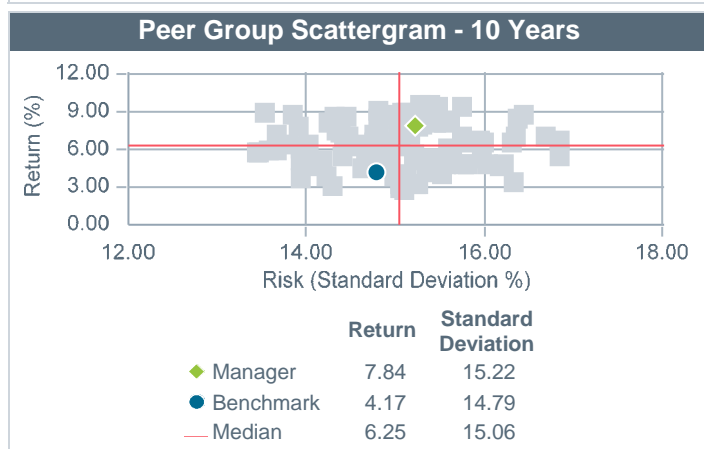
Manager: Arrowstreet

As of September 30, 2020

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

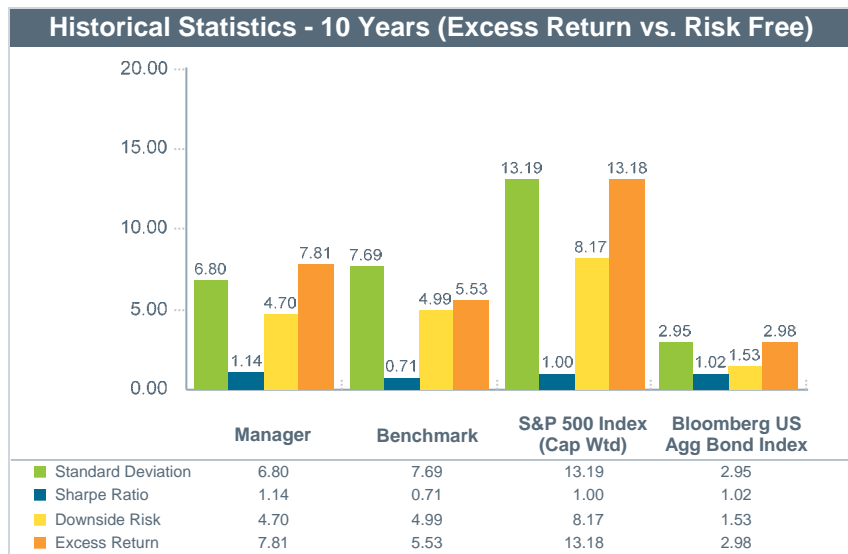
Peer Group: IM All ACWI Ex US (SA+CF)

| Performance       |      |        |         |         |         |          |       |        |       |      |       |
|-------------------|------|--------|---------|---------|---------|----------|-------|--------|-------|------|-------|
|                   | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018   | 2017  | 2016 | 2015  |
| Manager           | 7.27 | 10.17  | 3.64    | 9.49    | 6.90    | 7.84     | 23.43 | -13.84 | 29.12 | 8.06 | 0.01  |
| Benchmark         | 6.80 | 3.51   | 1.13    | 6.31    | 3.35    | 4.17     | 21.63 | -14.76 | 27.81 | 4.41 | -4.60 |
| Difference        | 0.47 | 6.66   | 2.51    | 3.18    | 3.55    | 3.67     | 1.80  | 0.92   | 1.31  | 3.65 | 4.61  |
| Peer Group Median | 8.08 | 7.75   | 3.02    | 7.36    | 4.82    | 6.25     | 24.92 | -14.64 | 28.74 | 2.11 | -0.59 |
| Rank              | 60   | 42     | 47      | 30      | 28      | 27       | 57    | 41     | 48    | 10   | 46    |
| Population        | 160  | 160    | 160     | 159     | 149     | 130      | 170   | 181    | 191   | 205  | 216   |



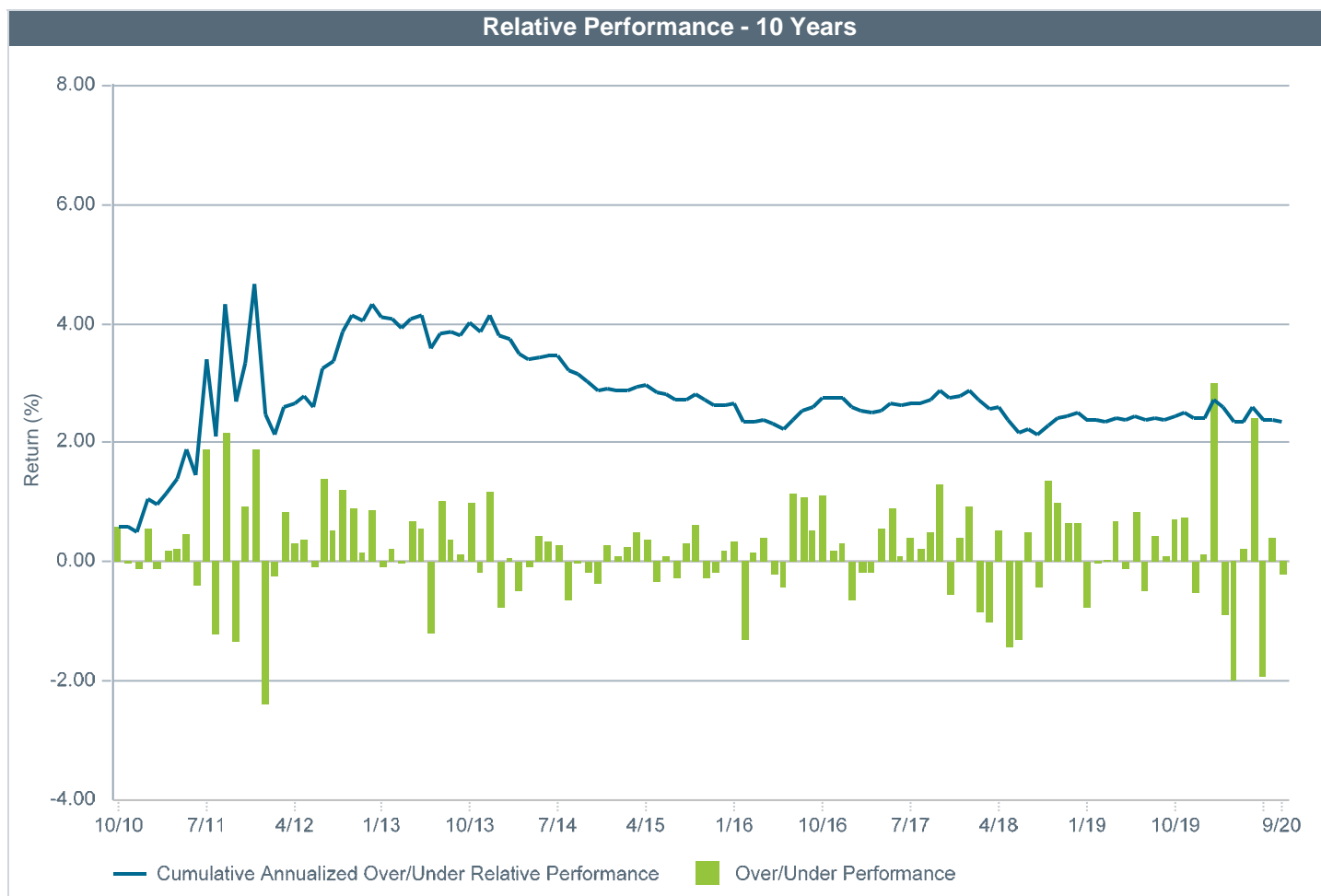
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

| Performance |       |        |         |         |         |          |       |       |       |      |      |
|-------------|-------|--------|---------|---------|---------|----------|-------|-------|-------|------|------|
|             | QTD   | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017  | 2016 | 2015 |
| Manager     | 5.26  | 5.32   | 5.99    | 7.49    | 8.11    | 8.52     | 19.68 | -3.68 | 12.31 | 5.43 | 7.04 |
| Benchmark   | 7.11  | 3.25   | 4.41    | 5.49    | 6.26    | 6.03     | 17.64 | -4.25 | 9.11  | 1.94 | 5.47 |
| Difference  | -1.85 | 2.07   | 1.58    | 2.00    | 1.85    | 2.49     | 2.04  | 0.57  | 3.20  | 3.49 | 1.57 |



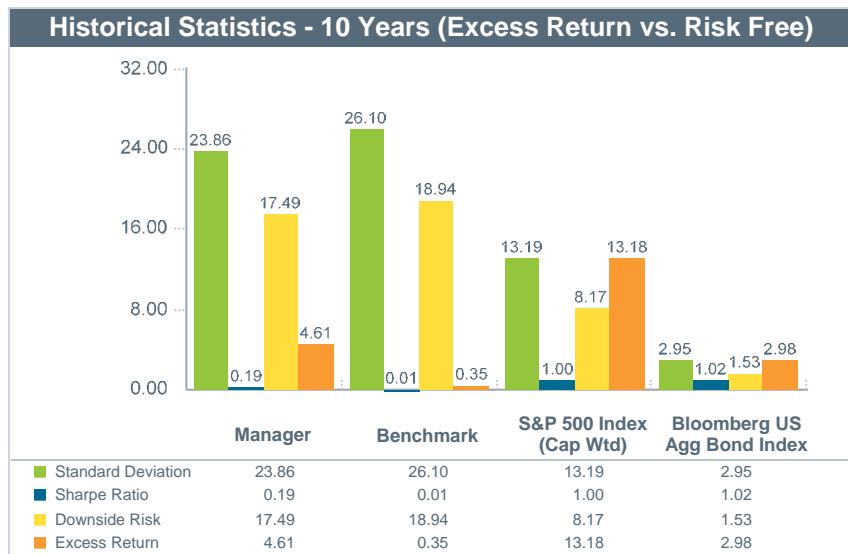
**Actual Correlation - 10 Years**

|                                 | Actual Correlation |
|---------------------------------|--------------------|
| S&P US Preferred Stock Index    | 0.96               |
| S&P 500 Index (Cap Wtd)         | 0.79               |
| Russell 2000 Index              | 0.73               |
| MSCI EAFE Index (USD) (Net)     | 0.80               |
| MSCI Emg Mkts Index (USD) (Net) | 0.76               |
| Bloomberg US Agg Bond Index     | 0.11               |
| Bloomberg US Trsy US TIPS Index | 0.29               |
| NCREIF ODCE Index (AWA) (Gross) | -0.23              |
| Wilshire US REIT Index          | 0.76               |
| HFRI FOF Comp Index             | 0.79               |
| Bloomberg Cmtty Index (TR)      | 0.56               |
| ICE BofAML 3 Mo US T-Bill Index | -0.25              |
| Cons Price Index (Unadjusted)   | 0.17               |



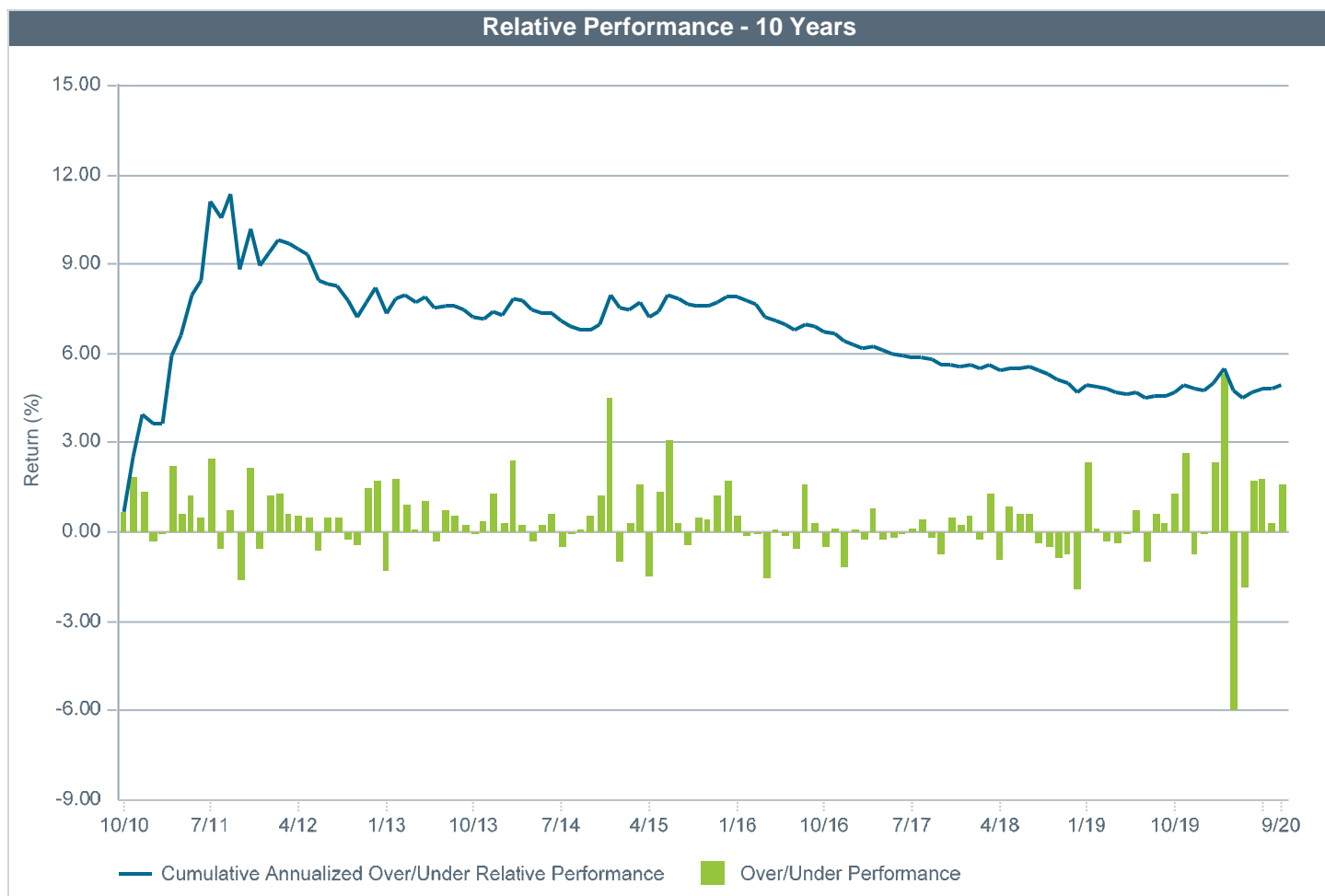
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on quarterly periodicity.

| Performance |        |        |         |         |         |          |       |        |       |       |        |
|-------------|--------|--------|---------|---------|---------|----------|-------|--------|-------|-------|--------|
|             | QTD    | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018   | 2017  | 2016  | 2015   |
| Manager     | -9.59  | -38.66 | -15.15  | -7.54   | -6.51   | 2.17     | 13.82 | -13.12 | -4.98 | 20.34 | -29.94 |
| Benchmark   | -12.87 | -43.45 | -17.65  | -9.66   | -10.02  | -2.65    | 7.55  | -11.67 | -5.58 | 21.95 | -35.07 |
| Difference  | 3.28   | 4.79   | 2.50    | 2.12    | 3.51    | 4.82     | 6.27  | -1.45  | 0.60  | -1.61 | 5.13   |



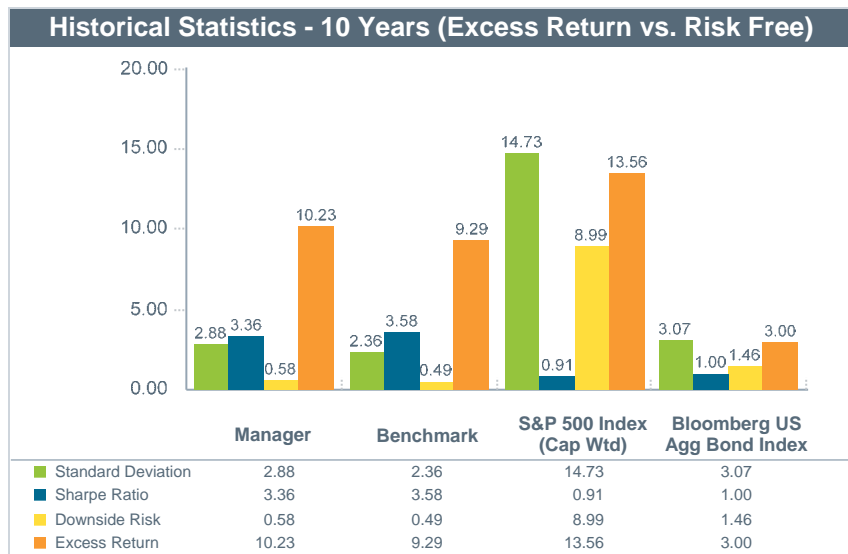
**Actual Correlation - 10 Years**

|                                 | Actual Correlation |
|---------------------------------|--------------------|
| MLP Custom Index                | 0.99               |
| S&P 500 Index (Cap Wtd)         | 0.78               |
| Russell 2000 Index              | 0.79               |
| MSCI EAFE Index (USD) (Net)     | 0.67               |
| MSCI Emg Mkts Index (USD) (Net) | 0.57               |
| Bloomberg US Agg Bond Index     | -0.09              |
| Bloomberg US Trsy US TIPS Index | 0.14               |
| NCREIF ODCE Index (AWA) (Gross) | -0.02              |
| Wilshire US REIT Index          | 0.66               |
| HFRI FOF Comp Index             | 0.73               |
| Bloomberg Cmtty Index (TR)      | 0.64               |
| ICE BofAML 3 Mo US T-Bill Index | -0.28              |
| Cons Price Index (Unadjusted)   | 0.23               |



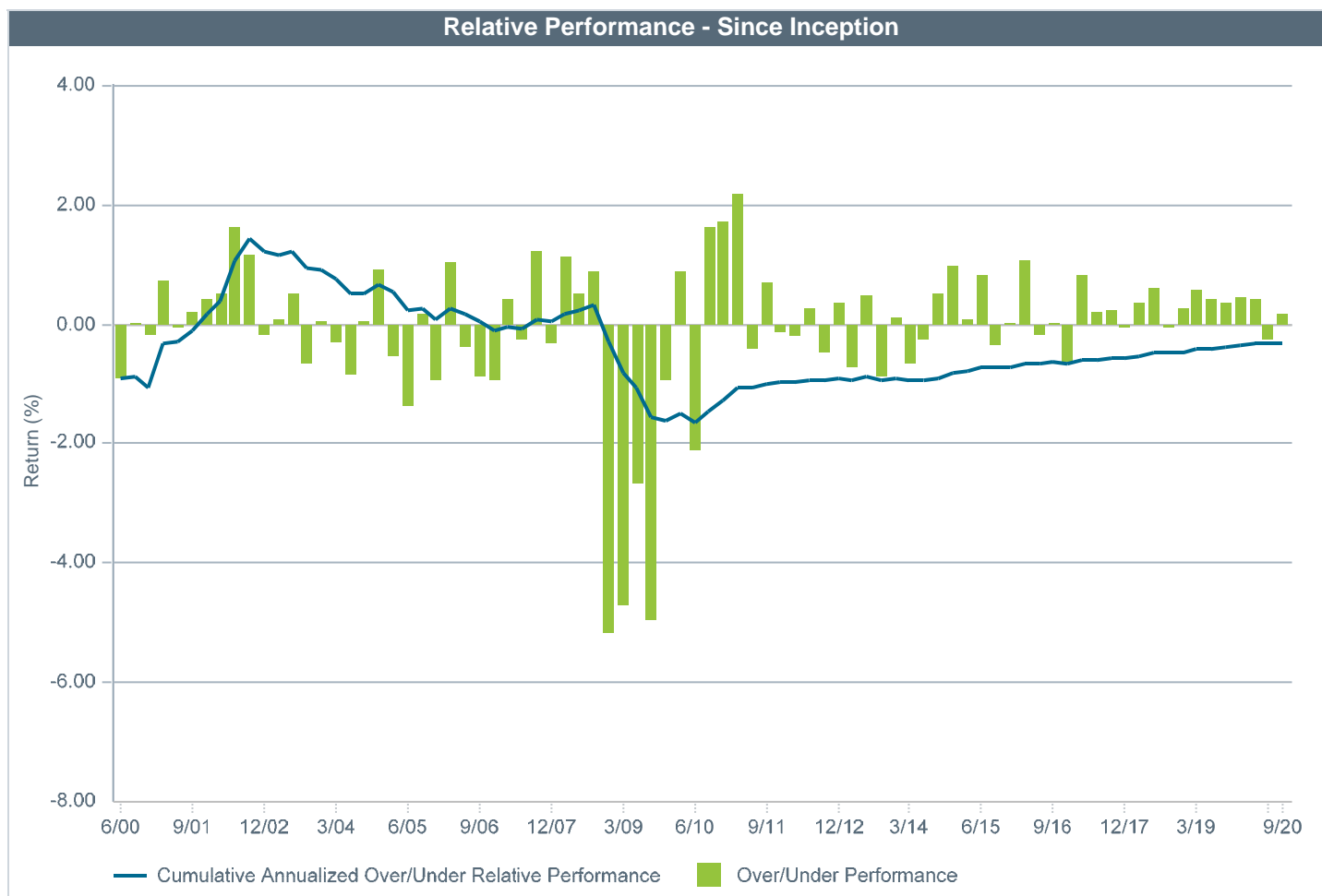
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on quarterly periodicity.

| Performance |      |        |         |         |         |          |      |      |      |      |       |
|-------------|------|--------|---------|---------|---------|----------|------|------|------|------|-------|
|             | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019 | 2018 | 2017 | 2016 | 2015  |
| Manager     | 0.67 | 2.20   | 6.36    | 7.69    | 9.56    | 11.27    | 7.26 | 9.66 | 8.99 | 9.09 | 15.71 |
| Benchmark   | 0.48 | 1.39   | 5.18    | 6.64    | 8.60    | 10.27    | 5.34 | 8.35 | 7.62 | 8.77 | 15.02 |
| Difference  | 0.19 | 0.81   | 1.18    | 1.05    | 0.96    | 1.00     | 1.92 | 1.31 | 1.37 | 0.32 | 0.69  |



**Actual Correlation - 10 Years**

|                                 | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.90               |
| S&P 500 Index (Cap Wtd)         | -0.17              |
| Russell 2000 Index              | -0.10              |
| MSCI EAFE Index (USD) (Net)     | -0.18              |
| MSCI Emg Mkts Index (USD) (Net) | -0.24              |
| Bloomberg US Agg Bond Index     | -0.29              |
| Bloomberg US Trsy US TIPS Index | -0.27              |
| Wilshire US REIT Index          | 0.00               |
| HFRI FOF Comp Index             | -0.22              |
| Bloomberg Cmtty Index (TR)      | -0.08              |
| ICE BofAML 3 Mo US T-Bill Index | -0.34              |
| Cons Price Index (Unadjusted)   | 0.05               |



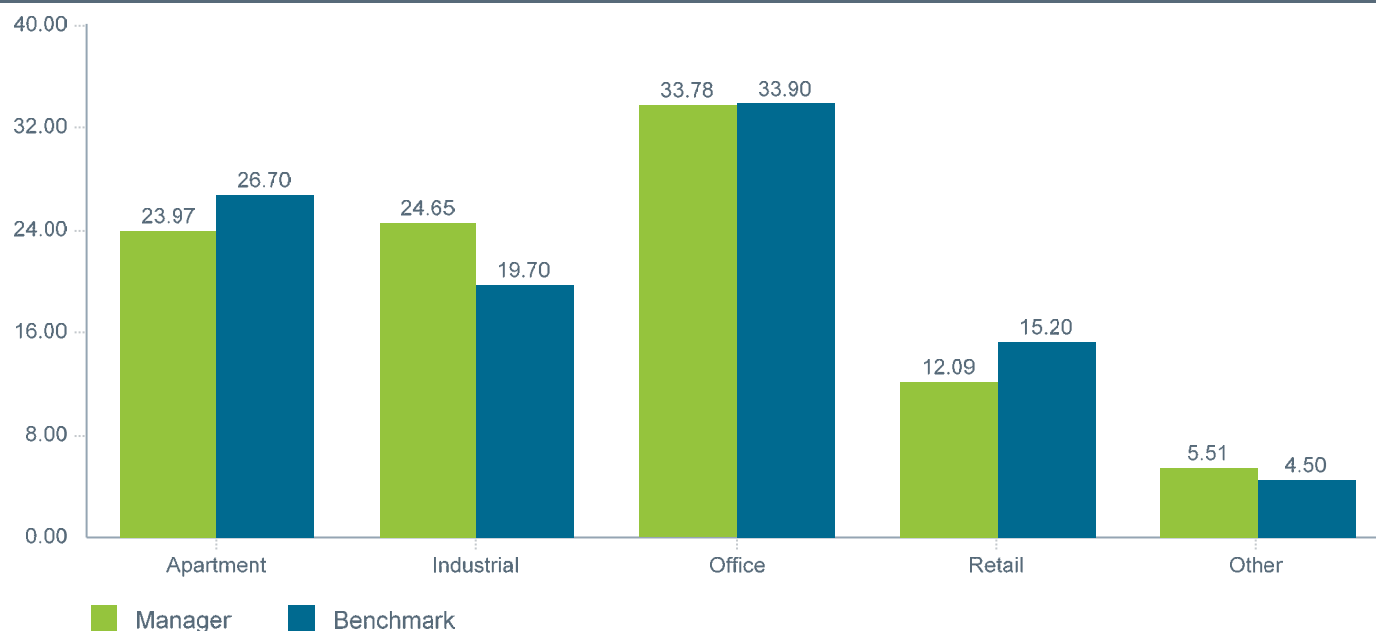
### Investment Strategy

The Fund pursues a diversified core real estate strategy and seeks to provide its investors with a reliable total investment gross return of approximately 8% to 10% over a market cycle, with 70% of return expected to be generated by the income component. The Fund manages a portfolio of institutional quality real estate assets diversified across the four major property types (office, industrial, retail and multi-family) and across major metropolitan areas. The Fund operates with moderate leverage and may invest up to 15% of its gross assets in higher risk, non-core type real estate investment opportunities.

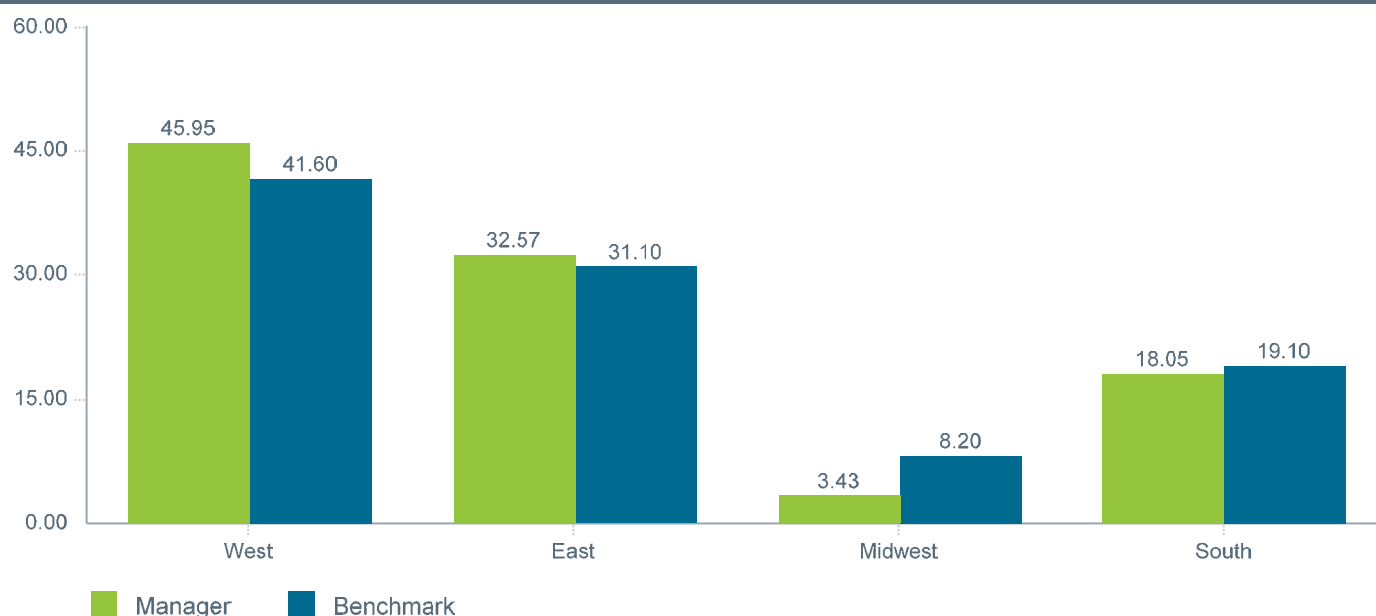
### Investment Profile

|                                |          |
|--------------------------------|----------|
| Fund Inception                 | 2000     |
| Legal Structure                | LP       |
| Fund Structure                 | Open-End |
| Gross Real Estate Assets (\$M) | 16,339   |
| Fund Leverage %                | 21.70    |
| Portfolio Occupancy %          | 94.60    |
| Cash Reserve %                 | 6.40     |
| Number of Investments          | 158      |
| Number of Limited Partners     | 525      |

### Property Type Allocation (%)

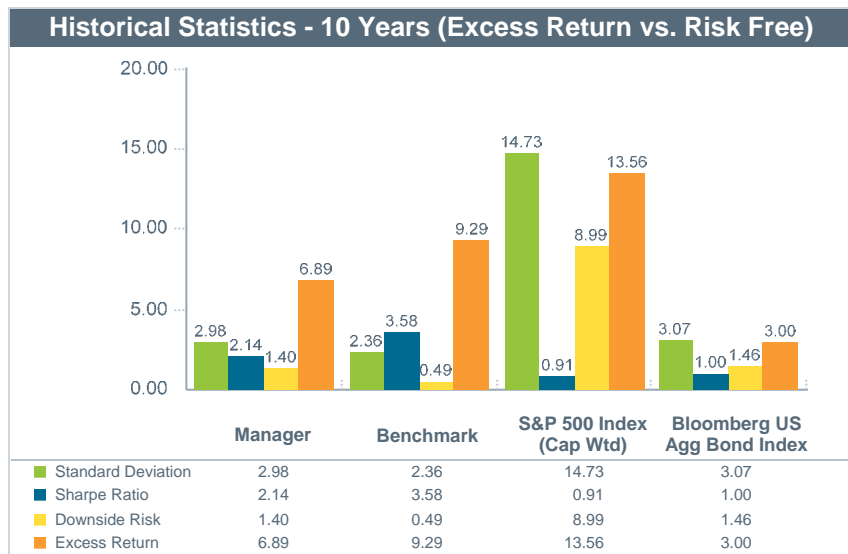


### Geographic Allocation (%)



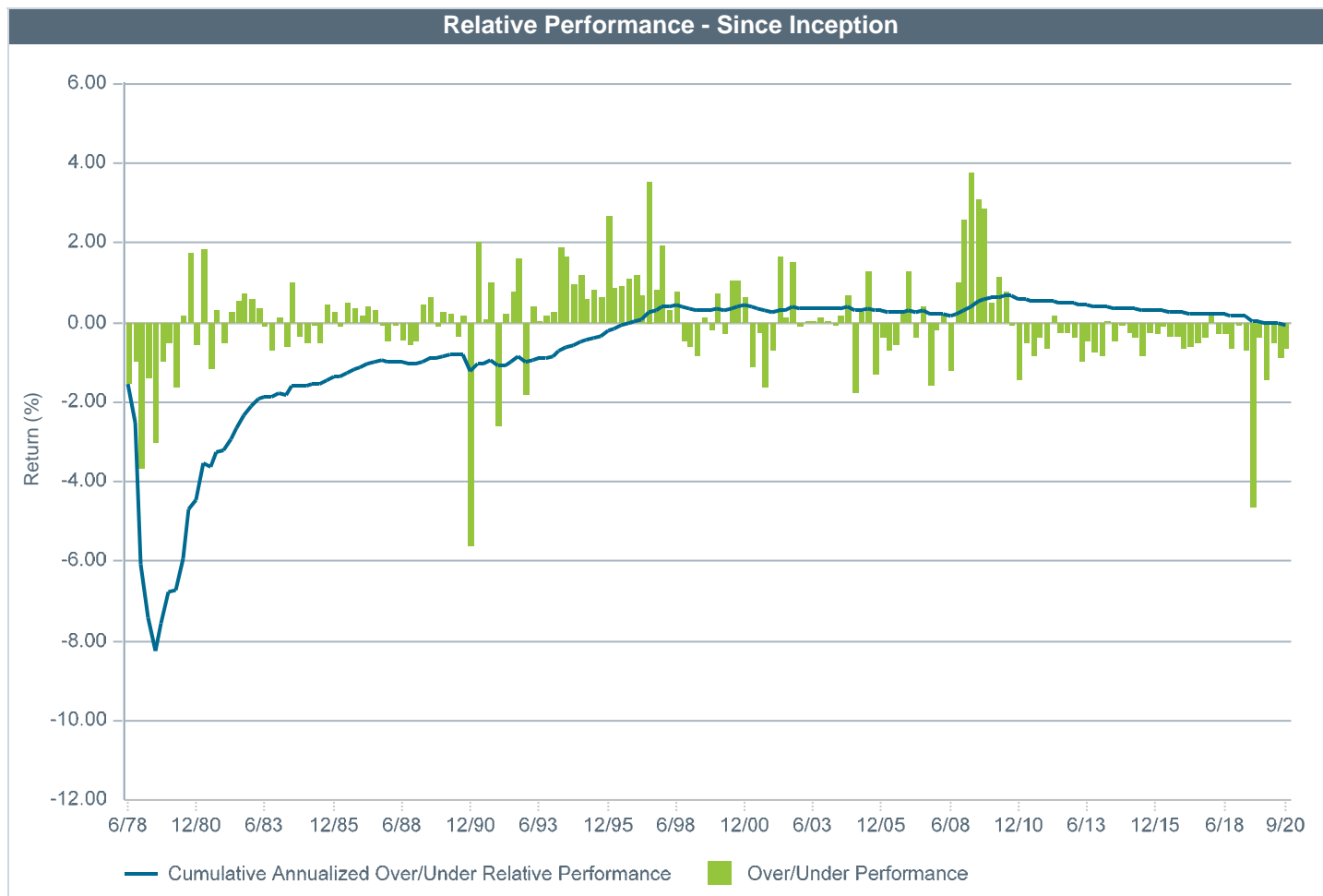
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of lab-office properties. 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 | 2019  | 2018  | 2017  | 2016  | 2015  |
| Manager     | -0.18 | -2.13  | 1.59    | 3.76    | 6.03    | 7.69     | -2.10 | 6.99  | 6.30  | 7.21  | 12.94 |
| Benchmark   | 0.48  | 1.39   | 5.18    | 6.64    | 8.60    | 10.27    | 5.34  | 8.35  | 7.62  | 8.77  | 15.02 |
| Difference  | -0.66 | -3.52  | -3.59   | -2.88   | -2.57   | -2.58    | -7.44 | -1.36 | -1.32 | -1.56 | -2.08 |



**Actual Correlation - 10 Years**

|                                 | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.87               |
| S&P 500 Index (Cap Wtd)         | -0.21              |
| Russell 2000 Index              | -0.15              |
| MSCI EAFE Index (USD) (Net)     | -0.20              |
| MSCI Emg Mkts Index (USD) (Net) | -0.26              |
| Bloomberg US Agg Bond Index     | -0.31              |
| Bloomberg US Trsy US TIPS Index | -0.31              |
| Wilshire US REIT Index          | 0.03               |
| HFRI FOF Comp Index             | -0.26              |
| Bloomberg Cmnty Index (TR)      | -0.15              |
| ICE BofAML 3 Mo US T-Bill Index | -0.55              |
| Cons Price Index (Unadjusted)   | -0.02              |



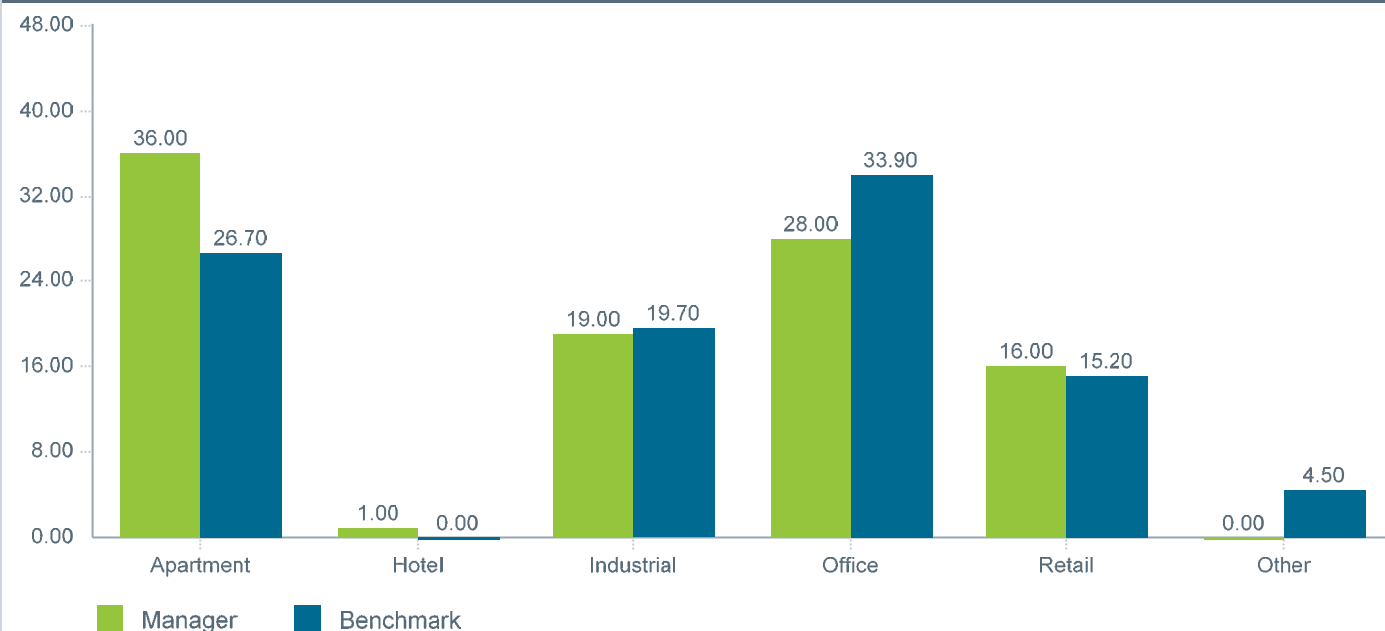
### Investment Strategy

The Fund pursues a diversified core real estate strategy that seeks to produce attractive risk-adjusted returns by focusing on selective acquisitions, diversification, active portfolio management, and asset management. The Fund invests in well-leased, stabilized assets in major US metropolitan markets and receives the majority of its return from the income component. Diversification for the Fund is consistently pursued on many levels, including geographic region, property type, and economic sector. The Fund has historically maintained a leverage ratio significantly lower than the NCREIF ODCE Index and invests 5-15% of its gross assets in value-added type real estate investment opportunities.

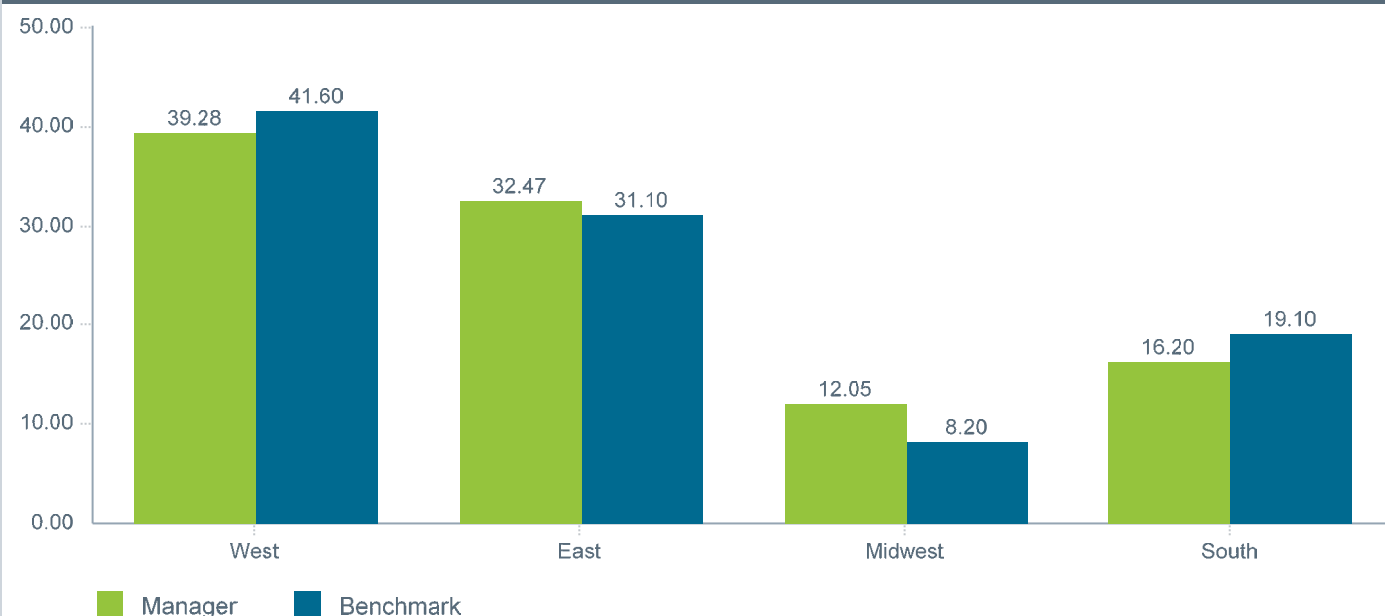
### Investment Profile

|                                |          |
|--------------------------------|----------|
| Fund Inception                 | 1978     |
| Legal Structure                | LP       |
| Fund Structure                 | Open-End |
| Gross Real Estate Assets (\$M) | 18,694   |
| Fund Leverage %                | 18.20    |
| Portfolio Occupancy %          | 91.90    |
| Cash Reserve %                 | 0.80     |
| Number of Investments          | 184      |
| Number of Limited Partners     | 446      |

### Property Type Allocation (%)

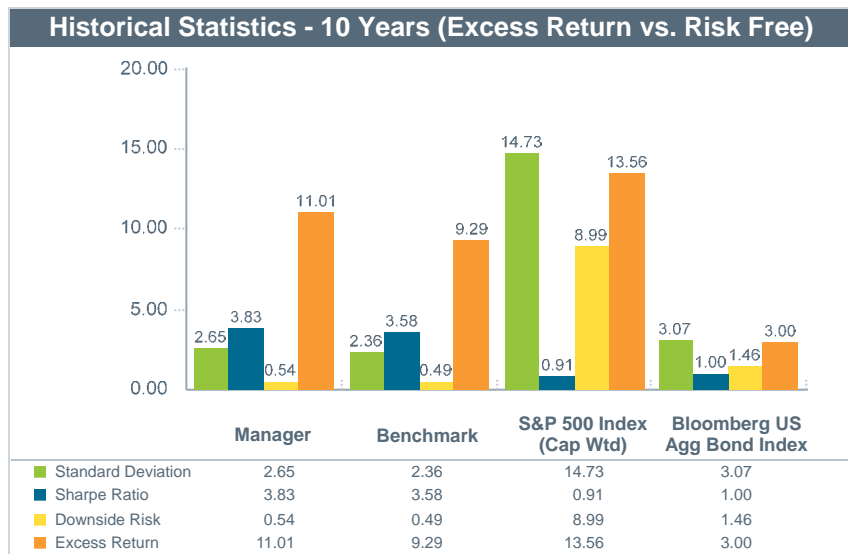


### Geographic Allocation (%)



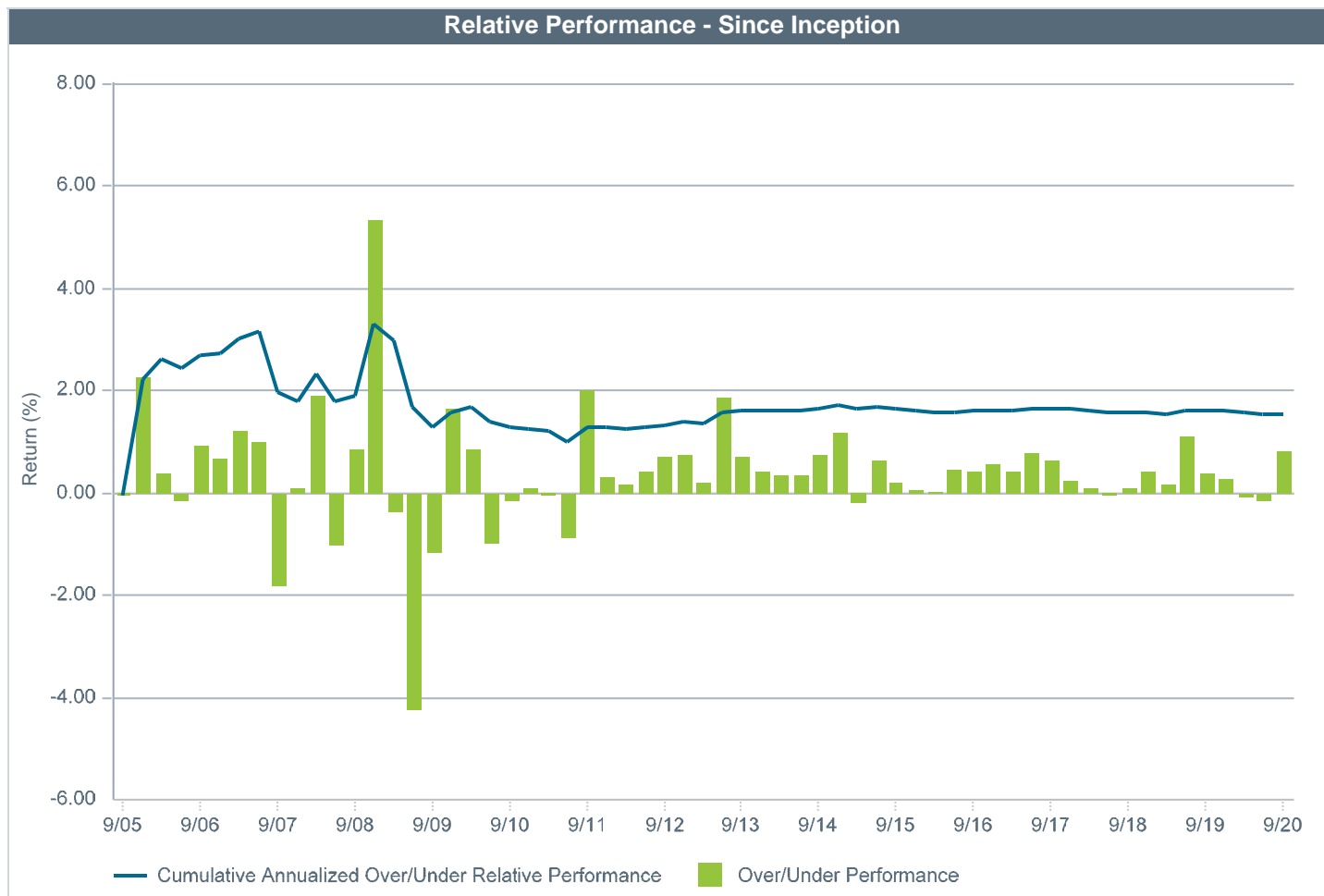
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Benchmark allocation to "Other" consists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

| Performance |      |        |         |         |         |          |      |      |      |       |       |
|-------------|------|--------|---------|---------|---------|----------|------|------|------|-------|-------|
|             | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019 | 2018 | 2017 | 2016  | 2015  |
| Manager     | 1.30 | 2.28   | 6.36    | 8.07    | 10.23   | 12.13    | 7.40 | 8.99 | 9.84 | 10.38 | 15.86 |
| Benchmark   | 0.48 | 1.39   | 5.18    | 6.64    | 8.60    | 10.27    | 5.34 | 8.35 | 7.62 | 8.77  | 15.02 |
| Difference  | 0.82 | 0.89   | 1.18    | 1.43    | 1.63    | 1.86     | 2.06 | 0.64 | 2.22 | 1.61  | 0.84  |



**Actual Correlation - 10 Years**

|                                 | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.92               |
| S&P 500 Index (Cap Wtd)         | -0.22              |
| Russell 2000 Index              | -0.14              |
| MSCI EAFE Index (USD) (Net)     | -0.20              |
| MSCI Emg Mkts Index (USD) (Net) | -0.34              |
| Bloomberg US Agg Bond Index     | -0.33              |
| Bloomberg US Trsy US TIPS Index | -0.40              |
| Wilshire US REIT Index          | -0.08              |
| HFRI FOF Comp Index             | -0.22              |
| Bloomberg Cmtty Index (TR)      | -0.15              |
| ICE BofAML 3 Mo US T-Bill Index | -0.49              |
| Cons Price Index (Unadjusted)   | -0.06              |





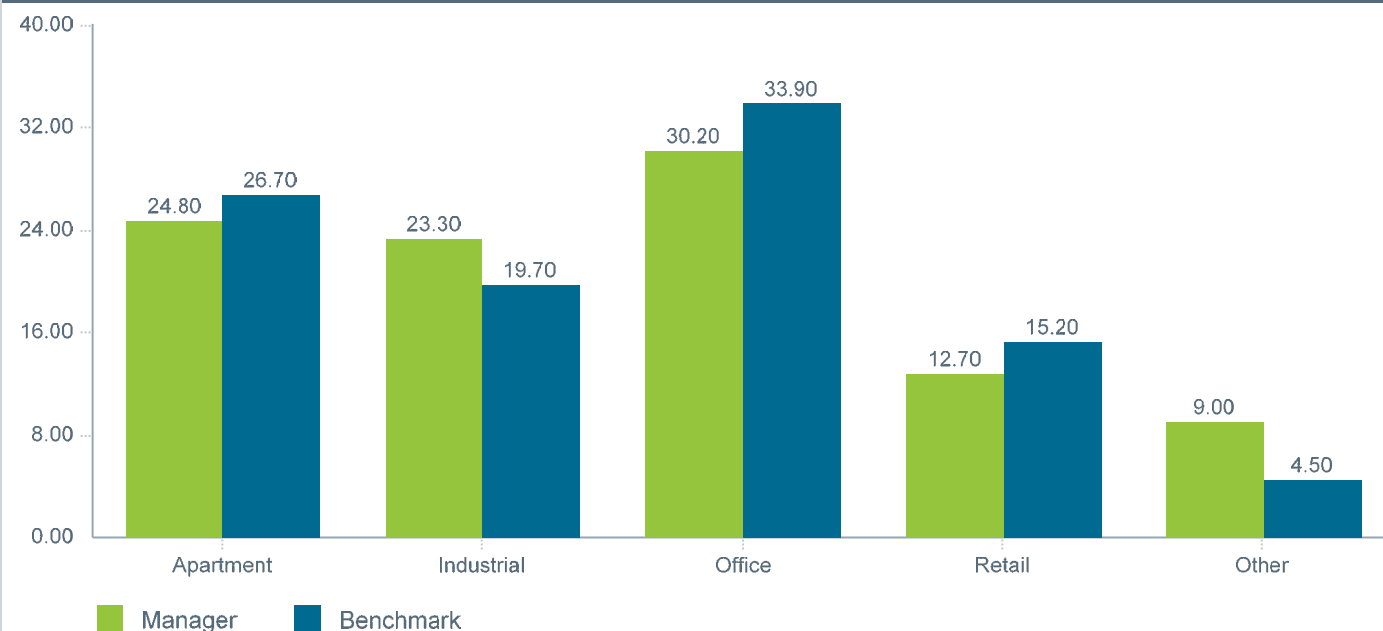
### Investment Strategy

The Fund pursues a diversified core real estate strategy that invests in assets with stable, highly predictable cash flow returns. The Fund targets high quality office, Class A multifamily, warehouse distribution, and top-tier super regional malls in addition to storage facilities in targeted primary markets. The Fund favors investing in major metropolitan markets and secondary markets expected to achieve above-average economic performance and believes that those cities offer better liquidity, more diverse tenant bases, and stronger resilience to market cycles. It operates with leverage of 50% or less and may invest up to 15% of its gross assets in higher-risk, value-added real estate investment opportunities.

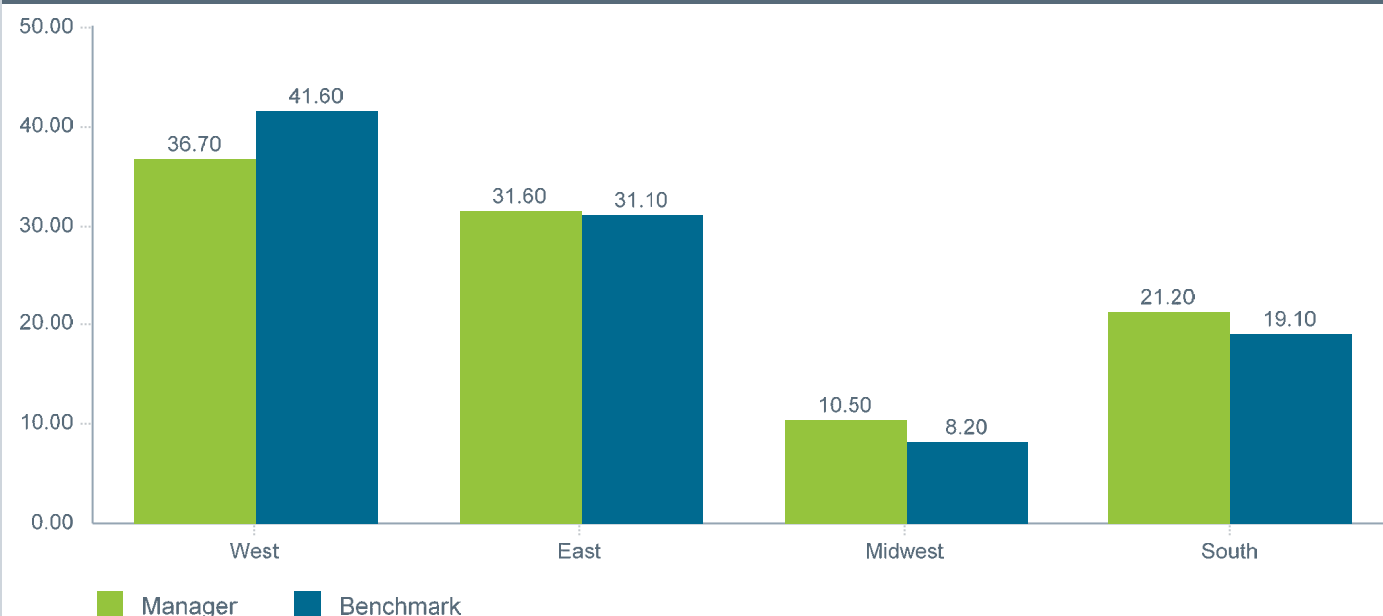
### Investment Profile

|                                |          |
|--------------------------------|----------|
| Fund Inception                 | 1973     |
| Legal Structure                | LLC      |
| Fund Structure                 | Open-End |
| Gross Real Estate Assets (\$M) | 31,584   |
| Fund Leverage %                | 17.20    |
| Portfolio Occupancy %          | 92.70    |
| Cash Reserve %                 | 2.00     |
| Number of Investments          | 446      |
| Number of Limited Partners     | 411      |

### 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 health care land held for potential development, and hotel. 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**

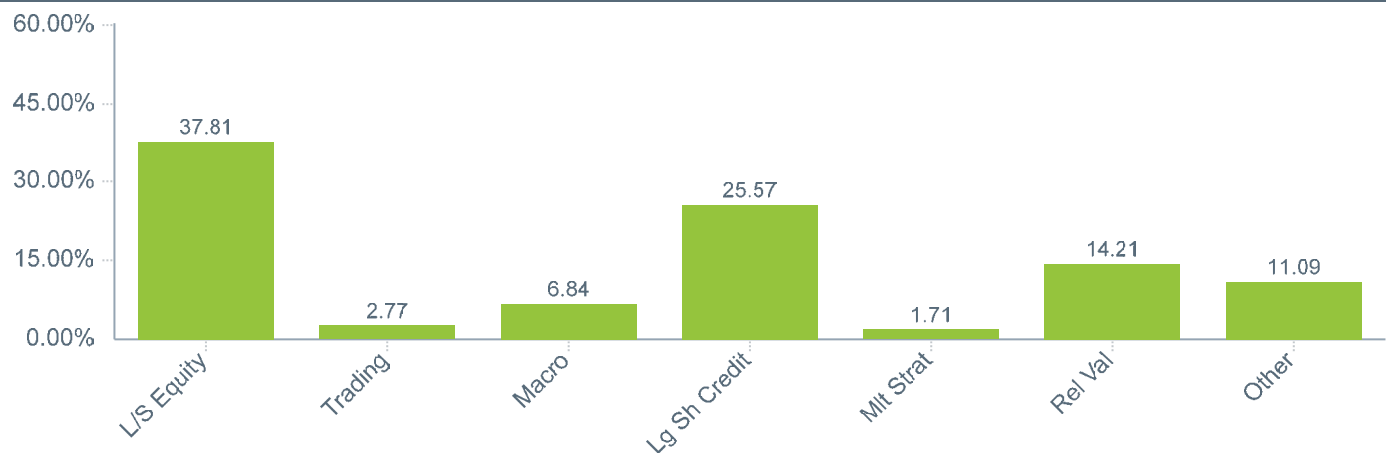
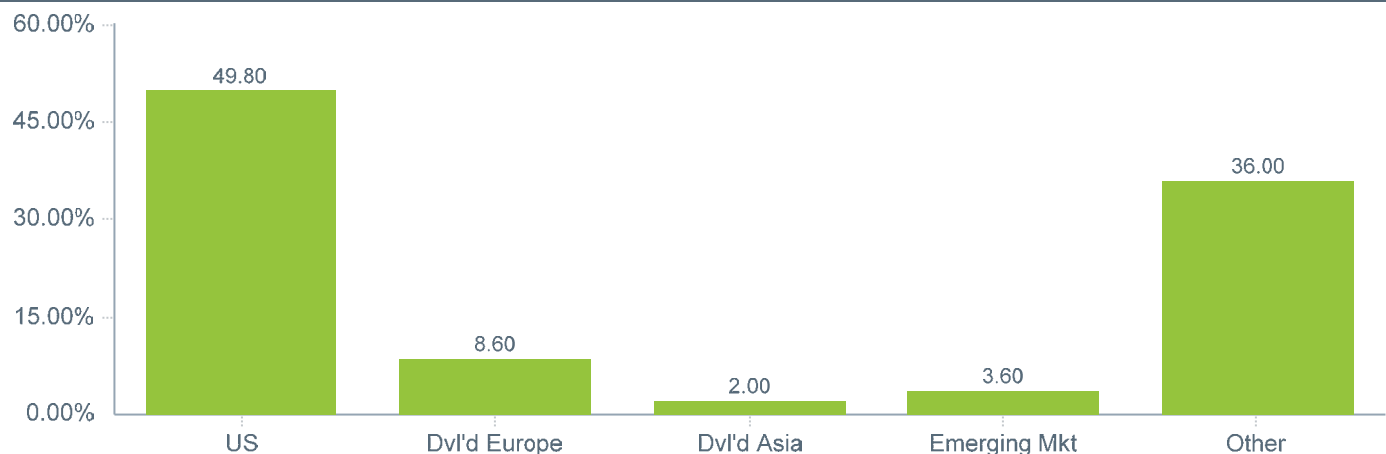
The Fund's investment objectives are to generate superior absolute and risk adjusted rates of return with low performance volatility and low correlation with global equity and fixed-income markets over a full market cycle. The Fund is also designed to preserve capital in challenging market environments. It does this through investment in a diversified pool of hedge fund strategies.

**Firm Statistics**

|                             |        |
|-----------------------------|--------|
| Year Firm Established       | 1971   |
| Firm AUM (\$M)              | 24,802 |
| Percentage Employee Owned % | 92.00  |

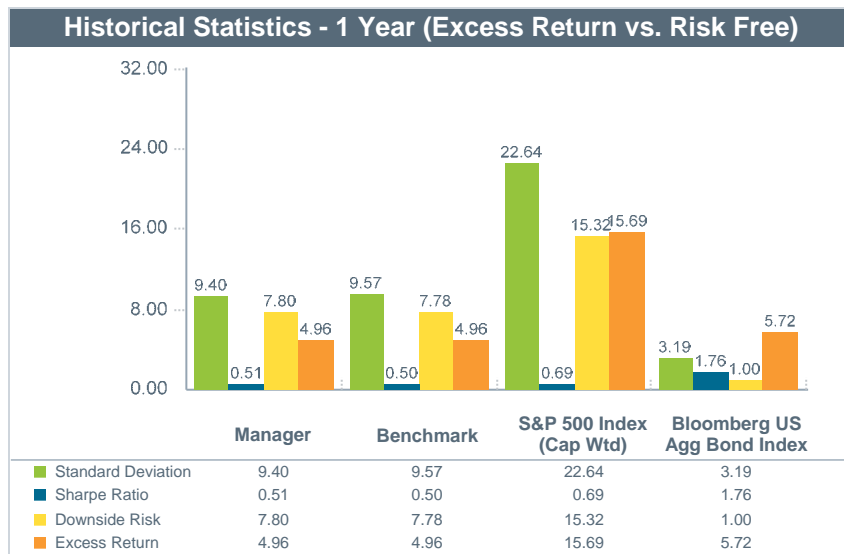
**Fund Statistics**

|  |              |
|--|--------------|
| Fund Inception                               | 2018         |
| Fund Size(\$M)                               | 287          |
| Number of Underlying Managers                | 23           |
| Maximum Weighting of an Underlying Manager % | 10.00        |
| Current Leverage (Assets/Equity)             | 3.70         |
| Annual Manager Turnover %                    | 40.00        |
| Annual Management Fee %                      | 0.60         |
| Performance Fee %                            | 5            |
| Hurdle %                                     | T-Bills + 2% |
| Initial Lock-Up Periods                      | N/A          |
| Redemption Frequency                         | N/A          |
| Notification Period                          | N/A          |

**Strategy Allocation (%)****Geographic Allocation (%)**

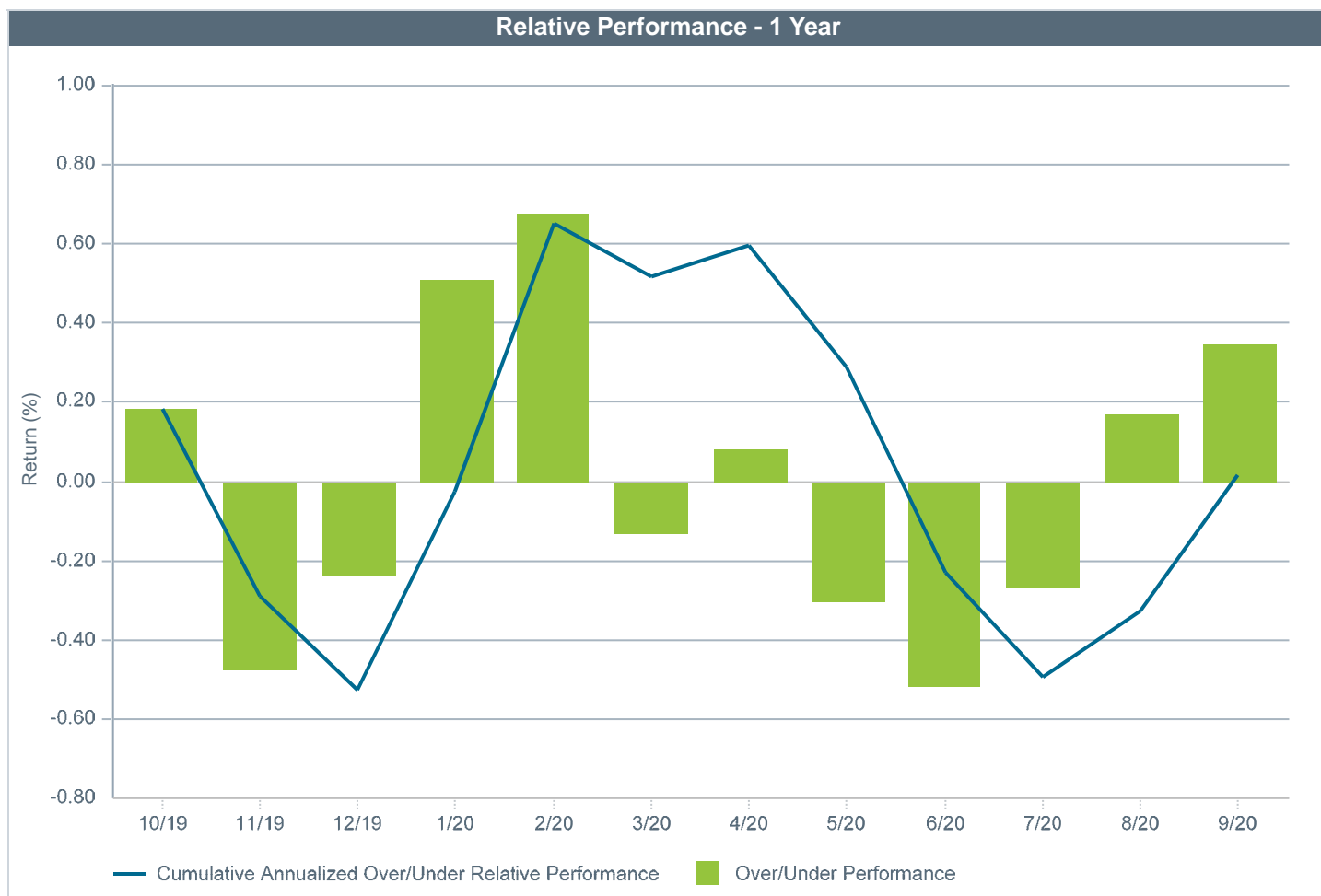
Strategy allocation to other consists of cash, expenses, management fees, and net receivable. Geographic allocation to other consists of cash or funds where geographic data are unavailable. Fund statistics shown are provided by the investment manager and are as of the most recently available quarter end.

| Performance |      |        |         |         |         |          |       |       |      |      |       |
|-------------|------|--------|---------|---------|---------|----------|-------|-------|------|------|-------|
|             | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017 | 2016 | 2015  |
| Manager     | 4.52 | 5.74   | N/A     | N/A     | N/A     | N/A      | 5.67  | N/A   | N/A  | N/A  | N/A   |
| Benchmark   | 4.26 | 5.72   | 2.88    | 3.09    | 3.07    | 2.89     | 8.39  | -4.02 | 7.77 | 0.51 | -0.27 |
| Difference  | 0.26 | 0.02   | N/A     | N/A     | N/A     | N/A      | -2.72 | N/A   | N/A  | N/A  | N/A   |



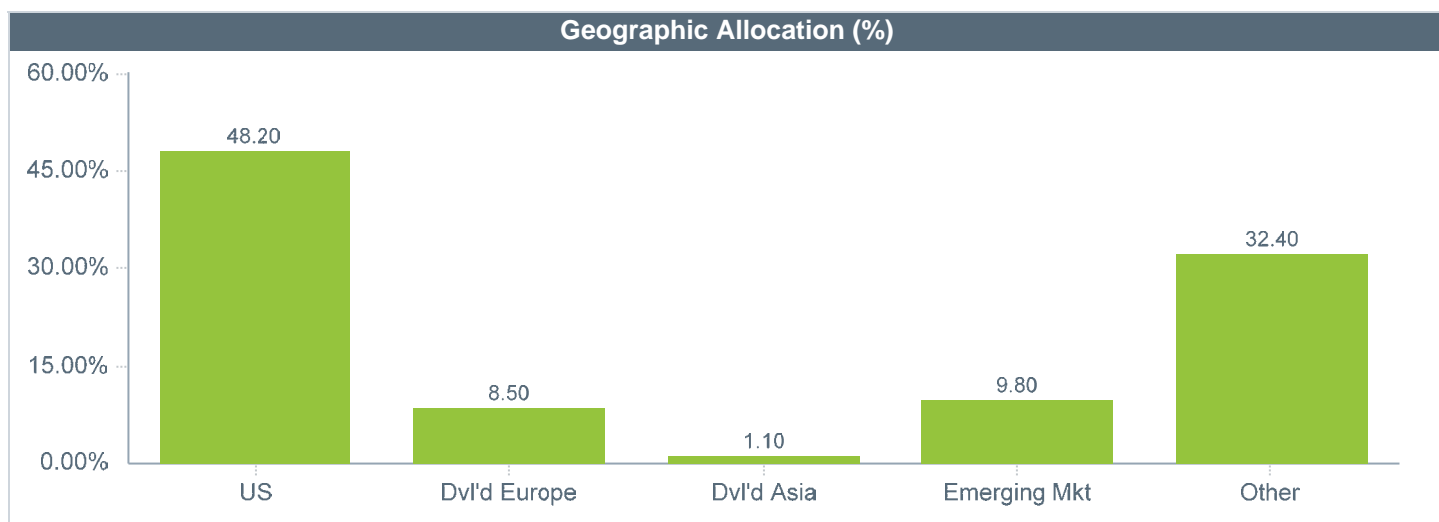
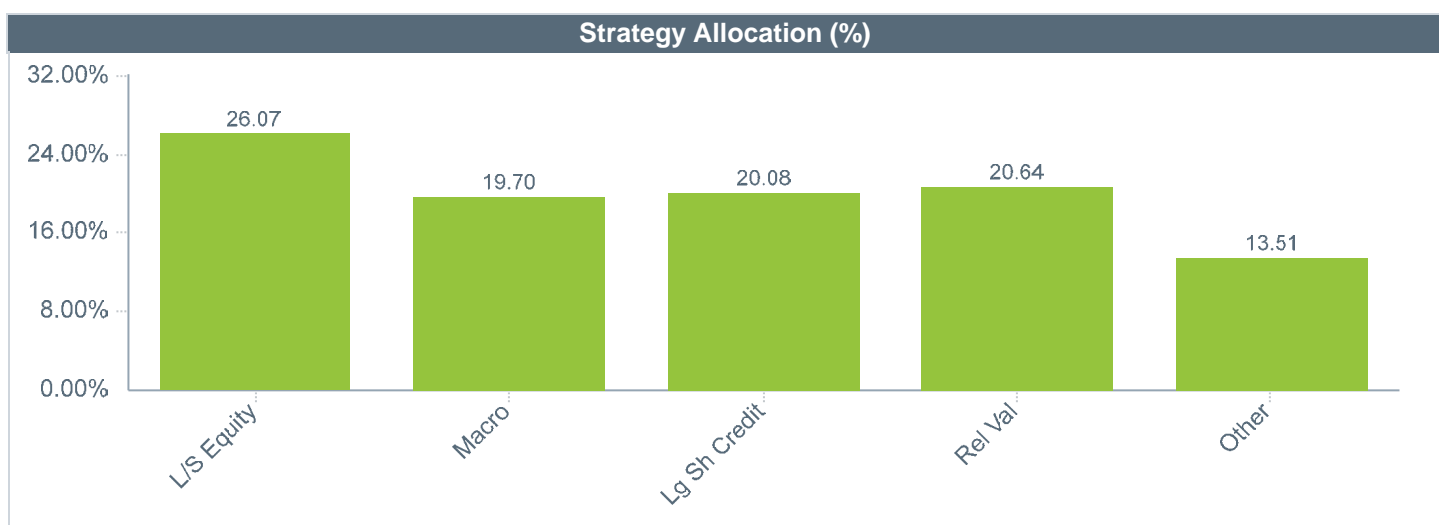
**Actual Correlation - 1 Year**

|                                 | Actual Correlation |
|---------------------------------|--------------------|
| HFRI FOF Comp Index             | 1.00               |
| S&P 500 Index (Cap Wtd)         | 0.99               |
| Russell 2000 Index              | 0.97               |
| MSCI EAFE Index (USD) (Net)     | 0.98               |
| MSCI Emg Mkts Index (USD) (Net) | 0.98               |
| Bloomberg US Agg Bond Index     | -0.39              |
| Bloomberg US Trsy US TIPS Index | 0.57               |
| NCREIF ODCE Index (AWA) (Gross) | -0.56              |
| Wilshire US REIT Index          | 1.00               |
| Bloomberg Cmdb Index (TR)       | 0.95               |
| ICE BofAML 3 Mo US T-Bill Index | -0.84              |
| Cons Price Index (Unadjusted)   | -0.21              |



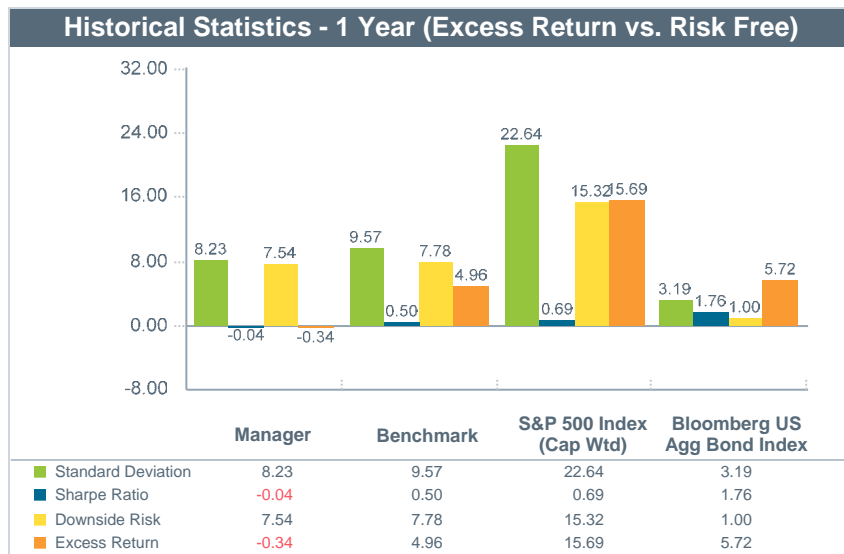
Performance shown is net of fees and client specific. Calculation is based on quarterly periodicity.

| Investment Strategy  | Firm Statistics                              |
|--|--|
| Silvery Lupine Fund Class C is a direct hedge funds portfolio managed by the Wyoming State Treasurer's Office. | Year Firm Established                        |
|  | 1971   |
|  | Firm AUM (\$M)                               |
|  | 24,802                                       |
|  | Percentage Employee Owned %                  |
|  | 92.00  |
|  | Fund Statistics                              |
|  | Fund Inception                               |
|  | N/A  |
|  | Fund Size(\$M)                               |
|  | 502  |
|  | Number of Underlying Managers                |
|  | 11   |
|  | Maximum Weighting of an Underlying Manager % |
|  | N/A  |
|  | Current Leverage (Assets/Equity)             |
|  | 4.00   |
|  | Annual Manager Turnover %                    |
|  | 0.00   |
|  | Annual Management Fee %                      |
|  | N/A  |
|  | Performance Fee %                            |
|  | N/A  |
|  | Hurdle %                                     |
|  | N/A  |
|  | Initial Lock-Up Periods                      |
|  | N/A  |
|  | Redemption Frequency                         |
|  | N/A  |
|  | Notification Period                          |
|  | N/A  |



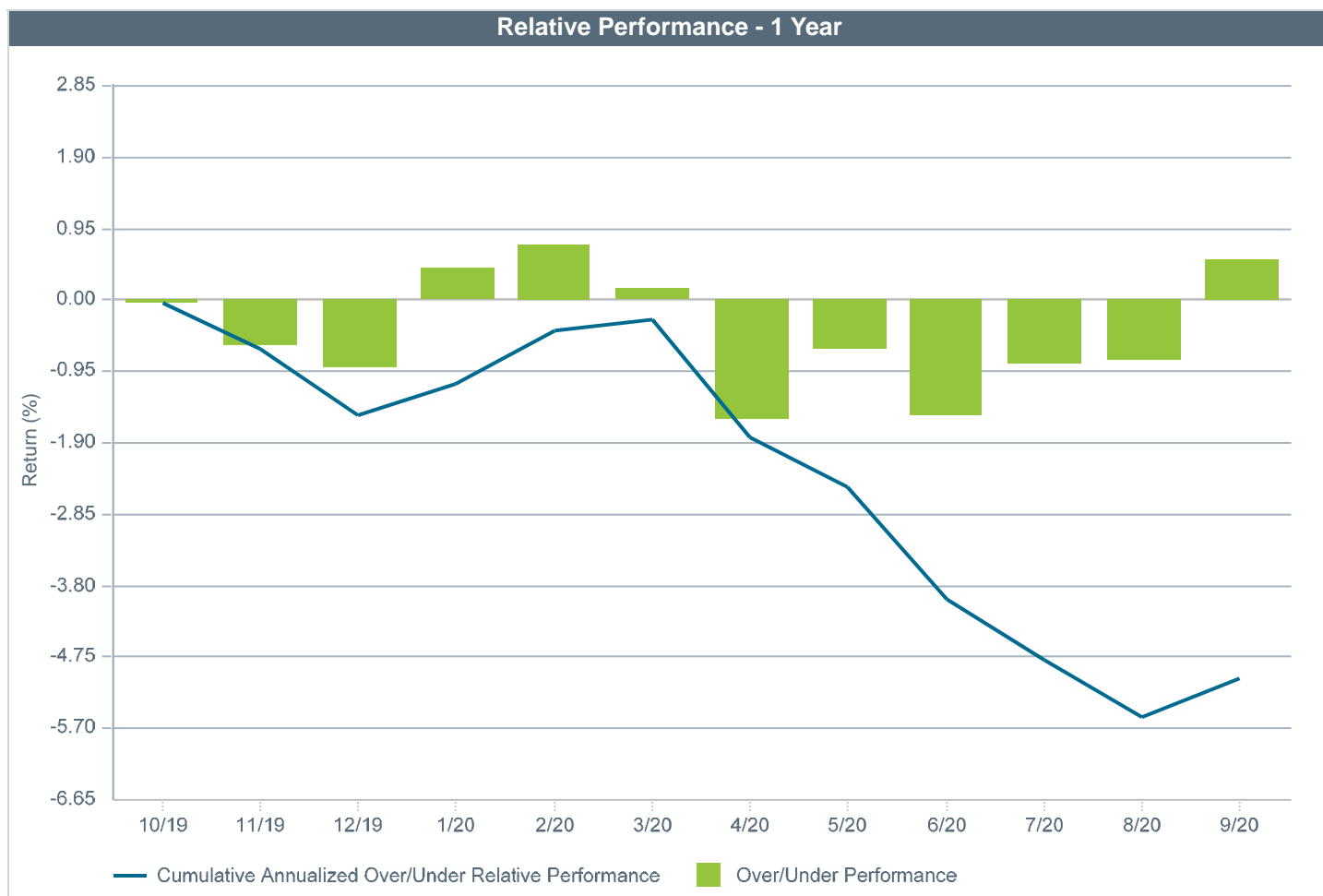
Strategy allocation to other consists of cash, expenses, and net receivable. Geographic allocation to other consists of cash or funds where geographic data are unavailable. Fund statistics shown are provided by GCM and are as of the most recently available quarter end.

| Performance |       |        |         |         |         |          |       |       |      |      |       |
|-------------|-------|--------|---------|---------|---------|----------|-------|-------|------|------|-------|
|             | QTD   | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017 | 2016 | 2015  |
| Manager     | 3.11  | 0.40   | N/A     | N/A     | N/A     | N/A      | 6.08  | N/A   | N/A  | N/A  | N/A   |
| Benchmark   | 4.26  | 5.72   | 2.88    | 3.09    | 3.07    | 2.89     | 8.39  | -4.02 | 7.77 | 0.51 | -0.27 |
| Difference  | -1.15 | -5.32  | N/A     | N/A     | N/A     | N/A      | -2.31 | N/A   | N/A  | N/A  | N/A   |



**Actual Correlation - 1 Year**

|                                 | Actual Correlation |
|---------------------------------|--------------------|
| HFRI FOF Comp Index             | 0.99               |
| S&P 500 Index (Cap Wtd)         | 0.97               |
| Russell 2000 Index              | 0.95               |
| MSCI EAFE Index (USD) (Net)     | 0.97               |
| MSCI Emg Mkts Index (USD) (Net) | 0.98               |
| Bloomberg US Agg Bond Index     | -0.50              |
| Bloomberg US Trsy US TIPS Index | 0.50               |
| NCREIF ODCE Index (AWA) (Gross) | -0.47              |
| Wilshire US REIT Index          | 0.98               |
| Bloomberg Cmnty Index (TR)      | 0.98               |
| ICE BofAML 3 Mo US T-Bill Index | -0.82              |
| Cons Price Index (Unadjusted)   | -0.13              |



Performance shown is net of fees and client specific. Calculation is based on quarterly periodicity.

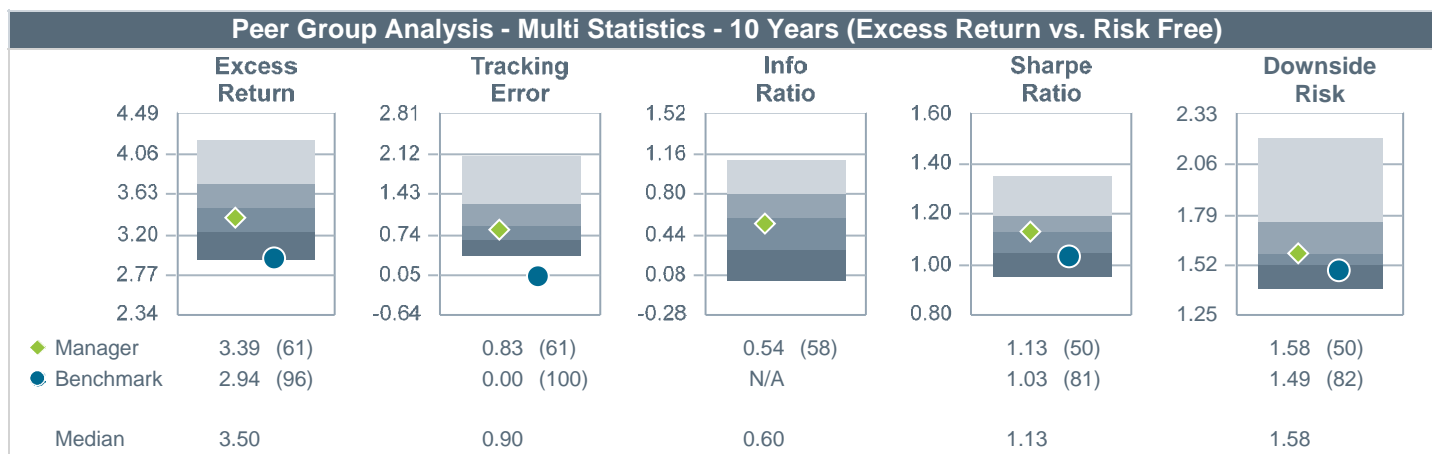
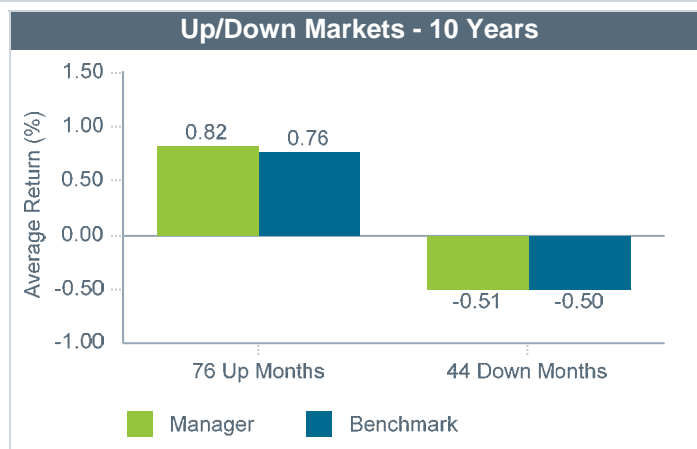
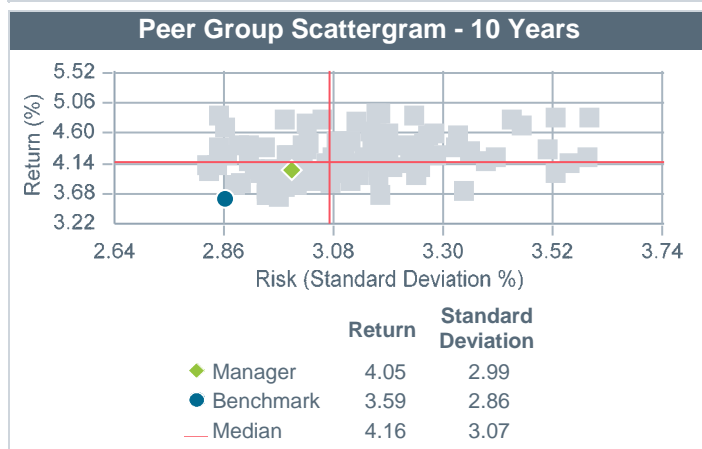
Manager: PIMCO Core

As of September 30, 2020

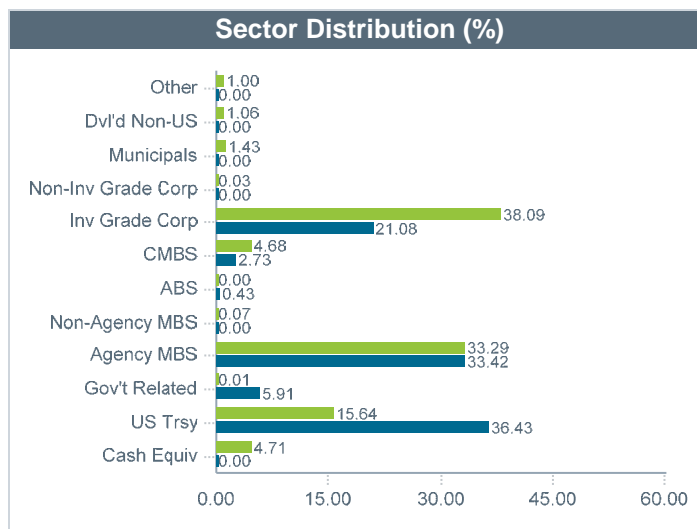
Benchmark: PIMCO Custom Index

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

| Performance       |      |        |         |         |         |          |      |      |      |      |       |
|-------------------|------|--------|---------|---------|---------|----------|------|------|------|------|-------|
|                   | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019 | 2018 | 2017 | 2016 | 2015  |
| Manager           | 1.27 | 8.14   | 5.65    | 4.64    | 4.25    | 4.05     | 7.71 | 0.58 | 4.27 | 3.35 | 0.50  |
| Benchmark         | 0.62 | 7.61   | 5.09    | 4.09    | 3.91    | 3.59     | 7.30 | 0.32 | 3.54 | 2.65 | 0.55  |
| Difference        | 0.65 | 0.53   | 0.56    | 0.55    | 0.34    | 0.46     | 0.41 | 0.26 | 0.73 | 0.70 | -0.05 |
| Peer Group Median | 1.10 | 7.52   | 5.62    | 4.70    | 4.43    | 4.16     | 9.18 | 0.06 | 4.03 | 3.10 | 0.82  |
| Rank              | 32   | 29     | 50      | 52      | 67      | 61       | 95   | 15   | 33   | 44   | 80    |
| Population        | 142  | 142    | 139     | 137     | 132     | 126      | 151  | 157  | 162  | 169  | 174   |



| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 6.11      | 3.47      |
| Spread Duration           | 4.27      | 3.94      |
| Avg. Maturity             | 7.33      | 4.25      |
| Avg. Quality              | Aa2       | Aa1/Aa2   |
| Yield To Maturity (%)     | 1.66      | 0.90      |
| Coupon Rate (%)           | 2.37      | 2.68      |
| Current Yield (%)         | 2.24      | N/A       |
| Holdings Count            | 359       | 9,081     |

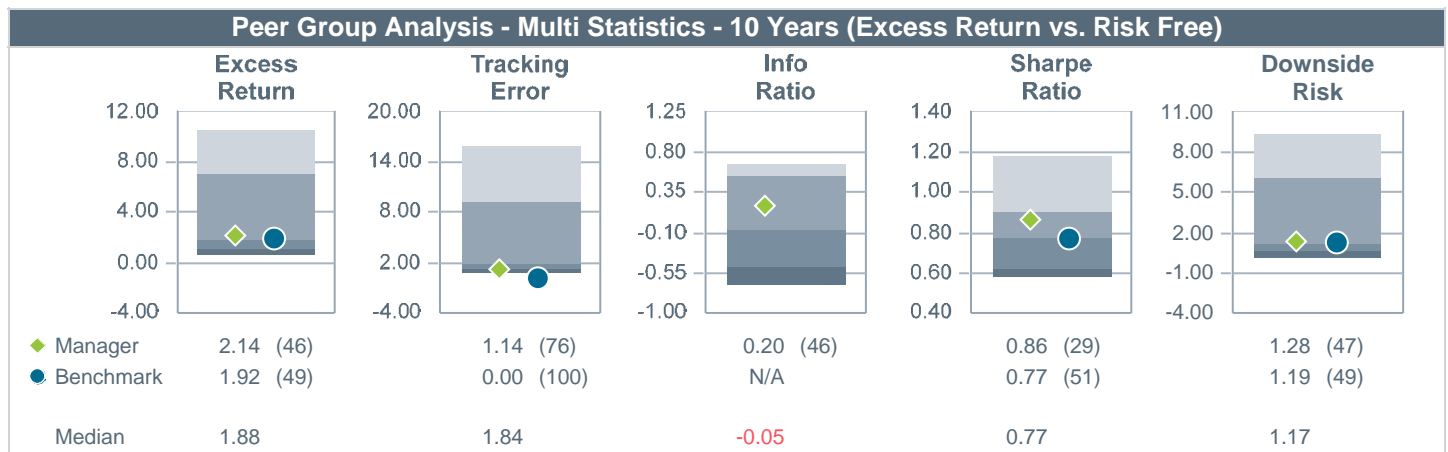
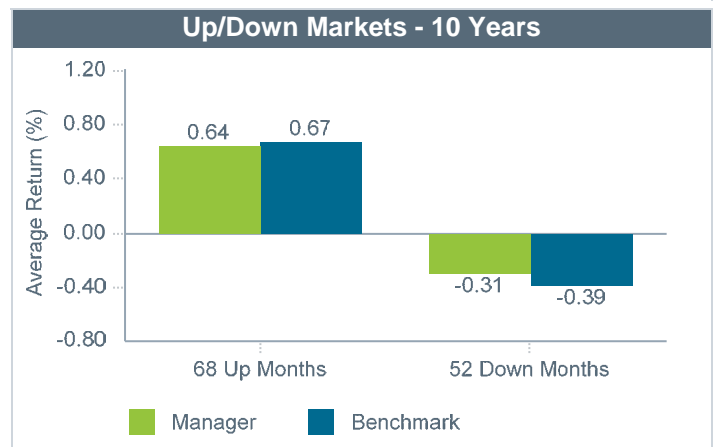
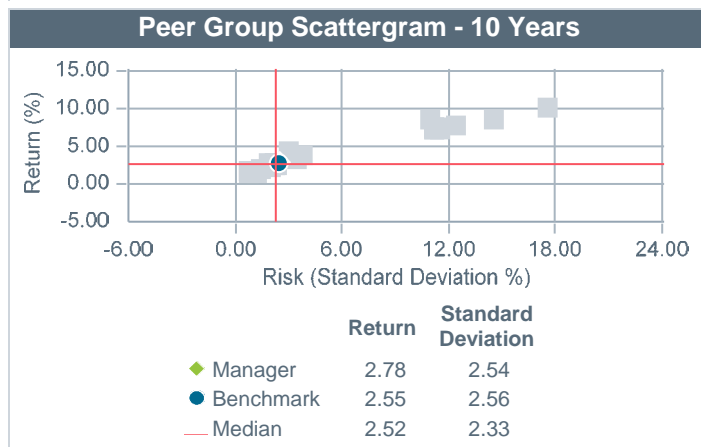


Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Sector allocation to "Other" consists of Euro/Yankee securities.

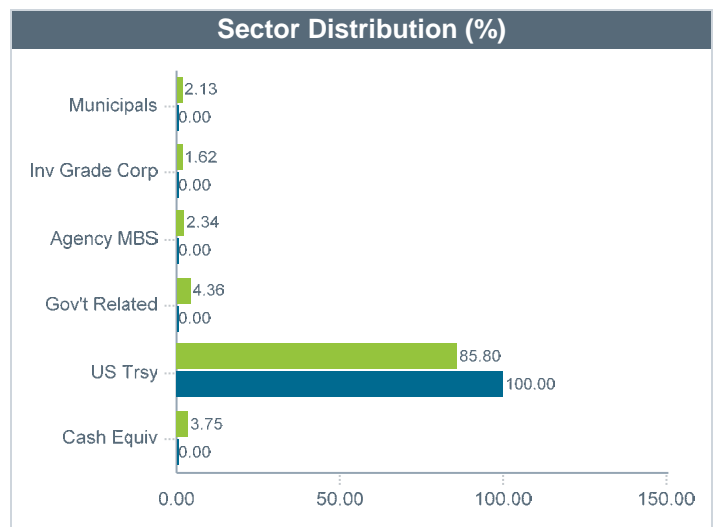
**Manager: Internal Intermediate Gov't Fixed Income Portfolio**
**As of September 30, 2020**
**Benchmark:** Internal Int Govt Fixed Income Portfolio Index

**Peer Group:** IM U.S. Government Bonds (SA+CF)

| Performance       |      |        |         |         |         |          |       |      |      |       |      |
|-------------------|------|--------|---------|---------|---------|----------|-------|------|------|-------|------|
|                   | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018 | 2017 | 2016  | 2015 |
| Manager           | 0.27 | 8.22   | 4.92    | 3.52    | 3.42    | 2.78     | 4.53  | 1.85 | 1.84 | 0.95  | 1.83 |
| Benchmark         | 0.17 | 8.40   | 4.82    | 3.23    | 2.89    | 2.55     | 4.70  | 1.43 | 1.14 | 1.05  | 1.18 |
| Difference        | 0.10 | -0.18  | 0.10    | 0.29    | 0.53    | 0.23     | -0.17 | 0.42 | 0.70 | -0.10 | 0.65 |
| Peer Group Median | 0.20 | 7.00   | 4.81    | 3.00    | 2.78    | 2.52     | 5.84  | 1.27 | 1.77 | 1.34  | 0.67 |
| Rank              | 30   | 46     | 50      | 49      | 46      | 46       | 74    | 7    | 50   | 81    | 7    |
| Population        | 40   | 40     | 40      | 39      | 37      | 36       | 44    | 50   | 49   | 50    | 50   |



| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 7.42      | 7.24      |
| Spread Duration           | 7.28      | 7.02      |
| Avg. Maturity             | 9.19      | 8.51      |
| Avg. Quality              | Aaa       | Aaa       |
| Yield To Maturity (%)     | 0.59      | 0.48      |
| Coupon Rate (%)           | 2.18      | 1.97      |
| Current Yield (%)         | 1.96      | N/A       |
| Holdings Count            | 45        | 261       |



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. The Internal Intermediate Govt Fixed Income Portfolio Index consists of the Bloomberg US Treasury Index as of 12/1/2019. November 2019 performance consists of the Internal Intermediate Govt Fixed Income Portfolio. Prior to November 2019, the index consists of Bloomberg US Gov't Int Term Bond Index. Prior to December 2009, the index consisted of the Bloomberg US Gov't Crdt Bond Index.

Manager: Investec

As of September 30, 2020

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

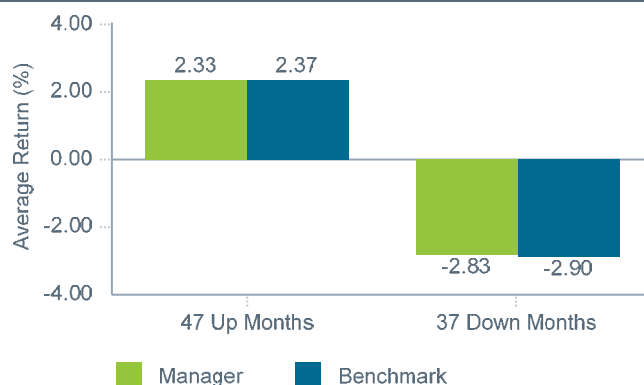
Peer Group: IM Emerging Markets Debt (SA+CF)

| Performance       |      |        |         |         |         |          |       |       |       |       |        |
|-------------------|------|--------|---------|---------|---------|----------|-------|-------|-------|-------|--------|
|                   | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017  | 2016  | 2015   |
| Manager           | 1.51 | -0.37  | 0.31    | 4.53    | 0.02    | N/A      | 14.10 | -7.64 | 17.65 | 7.00  | -14.68 |
| Benchmark         | 0.61 | -1.45  | 0.17    | 4.78    | -0.04   | 0.52     | 13.47 | -6.21 | 15.21 | 9.94  | -14.92 |
| Difference        | 0.90 | 1.08   | 0.14    | -0.25   | 0.06    | N/A      | 0.63  | -1.43 | 2.44  | -2.94 | 0.24   |
| Peer Group Median | 2.55 | 2.10   | 2.66    | 6.42    | 4.81    | 5.01     | 14.24 | -5.32 | 12.42 | 11.04 | -2.52  |
| Rank              | 73   | 79     | 84      | 89      | 94      | N/A      | 54    | 83    | 6     | 92    | 84     |
| Population        | 122  | 122    | 118     | 109     | 95      | 65       | 147   | 162   | 167   | 176   | 181    |

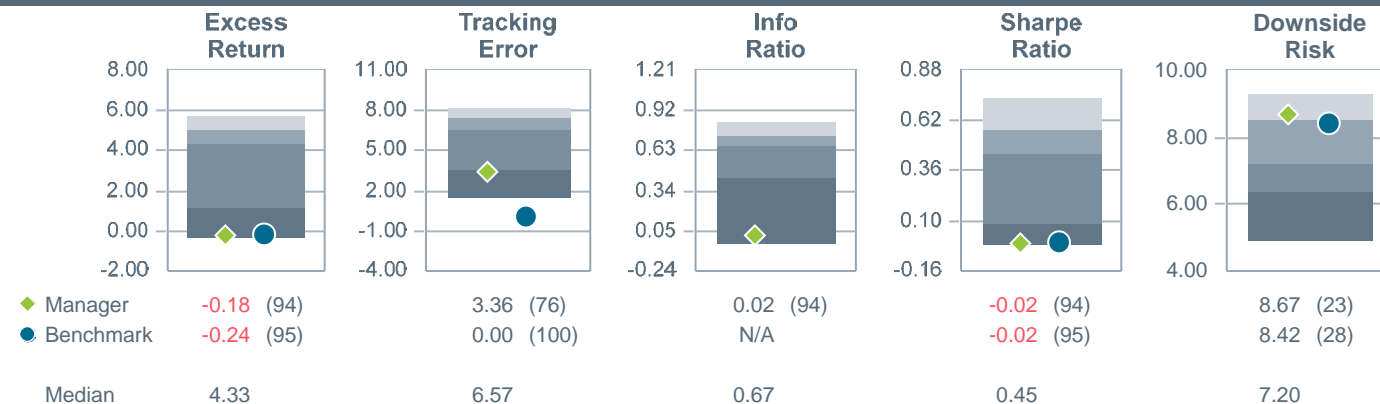
Peer Group Scattergram - 7 Years



Up/Down Markets - 7 Years



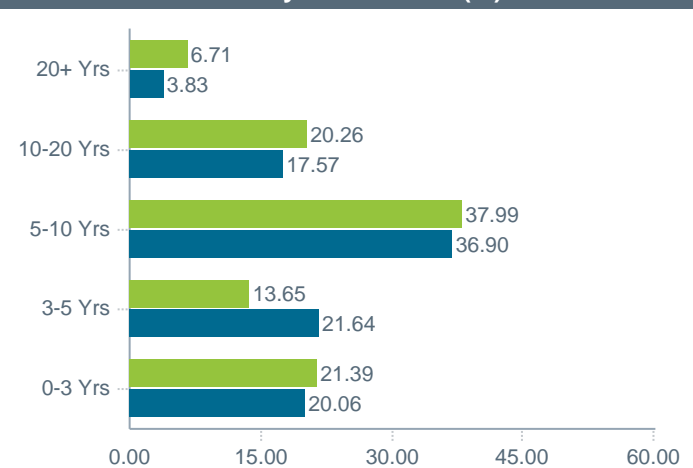
Peer Group Analysis - Multi Statistics - 7 Years (Excess Return vs. Risk Free)



Portfolio Characteristics (%)

|                       | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Effective Duration    | 6.13      | 5.48      |
| Spread Duration       | N/A       | 0.03      |
| Avg. Maturity         | 8.87      | 7.36      |
| Avg. Quality          | Baa2      | Ba2       |
| Yield To Maturity (%) | 5.24      | 4.29      |
| Coupon Rate (%)       | 5.60      | 5.75      |
| Current Yield (%)     | 5.79      | 5.20      |
| Holdings Count        | 155       | 240       |

Maturity Distribution (%)



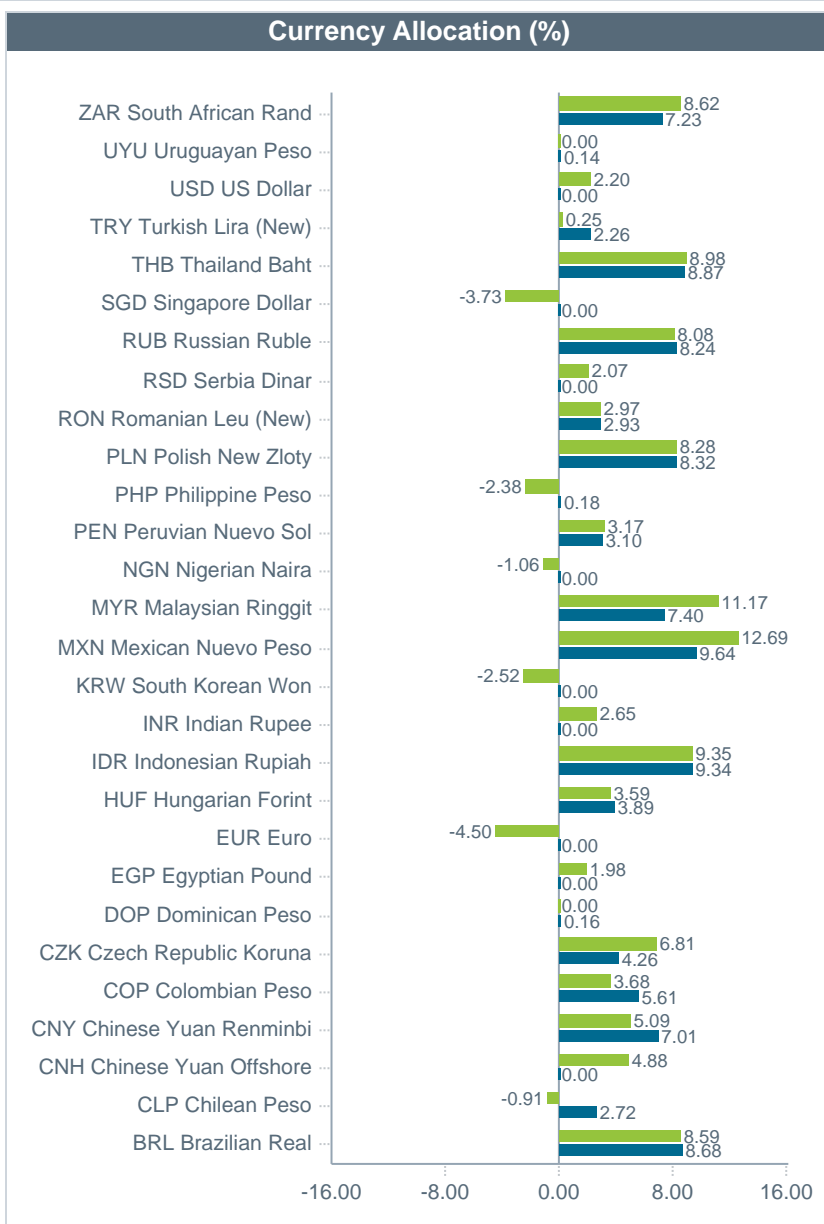
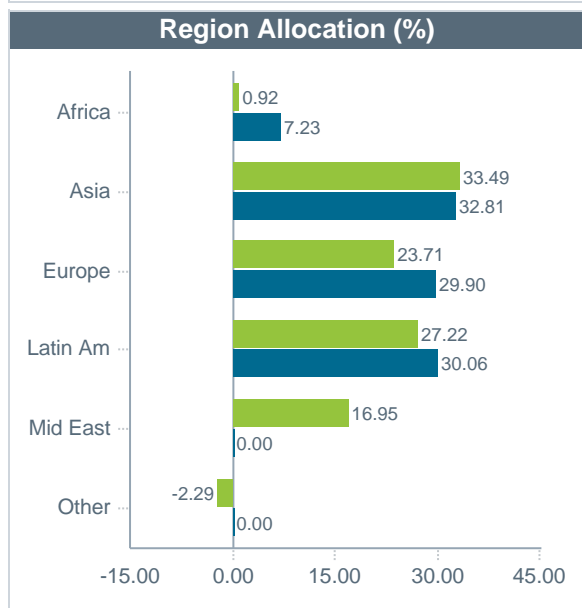
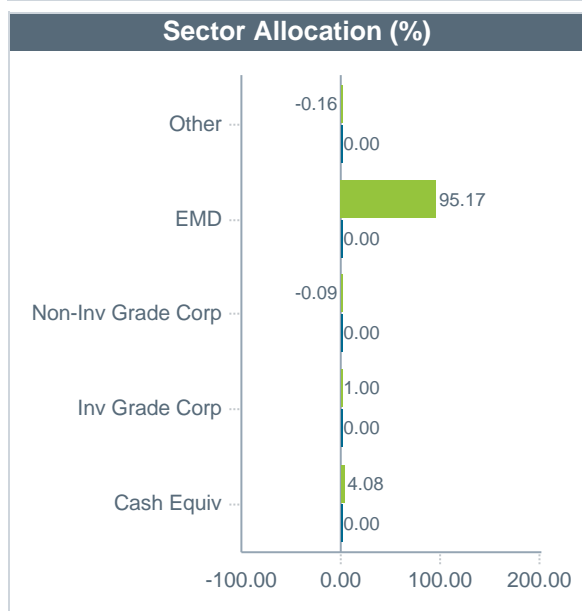
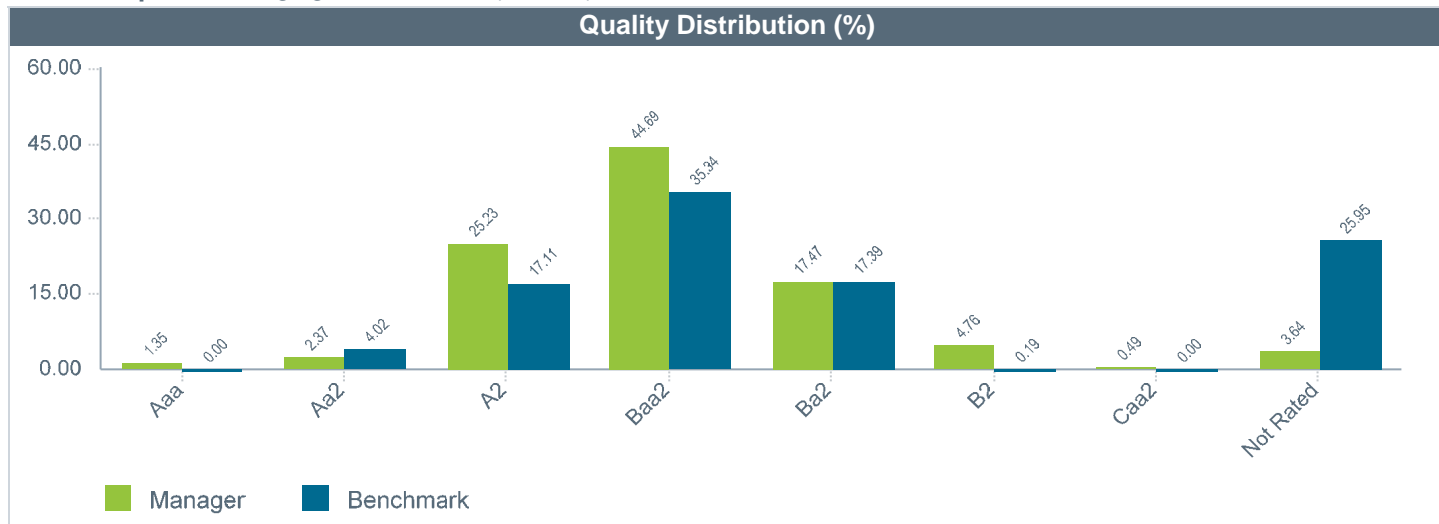


Manager: Investec

As of September 30, 2020

Benchmark: JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (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. Sector allocation to "Other" consists of foreign exchange and interest rate swaps. Region allocation to "Other" consists of cash.



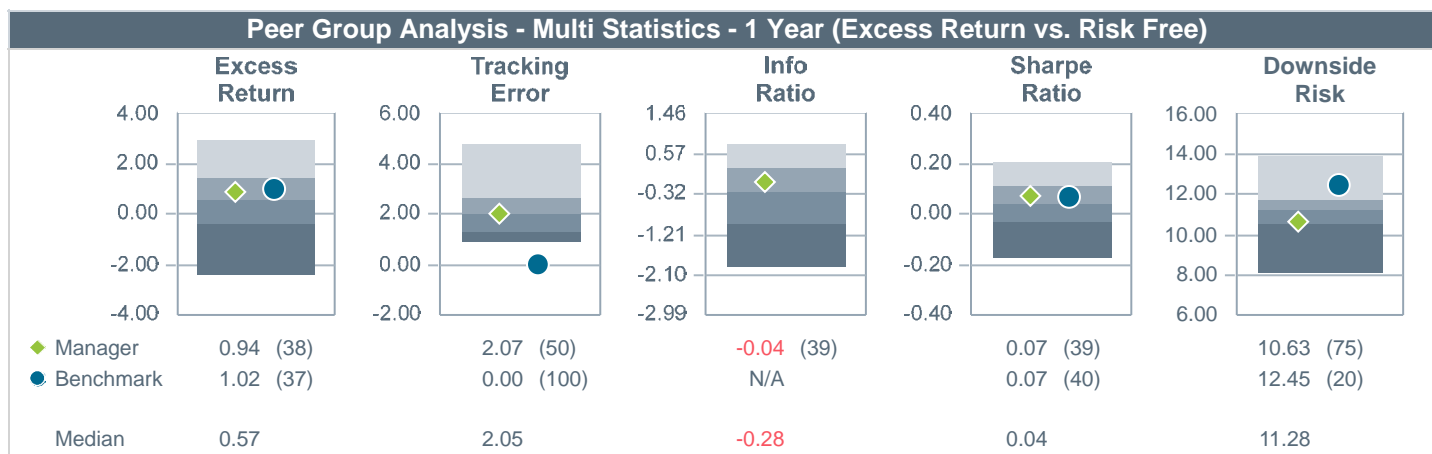
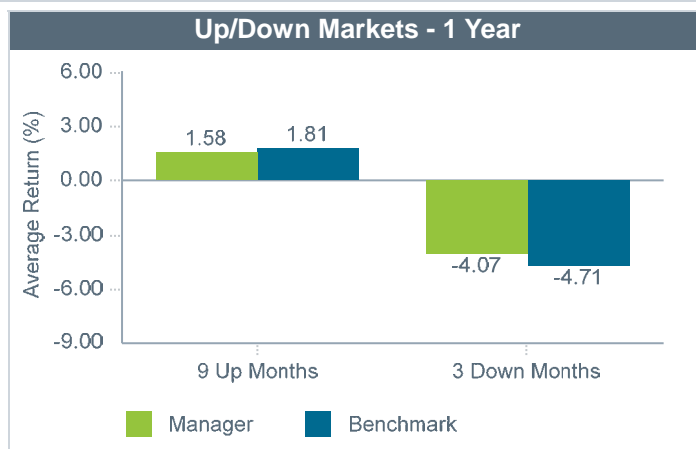
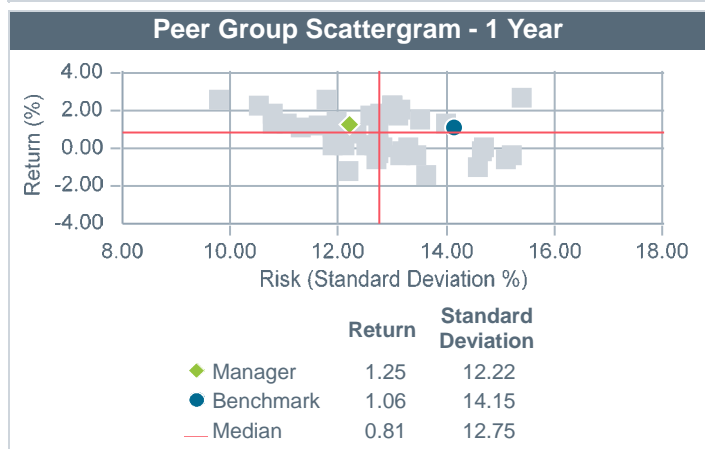
Manager: Credit Suisse

As of September 30, 2020

Benchmark: S&P/LSTA Lvg'd Loan Index

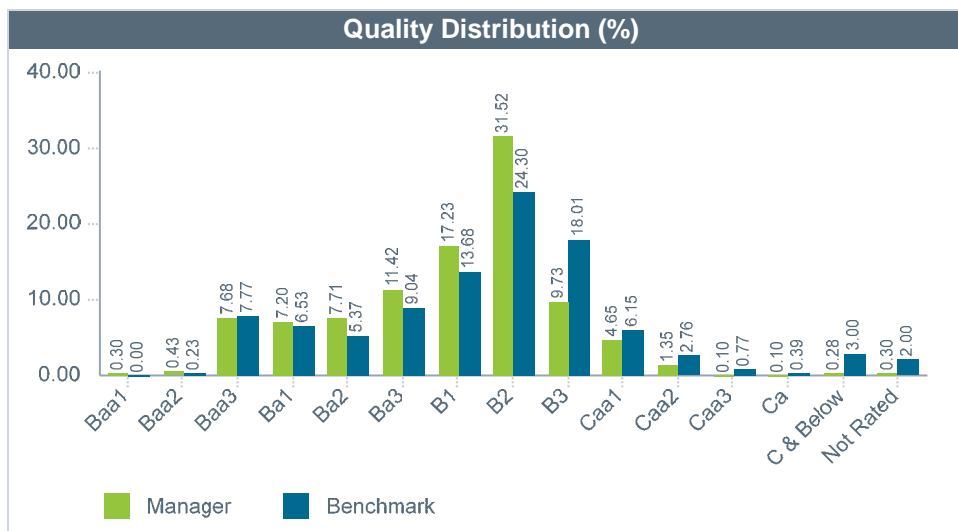
Peer Group: IM U.S. Bank Loans (SA+CF)

| Performance       |       |           |            |            |            |             |      |      |      |       |       |
|-------------------|-------|-----------|------------|------------|------------|-------------|------|------|------|-------|-------|
|                   | QTD   | 1<br>Year | 3<br>Years | 5<br>Years | 7<br>Years | 10<br>Years | 2019 | 2018 | 2017 | 2016  | 2015  |
| Manager           | 3.61  | 1.25      | N/A        | N/A        | N/A        | N/A         | N/A  | N/A  | N/A  | N/A   | N/A   |
| Benchmark         | 4.14  | 1.06      | 3.10       | 4.01       | 3.54       | 4.26        | 8.64 | 0.44 | 4.12 | 10.16 | -0.69 |
| Difference        | -0.53 | 0.19      | N/A        | N/A        | N/A        | N/A         | N/A  | N/A  | N/A  | N/A   | N/A   |
| Peer Group Median | 3.78  | 0.81      | 3.16       | 3.99       | 3.67       | 4.54        | 8.71 | 0.78 | 4.44 | 9.51  | 0.66  |
| Rank              | 59    | 41        | N/A        | N/A        | N/A        | N/A         | N/A  | N/A  | N/A  | N/A   | N/A   |
| Population        | 53    | 53        | 52         | 50         | 49         | 39          | 56   | 65   | 66   | 67    | 70    |



**Portfolio Characteristics**

|                       | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Effective Duration    | 0.25      | N/A       |
| Spread Duration       | 4.44      | N/A       |
| Avg. Maturity         | 5.00      | 4.67      |
| Avg. Quality          | B1        | B1        |
| Yield To Maturity (%) | 4.98      | 6.40      |
| Coupon Rate (%)       | 3.70      | 4.28      |
| Current Yield (%)     | 3.90      | 6.40      |
| Holdings Count        | 335       | 1,444     |



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



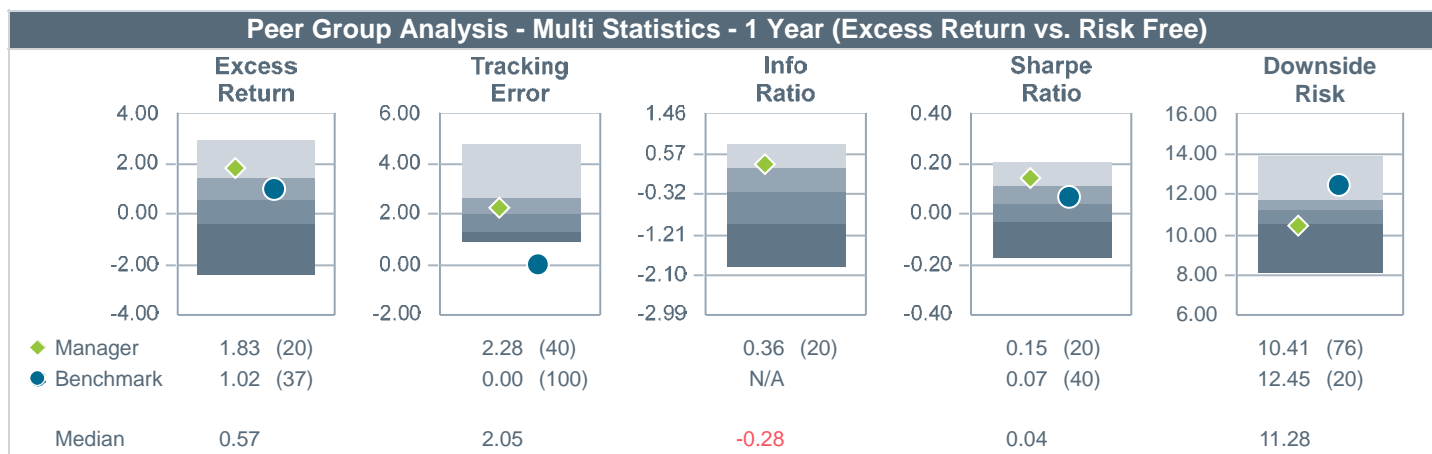
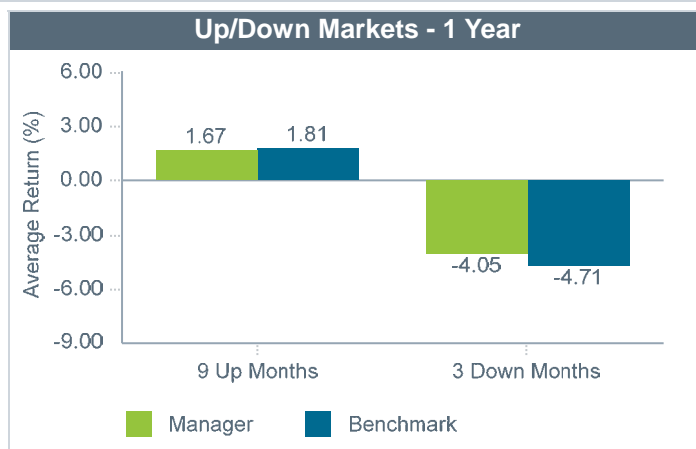
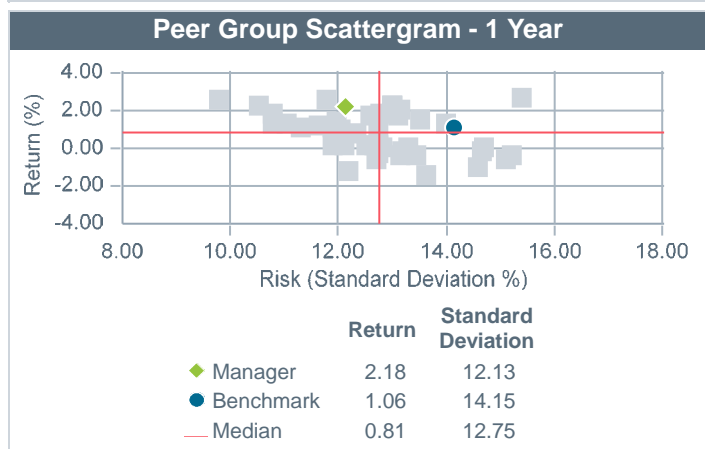
Manager: Octagon

As of September 30, 2020

Benchmark: S&P/LSTA Lvg'd Loan Index

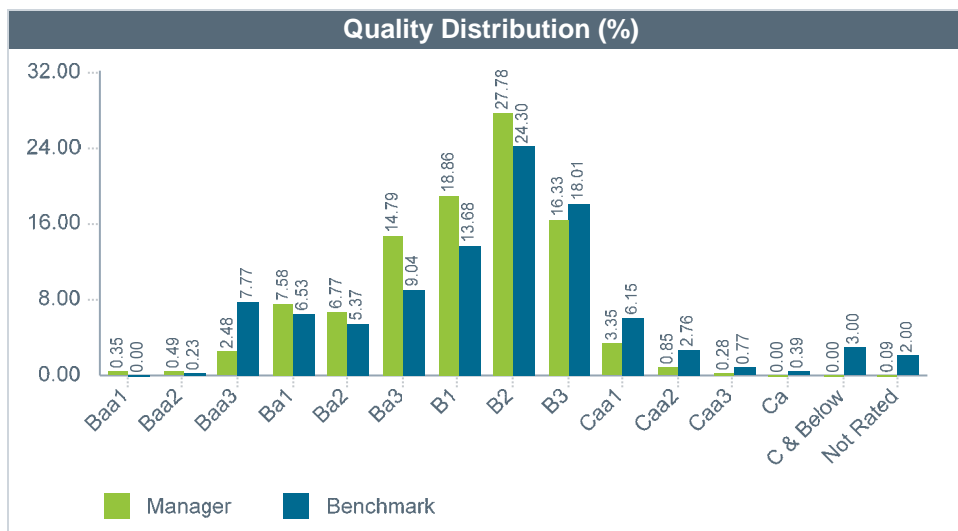
Peer Group: IM U.S. Bank Loans (SA+CF)

| Performance       |       |           |            |            |            |             |      |      |      |       |       |
|-------------------|-------|-----------|------------|------------|------------|-------------|------|------|------|-------|-------|
|                   | QTD   | 1<br>Year | 3<br>Years | 5<br>Years | 7<br>Years | 10<br>Years | 2019 | 2018 | 2017 | 2016  | 2015  |
| Manager           | 3.84  | 2.18      | N/A        | N/A        | N/A        | N/A         | N/A  | N/A  | N/A  | N/A   | N/A   |
| Benchmark         | 4.14  | 1.06      | 3.10       | 4.01       | 3.54       | 4.26        | 8.64 | 0.44 | 4.12 | 10.16 | -0.69 |
| Difference        | -0.30 | 1.12      | N/A        | N/A        | N/A        | N/A         | N/A  | N/A  | N/A  | N/A   | N/A   |
| Peer Group Median | 3.78  | 0.81      | 3.16       | 3.99       | 3.67       | 4.54        | 8.71 | 0.78 | 4.44 | 9.51  | 0.66  |
| Rank              | 43    | 17        | N/A        | N/A        | N/A        | N/A         | N/A  | N/A  | N/A  | N/A   | N/A   |
| Population        | 53    | 53        | 52         | 50         | 49         | 39          | 56   | 65   | 66   | 67    | 70    |



**Portfolio Characteristics**

|                       | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Effective Duration    | 0.25      | N/A       |
| Spread Duration       | N/A       | N/A       |
| Avg. Maturity         | 5.14      | 4.67      |
| Avg. Quality          | B1        | B1        |
| Yield To Maturity (%) | 5.13      | 6.40      |
| Coupon Rate (%)       | 4.08      | 4.28      |
| Current Yield (%)     | 4.27      | 6.40      |
| Holdings Count        | 264       | 1,444     |



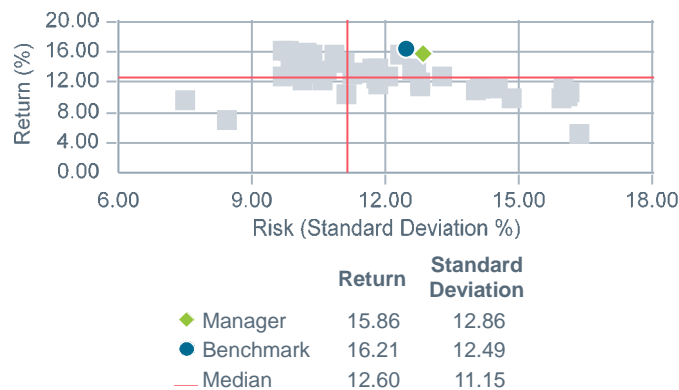
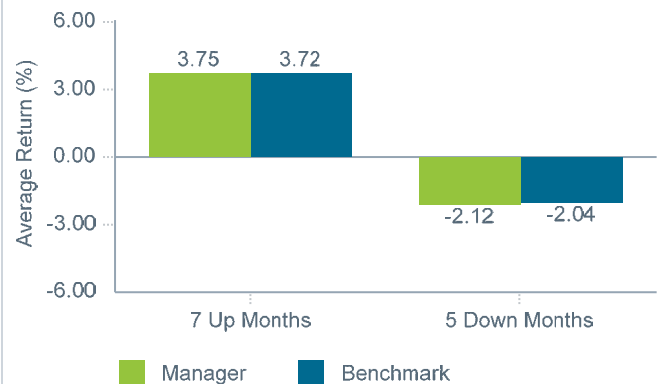
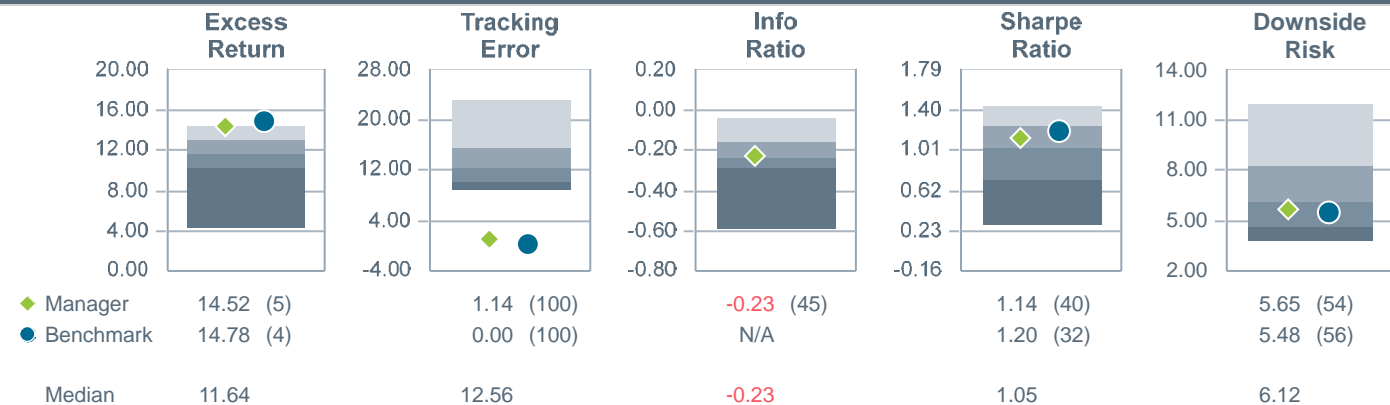
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



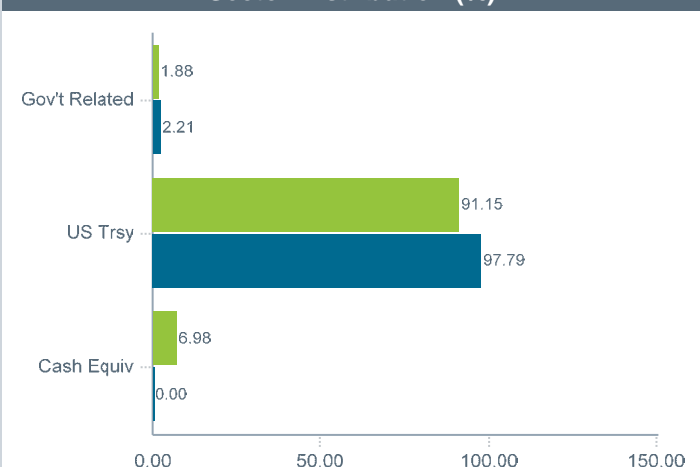
**Manager: Internal Long Duration Fixed Income Portfolio**
**As of September 30, 2020**
**Benchmark:** Bloomberg US Gov't Lng Trm Bond Index

**Peer Group:** IM U.S. Long Duration (SA+CF)

| Performance       |      |        |         |         |         |          |       |       |       |      |       |
|-------------------|------|--------|---------|---------|---------|----------|-------|-------|-------|------|-------|
|                   | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017  | 2016 | 2015  |
| Manager           | 0.14 | 15.86  | N/A     | N/A     | N/A     | N/A      | 14.61 | N/A   | N/A   | N/A  | N/A   |
| Benchmark         | 0.13 | 16.21  | 11.79   | 8.18    | 8.73    | 7.18     | 14.75 | -1.79 | 8.53  | 1.43 | -1.16 |
| Difference        | 0.01 | -0.35  | N/A     | N/A     | N/A     | N/A      | -0.14 | N/A   | N/A   | N/A  | N/A   |
| Peer Group Median | 1.54 | 12.60  | 10.36   | 9.25    | 8.85    | 7.91     | 20.14 | -4.74 | 11.21 | 7.39 | -3.22 |
| Rank              | 100  | 9      | N/A     | N/A     | N/A     | N/A      | 91    | N/A   | N/A   | N/A  | N/A   |
| Population        | 57   | 57     | 56      | 51      | 50      | 46       | 62    | 73    | 75    | 77   | 78    |

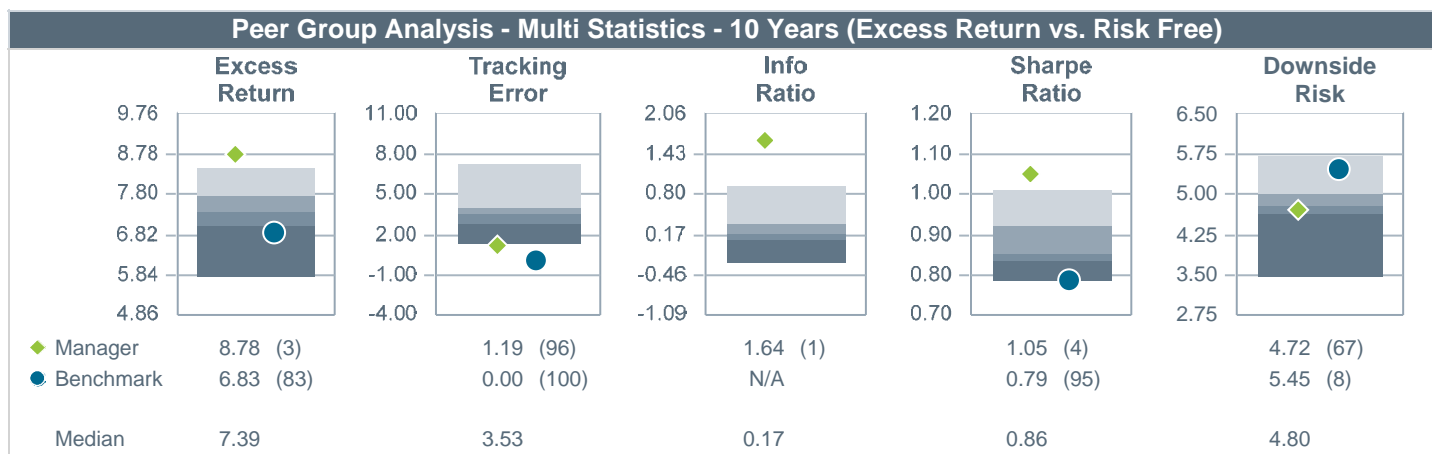
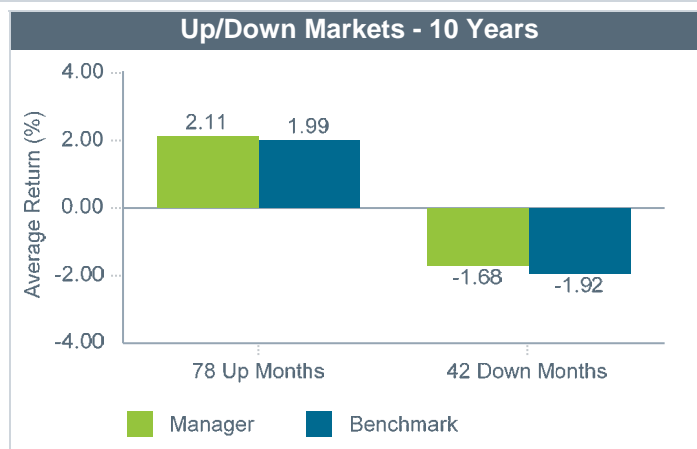
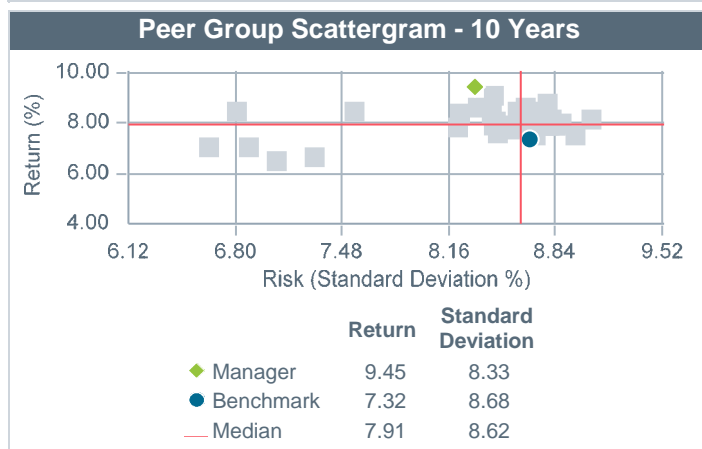
**Peer Group Scattergram - 1 Year**

**Up/Down Markets - 1 Year**

**Peer Group Analysis - Multi Statistics - 1 Year (Excess Return vs. Risk Free)**

**Portfolio Characteristics**

|                       | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Effective Duration    | 19.02     | 19.25     |
| Spread Duration       | 18.71     | 18.31     |
| Avg. Maturity         | 24.47     | 24.56     |
| Avg. Quality          | Aaa       | Aaa/Aa1   |
| Yield To Maturity (%) | 1.33      | 1.33      |
| Coupon Rate (%)       | 2.76      | 2.87      |
| Current Yield (%)     | 2.15      | N/A       |
| Holdings Count        | 13        | 87        |

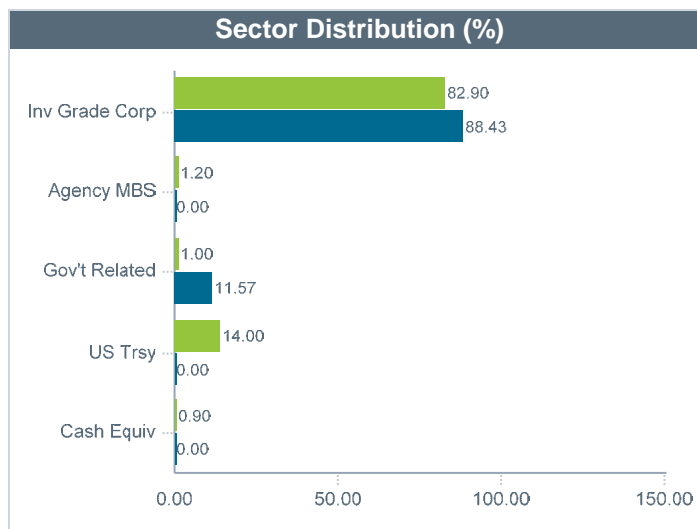
**Sector Distribution (%)**


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

| Performance       |       |        |         |         |         |          |       |       |       |       |       |
|-------------------|-------|--------|---------|---------|---------|----------|-------|-------|-------|-------|-------|
|                   | QTD   | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019  | 2018  | 2017  | 2016  | 2015  |
| Manager           | 1.68  | 12.78  | 10.29   | 10.63   | 9.80    | 9.45     | 23.73 | -5.68 | 13.59 | 13.40 | -4.73 |
| Benchmark         | 1.97  | 9.28   | 8.63    | 8.82    | 8.17    | 7.32     | 23.36 | -6.76 | 12.21 | 10.22 | -4.56 |
| Difference        | -0.29 | 3.50   | 1.66    | 1.81    | 1.63    | 2.13     | 0.37  | 1.08  | 1.38  | 3.18  | -0.17 |
| Peer Group Median | 1.54  | 12.60  | 10.36   | 9.25    | 8.85    | 7.91     | 20.14 | -4.74 | 11.21 | 7.39  | -3.22 |
| Rank              | 49    | 49     | 55      | 2       | 4       | 2        | 10    | 78    | 3     | 2     | 94    |
| Population        | 57    | 57     | 56      | 51      | 50      | 46       | 62    | 73    | 75    | 77    | 78    |



| Portfolio Characteristics |           |           |
|---------------------------|-----------|-----------|
|                           | Portfolio | Benchmark |
| Effective Duration        | 14.65     | 15.12     |
| Spread Duration           | 11.91     | 14.52     |
| Avg. Maturity             | 22.59     | 23.67     |
| Avg. Quality              | A3        | A2/A3     |
| Yield To Maturity (%)     | 2.98      | 3.07      |
| Coupon Rate (%)           | 4.26      | 4.61      |
| Current Yield (%)         | 2.97      | N/A       |
| Holdings Count            | 232       | 2,744     |



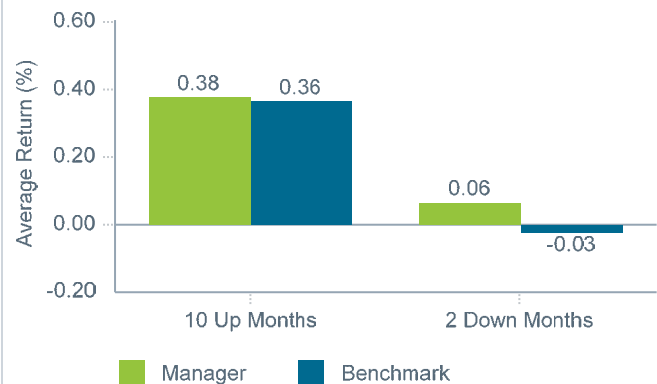
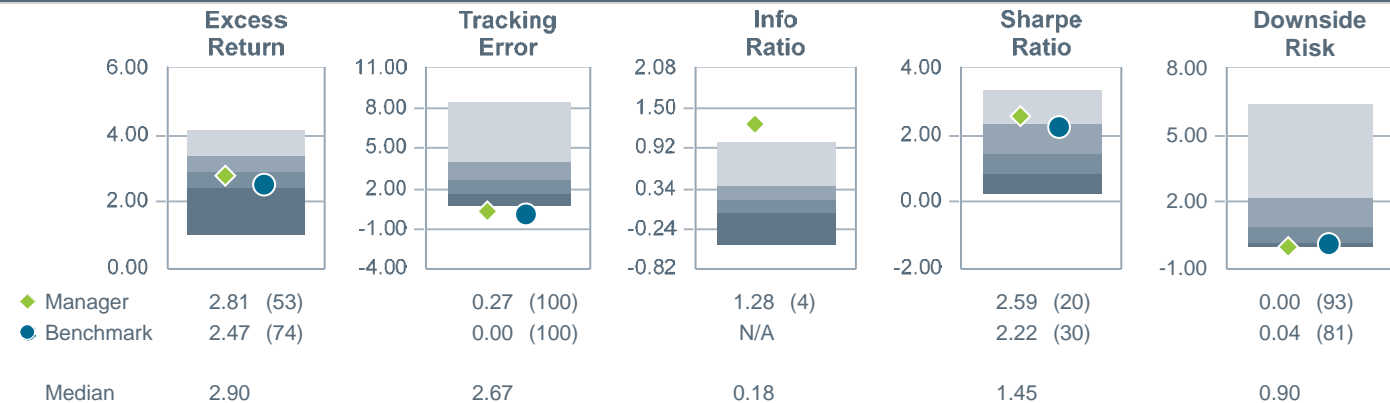
Performance shown is gross of fees and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

**Manager: Internal Low Duration Fixed Income Portfolio**
**As of September 30, 2020**
**Benchmark:** Bloomberg US Gov't 1-3 Yr Bond Index

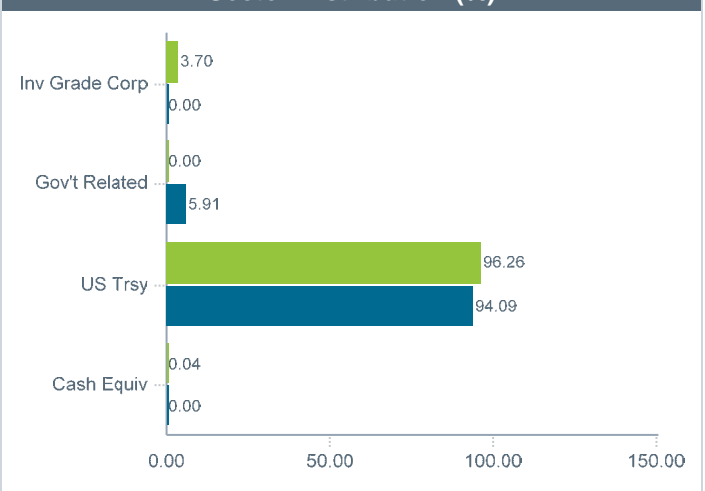
**Peer Group:** IM U.S. Short Duration Fixed Income (SA+CF)

| Performance       |      |        |         |         |         |          |      |      |      |      |      |
|-------------------|------|--------|---------|---------|---------|----------|------|------|------|------|------|
|                   | QTD  | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2019 | 2018 | 2017 | 2016 | 2015 |
| Manager           | 0.13 | 3.97   | N/A     | N/A     | N/A     | N/A      | 3.80 | N/A  | N/A  | N/A  | N/A  |
| Benchmark         | 0.10 | 3.62   | 2.66    | 1.82    | 1.54    | 1.30     | 3.59 | 1.58 | 0.45 | 0.87 | 0.57 |
| Difference        | 0.03 | 0.35   | N/A     | N/A     | N/A     | N/A      | 0.21 | N/A  | N/A  | N/A  | N/A  |
| Peer Group Median | 0.55 | 3.99   | 3.14    | 2.52    | 2.19    | 2.04     | 4.51 | 1.67 | 1.52 | 1.65 | 0.94 |
| Rank              | 98   | 51     | N/A     | N/A     | N/A     | N/A      | 83   | N/A  | N/A  | N/A  | N/A  |
| Population        | 110  | 108    | 107     | 102     | 98      | 92       | 113  | 124  | 127  | 129  | 129  |

**Peer Group Scattergram - 1 Year**

**Up/Down Markets - 1 Year**

**Peer Group Analysis - Multi Statistics - 1 Year (Excess Return vs. Risk Free)**

**Portfolio Characteristics**

|                       | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Effective Duration    | 1.97      | 1.92      |
| Spread Duration       | 1.97      | 1.93      |
| Avg. Maturity         | 1.99      | 1.98      |
| Avg. Quality          | Aaa       | Aaa/Aa1   |
| Yield To Maturity (%) | 0.12      | 0.14      |
| Coupon Rate (%)       | 1.36      | 1.57      |
| Current Yield (%)     | 1.34      | N/A       |
| Holdings Count        | 14        | 306       |

**Sector Distribution (%)**


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

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

September 30, 2020

| 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 5.0% vs. 1.8% 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 5.0% vs. 4.7% for the Total Fund 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 Total Fund 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 5.7% vs. 5.4% for the Total Fund 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 5.8% vs. 5.5% for the Total Fund 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 6.3% vs. 6.1% for the Total Fund 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 5.3% vs. 5.2% for the Total Fund 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 5.0% vs. 4.9% for the Total Fund 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 6.4% vs. 6.0% for the Total Fund Index           |
| <b>h) Pool A</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: Pool A return was 3.8% vs. 3.1% for the Total Fund Index                              |
| <b>i) LSRA</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. |     |    | N/A | LSRA was funded during 2019.  |
| <b>j) State Agency Pool</b>  |     |    |     |   |
| 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 2.9% vs. 2.6% 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 5% or the benchmark weighting + 2%, whichever is greater, of the total stock portfolio of the investment manager be invested in any one company.  | ✓   |    |     | Largest Holding: Apple = 6.70%                                |
| A maximum of 1% of the outstanding float of shares shall be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. For companies with market capitalizations of less than \$5 Billion, a maximum of 5% shall apply.  | ✓   |    |     |   |
| The maximum allowable in any sector, as defined by Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting.   | ✓   |    |     |   |
| A minimum number of 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.  | ✓   |    |     | 5-year: State Street return was 13.3% vs. 13.3% for the index |
|  | Yes | No | N/A | Explanation   |
| <b>b) Van Berkomp – Small Cap - Active</b>   |     |    |     |   |
| The portfolio will achieve its goal primarily through the investment in a portfolio of 35 to 55 U.S. small-cap equity securities.  | ✓   |    |     |   |
| At the time of initial purchase, the market capitalization of the company's common stocks purchased will not exceed 0.023% of the total market capitalization of the S&P 500 Index. Furthermore, the Portfolio Manager may own up to 25% of the portfolio at market value in U.S. stocks that exceed 0.023% of the total market capitalization of the S&P 500 Index. | ✓   |    |     |   |
| Individual Security = no more than 7% of account value<br>Cash Position = no more than 5% of account value<br>Sub-sector Limit = no more than 15% of the account value invested in a single sub-sector (Level IV of GICS sectors)<br>GICS Sectors = minimum of 5 different GICS sectors (Level 1 GICS sectors)   | ✓   |    |     |   |
| 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: 3/2020  |
| 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: 3/2020  |

|   | Yes | No | N/A | Explanation                                 |
|---|-----|----|-----|---|
| <b>c) State Street Russell 2000 – Small Cap - Passive</b>   |     |    |     |   |
| A maximum of 5% or the benchmark weighting + 2%, whichever is greater, of the total stock portfolio of the investment manager be invested in any one company.   | ✓   |    |     | Largest Holding: Penn Gaming = 0.59%        |
| A maximum of 1% of the outstanding float of shares shall be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. For companies with market capitalizations of less than \$5 Billion, a maximum of 5% shall apply. | ✓   |    |     |   |
| The maximum allowable in any sector, as defined by Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting.  | ✓   |    |     |   |
| A minimum number of 20 securities shall be held.  | ✓   |    |     |   |
| Meet performance of the Russell 2000 Index, net of fees, over a full market cycle, approximated by the most recent five-year period.  |     |    | N/A | Inception date: 11/2019                     |
| <b>d) Internal Small Cap – Small Cap</b>  |     |    |     |   |
| A maximum of 5% or the benchmark weighting + 2%, whichever is greater, of the total stock portfolio of the investment manager be invested in any one company.   |     |    | N/A | This account is in development as of 09/30. |
| A maximum of 1% of the outstanding float of shares shall be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. For companies with market capitalizations of less than \$5 Billion, a maximum of 5% shall apply. |     |    | N/A |   |
| The maximum allowable in any sector, as defined by Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting.  |     |    | N/A |   |
| A minimum number of 20 securities shall be held.  |     |    | N/A |   |
| Meet performance of the Russell 2000 Index, net of fees, over a full market cycle, approximated by the most recent five-year period.  |     |    | N/A |   |
| <b>e) BlackRock Small Cap – Small Cap - Active</b>  |     |    |     |   |
| A maximum of 5% or the benchmark weighting + 2%, whichever is greater, of the total stock portfolio of the investment manager be invested in any one company.   | ✓   |    |     | Largest Holding: QTS Realty = 1.41%         |
| A maximum of 1% of the outstanding float of shares shall be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. For companies with market capitalizations of less than \$5 Billion, a maximum of 5% shall apply. | ✓   |    |     |   |
| The maximum allowable in any sector, as defined by Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting.  | ✓   |    |     |   |
| A minimum number of 20 securities shall be held.  | ✓   |    |     |   |
| Meet performance of the Russell 2000 Index, net of fees, over a full market cycle, approximated by the most recent five-year period.  |     |    | N/A | Inception date: 08/2020                     |

|   | Yes | No | N/A | Explanation  |
|---|-----|----|-----|--|
| <b>4. International Equity Portfolios</b>   |     |    |     |  |
| <b>a) Northern Trust – Int'l – Passive</b>  |     |    |     |  |
| A maximum of 5% or the benchmark weighting + 2%, whichever is greater, of the total stock portfolio of the investment manager be invested in any one company.   | ✓   |    |     | Largest Holding: Alibaba Ltd = 2.57%   |
| A maximum of 1% of the outstanding float of shares shall be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. For companies with market capitalizations of less than \$5 Billion, a maximum of 5% shall apply. | ✓   |    |     |  |
| The maximum allowable in any sector, as defined by Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting.  | ✓   |    |     |  |
| A minimum number of 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 6.4% vs. 6.2% for the MSCI ACW Ex US Index (Net) |
|   | Yes | No | N/A | Explanation  |
| <b>b) Arrowstreet – Int'l Active</b>  |     |    |     |  |
| A maximum of 5% or the benchmark weighting + 2%, whichever is greater, of the total stock portfolio of the investment manager be invested in any one company.   | ✓   |    |     | Largest Holding: Taiwan Semi = 2.38%   |
| A maximum of 1% of the outstanding float of shares shall be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. For companies with market capitalizations of less than \$5 Billion, a maximum of 5% shall apply. | ✓   |    |     |  |
| The maximum allowable in any sector, as defined by Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting.  | ✓   |    |     |  |
| A minimum number of 20 securities shall be held.  | ✓   |    |     |  |
| Outperform the MSCI ACW Ex US IM Index (Net), net of fees, over a full market cycle, approximated by the most recent five-year period.  |     |    | N/A | Inception date: 03/2018  |
| 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: 03/2018  |

|   | Yes | No | N/A | Explanation                                |
|---|-----|----|-----|--|
| <b>c) Harding Loevner – Int'l Active</b>  |     |    |     |  |
| A maximum of 5% or the benchmark weighting + 2%, whichever is greater, of the total stock portfolio of the investment manager be invested in any one company.   | ✓   |    |     | Largest Holding: Ping An Insurance = 4.75% |
| A maximum of 1% of the outstanding float of shares shall be held in companies with market capitalizations of \$5 Billion or greater at the time of purchase. For companies with market capitalizations of less than \$5 Billion, a maximum of 5% shall apply. | ✓   |    |     |  |
| The maximum allowable in any sector, as defined by Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting.  | ✓   |    |     |  |
| A minimum number of 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.   |     |    | N/A | Inception date: 01/2020                    |
| 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: 01/2020                    |

|   | Yes | No | N/A | Explanation  |
|---|-----|----|-----|--|
| <b>5. Preferred Stock</b>   |     |    |     |  |
| <b>a) Cohen &amp; Steers</b>  |     |    |     |  |
| Minimum issue credit rating for preferred stock at the time of purchase will be BB or equivalent.                                       | ✓   |    |     | The portfolio currently holds securities which are rated below BB. Retention of these securities in the portfolio is permitted pursuant to Section 7.2 of the Investment Policy. |
| A maximum of 35% of the total portfolio of the investment manager may be invested in securities rated below investment grade.           | ✓   |    |     |  |
| A maximum of 10% of the total portfolio of the investment manager may be invested in any one issuer.                                    | ✓   |    |     |  |
| Outperform the S&P U.S. Preferred Stock Index, net of fees, over a full market cycle, approximated by the most recent five-year period. |     |    | N/A | Inception date: 07/2018  |
|   | Yes | No | N/A | Explanation  |
| <b>6. MLPs</b>  |     |    |     |  |
| <b>a) Harvest</b>   |     |    |     |  |
| A maximum of 15% or the benchmark weighting + 2%, whichever is greater, of the total portfolio may be invested in any one company.      | ✓   |    |     |  |
| Outperform the MLP Custom Index, net of fees, over a full market cycle, approximated by the most recent five-year period.               |     |    | N/A | Inception date: 08/2018  |
| <b>b) Harvest Passive</b>   |     |    |     |  |
| A maximum of 15% or the benchmark weighting + 2%, whichever is greater, of the total portfolio may be invested in any one company.      | ✓   |    |     |  |
| Meet the MLP Custom Index, net of fees, over a full market cycle, approximated by the most recent five-year period.                     |     |    | N/A | Inception date: 02/2020  |

|   | Yes | No | N/A | Explanation   |
|---|-----|----|-----|---|
| <b>7. 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 7.0% vs. 5.7% for the NCREIF ODCE Index (Net) (AWA) |
| The core portfolio shall consist of well-leased, high quality, income producing institutional properties.   | ✓   |    |     |   |
| The core portfolio shall be adequately diversified by geographical region, as well as by property type.   | ✓   |    |     |   |
| <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 2.9% vs. 5.7% for the NCREIF ODCE Index (Net) (AWA) |
| The core portfolio shall consist of well-leased, high quality, income producing institutional properties.   | ✓   |    |     |   |
| The core portfolio shall be adequately diversified by geographical region, as well as by property type.   | ✓   |    |     |   |
| <b>c) MS Prime</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. |     |    | N/A | Inception date: 10/2020   |
| The core portfolio shall consist of well-leased, high quality, income producing institutional properties.   | ✓   |    |     |   |
| The core portfolio shall be adequately diversified by geographical region, as well as by property type.   | ✓   |    |     |   |
| <b>Diversified Hedge Funds</b>  |     |    |     |   |
| <b>d) Grosvenor Diversified Hedge Funds</b>   |     |    |     |   |
| Outperform the HFRI FOF Comp Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.   |     |    | N/A | Inception date: 07/2018   |
| The portfolio shall be diversified across underlying hedge fund strategies and hedge fund managers.   | ✓   |    |     |   |
| <b>e) Internal Diversified Hedge Funds</b>  |     |    |     |   |
| Outperform the HFRI FOF Comp Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.   |     |    | N/A | Inception date: 07/2018   |
| The portfolio shall be diversified across underlying hedge fund strategies and hedge fund managers.   | ✓   |    |     |   |

|   | Yes | No | N/A | Explanation   |
|---|-----|----|-----|---|
| <b>8. Fixed Income Portfolios</b>   |     |    |     |   |
| <b>a) PIMCO – Core</b>  |     |    |     |   |
| Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.   | ✓   |    |     |   |
| All other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles.  | ✓   |    |     |   |
| Non-U.S. dollar denominated securities are permitted, but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |   |
| Private mortgage-backed and asset-backed securities are limited to 10% of the portfolio market value.   | ✓   |    |     |   |
| Commercial mortgage-backed securities are permitted but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |   |
| Dollar denominated emerging market securities are permitted, but shall comprise no more than 10% of the portfolio market value.   | ✓   |    |     |   |
| Investments in mortgage interest only and principal only securities or their derivations are permitted, but shall comprise no more than 5% of the portfolio market value.   | ✓   |    |     |   |
| Commercial paper of all issuers shall not exceed \$500,000,000.   | ✓   |    |     |   |
| A minimum number of 25 securities shall be held.  | ✓   |    |     |   |
| Duration must fall in the range of +/- 20% of the manager's primary benchmark, but not to exceed the duration of the Bloomberg Barclays U.S. Aggregate Bond Index or the Bloomberg Barclays Intermediate U.S. Aggregate Bond Index by more than 20%.  | ✓   |    |     |   |
| Average portfolio credit quality must be at least A- or equivalent.   | ✓   |    |     |   |
| Minimum issue credit rating at time of purchase shall be:<br>A1+ or equivalent for commercial paper;<br><br>BBB- or equivalent for corporate bonds, Mortgage-Backed Securities, Commercial Mortgage-Backed Securities, Asset Backed Securities, Non-U.S. Dollar-Denominated Securities and Dollar-Denominated Emerging Market Securities. | ✓   |    |     |   |
| Outperform its Custom Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.  | ✓   |    |     | 5-year: PIMCO net of fees return was 4.5% vs. 4.1% for the PIMCO Custom Index |
| 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: PIMCO ranked in the 52nd percentile for Core Fixed Income             |

|   | Yes | No | N/A | Explanation   |
|---|-----|----|-----|---|
| <b>b) Internal Int. Govt Fixed Income Portfolio – Core</b>  |     |    |     |   |
| Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.   | ✓   |    |     |   |
| All other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles.  | ✓   |    |     |   |
| Non-U.S. dollar denominated securities are permitted, but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |   |
| Private mortgage-backed and asset-backed securities are limited to 10% of the portfolio market value.   | ✓   |    |     |   |
| Commercial mortgage-backed securities are permitted but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |   |
| Dollar denominated emerging market securities are permitted, but shall comprise no more than 10% of the portfolio market value.   | ✓   |    |     |   |
| Investments in mortgage interest only and principal only securities or their derivations are permitted, but shall comprise no more than 5% of the portfolio market value.   | ✓   |    |     |   |
| Commercial paper of all issuers shall not exceed \$500,000,000.   | ✓   |    |     |   |
| A minimum number of 25 securities shall be held.  | ✓   |    |     |   |
| Duration must fall in the range of +/- 20% of the manager's primary benchmark, but not to exceed the duration of the Bloomberg Barclays U.S. Aggregate Bond Index or the Bloomberg Barclays Intermediate U.S. Aggregate Bond Index by more than 20%.  | ✓   |    |     |   |
| Average portfolio credit quality must be at least A- or equivalent.   | ✓   |    |     |   |
| Minimum issue credit rating at time of purchase shall be:<br>A1+ or equivalent for commercial paper;<br><br>BBB- or equivalent for corporate bonds, Mortgage-Backed Securities, Commercial Mortgage-Backed Securities, Asset Backed Securities, Non-U.S. Dollar-Denominated Securities and Dollar-Denominated Emerging Market Securities. | ✓   |    |     |   |
| Outperform the Internal Int. Gov Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.   | ✓   |    |     | 5-year: Int. Govt Fixed Income Portfolio net of fees return was 3.5% vs. return of 3.2% for the Internal Int. Gov Index |
| 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: Int. Govt Fixed Income Portfolio ranked in the 49th percentile for Government Fixed Income                      |



|   | Yes | No | N/A | Explanation             |
|---|-----|----|-----|-------------------------|
| <b>c) Payden &amp; Rygel – Core</b>   |     |    |     |                         |
| Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.   | ✓   |    |     |                         |
| All other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles.  | ✓   |    |     |                         |
| Non-U.S. dollar denominated securities are permitted, but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |                         |
| Private mortgage-backed and asset-backed securities are limited to 10% of the portfolio market value.   | ✓   |    |     |                         |
| Commercial mortgage-backed securities are permitted but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |                         |
| Dollar denominated emerging market securities are permitted, but shall comprise no more than 10% of the portfolio market value.   | ✓   |    |     |                         |
| Investments in mortgage interest only and principal only securities or their derivations are permitted, but shall comprise no more than 5% of the portfolio market value.   | ✓   |    |     |                         |
| Commercial paper of all issuers shall not exceed \$500,000,000.   | ✓   |    |     |                         |
| A minimum number of 25 securities shall be held.  | ✓   |    |     |                         |
| Duration must fall in the range of +/- 20% of the manager's primary benchmark, but not to exceed the duration of the Bloomberg Barclays U.S. Aggregate Bond Index or the Bloomberg Barclays Intermediate U.S. Aggregate Bond Index by more than 20%.  | ✓   |    |     |                         |
| Average portfolio credit quality must be at least A- or equivalent.   | ✓   |    |     |                         |
| Minimum issue credit rating at time of purchase shall be:<br>A1+ or equivalent for commercial paper;<br><br>BBB- or equivalent for corporate bonds, Mortgage-Backed Securities, Commercial Mortgage-Backed Securities, Asset Backed Securities, Non-U.S. Dollar-Denominated Securities and Dollar-Denominated Emerging Market Securities. | ✓   |    |     |                         |
| Outperform the Payden & Rygel Custom Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.   |     |    | N/A | Inception date: 11/2019 |
| 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: 11/2019 |

|   | Yes | No | N/A | Explanation             |
|---|-----|----|-----|-------------------------|
| <b>d) JPM MBS – Core</b>  |     |    |     |                         |
| Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.   | ✓   |    |     |                         |
| All other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles.  | ✓   |    |     |                         |
| Non-U.S. dollar denominated securities are permitted, but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |                         |
| Private mortgage-backed and asset-backed securities are limited to 10% of the portfolio market value.   | ✓   |    |     |                         |
| Commercial mortgage-backed securities are permitted but shall comprise no more than 10% of the portfolio market value.  | ✓   |    |     |                         |
| Dollar denominated emerging market securities are permitted, but shall comprise no more than 10% of the portfolio market value.   | ✓   |    |     |                         |
| Investments in mortgage interest only and principal only securities or their derivations are permitted, but shall comprise no more than 5% of the portfolio market value.   | ✓   |    |     |                         |
| Commercial paper of all issuers shall not exceed \$500,000,000.   | ✓   |    |     |                         |
| A minimum number of 25 securities shall be held.  | ✓   |    |     |                         |
| Duration must fall in the range of +/- 20% of the manager's primary benchmark, but not to exceed the duration of the Bloomberg Barclays U.S. Aggregate Bond Index or the Bloomberg Barclays Intermediate U.S. Aggregate Bond Index by more than 20%.  | ✓   |    |     |                         |
| Average portfolio credit quality must be at least A- or equivalent.   | ✓   |    |     |                         |
| Minimum issue credit rating at time of purchase shall be:<br>A1+ or equivalent for commercial paper;<br><br>BBB- or equivalent for corporate bonds, Mortgage-Backed Securities, Commercial Mortgage-Backed Securities, Asset Backed Securities, Non-U.S. Dollar-Denominated Securities and Dollar-Denominated Emerging Market Securities. | ✓   |    |     |                         |
| Outperform the Bloomberg US MBS Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.  |     |    | N/A | Inception date: 11/2019 |
| 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: 11/2019 |

|   | Yes | No | N/A | Explanation             |
|---|-----|----|-----|-------------------------|
| <b>e) Credit Suisse – Bank Loans</b>  |     |    |     |                         |
| Obligations of specific issuers are subject to a 5% per issuer limit, excluding investments in commingled vehicles.   | ✓   |    |     |                         |
| Duration must not exceed + 1 year of the S&P/LSTA Leveraged Loan Index.   | ✓   |    |     |                         |
| Average portfolio credit quality must be at least B or equivalent.  | ✓   |    |     |                         |
| Minimum issue credit rating at the time of purchase shall be:<br>a) CCC or equivalent for individual securities; and<br>b) Securities that are not rated shall be, in the judgment of the investment manager, of credit quality equal or superior to the standards described above. | ✓   |    |     |                         |
| Outperform the 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: 09/2019 |
| 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: 09/2019 |
|   | Yes | No | N/A | Explanation             |
| <b>f) Octagon – Bank Loans</b>  |     |    |     |                         |
| Obligations of specific issuers are subject to a 5% per issuer limit, excluding investments in commingled vehicles.   | ✓   |    |     |                         |
| Duration must not exceed + 1 year of the S&P/LSTA Leveraged Loan Index.   | ✓   |    |     |                         |
| Average portfolio credit quality must be at least B or equivalent.  | ✓   |    |     |                         |
| Minimum issue credit rating at the time of purchase shall be:<br>a) CCC or equivalent for individual securities; and<br>b) Securities that are not rated shall be, in the judgment of the investment manager, of credit quality equal or superior to the standards described above. | ✓   |    |     |                         |
| Outperform the 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: 09/2019 |
| 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: 09/2019 |

|   | Yes | No | N/A | Explanation  |
|---|-----|----|-----|--|
| <b>g) 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.  |     | ✗  |     | 5-year: net of fees return was 3.4% vs 6.2% for the index  |
| <b>h) Investec – Emerging Market Debt (Local Currency)</b>  |     |    |     |  |
| Obligations of individual sovereign/quasi-sovereign issuers are subject to a 20% per issuer limit.  | ✓   |    |     |  |
| Obligations of corporate issuers are subject to a 10% per issuer limit.   | ✓   |    |     |  |
| The investment manager, as part of managing the account, can take net investment positions of up to 20% of the portfolio in currency and currency forwards.   | ✓   |    |     |  |
| Duration must not be more than + 20% of the index.  | ✓   |    |     |  |
| Average portfolio credit quality must be BB+ or equivalent or better.   | ✓   |    |     |  |
| Minimum Issue Credit Rating at the time of purchase shall be:<br>A1+ or equivalent for commercial paper;<br>B- or equivalent for individual securities<br>Where a security is not rated at the issue level, the issuer rating shall be relied upon. | ✓   |    |     |  |
| Outperform the JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (Unhedged), net of fees, over a full market cycle, approximated by the most recent 5-year period.  |     | ✗  |     | 5-year: Investec net of fees return was 4.0% vs. the return of 4.8% for the JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (Unhedged) |
| 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: Investec ranked in the 89th percentile for Emerging Market Debt (Local Currency)                                     |

|   | Yes | No | N/A | Explanation             |
|---|-----|----|-----|-------------------------|
| <b>i) Global Evolution – Emerging Market Debt (Local Currency)</b>  |     |    |     |                         |
| Obligations of individual sovereign/quasi-sovereign issuers are subject to a 20% per issuer limit.  | ✓   |    |     |                         |
| Obligations of corporate issuers are subject to a 10% per issuer limit.   | ✓   |    |     |                         |
| The investment manager, as part of managing the account, can take net investment positions of up to 20% of the portfolio in currency and currency forwards.   | ✓   |    |     |                         |
| Duration must not be more than + 20% of the index.  | ✓   |    |     |                         |
| Average portfolio credit quality must be BB+ or equivalent or better.   | ✓   |    |     |                         |
| Minimum Issue Credit Rating at the time of purchase shall be:<br>A1+ or equivalent for commercial paper;<br>B- or equivalent for individual securities<br>Where a security is not rated at the issue level, the issuer rating shall be relied upon. | ✓   |    |     |                         |
| Outperform the JPM GBI-EM Gbl Dvf'd Index (USD) (TR) (Unhedged), net of fees, over a full market cycle, approximated by the most recent 5-year period.  |     |    | N/A | Inception date: 02/2020 |
| 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: 02/2020 |

|   | Yes | No | N/A | Explanation             |
|---|-----|----|-----|-------------------------|
| <b>j) Goldman Sachs – Emerging Market Debt (Corporate)</b>  |     |    |     |                         |
| Obligations of individual sovereign/quasi-sovereign issuers are subject to a 20% per issuer limit.  | ✓   |    |     |                         |
| Obligations of corporate issuers are subject to a 10% per issuer limit.   | ✓   |    |     |                         |
| The investment manager, as part of managing the account, can take net investment positions of up to 20% of the portfolio in currency and currency forwards.   | ✓   |    |     |                         |
| Duration must not be more than + 20% of the index.  | ✓   |    |     |                         |
| Average portfolio credit quality must be BB+ or equivalent or better.   | ✓   |    |     |                         |
| Minimum Issue Credit Rating at the time of purchase shall be:<br>A1+ or equivalent for commercial paper;<br>B- or equivalent for individual securities<br>Where a security is not rated at the issue level, the issuer rating shall be relied upon. | ✓   |    |     |                         |
| Outperform the JPM CEMBI Broad Div Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.   |     |    | N/A | Inception date: 03/2020 |
| 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: 03/2020 |

|   | Yes | No | N/A | Explanation             |
|---|-----|----|-----|-------------------------|
| <b>k) Logan Circle – Long Duration Credit</b>   |     |    |     |                         |
| Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.   | ✓   |    |     |                         |
| All other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles   | ✓   |    |     |                         |
| A maximum of 30% of the portfolio may be invested in U.S. dollar denominated non-U.S. fixed income securities.  | ✓   |    |     |                         |
| A maximum of 10% of the portfolio may be invested in U.S. dollar denominated emerging market securities.  | ✓   |    |     |                         |
| A maximum of the appropriate benchmark plus 5% of the portfolio may be invested in convertible and municipal securities.  | ✓   |    |     |                         |
| Average portfolio quality will be BBB+ or better. Securities shall be rated investment grade at time of purchase.   | ✓   |    |     |                         |
| Outperform the Bloomberg US Long Credit Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.  |     |    | N/A | Inception date: 11/2018 |
| 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: 11/2018 |
|   | Yes | No | N/A | Explanation             |
| <b>l) Internal Long Duration – Long Duration Government</b>   |     |    |     |                         |
| Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.   | ✓   |    |     |                         |
| All other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles   | ✓   |    |     |                         |
| A maximum of 30% of the portfolio may be invested in U.S. dollar denominated non-U.S. fixed income securities.  | ✓   |    |     |                         |
| A maximum of 10% of the portfolio may be invested in U.S. dollar denominated emerging market securities.  | ✓   |    |     |                         |
| A maximum of the appropriate benchmark plus 5% of the portfolio may be invested in convertible and municipal securities.  | ✓   |    |     |                         |
| Average portfolio quality will be BBB+ or better. Securities shall be rated investment grade at time of purchase.   | ✓   |    |     |                         |
| Outperform the Bloomberg US Gov Long Term Bond Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.   |     |    | N/A | Inception date: 01/2019 |
| 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: 01/2019 |

|   | Yes | No | N/A | Explanation             |
|---|-----|----|-----|-------------------------|
| <b>m) Internal Low Duration – Low Duration Government</b>   |     |    |     |                         |
| Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.   | ✓   |    |     |                         |
| All other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles   | ✓   |    |     |                         |
| Corporate securities will be subject to a maximum limit of 20%.   | ✓   |    |     |                         |
| Portfolio duration must be within plus or minus 30% of the Bloomberg Barclays US Gov't: 1-3 Year Bond Index.  | ✓   |    |     |                         |
| Average portfolio quality will be A or better.  | ✓   |    |     |                         |
| Outperform the Bloomberg US Gov 1-3 Year Bond Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.  |     |    | N/A | Inception date: 03/2018 |
| 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: 03/2018 |



|   | Yes | No | N/A | Explanation  |
|---|-----|----|-----|--|
| <b>9. Cash and Cash Equivalents Portfolios</b>  |     |    |     |  |
| <b>JP Morgan Cash Composite*</b>  |     |    |     |  |
| <b>a) JP Morgan Treasury Cash</b>   |     |    |     |  |
| The portfolio's weighted average maturity shall not exceed 90 days.   | ✓   |    |     |  |
| All securities shall have a maximum maturity of 365 days.   | ✓   |    |     |  |
| The maximum average cash flow weighted duration of the portfolio shall not exceed 90 days.  | ✓   |    |     |  |
| The market value of the portfolio shall remain within +/- 0.5% of 1.0% of amortized cost.   | ✓   |    |     |  |
| A maximum of 5% of total assets may be placed in 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 1.1% vs. 1.2% for the ICE BofAML 3 Mo US T-Bill Index |

\*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 12/31/2011 and performance calculated by JP Morgan thereafter.

|   | Yes | No | N/A | Explanation  |
|---|-----|----|-----|--|
| <b>JP Morgan Wyo-Star Cash Composite*</b>   |     |    |     |  |
| <b>b) JP Morgan Wyo-Star Cash</b>   |     |    |     |  |
| The portfolio's weighted average maturity is not to exceed 90 days.   | ✓   |    |     |  |
| All securities must have a maximum maturity of 365 days.  | ✓   |    |     |  |
| The maximum average cash flow weighted duration of the portfolio must not exceed 90 days.   | ✓   |    |     |  |
| The market value of the portfolio must remain within +/- 0.5% of 1% of amortized cost.  | ✓   |    |     |  |
| A maximum of 5% of total assets may be placed in securities of one issuer except for government securities.   | ✓   |    |     |  |
| 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 1.1% vs. 1.2% for the ICE BofAML 3 Mo US T-Bill Index |
| <b>c) JP Morgan Wyo-Star Extended Cash</b>  |     |    |     |  |
| Maximum average cash flow weighted duration is not to exceed 3 years.   | ✓   |    |     |  |
| Individual securities must not exceed a cash flow weighted duration of 5 years.   | ✓   |    |     |  |
| A maximum of 5% of total assets may be placed in 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 1.9% vs. 2.0% for the Blended Index          |
| The extended portion of WYO-STAR may not exceed 35% of the market value of the portfolio at the time of purchase.   | ✓   |    |     |  |

\*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 12/31/2011 and performance calculated by JP Morgan thereafter.

# Addendum & Glossary



**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 S&P 500 Index for US all cap equities, the Russell 2000 Index for US small cap equity, MSCI ACW Ex US Index (Net) for international equities, MLP Custom Index for MLPs, Bloomberg US Agg Bond Index for core fixed income, S&P/LSTA Lvg'd Loan Index for bank loans, EMD Blended Benchmark for EMD, NCREIF Open-End Diversified Core Equity Index for real estate, the State's actual private equity investment returns for private equity, HFRI FOF Comp Index for Diversified Hedge Funds, and ICE 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 S&P 500 Index for US all cap equities, the Russell 2000 Index for US small cap equity, MSCI ACW Ex US Index (Net) for international equities, MLP Custom Index for MLPs, Bloomberg US Agg Bond Index for core fixed income, S&P/LSTA Lvg'd Loan Index for bank loans, EMD Blended Benchmark for EMD, NCREIF Open-End Diversified Core Equity Index for real estate, the State's actual private equity investment returns for private equity, HFRI FOF Comp Index for Diversified Hedge Funds, and the State Agency Pool Custom Index for the State Agency Pool allocation.

- The Wyoming State Custom Index is calculated using beginning month asset class weights applied to the appropriate asset class benchmark return through 12/31/2019. As of 01/01/2020, the Index is calculated using the weighted average of the respective Investment Funds' Target Allocation Indices.
- The All Cap US Equity Custom Index consists of the Russell 3000 Index through 02/29/2020, and the S&P 500 Index thereafter.
- The MLP Custom Index consists of the S&P MLP Index (TR) through 06/30/2019, the Alerian MLP Index through 12/31/2019, and 50% Alerian MLP Index / 50% Alerian Midstream Energy Index thereafter.
- The International Equity Custom Index consists of the MSCI EAFE Index (USD) (Gross) through July 2010 and the MSCI ACW Ex US Index (USD) (Net) thereafter.
- The Internal Intermediate Govt Fixed Income Portfolio Index currently consists of the Bloomberg US Treasury Index. November 2019 performance consists of the Internal Intermediate Govt Fixed Income Portfolio. Prior to November 2019, the index consists of Bloomberg US Gov't Int Term Bond Index. Prior to December 2009, the index consisted of the Bloomberg US Gov't Crdt Bond Index.
- The PIMCO Custom Index consists of the Bloomberg US Agg Bond Index through February 2018, the Bloomberg US Agg Int Index through June 2019, the Bloomberg US Agg Bond Index through 03/26/2020, account performance from 03/27/2020 through 04/03/2020, and the Bloomberg US Agg Bond Index thereafter.
- The Low Duration Fixed Income Custom Index consists of the Bloomberg US Gov't Crdt 1-3 Yr Bond Index through 06/30/2019 and the Bloomberg US Gov't 1-3 Yr Bond Index thereafter.
- The State Street All Cap Custom Index consists of 69% Russell 3000 Index, 24% FTSE RAFI US 1000 Index, and 7% MSCI US Min Vol Index (USD) (Gross) through 02/27/2020, State Street All Cap account performance on 02/28/2020, and the S&P 500 Index thereafter.
- The EMD Custom Index consists of the JPM GBI-EM Gbl Dvf'd Index through 02/29/2020, 70% JPM GBI-EM Gbl Dvf'd Index / 30% JPM CEMBI Brd Dvf'd Index thereafter through 11/30/2020, and 1/3 JPM GBI-EM Gbl Dvf'd Index, 1/3 JPM CEMBI Brd Dvf'd Index, and 1/3 JPM EMBI Gbl Dvf'd Index thereafter.
- The Payden & Rygel Custom Index consists of the Bloomberg US Corp Inv Grade Index through 03/25/2020, account performance from 03/26/2020 through 03/31/2020, and Bloomberg US Corp Inv Grade Index thereafter.
- Opportunistic Investments Index: The Opportunistic Investments Index is the weighted average of the permanent funds' target allocation indices, excluding the opportunistic allocation.
- 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. The primary benchmark for JP Morgan Cash is the ICE BofAML 3 Mo US T-Bill Index and for JP Morgan Extd is the JP Morgan Blended Index through 06/30/2019, and the ICE BofAML 3 Mo US T-Bill Index thereafter.
- 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 ICE BofAML 3 Mo 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 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 Intermediate Govt 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.

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

Composite performance shown for Fixed Income is historically exclusive of convertibles.

**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 non-core 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 non-core 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 Intermediate Govt Fixed Income Portfolio.

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

During the 2nd quarter of 2017, Manning & Napier began the liquidation process.

During the 4th quarter of 2017, Lazard began the liquidation process.

During the 4th quarter of 2017, Intercontinental Exchange (ICE) acquired the BofA Merrill Lynch Global Research FICC index platform. As a result, all BofA Merrill Lynch indices have been rebranded to "ICE BofA Merrill Lynch".

During the 1st quarter of 2018, Arrowstreet was reclassified as International Equity and the Internal Low Duration portfolio was funded.

**Wyoming State Treasurer's Office**  
**Addendum**

**As of September 30, 2020**

During the 2nd quarter of 2018, Cohen & Steers, Grosvenor Diversified Hedge Funds, and Internal Diversified Hedge Funds were funded.

**Miscellaneous Comments (Continued)**

During the 2nd quarter of 2018, the Hybrid Assets Composite was created for convertibles, preferred stock, and MLPs.

During the 2nd quarter of 2018, RBC began the liquidation process.

During the 3rd quarter of 2018, Internal Equity Russell 2000 was funded.

During the 3rd quarter of 2018, Harvest was funded.

During the 4th quarter of 2018, Logan Circle, Internal Long Duration Fixed Income Portfolio, and State Street Low Duration were funded.

During the 1st quarter of 2019, Epoch began the liquidation process.

During the 2nd quarter of 2019, Allianz, Stone Harbor, Fisher, JPM Core, NB Credit, Seix, State Street TIPS, and State Street Low Duration began the liquidation process.

During the 3rd quarter of 2019, Credit Suisse, Octagon, and Internal Ladder Portfolio were funded.

During the 4th quarter of 2019, Harding Loevner, State Street Russell 2000, Harvest Passive, Payden & Rygel, and JPM MBS were funded, and CS McKee began the liquidation process.

During the 1st quarter of 2020, Van Berkom was funded.

During the 2nd quarter of 2020, Grosvenor D was funded.

During the 3rd quarter of 2020, MS Prime and BlackRock Small Cap were funded.



## 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 All ACWI ex US (SA+CF):** The **All ACWI ex US** universe includes products where the investment strategy can be best described as benchmark driven and includes products investing in growth and value securities across the MSCI ACW Ex US Index.

**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 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.

**IM U.S. Short Duration Fixed Income (SA+CF):** The **U.S. Short Duration Fixed Income** universe includes products where the portfolio weighted average duration is greater than or equal to 1 year and less than 2.5 years. The average maturity is between 1 and 3 years.

**IM U.S. Long Duration Fixed Income (SA+CF):** The **U.S. Long Duration Fixed Income** universe includes products where the portfolio weighted average duration is greater than or equal to 6 years. The average maturity can be greater than 6 years.

**IM U.S. Bank Loans (SA+CF):** The **U.S. Bank Loans** universe includes products where the sector allocation to bank loans is greater than or equal to 75%. The S&P/LSTA Leverage Loan Index or Credit Suisse Leveraged Loan Index are commonly used benchmarks.

## Glossary

**Active Return** - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

**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                      |

**Benchmark Effect** - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

**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, and thus may differ from the classification of the investment manager and/or index provider.

**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, and 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. Stocks are unclassified when there is not enough data to determine a size and style metric.

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.



## Glossary

**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.

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

**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.

**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."

**Cash Flow Effect** - The composite's active return minus the sum of each managers' active return minus the benchmark effect.

**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 that focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative returns for the selected periodicity. 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., ICE BofAML 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

## Glossary

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.

### 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 performance compiled from consultant and custodian 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.

**Investment Manager Peer Groups** - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees.

**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 valuing a company's current share price relative to its trailing 12-month per-share earnings (EPS).

**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.

**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.

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

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

**Risk Free Benchmark** - ICE BofAML 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                          | Stable Value (Plan Sponsor Directed) | 50                          |
| TIPS                                | 95                          | Hedge Funds of Funds                 | 35                          |
| US Large Cap Equity                 | 95                          |                                      |                             |
| Diversified Real Return             | 93                          |                                      |                             |
| Stable Value (Participant Directed) | 91                          |                                      |                             |
| Global Equity                       | 90                          | <u>Not Liquid Investments</u>        |                             |
| Non-US Large Cap Equity             | 90                          | Core Real Estate                     | 25                          |
| Global Tactical Asset Allocation    | 88                          | Core Plus Real Estate                | 15                          |
| MLPs                                | 85                          | Non-Core Real Estate                 | 5                           |
| US Mid Cap Equity                   | 85                          | Private Equity Funds of Funds        | 5                           |
| US SMid Cap Equity                  | 85                          |                                      |                             |
| US Small Cap Equity                 | 85                          |                                      |                             |
| REITs                               | 85                          |                                      |                             |
| Non-US Small Cap Equity             | 85                          |                                      |                             |
| 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., ICE BofAML 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.

**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    |                                      |                  |

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

**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.



## Glossary

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

**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., ICE BofAML 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 portfolio's 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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