

# Wyoming State Treasurer's Office

## Investment Performance Analysis

Quarter Ended  
**December 31, 2012**

**RVKuhns**  
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# WYOMING STATE TREASURER'S OFFICE

*FOURTH QUARTER 2012*

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## QUARTERLY COMMENTARY

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

### **MARKET ENVIRONMENT ..... PAGE 1-18**

- 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. Lastly, this section includes a review of the benchmarks referenced within the quarterly report.

### **PERFORMANCE SUMMARY ..... PAGE 19-25**

- These 7 pages provide all the market value, asset allocation, and performance information for the State's investments, in summary form.

### **INVESTMENT POLICY OBJECTIVE REVIEW ..... PAGE 26-46**

- This 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..... PAGE 47-54**

- The appendix includes a glossary, giving definitions and other information on data included throughout the report, including financial terms and ratios, indices, 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.

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## MEMORANDUM

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**To:** Wyoming State Loan and Investment Board  
**From:** R.V. Kuhns & Associates, Inc.  
**Subject:** December 31, 2012 Investment Performance Analysis Commentary

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Outlined below please find a summary of significant observations regarding performance of the State's Funds for the period ended December 31, 2012. We hope this summary will facilitate your review of our Investment Performance Analysis Report.

- The Total Fund outperformed the Actual Allocation Index by 0.3% during the fourth quarter driven by manager relative performance (1.2% vs. 0.9%). Due to conservative asset allocation, over the trailing five-year time period, the Total Fund compares favorably to both the All Master Trust universe as well as the Actual Allocation Index, outperforming by 1.7% and 0.7% per annum, respectively. The Total Fund ranked in the 10<sup>th</sup> percentile against the All Master Trust universe over the same time period.
- The Total Fund has efficiently generated returns by the way of strong downside protection and meaningful upside participation, coupled with very little volatility over both the trailing five- and ten-year time periods. On a risk-adjusted basis, the Total Fund ranked in the top 10% of all peer Plans over the trailing five-year time period and ranks in the top 15% over the trailing ten-year time period.
- The State's investment pools produced positive returns averaging 1.5% and outperformed their respective custom benchmark during the fourth quarter of 2012. The majority of fourth quarter performance for the nine pools was driven by the State's strategic asset allocation.
- Equity markets closed the year with another positive quarter in spite of continued concerns about the health of the global economy. The State's large cap domestic equity investments, managed by State Street, performed in line with the S&P 500 Index during the fourth quarter, returning -0.4%. Gabelli, the State's small/mid-cap value manager, underperformed the R 2500 Value Index for the quarter, returning 3.9% versus 4.1% for the index. However, long-term performance remains strong as Gabelli outperformed over the trailing five- and seven-year periods by over 200 basis points.
- The International Monetary Fund (IMF), European Central Bank (ECB), and Euro zone finance ministers reached agreement with Greece over the next stage of their rescue package. Equities in both developing and emerging markets produced their second consecutive quarter of strong returns in response to the package. The State's international equity portfolio outperformed its benchmark by 37 basis points over the quarter and by over 110 basis points over the trailing three-year period. Notable contributors to positive relative and absolute performance within the international equity portfolio, Fisher and The Boston Company, outperformed their benchmarks by 0.9% and 0.2%, respectively during the fourth quarter.
- The "fiscal cliff", a group of tax increases and spending cuts scheduled to take effect at the beginning of 2013, dominated headlines as the fourth quarter came to a close. At the start of 2013, lawmakers reached a deal on tax issues, however the automatic spending cuts known as the sequester were postponed until March. The State began the transition to the new fixed income asset class structure during the fourth quarter, funding State Street to manage the new TIPS mandate and six managers, C.S. McKee, JP Morgan, MacKay Shields, Neuberger Berman, PIMCO, and Wells Capital, to fulfill the new Core mandate. Additional assets are intended to transition to two credit and two emerging markets debt (local) managers during the first quarter of 2013. Over the trailing one- and three-year periods, the Total Fixed Income Portfolio outperformed the Barclays US Aggregate Bond Index by 2.7% and by 1.0% per annum, respectively.
- Both core real estate and absolute return assets finished the quarter with positive absolute performance. The State's two core real estate managers, UBS and Clarion, returned mixed relative performance as UBS underperformed the NCREIF ODCE Index by 0.4% and Clarion outperformed the index by 0.4%, which returned 2.4%. All absolute return strategies outperformed the HFN FOF Multi-Strat benchmark, which returned 1.3% during the fourth quarter. Grosvenor Global Recovery Fund underperformed its custom benchmark by 1.5% during the quarter.

## Capital Markets Review As of December 31, 2012

### Fourth Quarter Economic Environment

Equity markets closed the year with another positive quarter in spite of continued concerns about the health of the global economy. Domestically, the Bureau of Economic Analysis revised estimate of real GDP growth for the third quarter was 3.1% annualized, up from the second quarter rate of 1.3%. The Bureau of Labor Statistics reported modest fourth quarter job growth, as an average of 151,000 jobs were added monthly and the unemployment rate remained at 7.8%. The “fiscal cliff”, a group of tax increases and spending cuts scheduled to take effect at the beginning of 2013, dominated headlines as the fourth quarter came to a close. At the start of 2013, lawmakers reached a deal on tax issues, however, no action was taken on the debt ceiling, which is expected to be reached in late February. The automatic spending cuts known as the sequester were postponed until March. Consumer sentiment, as measured by the University of Michigan survey, declined 11.9% in December in response to the fiscal cliff impasse after reaching its highest level since 2007 in November. There was moderate improvement in the manufacturing sector in December, as the Institute for Supply Management index was reported at 50.7%, indicating expansion in the sector.

Internationally, the International Monetary Fund (IMF), European Central Bank (ECB), and Euro zone finance ministers reached agreement with Greece over the next stage of their rescue package. Spanish, Italian, and Greek debt spreads declined significantly in response to the package. Elsewhere, the Bank of Japan continued to step up its bond buying programs while incoming Prime Minister Shinzo Abe called for significant fiscal stimulus. Japanese stock markets rallied in December, gaining over 10% in local currency terms and reaching their highest levels since April. Chinese GDP grew at a 7.4% annualized rate in the third quarter, the slowest rate since 2009.

#### Domestic Equities

- Equities lost ground in October, but rebounded later in the quarter to post gains for the second consecutive quarter.
- Continuing the trend since the second quarter, value significantly outperformed growth, as the Russell 3000 Value returned 1.65% while the Russell 3000 Growth returned -1.19%.
- Mid-cap stocks outperformed small cap and large cap stocks, as the Russell Mid Cap returned 2.88% compared with 1.85% and 0.12% for the Russell 2000 and Russell 1000, respectively.
- Sector returns were mixed this quarter. Financials posted a 5.92% return on the quarter, and were the highest performing sector. Telecommunications returned -6.02%, and was the lowest performing sector.

#### International Equities

- International markets produced their second consecutive quarter of strong returns. Gains were experienced broadly by both developed and emerging markets.
- As with domestic equities, value outperformed growth as the MSCI EAFE Value returned 7.44% compared with 5.79% for the MSCI EAFE Growth.

#### Fixed Income

- U.S. bonds outperformed their global counterparts, as the Barclays US Aggregate Bond Index returned 0.21% versus -0.48% for the Barclays Global Aggregate Bond Index.
- As in the third quarter, appetite for risk remained high, as emerging markets debt outperformed developed markets debt, and high yield outperformed investment grade.

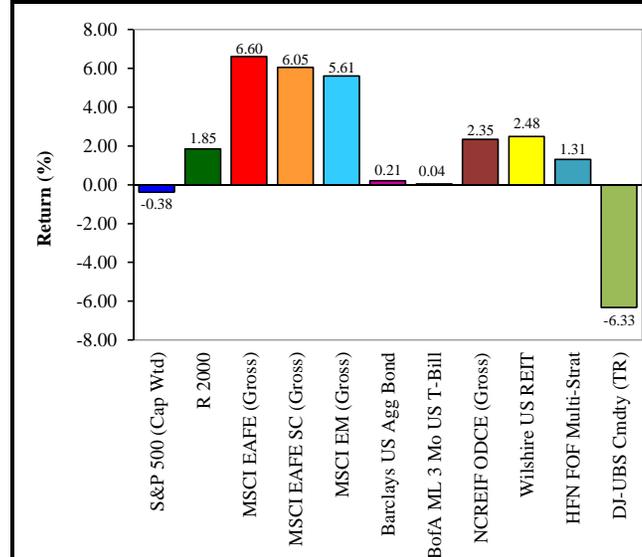
### Trailing-Period Performance

	Mth End Oct-2012	Mth End Nov-2012	MTD	QTD	FYTD	1 Year	2 Years	3 Years	5 Years	10 Years
S&P 500 (Cap Wtd)	-1.85	0.58	0.91	-0.38	16.00	16.00	8.84	10.87	1.66	7.10
R 2000	-2.17	0.53	3.56	1.85	16.34	16.34	5.58	12.25	3.55	9.72
MSCI EAFE (Gross)	0.84	2.43	3.21	6.60	17.90	17.90	2.01	4.04	-3.21	8.70
MSCI EAFE SC (Gross)	0.86	0.96	4.15	6.05	20.42	20.42	0.78	7.52	-0.51	12.34
MSCI EM (Gross)	-0.60	1.28	4.90	5.61	18.64	18.64	-1.47	4.99	-0.61	16.89
Barclays US Agg Bond	0.20	0.16	-0.14	0.21	4.21	4.21	6.01	6.19	5.95	5.18
BofA ML 3 Mo US T-Bill	0.01	0.02	0.02	0.04	0.11	0.11	0.11	0.11	0.52	1.78
NCREIF ODCE (Gross)	N/A	N/A	N/A	2.35	10.94	10.94	13.43	14.40	-1.10	6.71
Wilshire US REIT	-0.90	-0.39	3.82	2.48	17.59	17.59	13.34	18.21	5.25	11.57
HFN FOF Multi-Strat	-0.15	0.43	1.03	1.31	4.80	4.80	-0.51	1.22	-1.98	3.38
DJ-UBS Cmdty (TR)	-3.87	0.05	-2.61	-6.33	-1.06	-1.06	-7.39	0.07	-5.17	4.09

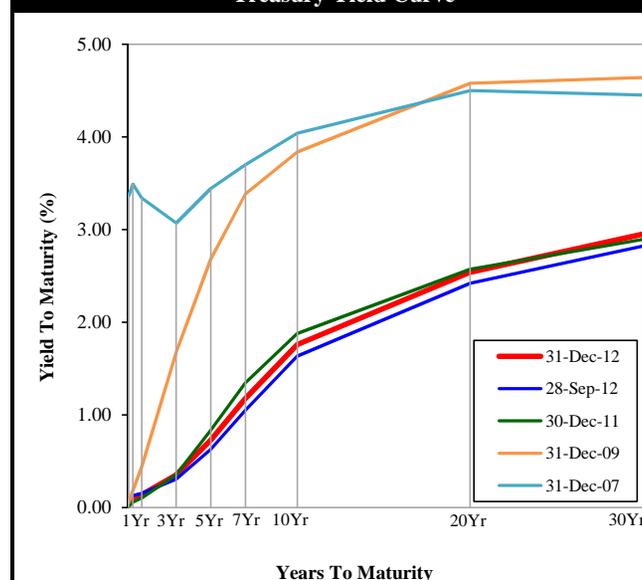
Performance is annualized for periods greater than one year.

Treasury data courtesy of the U.S. Department of the Treasury.

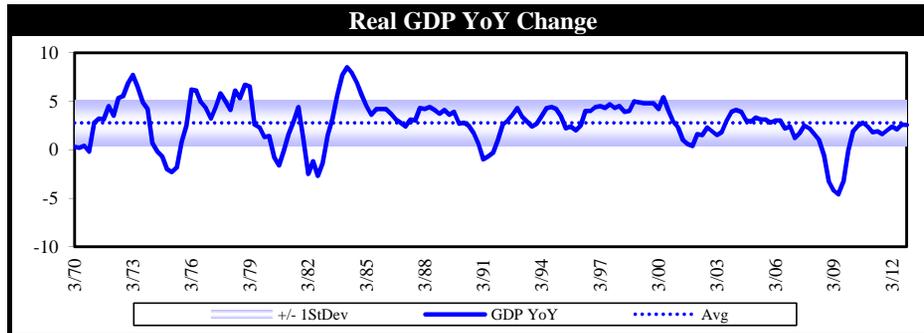
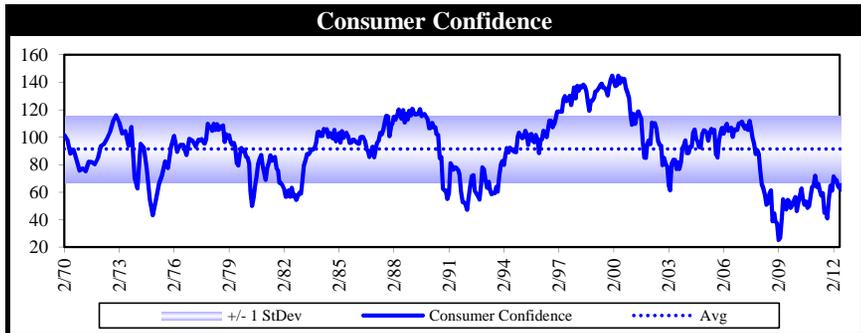
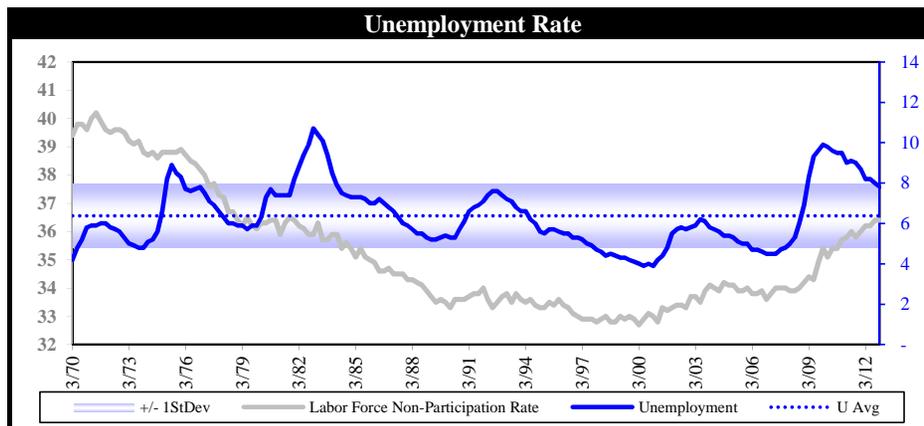
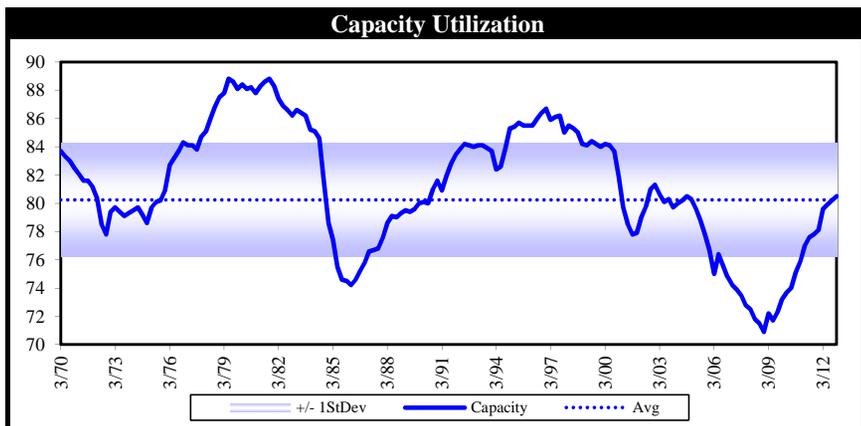
### QTD



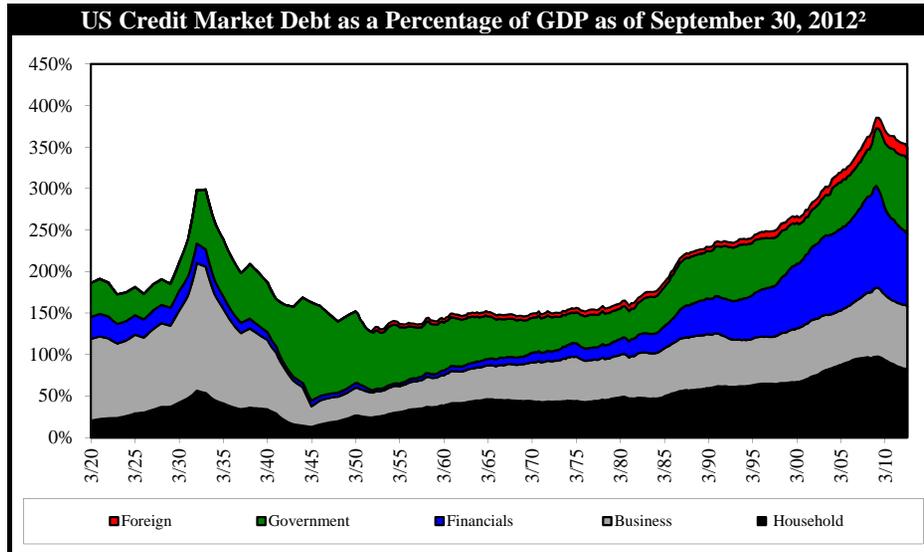
### Treasury Yield Curve



**Economic Measures <sup>1</sup>**  
As of December 31, 2012



	12/31/2012		9/30/2012	20 Year	40 Year
Capacity Utilization	78.80	▲	78.40	79.20	80.20
Unemployment Rate	7.80%	—	7.80%	6.00%	6.40%
Shiller 20 City YoY - Housing	N/A		2.97%	2.89%	N/A
PMI - Manufacturing	50.70	▼	51.50	52.10	52.20
Baltic Dry Index - Shipping	N/A		766	2,427	2,087
Real GDP YoY	N/A		2.60%	2.60%	2.80%
Consumer Confidence (Conf. Bd.)	65.10	▼	68.40	92.99	91.72
Breakeven Inflation - 10 Year	2.45	▲	2.42	N/A	N/A
CPI YoY (Headline) <sup>4</sup>	1.70%	▼	2.00%	2.50%	4.40%
CPI YoY (Core) <sup>4</sup>	1.90%	▼	2.00%	2.30%	4.30%
PPI YoY	1.30%	▼	2.10%	2.30%	4.00%
M2 YoY	8.20%	▲	6.80%	5.70%	6.80%
Personal Savings	N/A		3.30%	4.00%	6.40%
Disposable Personal Income	N/A		0.40%	0.40%	0.50%
Prsnl Consumption Expenditures	N/A		1.60%	2.10%	3.90%
US Dollar Total Weighted Index	72.72	—	72.72	87.62	95.36
WTI Crude Oil per Barrel	\$92	▼	\$92	\$43	\$38
Gold Spot per Oz <sup>5</sup>	\$1,675	▼	\$1,772	\$303	\$329

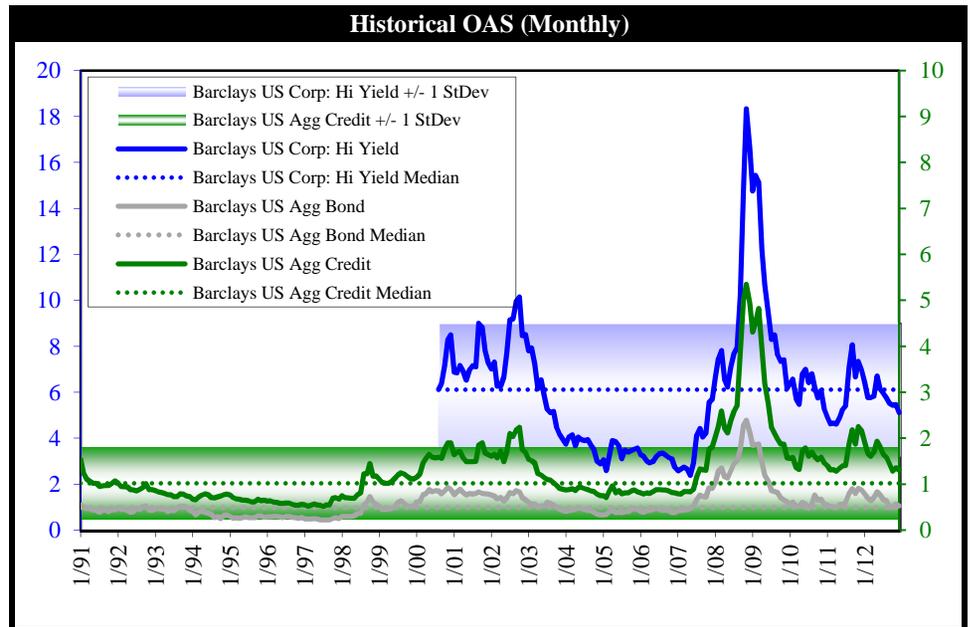
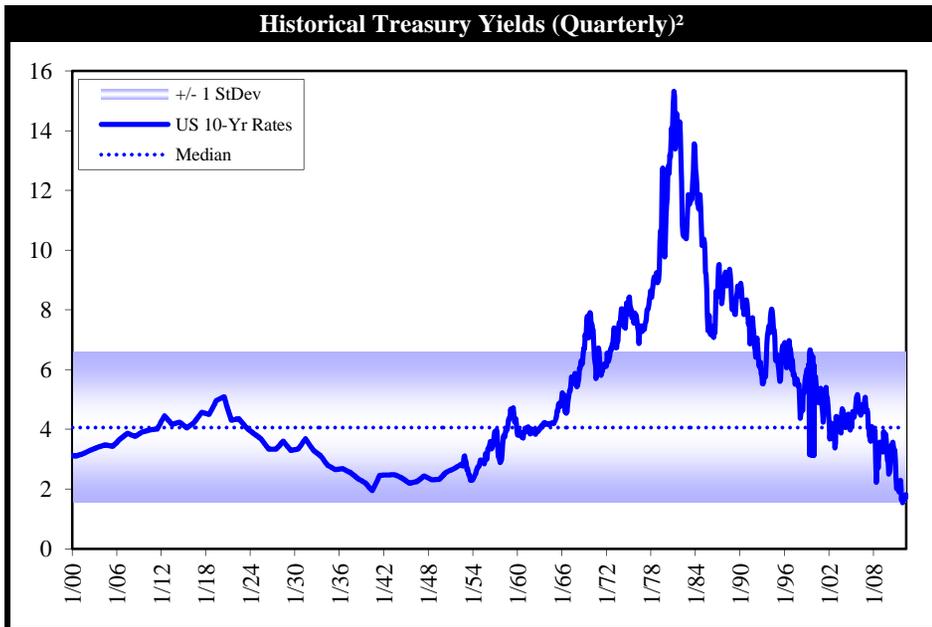
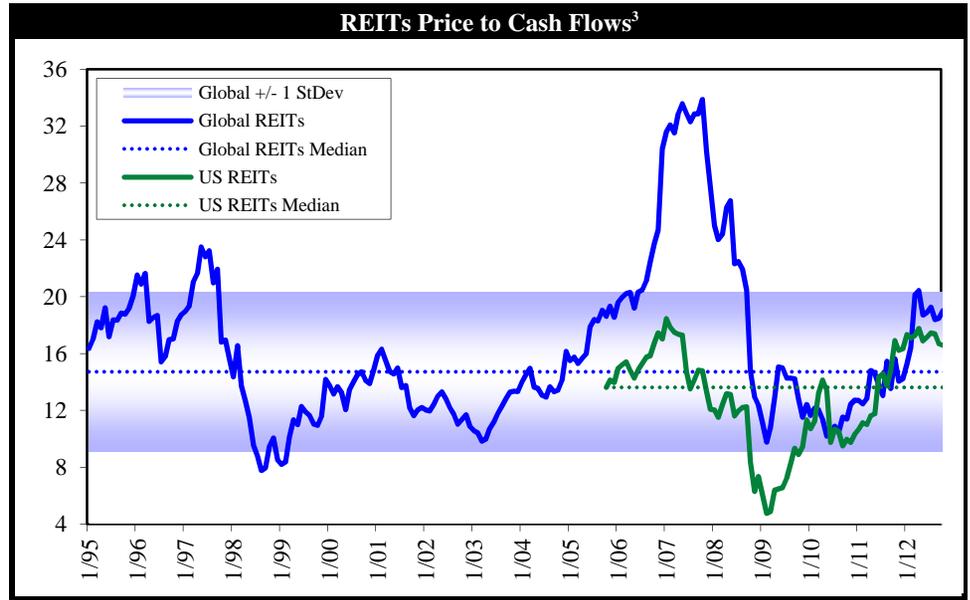
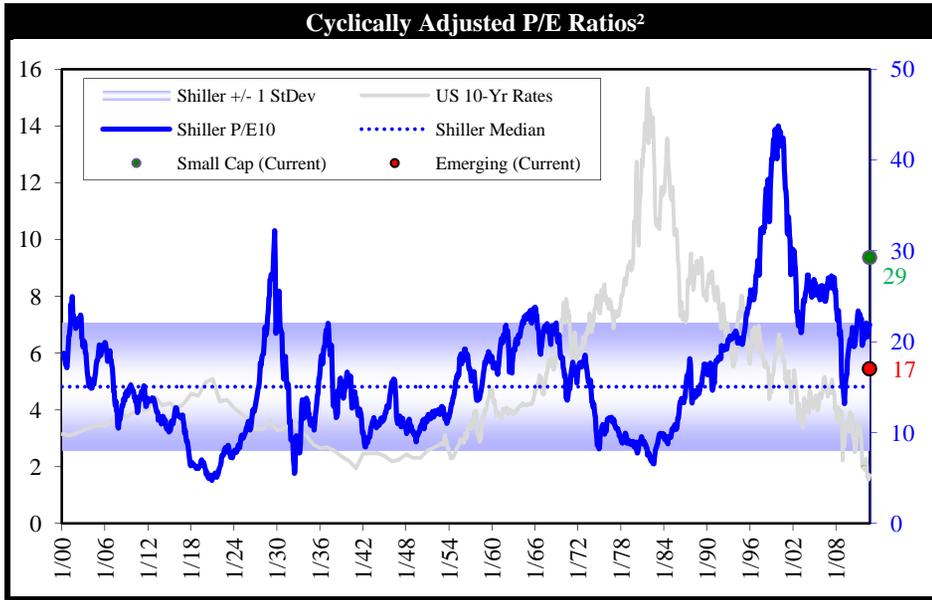


<sup>1</sup> All data courtesy of Bloomberg Professional Service, except as noted below.

<sup>2</sup> Data prior to 1952 is from "The Statistical History of the United States, From Colonial Times to the Present", by Ben Wattenberg, Morgan Stanley Research.

<sup>3</sup> "N/A" is shown for data that is not yet available. <sup>4</sup> CPI figures are cyclically adjusted. <sup>5</sup> 20- and 40-year average Gold spot prices are adjusted for inflation.

## Valuation Metrics<sup>1</sup> As of December 31, 2012

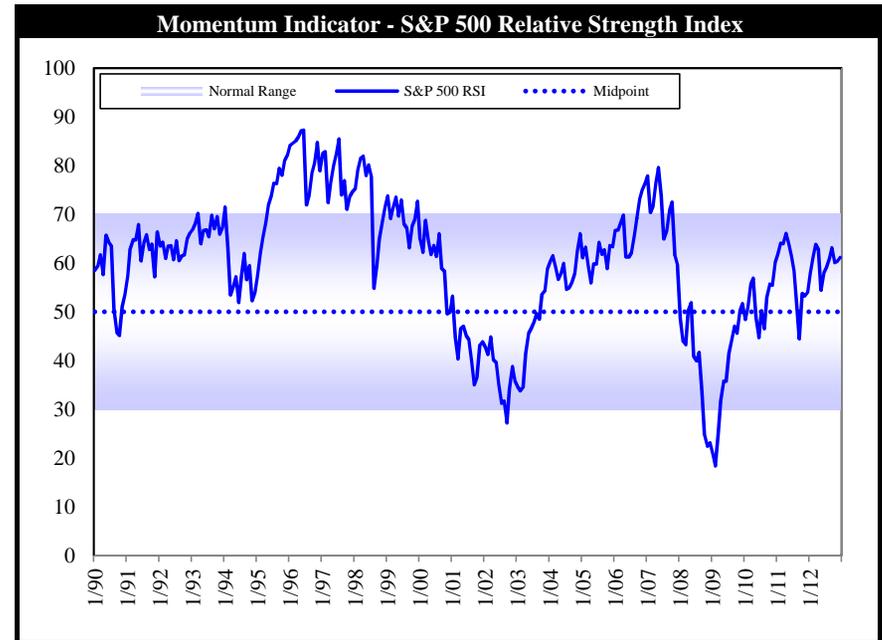
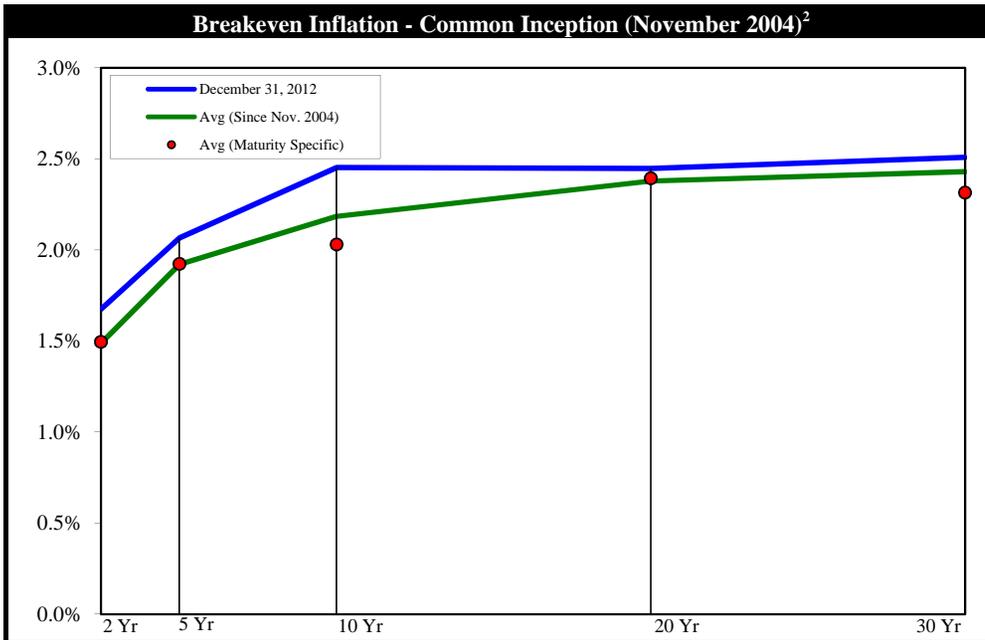
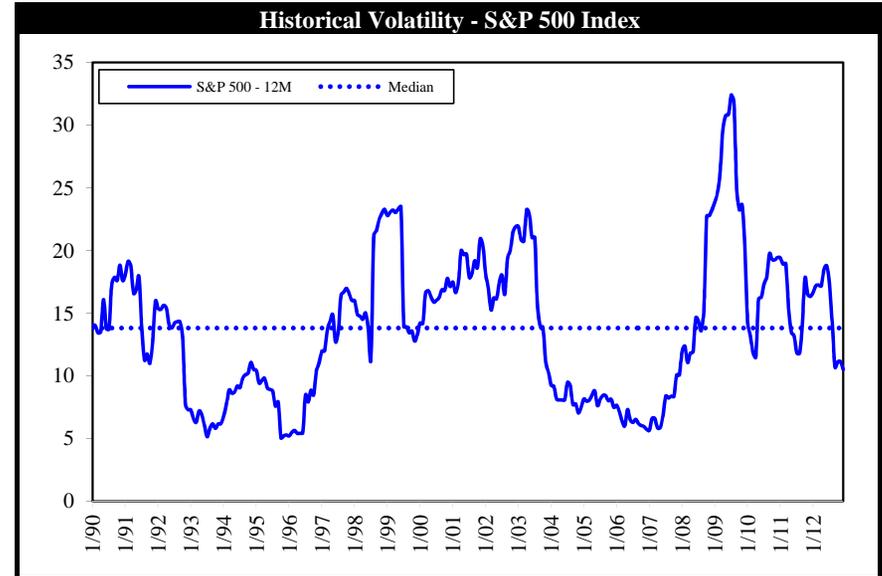
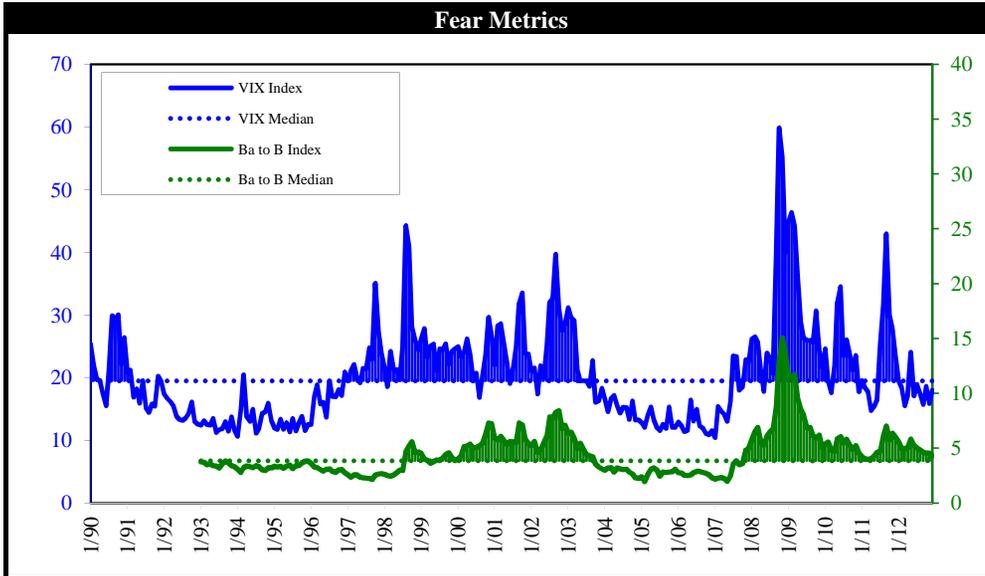


<sup>1</sup> All data courtesy of Bloomberg Professional Service.

<sup>2</sup> Source: Bloomberg and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E for the S&P 500 Index is based on 10-year trailing real earnings. Small Cap is represented by the S&P 600 Small Cap Index, and Emerging is represented by the MSCI Emerging Markets Index. Due to limited history, only the current 10-year P/E is shown for Small Cap and Emerging.

<sup>3</sup> US REITs is represented by the MSCI US REITs Index and Global REITs is represented by the MSCI World Real Estate Index.

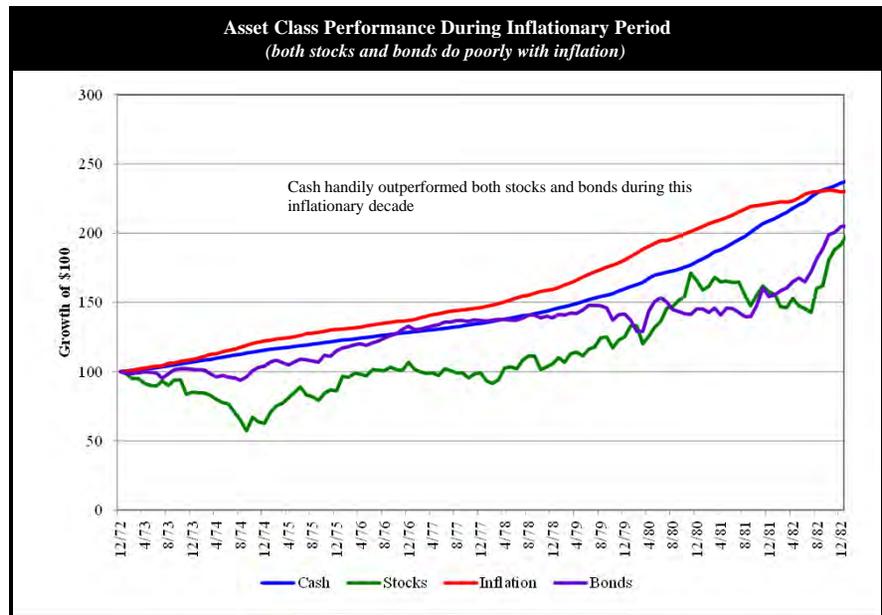
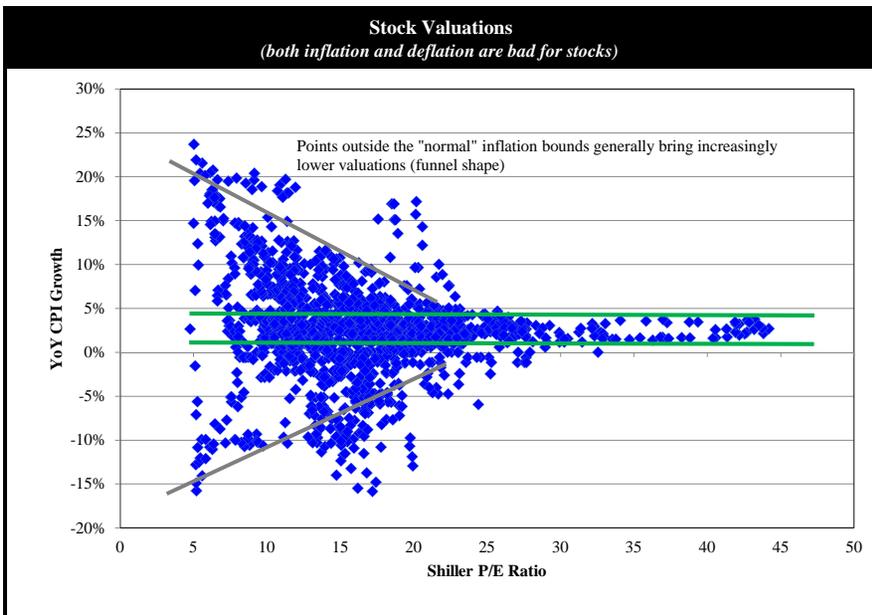
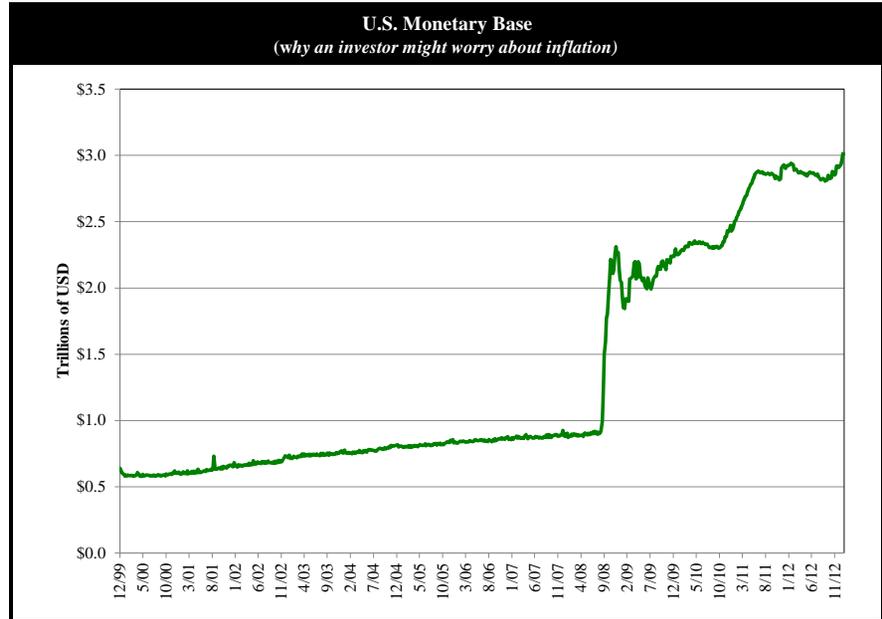
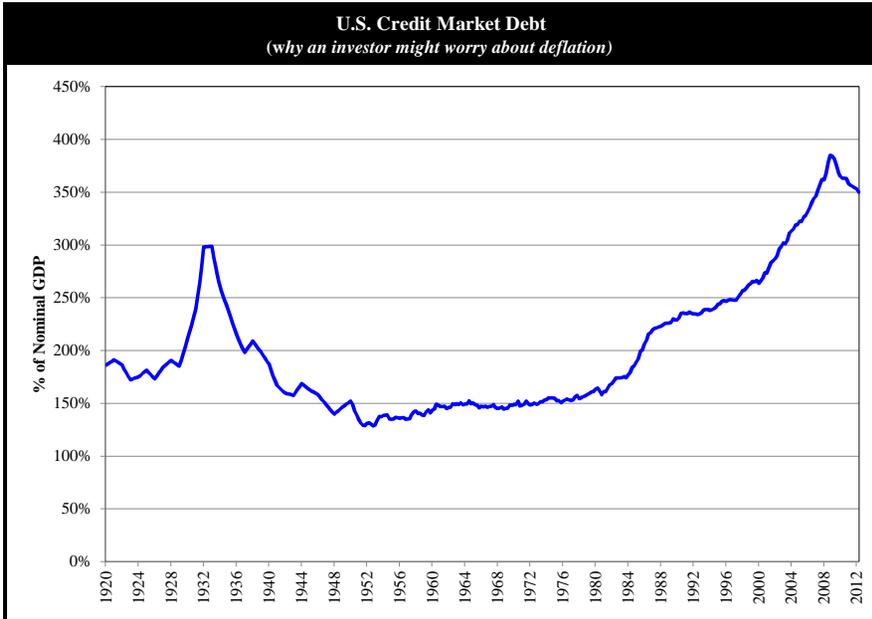
Risk Metrics <sup>1</sup>  
As of December 31, 2012



<sup>1</sup> All data courtesy of Bloomberg Professional Service.

<sup>2</sup> Common inception of November 2004 is based on historical data availability. Specific inception dates are as follows: 2- and 20-year (2004), 5-year (2002), 10- and 30-year (1998).

**Inflation Considerations  
As of December 31, 2012**



Data courtesy of Federal Reserve Bank of St. Louis, Bloomberg Professional Service, J.P. Morgan and Morningstar.

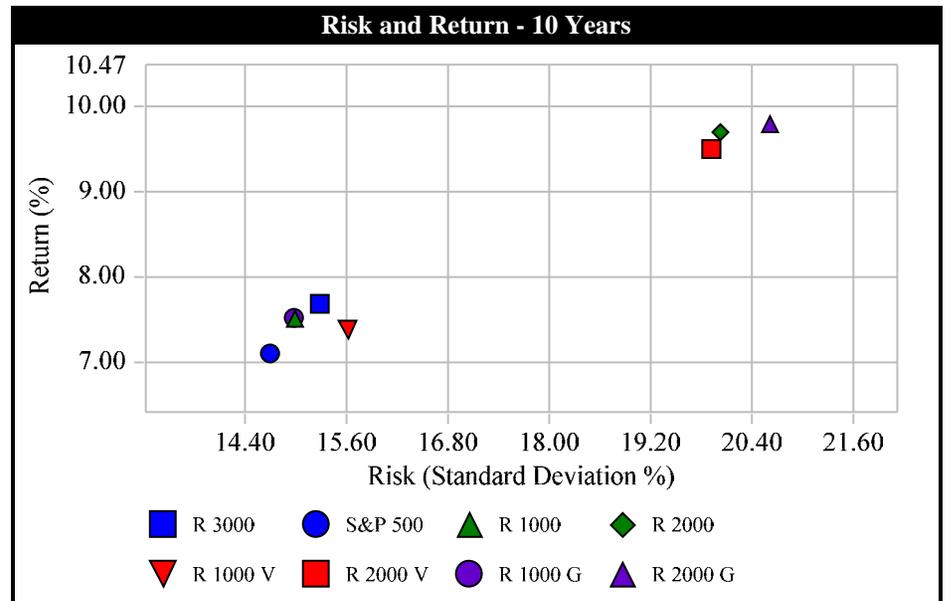
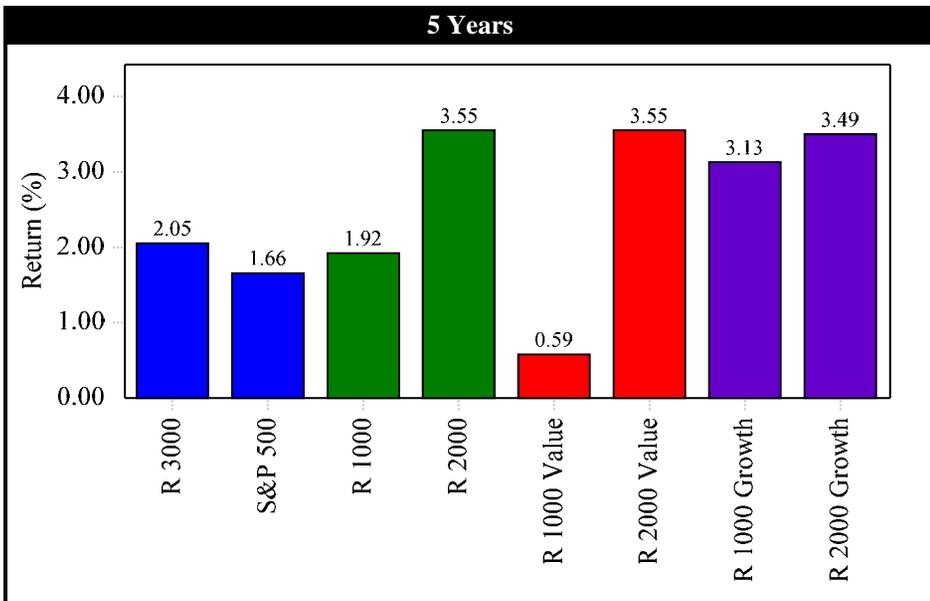
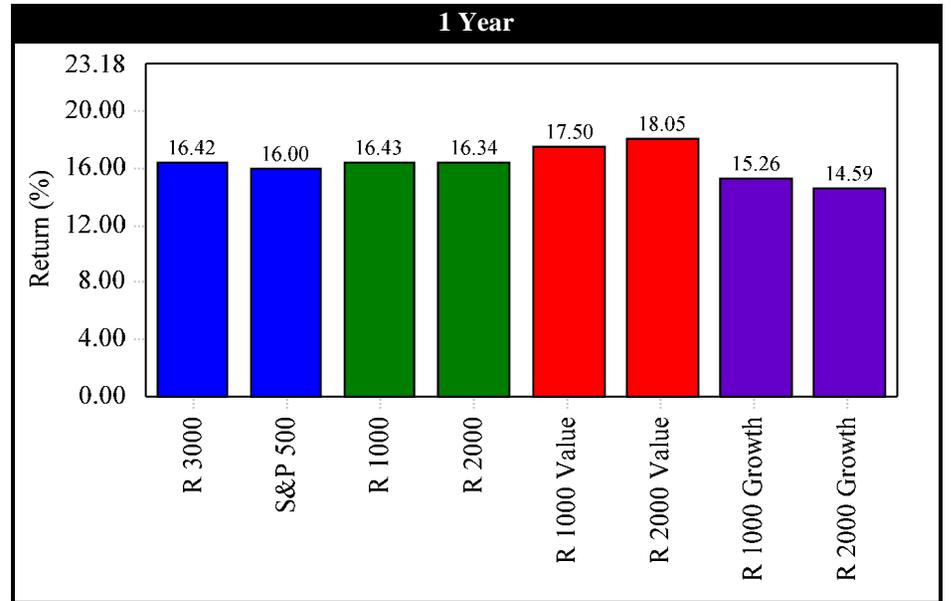
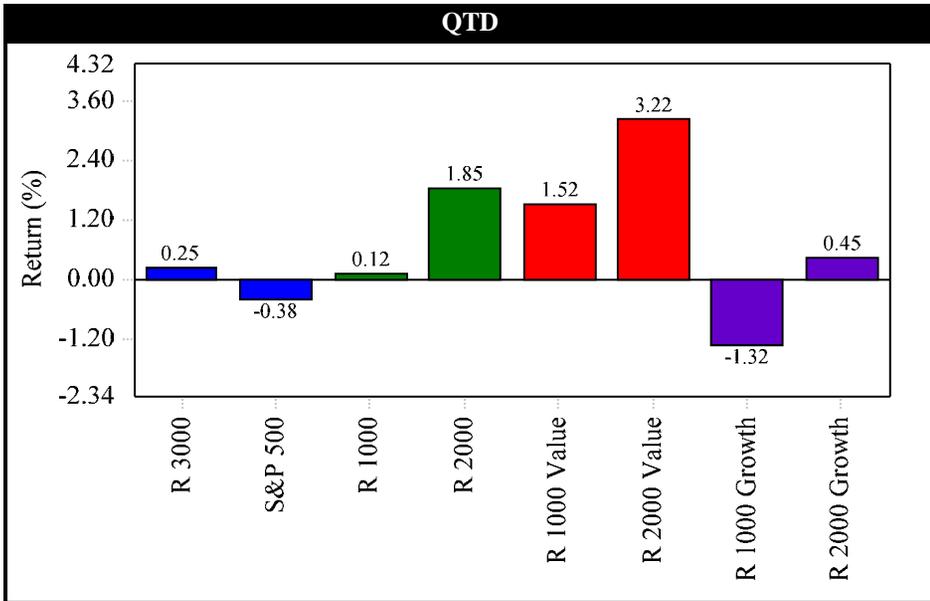
Asset class performance shown is represented by the BofA ML 3 Mo T-Bill TR Index (Cash), S&P 500 Index (Stocks), Consumer Price Index (Inflation), and Barclays U.S. Aggregate Bond Index (Bonds).

**Annual Asset Class Performance**  
As of December 31, 2012

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Best	28.58	66.42	31.84	12.35	25.91	62.14	33.16	34.54	35.97	39.78	8.44	79.02	28.60	22.49	20.42
	20.34	27.31	31.04	8.44	16.56	56.28	31.27	26.65	32.59	16.23	5.24	58.21	26.86	15.99	18.64
	16.42	24.69	16.16	7.89	14.81	47.25	25.95	21.39	26.86	15.97	2.06	47.32	22.40	13.56	17.90
	11.77	24.34	14.28	7.28	10.25	39.17	20.70	21.36	19.67	11.63	-2.35	32.46	19.20	9.24	17.59
	8.69	21.26	13.15	6.61	5.54	36.18	18.33	14.02	18.37	11.63	-10.01	28.60	16.83	7.84	16.34
	5.23	21.04	12.40	5.64	3.58	28.97	13.06	13.82	16.32	9.91	-20.47	27.18	16.36	4.98	16.00
	3.94	20.19	11.63	5.28	3.12	28.68	11.13	6.75	15.79	6.97	-26.16	26.46	15.12	2.11	15.81
	3.75	13.17	6.18	4.42	1.78	23.93	10.88	5.33	11.85	6.60	-33.79	18.91	15.06	0.10	10.94
	1.87	4.85	-3.02	2.49	-1.41	11.93	9.15	4.91	9.85	5.49	-35.65	11.41	10.16	-4.18	8.82
	-2.55	2.40	-5.86	-2.37	-6.00	9.28	8.56	4.55	4.85	5.00	-37.00	9.72	8.21	-5.55	6.98
	-17.01	2.39	-7.22	-11.89	-7.44	8.39	8.46	3.07	4.33	1.87	-39.20	5.93	6.54	-11.73	4.80
	-25.33	-0.82	-9.10	-12.11	-15.66	5.87	6.79	2.84	2.71	1.79	-43.06	1.92	6.31	-13.32	4.21
	-27.03	-2.58	-13.96	-19.51	-20.48	4.10	4.34	2.74	2.07	-1.57	-46.78	0.21	4.77	-15.66	0.11
Worst	N/A	-7.65	-30.61	-21.21	-22.10	1.15	1.33	2.43	0.41	-17.55	-53.18	-29.76	0.13	-18.17	-1.06

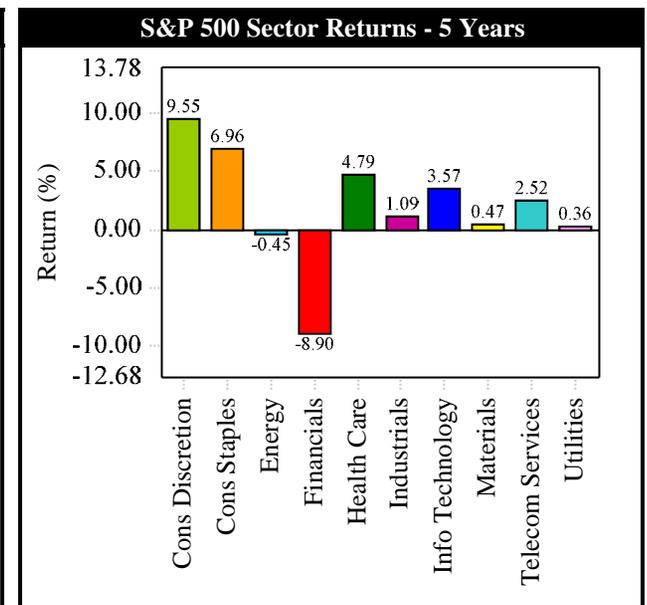
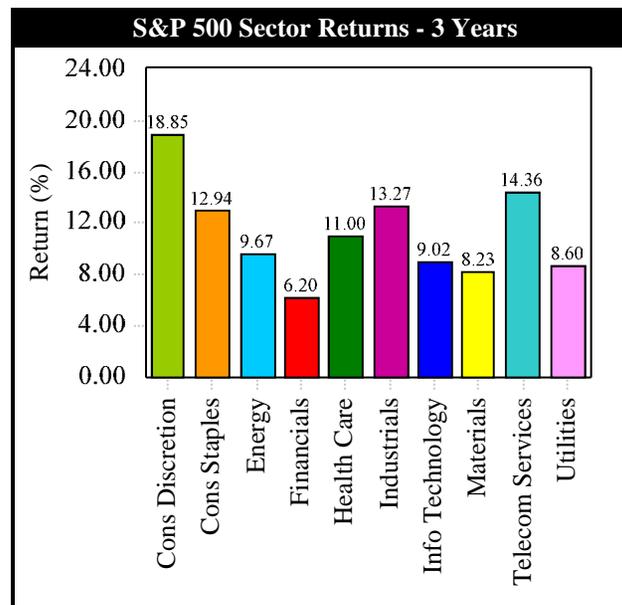
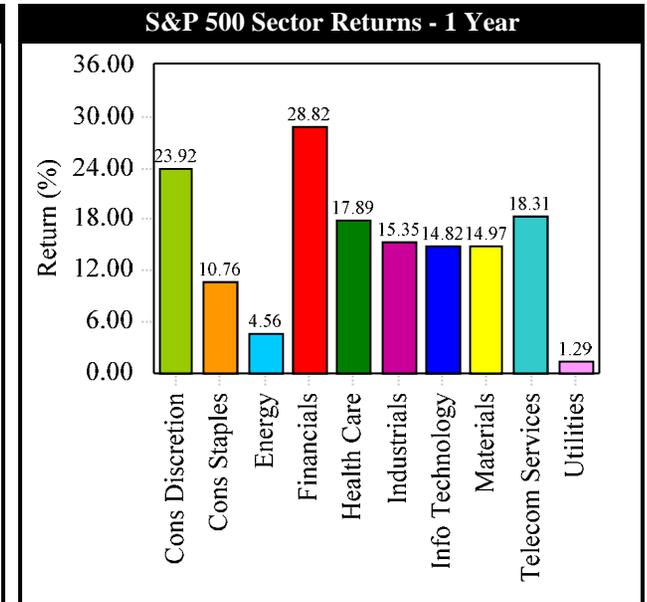
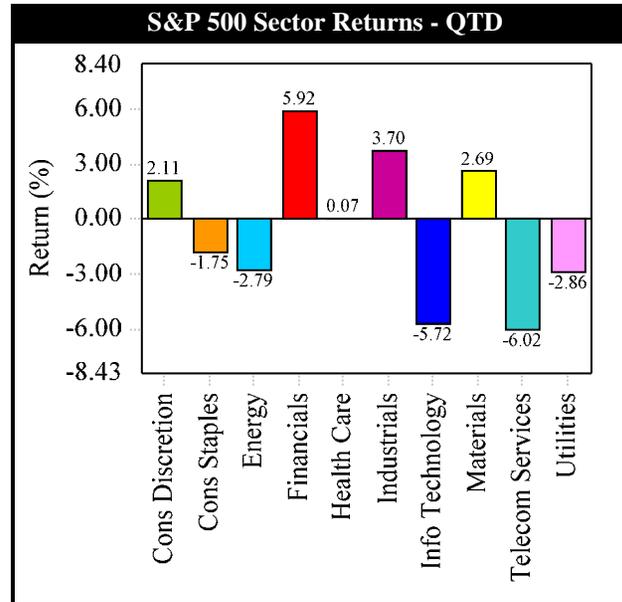
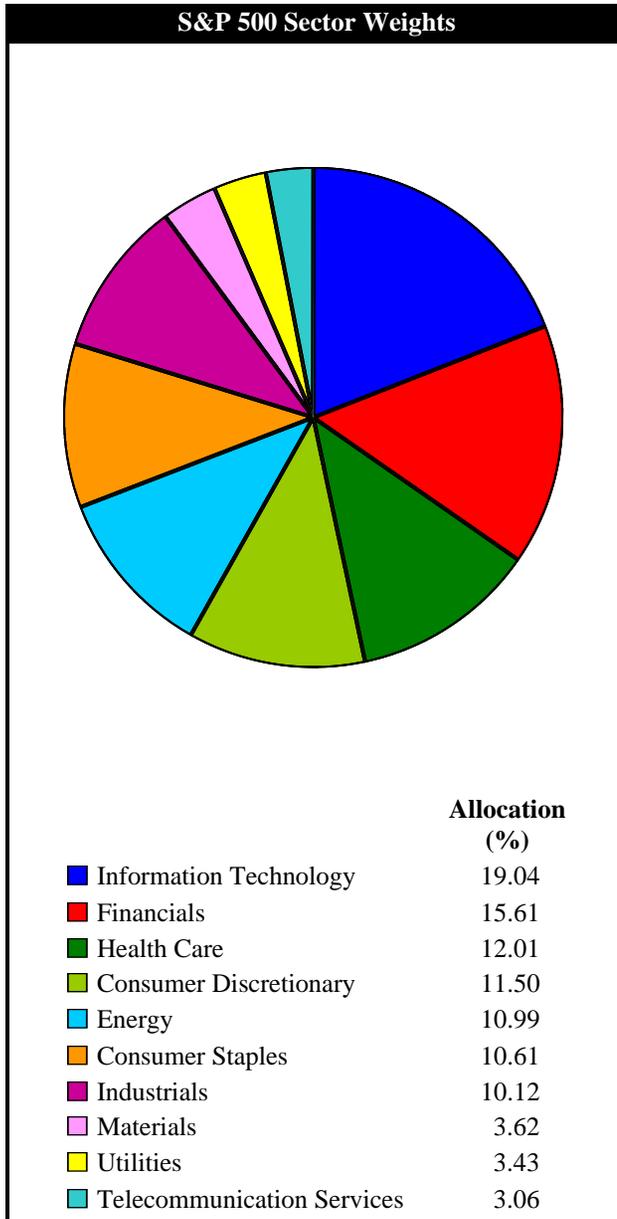
S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Gross) - Int'l Dev.	MSCI EAFE SC (Gross) - Int'l SC	MSCI EM (Gross) - Int'l Emg Mkts	Barclays US Agg Bond - FI	Barclays US Corp: Hi Yield - FI	Barclays US Trsy: US TIPS - FI	Barclays US Gov/Credit: Lng - FI	NCREIF ODCE (Gross) - Real Estate	Wilshire US REIT - REITs	HFN FOF Multi-Strat (Net) - ARS	DJ-UBS Cmdty (TR) - Commod.	BofA ML 3 Mo T-Bill - Cash Equiv
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**Domestic Equity Market Performance and Risk**  
As of December 31, 2012



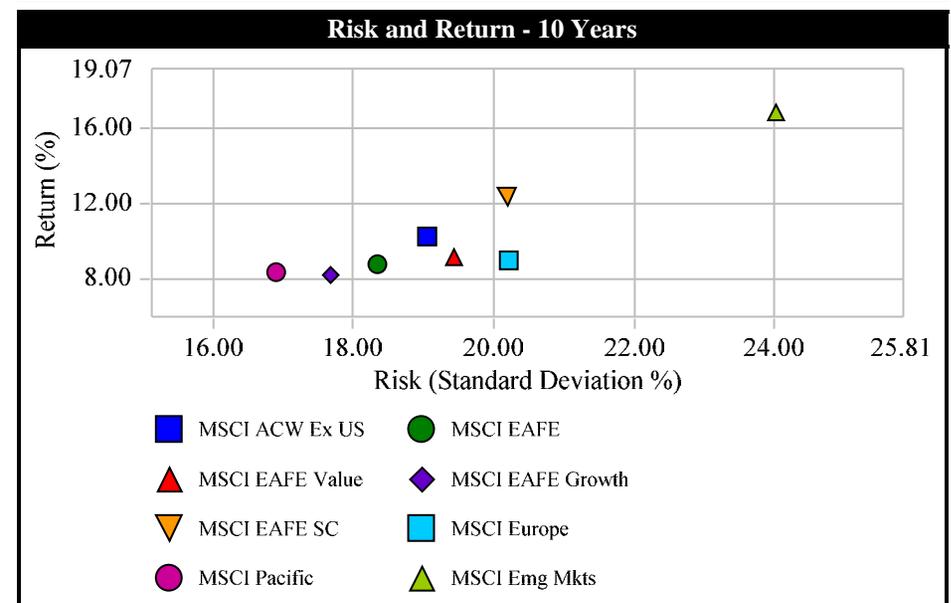
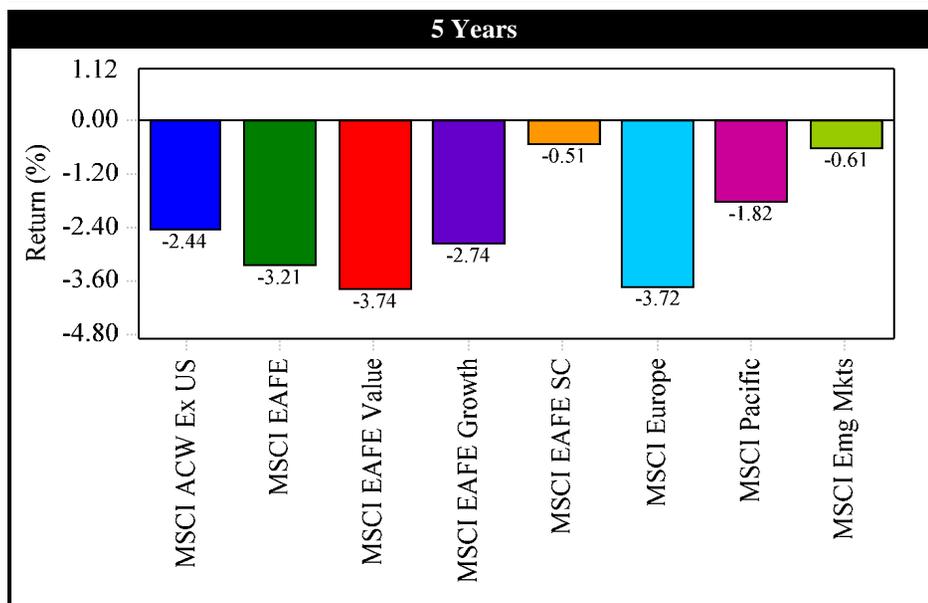
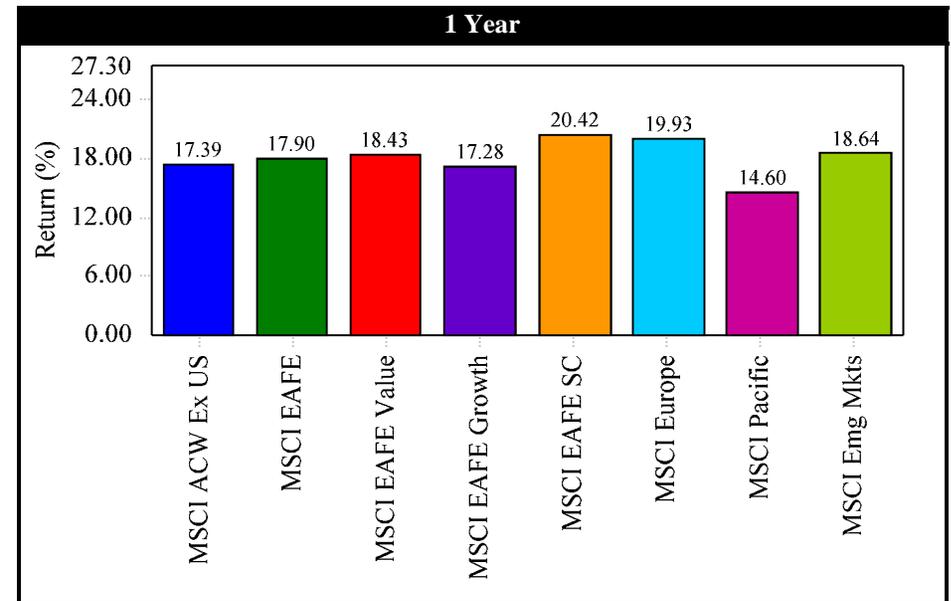
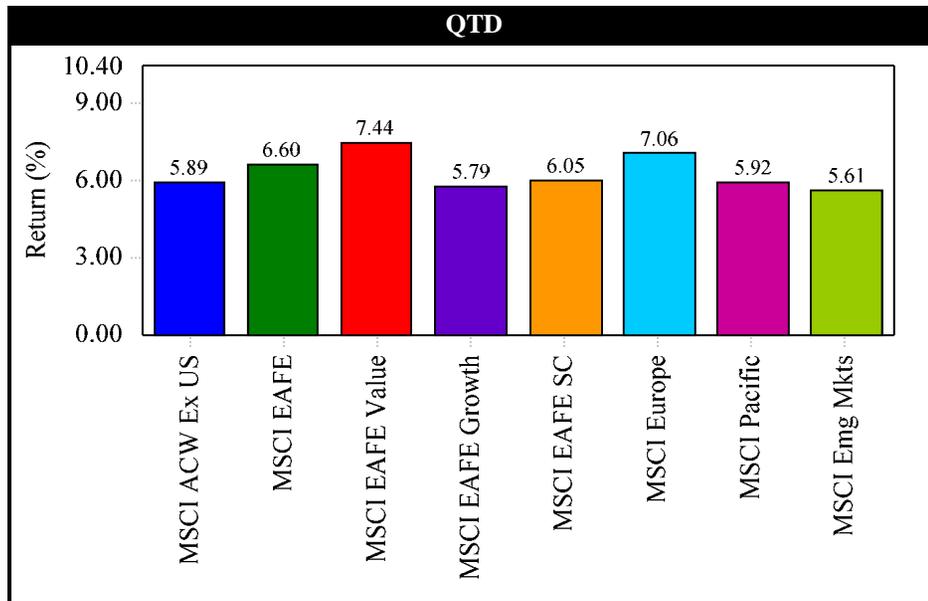
Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity.

**Domestic Equity Sector Weights and Returns**  
As of December 31, 2012



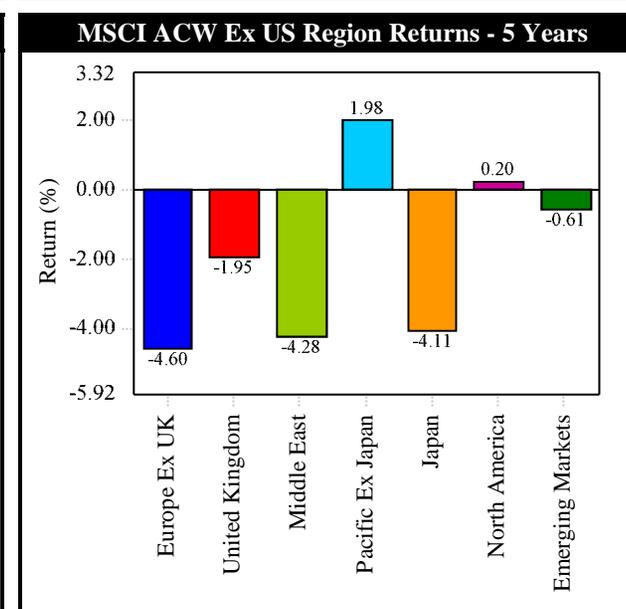
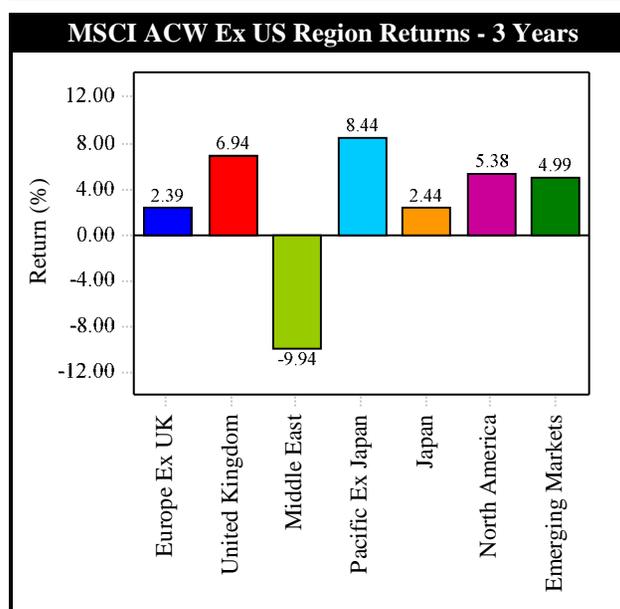
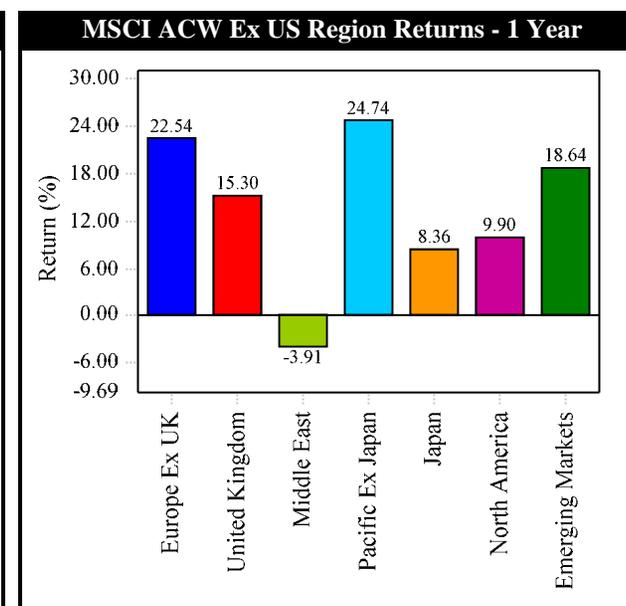
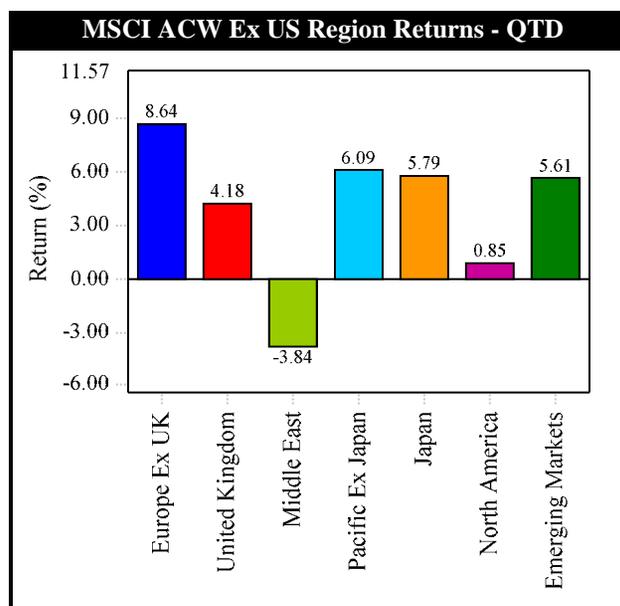
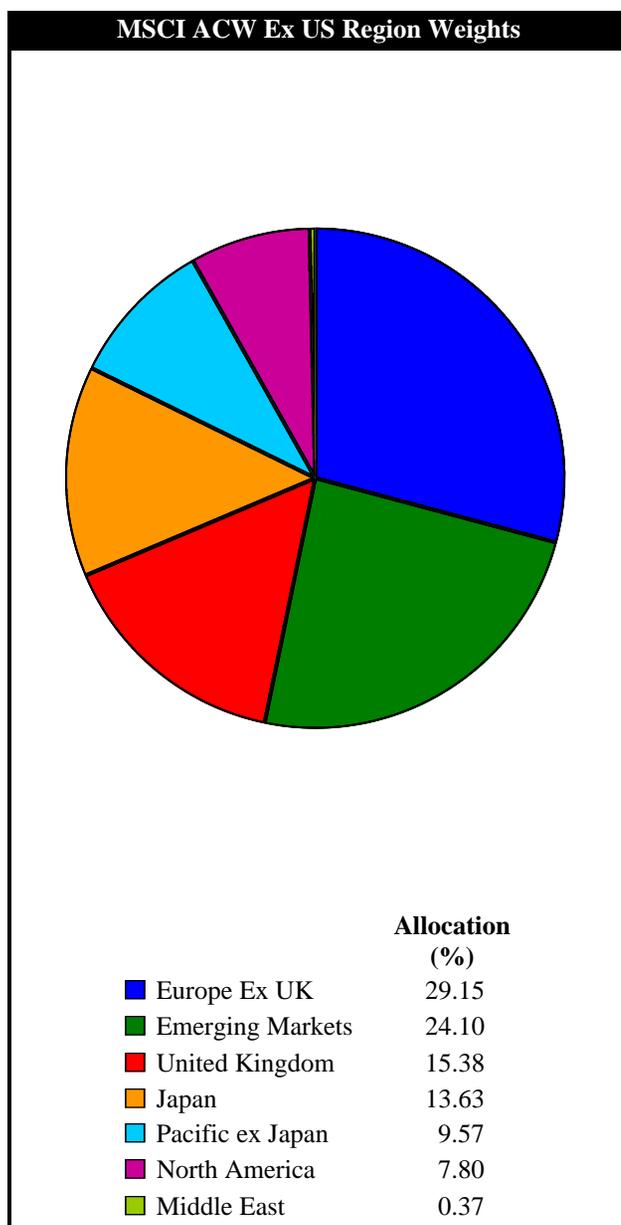
Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Returns provided by MPI Stylus, allocations provided by Standard & Poor's.

**International Equity Market Performance and Risk**  
As of December 31, 2012



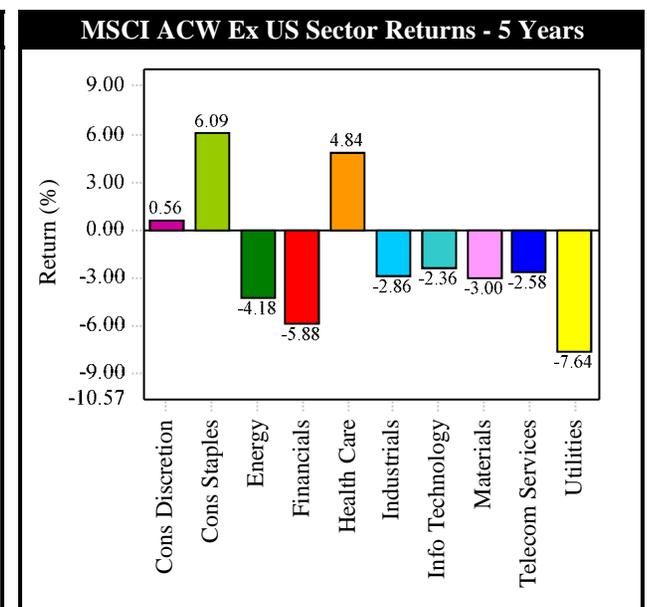
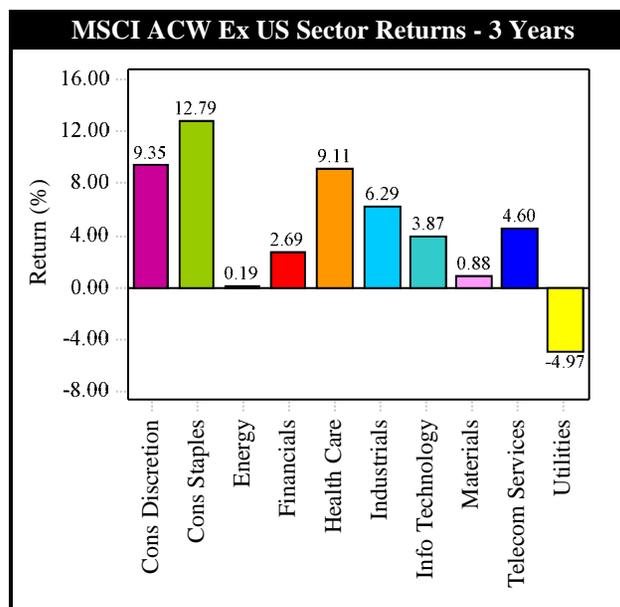
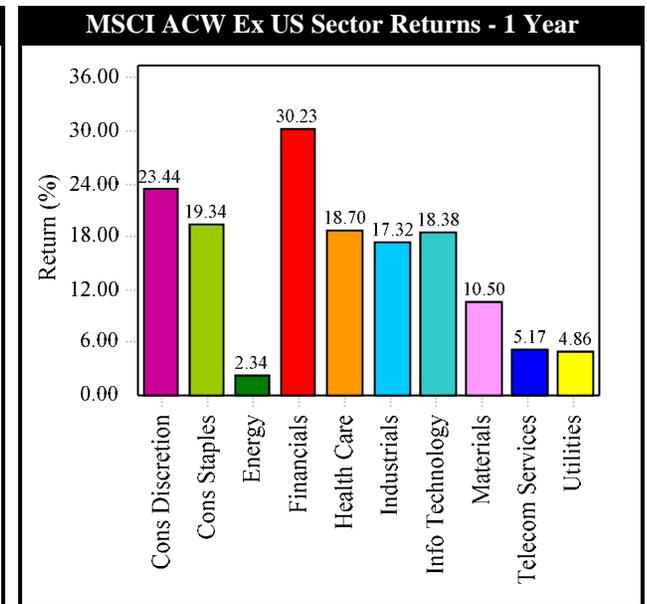
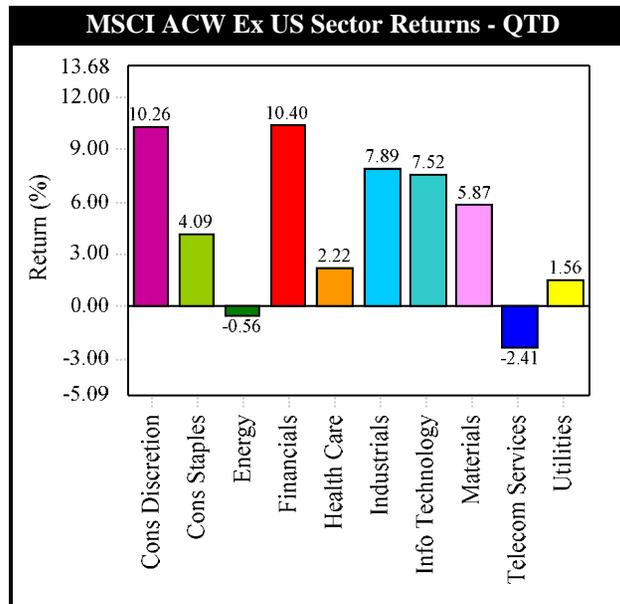
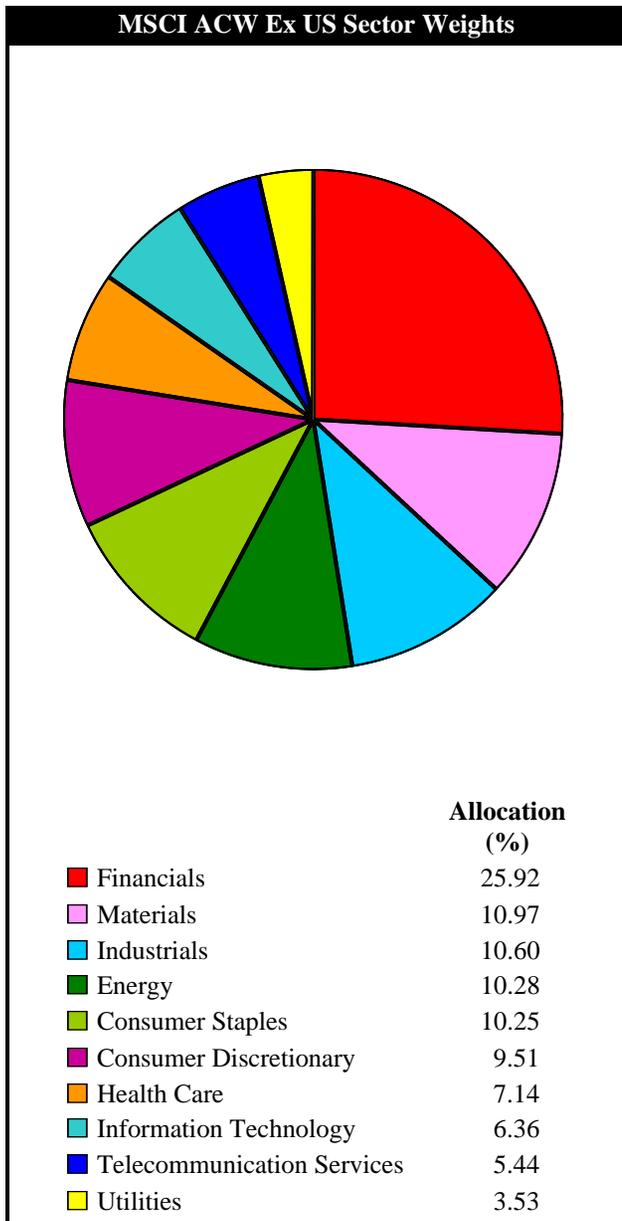
Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity. All returns are shown gross of foreign taxes on dividends.

**International Equity Region Weights and Returns**  
As of December 31, 2012



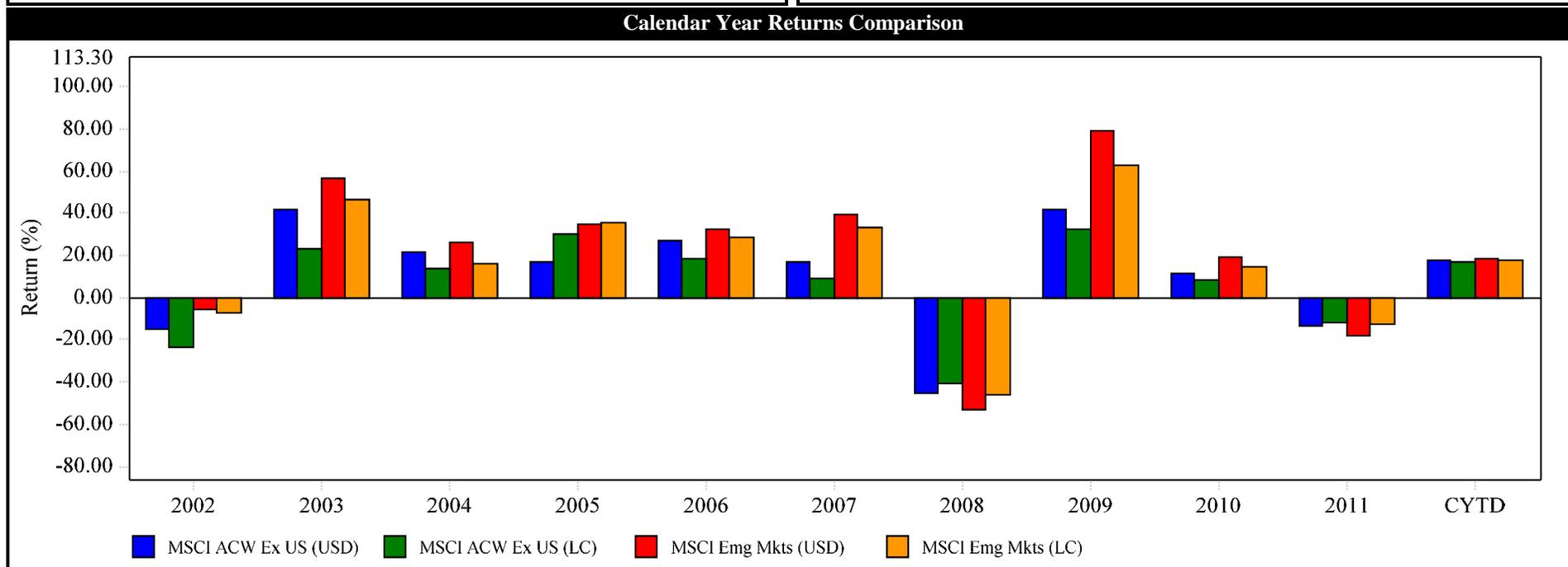
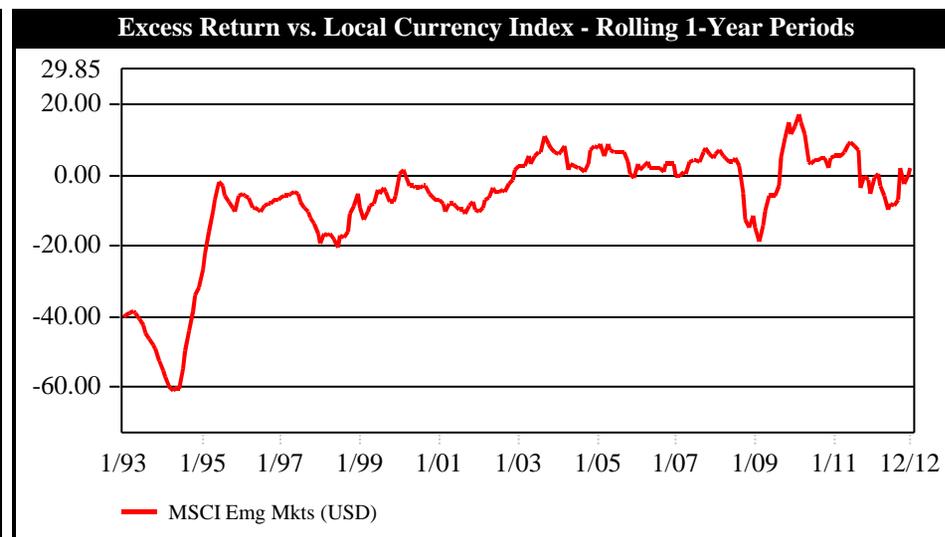
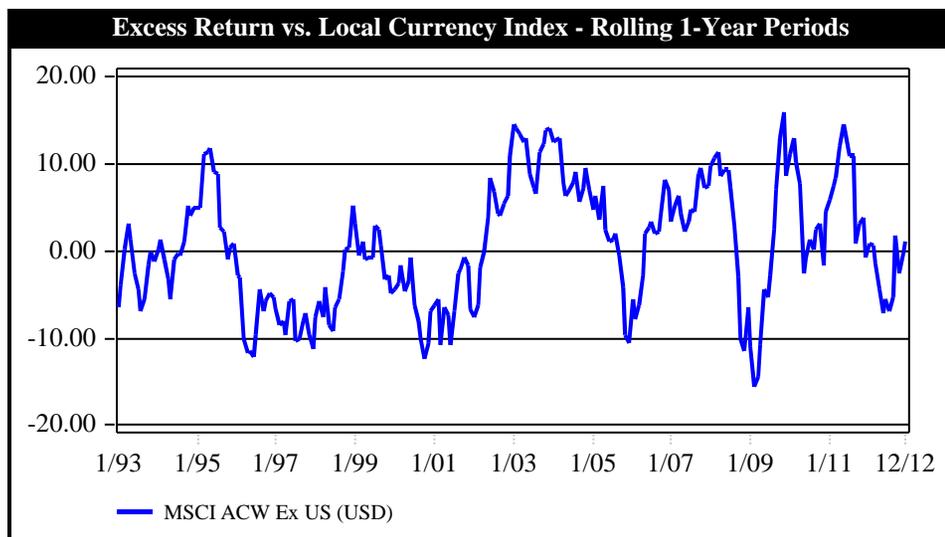
Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Returns and allocations provided by MSCI Barra. All returns are shown gross of foreign taxes on dividends.

**International Equity Sector Weights and Returns**  
As of December 31, 2012



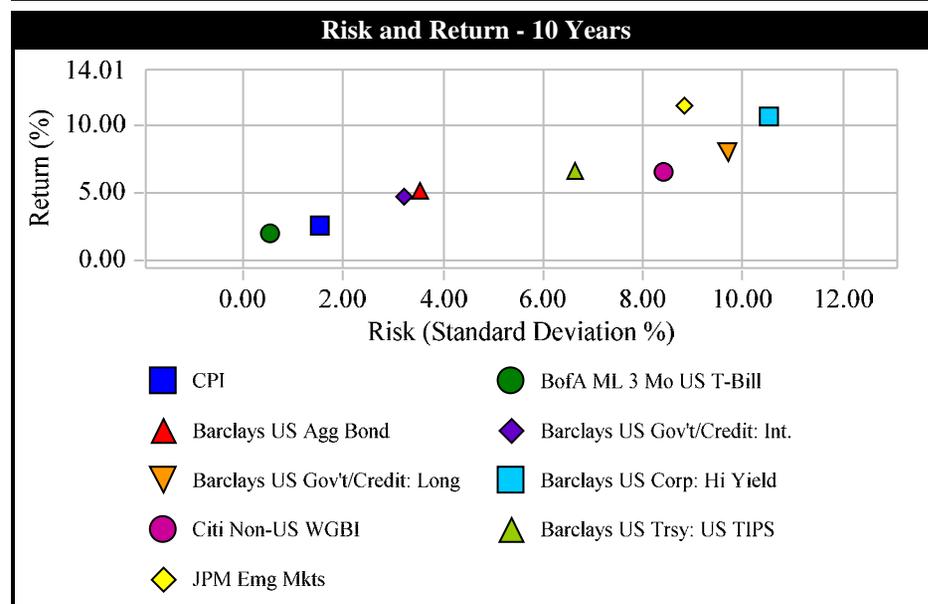
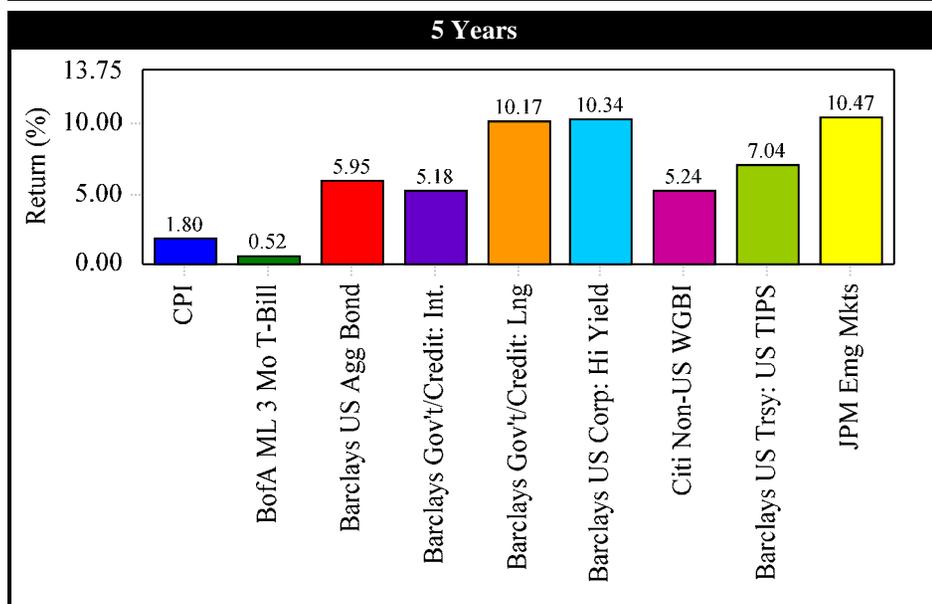
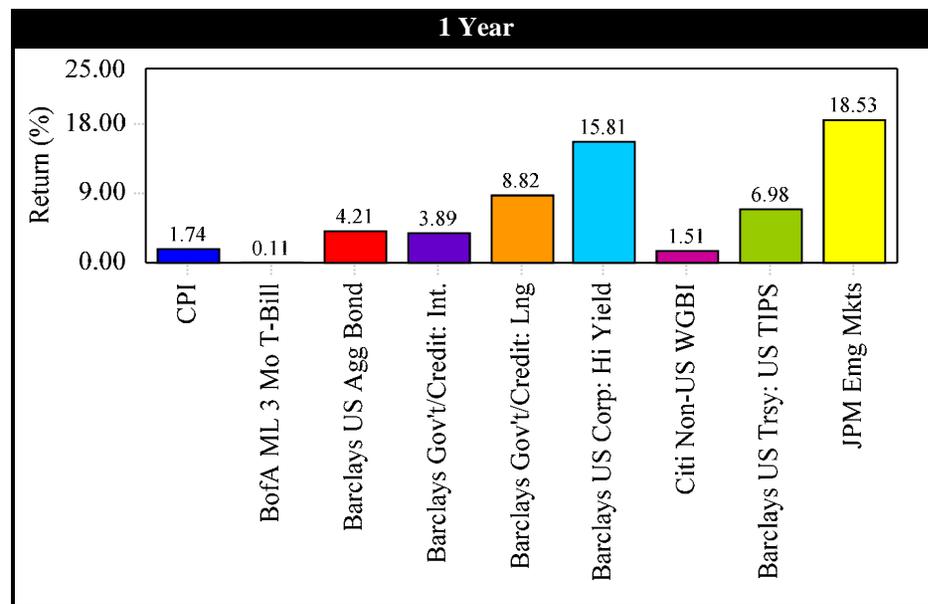
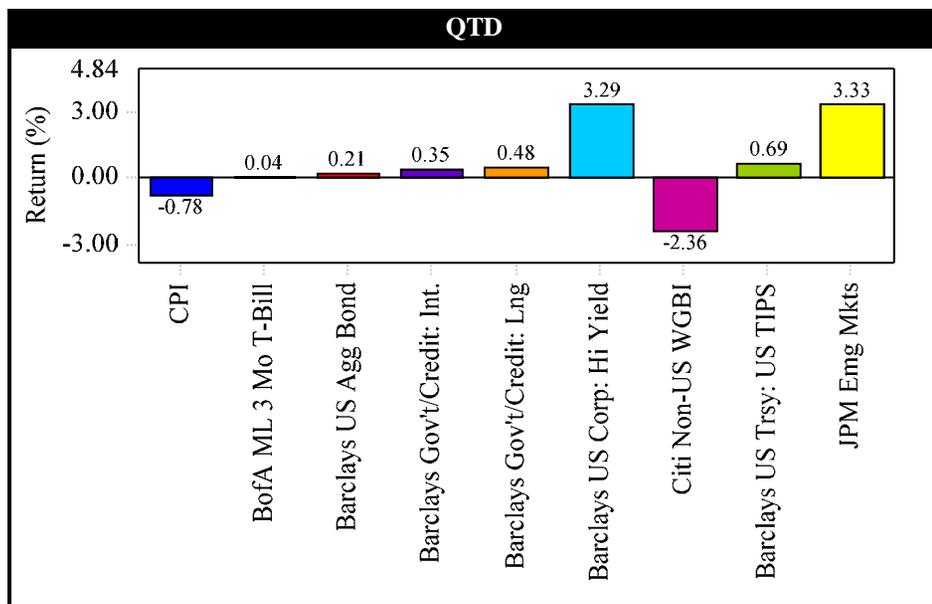
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**Effect of Currency on International Equity Performance**  
As of December 31, 2012



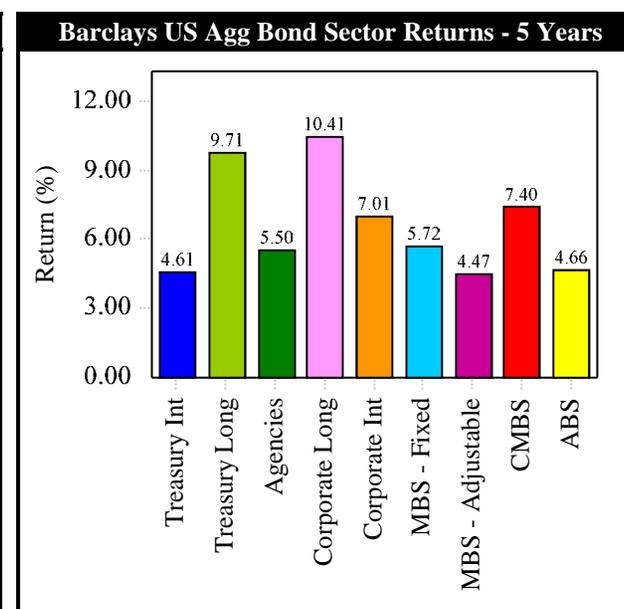
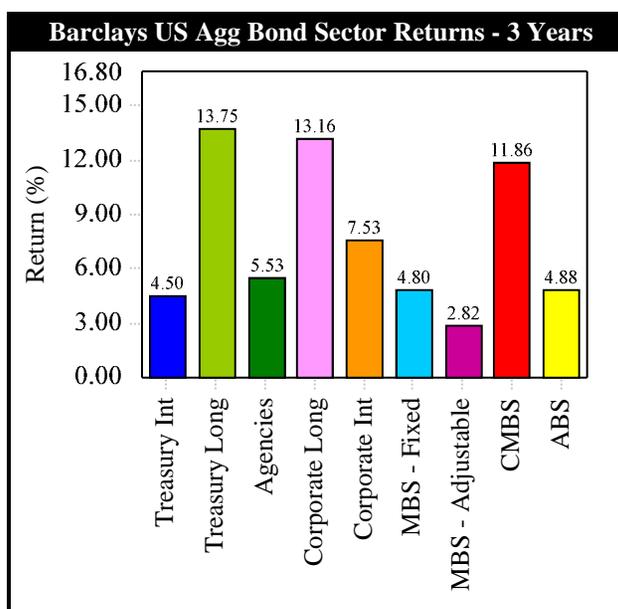
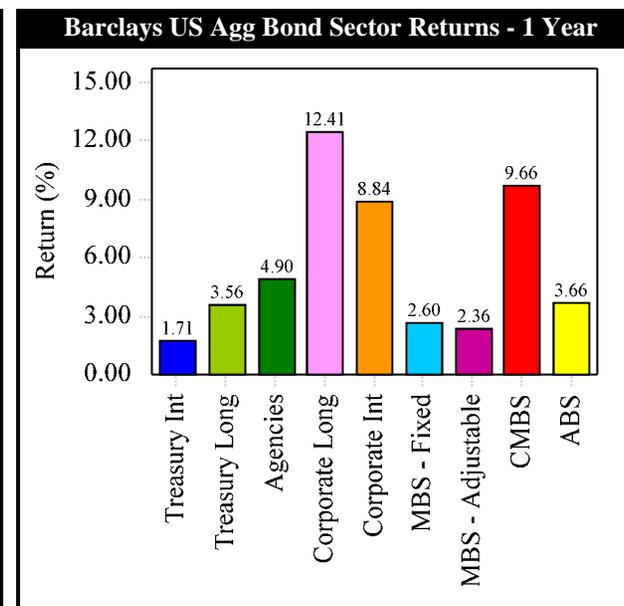
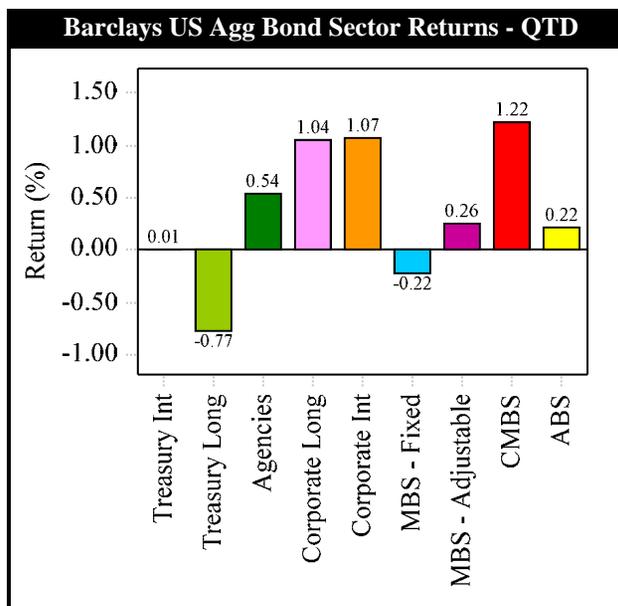
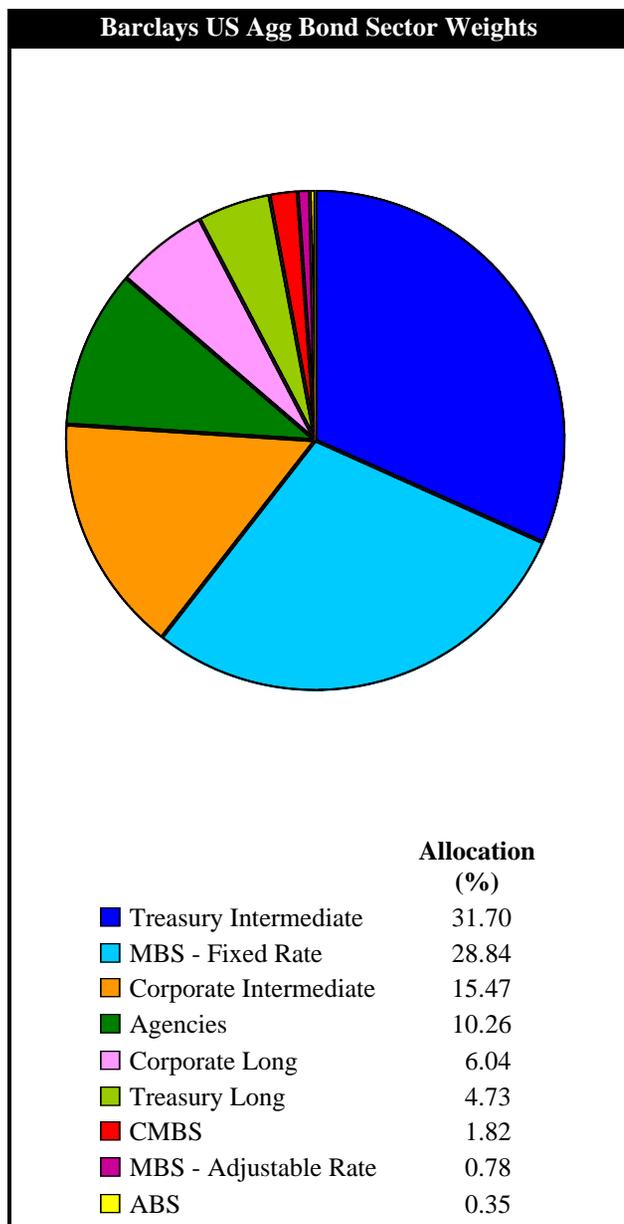
Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity.  
All returns are shown gross of foreign taxes on dividends.

**Fixed Income Market Performance and Risk**  
As of December 31, 2012



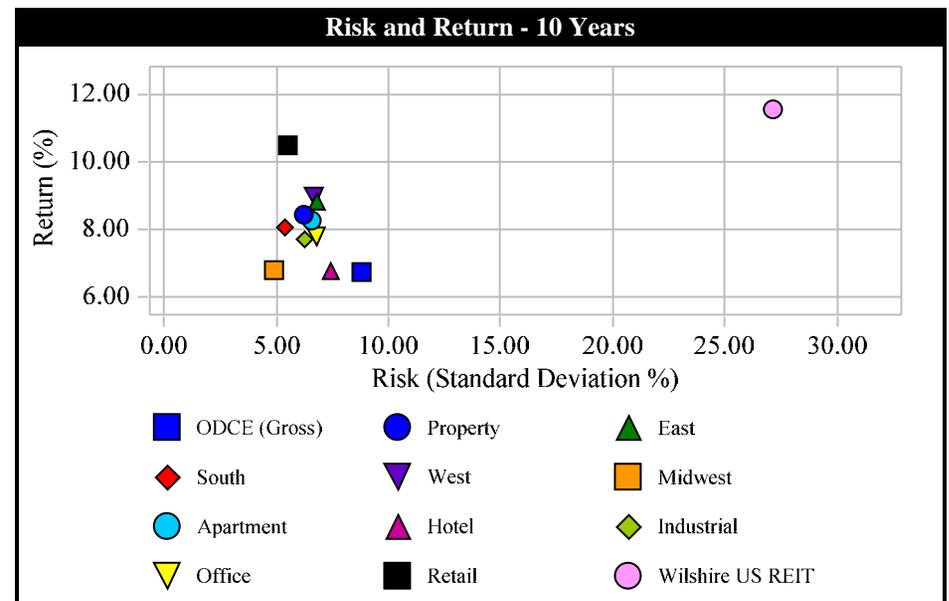
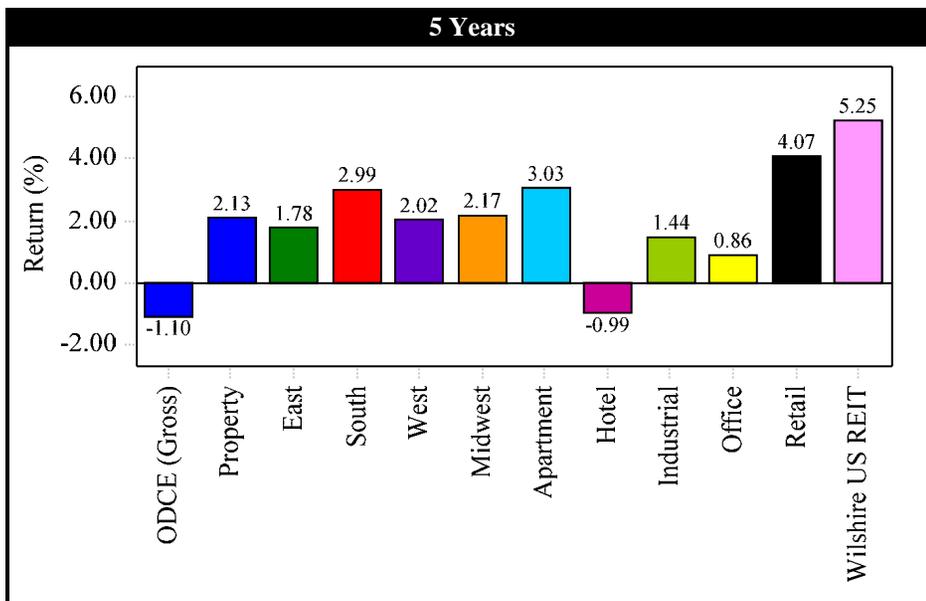
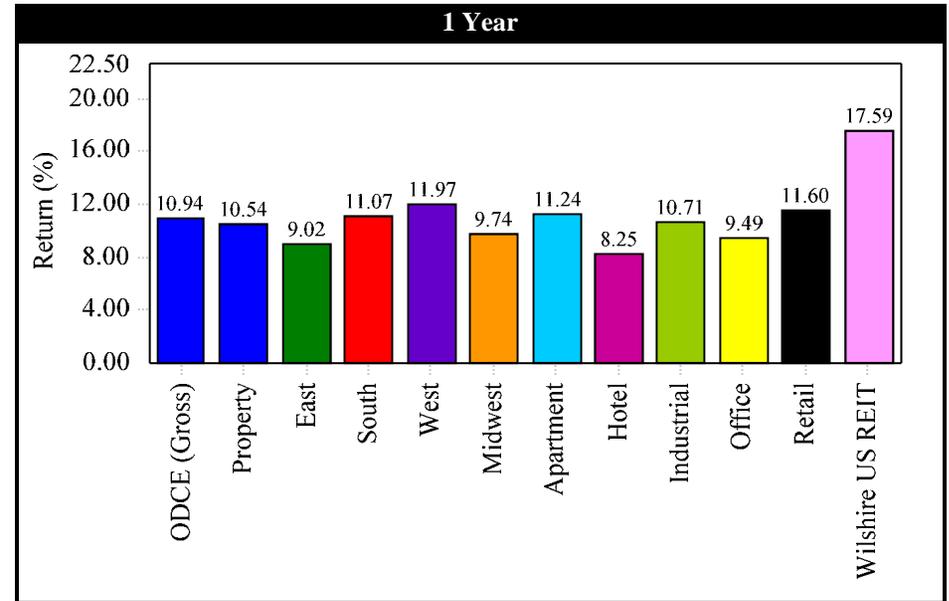
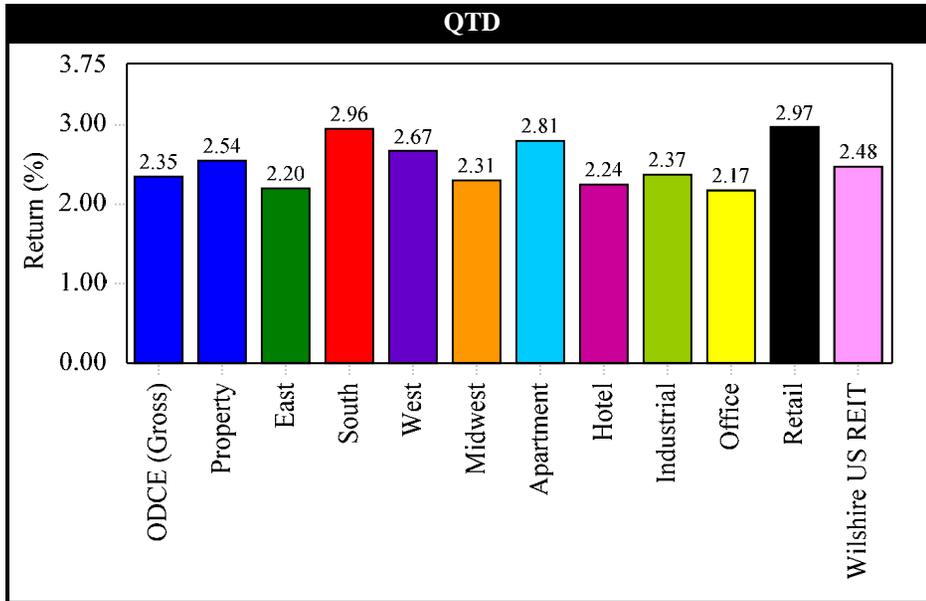
Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity.

**Domestic Fixed Income Sector Weights and Returns**  
As of December 31, 2012



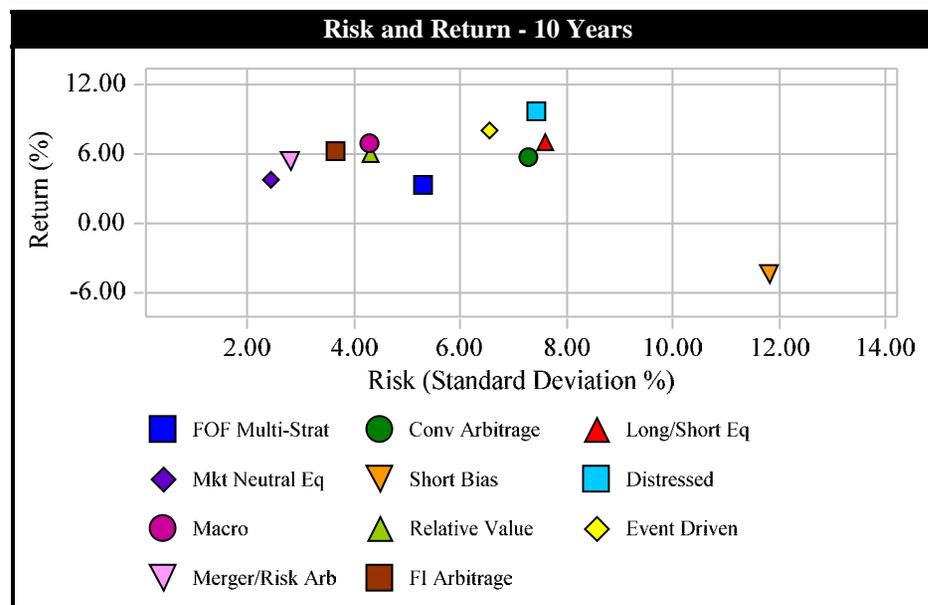
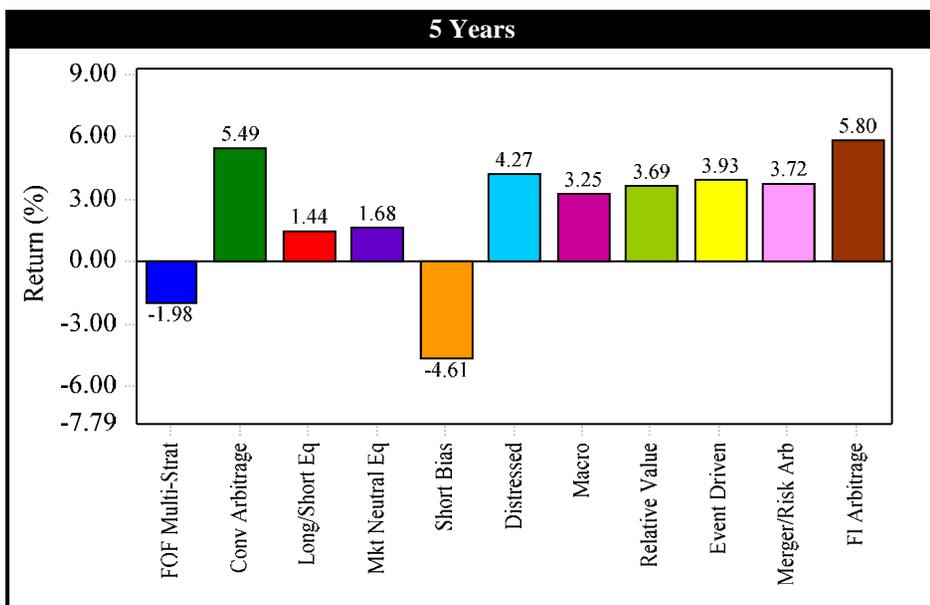
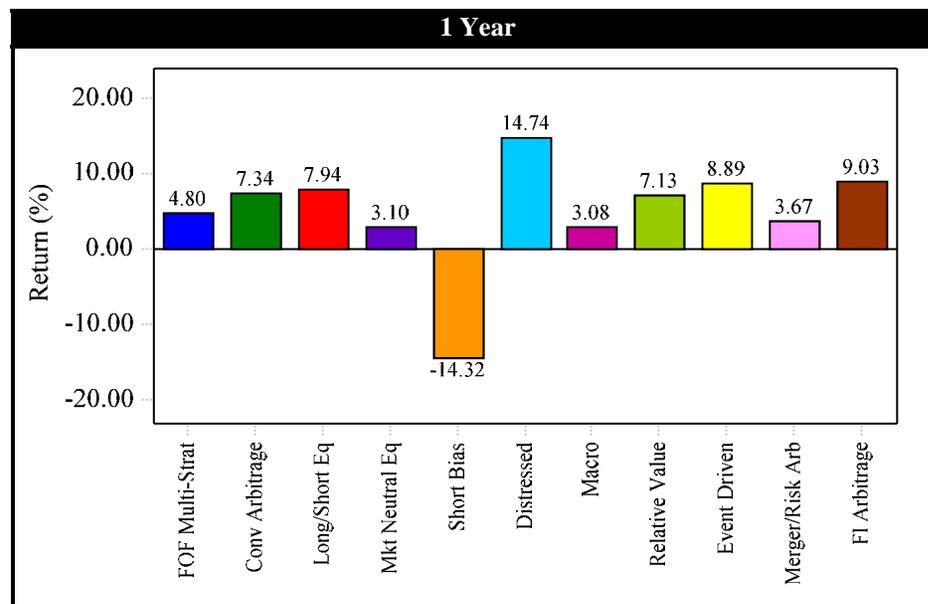
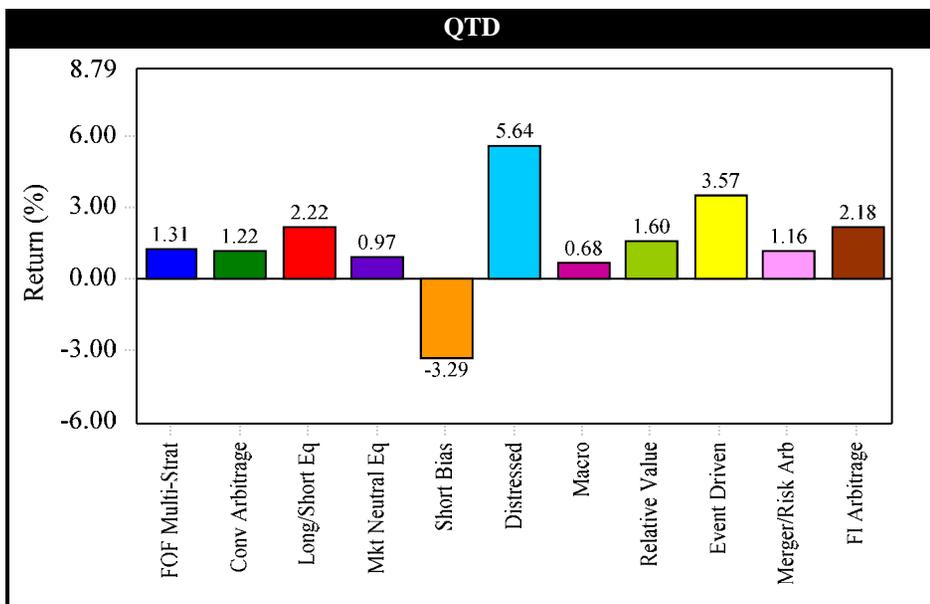
Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Returns and allocations provided by Barclays Indices.

**Real Estate Market Performance and Risk**  
As of December 31, 2012



Performance is annualized for periods greater than one year. Calculation is based on quarterly periodicity. All data shown represent NCREIF indices unless otherwise noted. Region and sector data represent the Property Index.

## Hedge Fund Market Performance and Risk As of December 31, 2012



Performance is annualized for periods greater than one year. Calculation is based on monthly periodicity. All data shown represent HFN indices, net of fees. Values are preliminary and subject to change.

## INDEX GLOSSARY

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

**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.

**R 2500:** The **Russell 2500 Index** measures the performance of the small to mid-cap segment of the US equity market. It includes approximately 2500 of the smallest securities by market cap from the Russell 3000 Index.

**R 2500 Value:** The **Russell 2500 Value Index** measures the performance of the small to mid-cap value segment of the US equity market. Value stocks are securities of companies that have lower price-to-book and price earnings, higher dividend yields, and lower forecasted growth rates than growth companies. These stocks often trade at prices lower than average relative to earnings and/or book value. Because of this apparent discount and occasionally higher than average yield, these stocks tend to be defensive in nature and therefore less volatile than growth stocks.

**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 ACW Ex US:** The **MSCI ACW (All Country World Index) Ex US Index** is designed to measure equity market performance in global developed and emerging markets, excluding the US. The 23 underlying developed countries are: *Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.* The emerging market countries are: *Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.*

**MSCI ACW Ex US Value:** The **MSCI ACW (All Country World Index) Ex US Value Index** is identical to the MSCI ACWI ex US with the exception that it focuses specifically on the value segment of global developed and emerging markets.

**MSCI EAFE:** The **MSCI EAFE (Europe, Australasia, Far East) Index** is designed to measure equity market performance of 22 developed countries, excluding the US & Canada: *Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.*

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

**Barclays US Trsy: US TIPS:** The **Barclays US Treasury: US TIPS Index** measures the performance of the US Treasury Inflation Protected Securities (TIPS) market.

**Barclays US Agg Bond:** The **Barclays 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.

**Barclays US MBS:** The **Barclays US MBS (Mortgage Backed Securities) Index** measures the performance of investment grade fixed-rate mortgage-backed pass-through securities of government-sponsored agencies (GNMA, FNMA, and FHLMC).

**Barclays US Credit:** The **Barclays US Credit Index** measures the performance of the dollar-denominated US investment bond market including investment grade corporate debt and sovereign, supranational, local authority and non-US agency bonds.

**Global/EM Fixed Income Custom Index:** The **Global/EM Fixed Income Custom Index** consists of 32.5% Barclays Aggregate Ex US Hedged, 5% Barclays Aggregate Ex US Unhedged, 47.5% JP Morgan EMBI, and 15% JP Morgan GBI-EM Global Diversified Unhedged.

**Barclays US Govt: Int Trm Bond:** The **Barclays US Gov't Intermediate Term Bond Index** is a market-capitalization-weighted performance benchmark for government fixed-rate debt issues.

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

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

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

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

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

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

**Global Recovery Custom Index:** The **Global Recovery Custom Index** consists of 50% Credit Suisse Distressed Index, 20% Credit Suisse High Yield Index, and 30% ABX Index.

**Wyoming State Treasurer's Office**  
**Investment Performance**  
 December 31, 2012

**Investment Policy:**

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

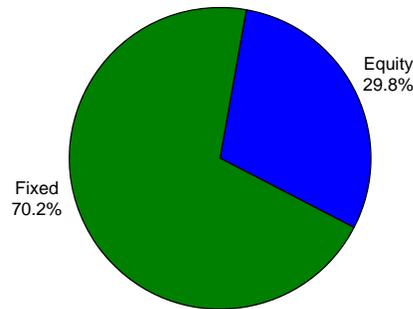
**Investment Objectives and Priorities:**

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

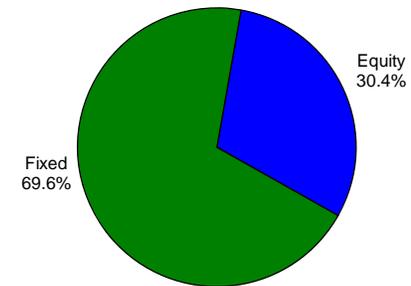
- a) Safety of principal. Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio.
- b) Liquidity requirements of anticipated and unanticipated expenditures.
- c) Yield.
- d) Recognition of differing objectives and needs of various fund portfolios.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

**Asset Allocation:**

**06/30/2012 Allocation**



**12/31/2012 Allocation**



**Historical Performance:**

	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Wyoming State Total Fund</b>	<b>\$15,882.95</b>	<b>\$15,593.10</b>	<b>\$16,488.25</b>	<b>1.23%</b>	<b>4.55%</b>	<b>9.14%</b>	<b>7.15%</b>	<b>4.74%</b>
<i>Wyoming State Actual Allocation Index</i>				<i>0.95%</i>	<i>3.78%</i>	<i>7.76%</i>	<i>6.35%</i>	<i>4.05%</i>

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

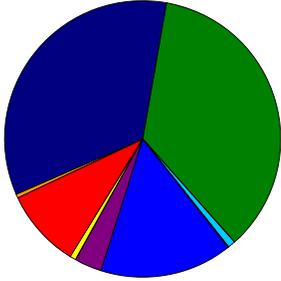
Note[2]: The Wyoming State Actual Allocation Index is calculated using beginning-month asset class weights applied to the appropriate asset class benchmark return.

Note[3]: Market Value and Total Investment Value are shown in (\$) Millions.

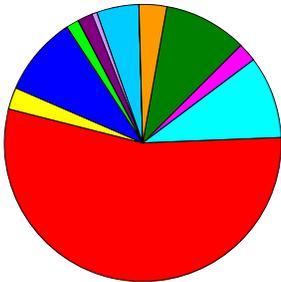
**Wyoming State Treasurer's Office**  
**Investment Performance - Total Performance**  
 December 31, 2012

	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Wyoming State Total Fund</b>	<b>\$15,882,952,326</b>	<b>\$15,593,099,135</b>	<b>\$16,488,253,476</b>	<b>100.0%</b>	<b>1.23%</b>	<b>4.55%</b>	<b>9.14%</b>	<b>7.15%</b>	<b>4.74%</b>
Wyoming State Actual Allocation Index					0.95%	3.78%	7.76%	6.35%	4.05%
<b>Investment Funds</b>									
Permanent Mineral Trust	\$5,599,941,132	\$5,595,493,940	\$5,874,390,797	35.6%	1.85%	5.90%	11.23%	7.94%	3.75%
Permanent Land Fund	\$138,464,064	\$135,206,833	\$143,989,435	0.9%	1.80%	5.77%	10.99%	7.88%	3.59%
University Permanent Land Fund	\$18,121,644	\$18,250,347	\$18,400,594	0.1%	1.87%	5.75%	10.56%	7.58%	3.18%
Common School Perm Land Fund	\$2,452,663,712	\$2,371,333,538	\$2,553,515,396	15.5%	1.90%	5.94%	11.40%	8.21%	4.21%
Hathaway Scholarship Endowment Fund	\$506,652,921	\$518,418,148	\$530,234,568	3.2%	1.68%	5.50%	10.57%	7.77%	5.71%
Higher Education Endowment Fund	\$109,717,474	\$111,829,141	\$115,072,223	0.7%	1.68%	5.53%	10.60%	7.71%	5.61%
Workers Compensation Fund	\$1,462,523,235	\$1,436,849,381	\$1,518,344,984	9.2%	1.38%	4.80%	9.21%	7.32%	6.45%
Tobacco Settlement Trust	\$71,176,409	\$69,855,405	\$72,814,010	0.4%	0.90%	3.52%	7.05%	7.07%	6.56%
State Agency Pool	\$5,523,691,734	\$5,335,862,401	\$5,661,491,469	34.3%	0.77%	2.99%	5.90%	5.78%	5.73%
<b>Asset Class Performance</b>									
<b>US Equity</b>					<b>0.60%</b>	<b>6.75%</b>	<b>16.14%</b>	<b>11.86%</b>	<b>2.65%</b>
US Large Cap Equity S&P 500	\$1,475,001,759	\$1,652,349,058	\$1,607,796,985	9.8%	-0.41%	5.90%	16.20%	11.31%	1.95%
US SMID Cap Equity Russell 2500	\$326,002,313	\$307,652,675	\$365,934,126	2.2%	-0.38%	5.95%	16.00%	10.87%	1.66%
International Equity International Equity Custom Index	\$1,509,089,959	\$1,352,874,572	\$1,587,659,882	9.6%	3.88%	9.02%	13.13%	13.57%	4.57%
Fixed Income Barclays US Aggregate	\$8,732,015,323	\$9,159,906,733	\$9,000,297,190	54.6%	3.10%	8.84%	17.88%	13.35%	4.35%
Convertible Bonds BofA ML All Quality Convertible	\$389,994,085	\$376,125,813	\$417,113,990	2.5%	6.22%	13.51%	17.16%	4.41%	-2.17%
Cash Equivalents JP Morgan Cash Custom Index	\$1,530,054,401	\$1,075,295,965	\$1,531,978,196	9.3%	5.85%	13.68%	16.83%	3.28%	-3.64%
Private Equity S&P 500 + 5%	\$196,755,826	\$227,016,316	\$243,711,488	1.5%	0.56%	3.09%	6.63%	7.02%	6.78%
Core Real Estate NCREIF ODCE	\$332,607,260	\$284,562,996	\$290,762,807	1.8%	0.21%	1.80%	4.21%	6.19%	5.95%
Value-Added Real Estate NCREIF Property	\$98,346,079	\$74,626,605	\$97,050,412	0.6%	1.95%	7.52%	11.93%	10.01%	5.60%
Absolute Return HFN FOF Multi-Strat	\$763,656,051	\$748,344,215	\$816,519,129	5.0%	2.80%	7.85%	14.96%	8.37%	4.06%
Wyoming Investments	\$529,429,269	\$334,344,187	\$529,429,269	3.2%	0.02%	0.16%	0.39%	0.53%	1.19%
					0.03%	0.14%	0.26%	0.55%	1.17%
					0.85%	8.57%	21.80%	16.42%	6.75%
					2.37%	4.82%	10.57%	14.66%	-1.18%
					2.35%	5.18%	10.94%	14.40%	-1.10%
					2.54%	4.94%	10.54%	12.63%	2.13%
					2.11%	5.39%	8.66%	4.45%	1.11%
					1.31%	3.59%	4.80%	1.22%	-1.98%
					N/A	N/A	N/A	N/A	N/A

Allocation by Fund



Allocation by Asset Class



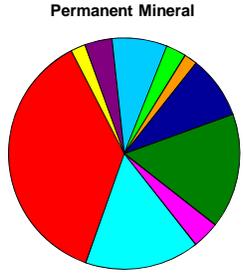
Note[1]: Performance shown is gross of fees with the exception of convertible bonds and absolute return, which are shown net of fees. Investment performance is calculated on invested assets only.  
 Note[2]: Pooled investment performance and market values shown reflect State Agency participation and is calculated on a capital-weighted basis using beginning-period allocations.  
 Note[3]: Cash Equivalents performance includes Extended Cash performance.  
 Note[4]: Performance for Private Equity and Value-Added Real Estate investments is calculated on an IRR basis. For further analysis, please refer to the supplementary alternatives performance report.  
 Note[5]: Market values for non-core real estate and private equity are as of the most recent valuation, adjusted for subsequent cash flows. Investment (Cost) Values are not lagged.  
 Note[6]: Market values shown for Wyoming Investments reflect cost value of the investments, except at fiscal year end.  
 Note[7]: International Equity Custom Index consists of MSCI EAFE (Gross) through July 2010 and the MSCI ACW Ex US (Net) thereafter.

**Wyoming State Treasurer's Office**  
**Investment Performance - Total Performance**  
 December 31, 2012

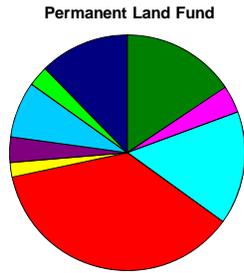
	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Wyoming State Total Fund</b>	<b>\$15,882,952,326</b>	<b>\$15,593,099,135</b>	<b>\$16,488,253,476</b>		<b>1.23%</b>	<b>4.55%</b>	<b>9.14%</b>	<b>7.15%</b>	<b>4.74%</b>

**Investment Funds:**

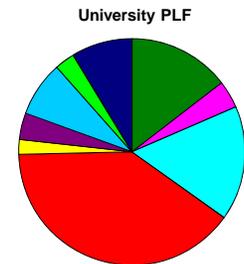
Investment Fund	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Permanent Mineral Trust</b>	<b>\$5,599,941,132</b>	<b>\$5,595,493,940</b>	<b>\$5,874,390,797</b>	<b>100.0%</b>	<b>1.85%</b>	<b>5.90%</b>	<b>11.23%</b>	<b>7.94%</b>	<b>3.75%</b>
US Large Cap Equity	\$864,421,675	\$974,097,283	\$947,139,710	16.1%					
US SMID Cap Equity	\$200,609,512	\$190,467,149	\$225,679,519	3.8%					
International Equity	\$892,383,342	\$801,411,824	\$939,793,099	16.0%					
Fixed Income	\$2,106,472,797	\$2,226,030,715	\$2,174,468,986	37.0%					
Convertibles	\$112,914,651	\$108,985,757	\$120,665,162	2.1%					
Real Estate	\$254,558,229	\$207,471,684	\$224,120,859	3.8%					
Absolute Return	\$423,820,743	\$419,653,552	\$453,219,034	7.7%					
Private Equity	\$134,058,372	\$156,155,526	\$166,075,905	2.8%					
Wyoming Investments	\$108,569,531	\$108,284,450	\$108,569,531	1.8%					
Cash (invested in State Agency Pool)	\$502,132,279	\$402,936,000	\$514,658,991	8.8%					
<i>Actual Allocation Index</i>					1.38%	5.01%	9.83%	6.89%	2.86%



Investment Fund	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Permanent Land Fund</b>	<b>\$138,464,064</b>	<b>\$135,206,833</b>	<b>\$143,989,435</b>	<b>100.0%</b>	<b>1.80%</b>	<b>5.77%</b>	<b>10.99%</b>	<b>7.88%</b>	<b>3.59%</b>
US Large Cap Equity	\$21,255,601	\$22,710,059	\$22,490,443	15.6%					
US SMID Cap Equity	\$4,826,212	\$4,428,090	\$5,408,595	3.8%					
International Equity	\$21,417,139	\$18,456,057	\$22,394,040	15.6%					
Fixed Income	\$51,536,181	\$52,721,073	\$52,933,636	36.8%					
Convertibles	\$2,706,623	\$2,508,179	\$2,868,109	2.0%					
Real Estate	\$5,746,854	\$4,593,560	\$5,025,363	3.5%					
Absolute Return	\$10,397,398	\$9,724,666	\$11,079,871	7.7%					
Private Equity	\$3,274,576	\$3,622,853	\$4,054,228	2.8%					
Cash (invested in State Agency Pool)	\$17,303,479	\$16,442,294	\$17,735,150	12.3%					
<i>Actual Allocation Index</i>					1.33%	4.85%	9.55%	6.79%	2.64%



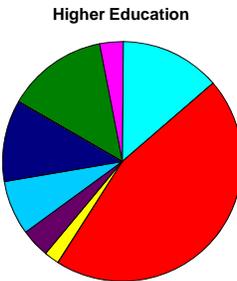
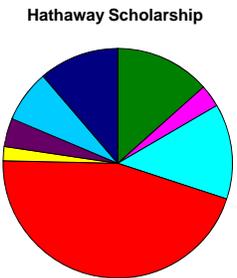
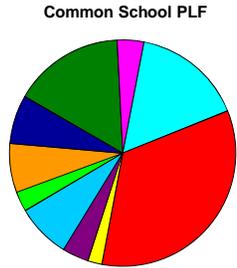
Investment Fund	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>University Permanent Land Fund</b>	<b>\$18,121,644</b>	<b>\$18,250,347</b>	<b>\$18,400,594</b>	<b>100.0%</b>	<b>1.87%</b>	<b>5.75%</b>	<b>10.56%</b>	<b>7.58%</b>	<b>3.18%</b>
US Large Cap Equity	\$2,968,293	\$3,244,613	\$2,680,473	14.6%					
US SMID Cap Equity	\$643,779	\$615,721	\$721,925	3.9%					
International Equity	\$2,869,634	\$2,610,267	\$3,012,121	16.4%					
Fixed Income	\$7,080,159	\$7,508,123	\$7,319,917	39.8%					
Convertibles	\$363,621	\$356,803	\$388,519	2.1%					
Real Estate	\$858,341	\$651,421	\$701,992	3.8%					
Absolute Return	\$1,353,052	\$1,376,687	\$1,450,030	7.9%					
Private Equity	\$426,144	\$511,359	\$528,113	2.9%					
Cash (invested in State Agency Pool)	\$1,558,620	\$1,375,354	\$1,597,503	8.7%					
<i>Actual Allocation Index</i>					1.36%	4.92%	9.37%	6.72%	2.63%



Note[1]: Performance shown is gross of fees with the exception of convertible bonds and absolute return, which are shown net of fees.  
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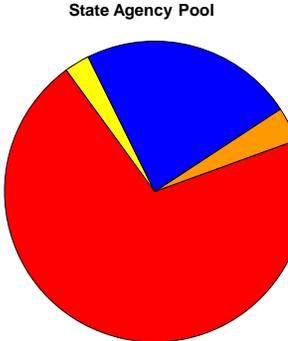
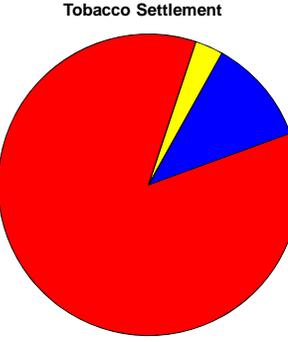
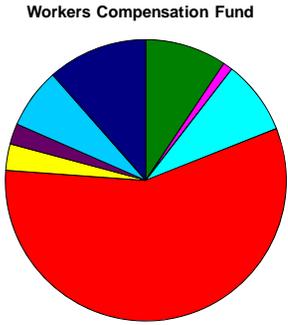
	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Investment Funds:</b>									
<b>Common School PLF</b>	<b><u>\$2,452,663,712</u></b>	<b><u>\$2,371,333,538</u></b>	<b><u>\$2,553,515,396</u></b>	<b><u>100.0%</u></b>	<b>1.90%</b>	<b>5.94%</b>	<b>11.40%</b>	<b>8.21%</b>	<b>4.21%</b>
Common School Perm Land Fund	\$379,339,844	\$414,255,673	\$406,109,342	15.9%					
US Large Cap Equity	\$86,558,543	\$80,449,820	\$96,902,168	3.8%					
US SMID Cap Equity	\$386,163,962	\$343,152,820	\$406,106,094	15.9%					
International Equity	\$846,104,178	\$890,813,963	\$868,318,832	34.0%					
Fixed Income	\$48,761,750	\$46,624,342	\$52,117,967	2.0%					
Convertibles	\$109,304,294	\$89,033,840	\$96,532,253	3.8%					
Real Estate	\$185,415,550	\$177,502,498	\$198,024,359	7.8%					
Absolute Return	\$58,996,734	\$66,726,578	\$73,053,242	2.9%					
Private Equity	\$178,359,738	\$18,359,738	\$178,359,738	7.0%					
Wyoming Investments	\$173,659,120	\$244,414,265	\$177,991,400	7.0%					
Cash (invested in State Agency Pool)					1.41%	4.90%	9.76%	6.87%	2.99%
<i>Actual Allocation Index</i>									
<b>Hathaway Scholarship</b>	<b><u>\$506,652,921</u></b>	<b><u>\$518,418,148</u></b>	<b><u>\$530,234,568</u></b>	<b><u>100.0%</u></b>	<b>1.68%</b>	<b>5.50%</b>	<b>10.57%</b>	<b>7.77%</b>	<b>5.71%</b>
Hathaway Scholarship	\$64,787,156	\$74,670,742	\$71,214,556	13.4%					
US Large Cap Equity	\$15,098,681	\$14,389,601	\$16,855,580	3.2%					
US SMID Cap Equity	\$67,799,593	\$61,615,305	\$71,263,316	13.4%					
International Equity	\$232,983,080	\$253,067,809	\$240,290,028	45.3%					
Fixed Income	\$9,814,584	\$9,512,614	\$10,522,480	2.0%					
Convertibles	\$21,426,962	\$19,921,849	\$21,298,518	4.0%					
Real Estate	\$36,408,697	\$33,319,265	\$39,000,656	7.4%					
Absolute Return	\$58,334,169	\$51,920,964	\$59,789,434	11.3%					
Cash (invested in State Agency Pool)					1.18%	4.47%	8.92%	6.70%	4.81%
<i>Actual Allocation Index</i>									
<b>Higher Education</b>	<b><u>\$109,717,474</u></b>	<b><u>\$111,829,141</u></b>	<b><u>\$115,072,223</u></b>	<b><u>100.0%</u></b>	<b>1.68%</b>	<b>5.53%</b>	<b>10.60%</b>	<b>7.71%</b>	<b>5.61%</b>
Higher Education	\$13,951,737	\$16,577,069	\$15,658,793	13.6%					
US Large Cap Equity	\$3,294,611	\$3,188,602	\$3,675,570	3.2%					
US SMID Cap Equity	\$14,853,185	\$13,659,818	\$15,582,492	13.5%					
International Equity	\$50,486,827	\$56,142,026	\$52,215,990	45.4%					
Fixed Income	\$2,142,624	\$2,111,179	\$2,298,121	2.0%					
Convertibles	\$4,736,565	\$4,215,712	\$4,501,534	3.9%					
Real Estate	\$7,869,392	\$7,404,432	\$8,448,281	7.3%					
Absolute Return	\$12,382,533	\$8,530,303	\$12,691,440	11.0%					
Cash (invested in State Agency Pool)					1.19%	4.51%	8.96%	6.64%	4.76%
<i>Actual Allocation Index</i>									



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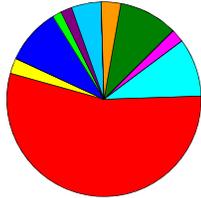
	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Workers Compensation Fund</b>									
<b>Investment Funds:</b>									
<b>Workers Compensation Fund</b>	<b><u>\$1,462,523,235</u></b>	<b><u>\$1,436,849,381</u></b>	<b><u>\$1,518,344,984</u></b>	<b><u>100.0%</u></b>	<b>1.38%</b>	<b>4.80%</b>	<b>9.21%</b>	<b>7.32%</b>	<b>6.45%</b>
US Large Cap Equity	\$128,277,454	\$146,793,618	\$142,503,668	9.4%					
US SMID Cap Equity	\$14,970,976	\$14,113,691	\$16,690,769	1.1%					
International Equity	\$123,603,102	\$111,968,480	\$129,508,719	8.5%					
Fixed Income	\$849,082,147	\$887,627,598	\$867,592,220	57.1%					
Convertibles	\$43,097,755	\$42,103,193	\$46,081,103	3.0%					
Real Estate	\$34,322,093	\$33,301,535	\$35,632,700	2.3%					
Absolute Return	\$98,391,220	\$99,363,115	\$105,296,898	6.9%					
Cash (invested in State Agency Pool)	\$170,778,489	\$101,578,151	\$175,038,906	11.5%					
<i>Actual Allocation Index</i>					0.86%	3.61%	7.23%	6.25%	5.61%
<b>Tobacco Settlement</b>									
<b>Tobacco Settlement Trust</b>	<b><u>\$71,176,409</u></b>	<b><u>\$69,855,405</u></b>	<b><u>\$72,814,010</u></b>	<b><u>100.0%</u></b>	<b>0.90%</b>	<b>3.52%</b>	<b>7.05%</b>	<b>7.07%</b>	<b>6.56%</b>
Fixed Income	\$61,074,567	\$63,518,437	\$62,361,756	85.6%					
Convertibles	\$2,037,397	\$1,995,180	\$2,186,625	3.0%					
Cash (invested in State Agency Pool)	\$8,064,445	\$4,341,789	\$8,265,629	11.4%					
<i>Actual Allocation Index</i>					0.21%	1.78%	4.18%	6.12%	5.90%
<b>State Agency Pool</b>									
<b>State Agency Pool</b>	<b><u>\$5,523,691,734</u></b>	<b><u>\$5,335,862,401</u></b>	<b><u>\$5,661,491,469</u></b>	<b><u>100.0%</u></b>	<b>0.77%</b>	<b>2.99%</b>	<b>5.90%</b>	<b>5.78%</b>	<b>5.73%</b>
Fixed Income	\$3,866,295,539	\$4,085,754,320	\$3,992,348,616	70.5%					
Convertibles	\$143,607,064	\$140,096,044	\$153,710,772	2.7%					
Cash Equiv.	\$1,306,690,345	\$930,315,837	\$1,308,333,296	23.1%					
Wyoming Investments	\$207,098,786	\$179,696,201	\$207,098,786	3.7%					
<i>Actual Allocation Index</i>					0.16%	1.56%	3.57%	5.09%	5.10%



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**Wyoming State Treasurer's Office**  
**Investment Performance - Total Performance**  
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Current Asset Allocation



	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b>Wyoming State Total Fund</b>	<b>\$15,882,952,326</b>	<b>\$15,593,099,135</b>	<b>\$16,488,253,476</b>	<b>100.0%</b>	<b>1.23%</b>	<b>4.55%</b>	<b>9.14%</b>	<b>7.15%</b>	<b>4.74%</b>
Wyoming State Actual Allocation Index					0.95%	3.78%	7.76%	6.35%	4.05%
<b>US Equity</b>									
State Street	\$1,474,381,391	\$1,651,737,443	\$1,607,176,613		-0.41%	5.90%	15.82%	10.90%	1.73%
UW Portfolio Mgmt Program	\$620,367	\$611,614	\$620,372		0.32%	2.20%	6.25%	4.47%	-3.92%
S&P 500					-0.38%	5.95%	16.00%	10.87%	1.66%
<b>US Large Cap Equity</b>	<b>\$1,475,001,759</b>	<b>\$1,652,349,058</b>	<b>\$1,607,796,985</b>	<b>9.8%</b>					
Gabelli	\$326,002,313	\$307,652,675	\$365,934,126		3.88%	9.02%	12.98%	13.10%	6.60%
Russell 2500 Value					4.14%	10.23%	19.21%	12.87%	4.54%
<b>US SMID Cap Equity</b>	<b>\$326,002,313</b>	<b>\$307,652,675</b>	<b>\$365,934,126</b>	<b>2.2%</b>					
<b>Total US Equity</b>	<b>\$1,801,004,072</b>	<b>\$1,960,001,732</b>	<b>\$1,973,731,112</b>	<b>12.0%</b>					
<b>International Equity</b>									
The Boston Company	\$148,657,896	\$121,322,951	\$145,320,854		6.62%	13.75%	14.41%	N/A	N/A
MSCI ACW Ex US Value					6.45%	14.58%	16.97%	3.07%	-2.94%
Northern Trust	\$760,877,475	\$682,601,622	\$795,479,144		5.97%	13.55%	17.13%	N/A	N/A
Manning & Napier	\$224,973,916	\$198,255,888	\$233,548,912		5.90%	13.50%	19.59%	N/A	N/A
MSCI ACW Ex US					5.85%	13.68%	16.83%	3.87%	-2.89%
Fisher Investments	\$374,580,671	\$350,694,111	\$413,310,973		6.74%	13.37%	16.88%	6.28%	-0.42%
Fisher Custom Benchmark					5.85%	13.68%	16.83%	3.28%	-3.64%
<b>Total International Equity</b>	<b>\$1,509,089,959</b>	<b>\$1,352,874,572</b>	<b>\$1,587,659,882</b>	<b>9.6%</b>					
<b>Fixed Income</b>									
State Street TIPS	\$300,000,000	\$0	\$299,292,063		N/A	N/A	N/A	N/A	N/A
Barclays US Trsy: US TIPS					0.69%	2.82%	6.98%	8.90%	7.04%
C.S. McKee	\$550,000,000	\$0	\$549,278,861		N/A	N/A	N/A	N/A	N/A
JP Morgan Core	\$1,631,993,381	\$0	\$1,639,676,829		N/A	N/A	N/A	N/A	N/A
MacKay Shields	\$850,000,000	\$0	\$848,585,395		N/A	N/A	N/A	N/A	N/A
Neuberger Berman Core	\$719,781,885	\$0	\$738,871,373		N/A	N/A	N/A	N/A	N/A
PIMCO Core	\$1,911,518,497	\$0	\$1,982,531,837		N/A	N/A	N/A	N/A	N/A
Wells Capital	\$550,000,000	\$0	\$548,130,352		N/A	N/A	N/A	N/A	N/A
Barclays US Aggregate					0.21%	1.80%	4.21%	6.19%	5.95%
WAMCO Core Plus	\$82,452,273	\$1,878,129,607	\$95,540,135		N/A	N/A	N/A	N/A	N/A
Neuberger Berman Core Plus	\$1,092,469,914	\$1,882,790,104	\$1,140,893,275		N/A	N/A	N/A	N/A	N/A
PIMCO Core Plus	\$57,025,433	\$1,891,073,827	\$73,612,874		N/A	N/A	N/A	N/A	N/A
Barclays US Aggregate					0.21%	1.80%	4.21%	6.19%	5.95%
PIMCO Mortgages	\$26,705,606	\$685,264,861	\$29,278,964		N/A	N/A	N/A	N/A	N/A
JP Morgan Mortgages	\$17,561,804	\$684,160,414	\$18,964,890		N/A	N/A	N/A	N/A	N/A
Barclays US Mortgages					-0.20%	0.92%	2.59%	4.72%	5.67%
WAMCO Corporates	\$19,079,188	\$421,549,845	\$21,183,029		N/A	N/A	N/A	N/A	N/A
Logan Circle	\$42,117,292	\$420,388,656	\$49,337,080		N/A	N/A	N/A	N/A	N/A
Barclays US Credit					1.04%	4.61%	9.37%	8.73%	7.65%
PIMCO Global/Emerging Markets	\$479,060,936	\$736,475,893	\$544,819,484		N/A	N/A	N/A	N/A	N/A
Global/EM Custom Index					2.57%	7.54%	13.60%	9.39%	N/A
Wyoming State Treasurer's Office	\$402,249,114	\$560,073,528	\$420,300,750		0.49%	1.41%	2.66%	3.90%	3.93%
Barclays US Gov't: Int Trm					0.03%	0.65%	1.73%	4.25%	4.51%
<b>Total Fixed Income</b>	<b>\$8,732,015,323</b>	<b>\$9,159,906,733</b>	<b>\$9,000,297,190</b>	<b>54.6%</b>					

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

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

Note[3]: The Global/EM Custom Index consists of 32.5% Barclays Aggregate Ex US Hedged, 5% Barclays Aggregate Ex US Unhedged, 47.5% JP Morgan EMBI, and 15% JP Morgan GBI-EM Global Diversified Unhedged.

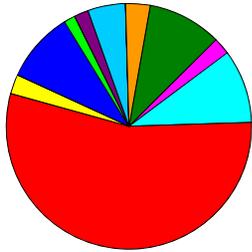
Note[4]: Performance for Private Equity and Value-Added Real Estate investments is calculated on an IRR basis. For further analysis, please refer to the supplementary alternatives report.

Note[5]: Fisher Custom Benchmark consists of MSCI EAFE (Gross) through July 2010 and the MSCI ACW Ex US (Net) thereafter.

Note[6]: Please refer to the addendum for details regarding the fixed income transition.

**Wyoming State Treasurer's Office**  
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Current Asset Allocation



	Total Investment Value	Fiscal Year Ending 06/30/12 Market Value	Current Market Value	% of MV	Qtr Ending 12/31/12 Return	Fiscal YTD Return	1 Year Return	3 Year Return	5 Year Return
<b><u>Convertible Bonds</u></b>									
Allianz Global Investors	\$389,994,085	\$376,125,813	\$417,113,990	2.5%	1.95%	7.52%	11.93%	10.01%	5.60%
BofA ML All Quality Convertible					2.80%	7.85%	14.96%	8.37%	4.06%
<b><u>Cash &amp; Cash Equivalents</u></b>									
JP Morgan Cash Composite	\$1,530,054,401	\$1,075,295,965	\$1,531,978,196	9.3%	0.02%	0.16%	0.39%	0.53%	1.19%
JP Morgan Cash Custom Index					0.03%	0.14%	0.26%	0.55%	1.17%
<b><u>Private Equity</u></b>									
Cheyenne Capital Fund, L.P.	\$187,755,826	\$213,636,746	\$229,831,152				SEE NOTE[4]		
Access Venture Partners II	\$9,000,000	\$13,379,570	\$13,880,336				SEE NOTE[4]		
S&P 500 + 5%					0.85%	8.57%	21.80%	16.42%	6.75%
<b>Total Private Equity</b>	<b>\$196,755,826</b>	<b>\$227,016,316</b>	<b>\$243,711,488</b>	<b>1.5%</b>					
<b><u>Real Estate</u></b>									
Clarion Lion	\$191,303,630	\$157,822,269	\$160,909,656		2.72%	5.07%	10.91%	16.19%	-3.37%
UBS Trumbull	\$141,303,630	\$126,740,727	\$129,853,151		1.94%	4.51%	10.15%	13.38%	0.94%
NCREIF ODCE					2.35%	5.18%	10.94%	14.40%	-1.10%
TA Realty	\$15,000,000	\$10,095,467	\$10,208,929				SEE NOTE[4]		
Heitman	\$8,769,627	\$8,385,075	\$8,394,594				SEE NOTE[4]		
WestRiver	\$50,110,934	\$29,658,219	\$52,151,427				SEE NOTE[4]		
Cornerstone	\$24,465,518	\$26,487,844	\$26,295,463				SEE NOTE[4]		
NCREIF Property					2.54%	4.94%	10.54%	12.63%	2.13%
<b>Total Real Estate</b>	<b>\$430,953,339</b>	<b>\$359,189,601</b>	<b>\$387,813,219</b>	<b>2.4%</b>					
<b><u>Absolute Return</u></b>									
PAAMCO - Jackalope Fund	\$354,482,860	\$324,208,684	\$379,016,575		1.97%	4.70%	7.36%	3.33%	0.43%
Aurora L.P.	\$162,461,240	\$164,695,111	\$165,886,261		1.68%	4.67%	6.51%	2.48%	0.10%
Aurora L.P. II	\$193,474,620	\$155,464,700	\$197,941,838		1.87%	4.67%	6.52%	2.29%	N/A
HFN FOF Multi-Strat					1.31%	3.59%	4.80%	1.22%	-1.98%
Grosvenor Global Recovery Fund	\$53,237,331	\$103,975,720	\$73,674,455		4.23%	11.31%	20.86%	13.20%	N/A
Global Recovery Custom Index					5.70%	15.42%	27.45%	11.55%	3.68%
<b>Total Absolute Return</b>	<b>\$763,656,051</b>	<b>\$748,344,215</b>	<b>\$816,519,129</b>	<b>5.0%</b>					
<b><u>Wyoming Investments</u></b>									
	\$529,429,269	\$334,344,187	\$529,429,269	3.2%	N/A	N/A	N/A	N/A	N/A

Note[1]: Performance shown is gross of fees with the exception of convertible bonds and absolute return, which are shown net of fees.  
Note[2]: Returns are stated in traditional total return terms and do not specify realized income.  
Note[3]: Market values for non-core real estate and private equity are as of the most recent valuation, adjusted for subsequent cash flows. Investment (Cost) Values are not lagged.  
Note[4]: Performance for Private Equity and Value-Added Real Estate investments is calculated on an IRR basis. For further analysis, please refer to the supplementary alternatives report.  
Note[5]: The Global Recovery Custom Index consists of 50% Credit Suisse Distressed Index, 20% Credit Suisse High Yield Index, and 30% ABX Index.  
Note[6]: Market values shown for Wyoming Investments reflect cost value of the investments, except at fiscal year end.

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

December 31, 2012

Investment Policy Guidelines	Meeting Objective			Explanation
	Yes	No	N/A	
<b>1. Total Fund</b>				
- Exceed the rate of inflation (C.P.I.) over a market cycle of 5-years.	✓			Wyoming returned 4.7% 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 4.7% vs. 4.0% for the Actual Allocation Index for the current 5-year period
- Not more than 1% of the outstanding common shares of any corporation shall be owned by the State. An exception may be made for Alternative Investments.	✓			
- Not more than 1 ½% 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>					
a)	<b>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 3.8% vs. 2.9% for the Actual Allocation Index
b)	<b>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 3.6% vs. 2.6% for the Actual Allocation Index
c)	<b>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 3.2% vs. 2.6% for the Actual Allocation Index
d)	<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 4.2% vs. 3.0% for the Actual Allocation Index
e)	<b>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 5.7% vs. 4.8% for the Actual Allocation Index.
f)	<b>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 5.6% vs. 4.8% for the Actual Allocation Index.
g)	<b>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 6.5% vs. 5.6% for the Actual Allocation Index
h)	<b>Tobacco Settlement Trust Fund</b>				
	- At least 5% to 10% of the fund balance should be invested in securities with maturities of less than one year.	✓			
	- No public and/or private equities are permitted.	✓			
	- Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Tobacco Settlement Trust Fund return was 6.6% vs. 5.9% for the Actual Allocation Index

		Yes	No	N/A	Explanation
i)	<b>State Agency Pool</b>				
	- At least 10% to 15% of the fund balance should be invested in securities with maturities of less than one year.	✓			
	- No public and/or private equities are permitted.	✓			
	- Exceed a weighted index of the Fund's asset allocation and component benchmarks over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: State Agency Pool return was 5.7% vs. 5.1% for the Actual Allocation Index

		Yes	No	N/A	Explanation
<b>3. Domestic Equity Portfolios</b>					
a)	<b>State Street – Large Cap Core</b>				
	- At the time of purchase, a maximum of five percent (5%) of the total stock portfolio of a manager may be invested in any one security.	✓			Determined by the company's weight in the S&P 500 Index
	- A stock position can be allowed to grow from five percent (5%) to a maximum of seven and one-half percent (7.5%) of market value providing there are at least 35 securities in the portfolio.	✓			Largest Holding: Apple Inc. = 3.9%
	- A maximum of 5% of the outstanding float of shares of one company may be held.	✓			
	- The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			In line with Index
	- A minimum number of 35 securities shall be held.	✓			500 securities held in the portfolio
	- Meet performance of the S&P 500 Index, gross of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: State Street gross of fees return was 1.7% vs. 1.7% for the S&P 500 Index

		Yes	No	N/A	Explanation
b)	<b>Gabelli – Small/Mid Cap Value</b>				
	- At the time of purchase, a maximum of five percent (5%) of the total stock portfolio of a manager may be invested in any one security.	✓			
	- A stock position can be allowed to grow from five percent (5%) to a maximum of seven and one-half percent (7.5%) of market value providing there are at least 35 securities in the portfolio.	✓			
	- A maximum of 5% of the outstanding float of shares of one company may be held.	✓			
	- The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.		✗		Gabelli worked to reduce the overweighting concurrently with the most recent rebalancing of the State's portfolio. The current exposure to consumer staples is 10.5%, approximately 4.3 times the respective benchmark weighting.
	- A minimum number of 35 securities shall be held.	✓			
	- Outperform the Russell 2500 Value Index by 100 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Gabelli net of fees return was 6.0% vs. 4.5% for the Russell 2500 Value Index
	- Performance should rank on the top 40 <sup>th</sup> percentile of the small/mid cap peer universe over 5-years, gross of fees.	✓			5-year: US Small/Mid Value rank was 28

		Yes	No	N/A	Explanation
<b>4. International Equity Portfolios</b>					
a)	<b>The Boston Company – Int’l Large Cap Value</b>				
	- At the time of purchase, a maximum of five percent (5%) of the total stock portfolio of a manager may be invested in any one security.	✓			
	- A stock position can be allowed to grow from five percent (5%) to a maximum of seven and one-half percent (7.5%) of market value providing there are at least 35 securities in the portfolio.	✓			
	- A maximum of 5% of the outstanding float of shares of one company may be held.	✓			
	- The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
	- A minimum number of 35 securities shall be held.	✓			
	- Outperform the MSCI ACW Ex US Value Index (Net) by 100 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 8/2010
	- Performance should rank on the top 40 <sup>th</sup> percentile of the international equity peer universe over 5-years, gross of fees.			N/A	Inception date: 8/2010

		Yes	No	N/A	Explanation
b)	<b>Northern Trust – Int'l Passive</b>				
	- At the time of purchase, a maximum of five percent (5%) of the total stock portfolio of a manager may be invested in any one security.	✓			
	- A stock position can be allowed to grow from five percent (5%) to a maximum of seven and one-half percent (7.5%) of market value providing there are at least 35 securities in the portfolio.	✓			
	- A maximum of 5% of the outstanding float of shares of one company may be held.	✓			
	- The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
	- A minimum number of 35 securities shall be held.	✓			
	- Meet performance of the MSCI ACW Ex US Index (Net), gross of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 8/2010

		Yes	No	N/A	Explanation
c)	<b>Manning &amp; Napier – Int'l Large Cap Core</b>				
	- At the time of purchase, a maximum of five percent (5%) of the total stock portfolio of a manager may be invested in any one security.	✓			
	- A stock position can be allowed to grow from five percent (5%) to a maximum of seven and one-half percent (7.5%) of market value providing there are at least 35 securities in the portfolio.	✓			
	- A maximum of 5% of the outstanding float of shares of one company may be held.	✓			
	- The maximum allowable in any sector, as defined as Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			
	- A minimum number of 35 securities shall be held.	✓			
	- Outperform the MSCI ACW Ex US Index (Net) by 100 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 8/2010
	- Performance should rank on the top 40 <sup>th</sup> percentile of the international equity peer universe over 5-years, gross of fees.			N/A	Inception date: 8/2010

		Yes	No	N/A	Explanation
d)	<b>Fisher – Int'l Large Cap Core</b>				
	- At the time of purchase, a maximum of five percent (5%) of the total stock portfolio of a manager may be invested in any one security.	✓			
	- A stock position can be allowed to grow from five percent (5%) to a maximum of seven and one-half percent (7.5%) of market value providing there are at least 35 securities in the portfolio.	✓			
	- A maximum of 5% of the outstanding float of shares of one company may be held.	✓			
	- The maximum allowable weight in any sector, as defined as Global Industry Classification System Level 1, is 2.5 times the respective benchmark weighting, unless the contract with the investment manager specifically provides otherwise.	✓			During the fourth quarter of 2012, there were three instances where the portfolio's Information Technology weight fluctuated above the mandated maximum. Market movement corrected all three instances.
	- A minimum number of 35 securities shall be held.	✓			
	- Outperform the Fisher Custom Benchmark* by 100 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Fisher net of fees return was -0.9% vs. -3.6% for the Fisher Custom Benchmark
	- Performance should rank on the top 40 <sup>th</sup> percentile of the international equity peer universe over 5-years, gross of fees.	✓			5-year: International Core Equity rank was 17

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

		Yes	No	N/A	Explanation
<b>5. Fixed Income Portfolios</b>					
a)	<b>State Street – US TIPS Mandate</b>				
	- Meet the performance of the Barclays US TIPS Index with minimal tracking error, gross of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2013

		Yes	No	N/A	Explanation
b)	<b>C.S. McKee – Core Mandate</b>				
	- Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
	- Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
	- Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Commercial paper of all issuers shall not exceed \$500 million.	✓			
	- Duration must fall in the range of plus or minus twenty percent (20%) of the Barclays US Aggregate Bond Index.	✓			
	- Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities Standard and Poor's, Fitch, or Moody's ratings are acceptable. If the issue is rated by all three rating agencies, the middle rating will apply. If the security is rated by two rating agencies, the lower rating will apply.	✓			
	- Average portfolio credit quality must be A- or better.	✓			
	- Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- A minimum number of 25 securities shall be held.	✓			
	- Investments in mortgage interest only and principal only securities are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
	- Private placements, including 144A securities are not allowed.	✓			
	- Currency forwards and/or swaps are used only for purposes of managing currency exposure, subject to Section 10 of the State's Investment Policy.	✓			
	- Outperform the Barclays US Aggregate Bond Index by 25 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2013
	- Performance should rank in the top 40 <sup>th</sup> percentile of a peer universe over 5-years, gross of fees.			N/A	Inception date: 1/2013

		Yes	No	N/A	Explanation
c)	<b>JP Morgan – Core Mandate</b>				
	- Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
	- Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.			N/A	
	- Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
	- Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Commercial paper of all issuers shall not exceed \$500 million.			N/A	
	- Duration must fall in the range of plus or minus twenty percent (20%) of the Barclays US Aggregate Bond Index.	✓			
	- Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities Standard and Poor's, Fitch, or Moody's ratings are acceptable. If the issue is rated by all three rating agencies, the middle rating will apply. If the security is rated by two rating agencies, the lower rating will apply.	✓			Securities rated below Investment Grade in portfolio were inherited from the previous manager.
	- Average portfolio credit quality must be A- or better.	✓			
	- Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.			N/A	
	- A minimum number of 25 securities shall be held.	✓			
	- Investments in mortgage interest only and principal only securities are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
	- Private placements, including 144A securities are not allowed.	✓			
	- Currency forwards and/or swaps are used only for purposes of managing currency exposure, subject to Section 10 of the State's Investment Policy.	✓			
	- Outperform the Barclays US Aggregate Bond Index by 25 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2013
	- Performance should rank in the top 40 <sup>th</sup> percentile of a peer universe over 5-years, gross of fees.			N/A	Inception date: 1/2013

		Yes	No	N/A	Explanation
d)	<b>MacKay Shields – Core Mandate</b>				
	- Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
	- Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
	- Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Commercial paper of all issuers shall not exceed \$500 million.	✓			
	- Duration must fall in the range of plus or minus twenty percent (20%) of the Barclays US Aggregate Bond Index.	✓			
	- Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities Standard and Poor's, Fitch, or Moody's ratings are acceptable. If the issue is rated by all three rating agencies, the middle rating will apply. If the security is rated by two rating agencies, the lower rating will apply.	✓			
	- Average portfolio credit quality must be A- or better.	✓			
	- Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- A minimum number of 25 securities shall be held.	✓			
	- Investments in mortgage interest only and principal only securities are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
	- Private placements, including 144A securities are not allowed.	✓			
	- Currency forwards and/or swaps are used only for purposes of managing currency exposure, subject to Section 10 of the State's Investment Policy.	✓			
	- Outperform the Barclays US Aggregate Bond Index by 25 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2013
	- Performance should rank in the top 40 <sup>th</sup> percentile of a peer universe over 5-years, gross of fees.			N/A	Inception date: 1/2013

		Yes	No	N/A	Explanation
e)	<b>Neuberger Berman – Core Mandate</b>				
	- Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
	- Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
	- Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Commercial paper of all issuers shall not exceed \$500 million.	✓			
	- Duration must fall in the range of plus or minus twenty percent (20%) of the Barclays US Aggregate Bond Index.	✓			
	- Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities Standard and Poor's, Fitch, or Moody's ratings are acceptable. If the issue is rated by all three rating agencies, the middle rating will apply. If the security is rated by two rating agencies, the lower rating will apply.	✓			Neuberger Berman received a waiver to transition securities rated below these minimums from the Core Plus portfolio. This is reported to the Wyoming State Treasurer's Office on a monthly basis.
	- Average portfolio credit quality must be A- or better.	✓			
	- Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- A minimum number of 25 securities shall be held.	✓			
	- Investments in mortgage interest only and principal only securities are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
	- Private placements, including 144A securities are not allowed.	✓			
	- Currency forwards and/or swaps are used only for purposes of managing currency exposure, subject to Section 10 of the State's Investment Policy.	✓			No currency forwards or swaps are currently used.
	- Outperform the Barclays US Aggregate Bond Index by 25 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2013
	- Performance should rank in the top 40 <sup>th</sup> percentile of a peer universe over 5-years, gross of fees.			N/A	Inception date: 1/2013

		Yes	No	N/A	Explanation
f)	<b>PIMCO – Core Mandate*</b>				
	- Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
	- Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
	- Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Commercial paper of all issuers shall not exceed \$500 million.	✓			
	- Duration must fall in the range of plus or minus twenty percent (20%) of the Barclays US Aggregate Bond Index.	✓			
	- Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities Standard and Poor's, Fitch, or Moody's ratings are acceptable. If the issue is rated by all three rating agencies, the middle rating will apply. If the security is rated by two rating agencies, the lower rating will apply.	✓			
	- Average portfolio credit quality must be A- or better.	✓			
	- Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- A minimum number of 25 securities shall be held.	✓			
	- Investments in mortgage interest only and principal only securities are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
	- Private placements, including 144A securities are not allowed.	✓			
	- Currency forwards and/or swaps are used only for purposes of managing currency exposure, subject to Section 10 of the State's Investment Policy.	✓			
	- Outperform the Barclays US Aggregate Bond Index by 25 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2013
	- Performance should rank in the top 40 <sup>th</sup> percentile of a peer universe over 5-years, gross of fees.			N/A	Inception date: 1/2013

\*PIMCO received a waiver to transition securities from the Core Plus portfolio. As of December 31, 2012, the portfolio meets all criteria established for the Core Plus portfolio.

		Yes	No	N/A	Explanation
g)	<b>Wells Capital – Core Mandate</b>				
	- Obligations not issued or guaranteed by the US government, US agencies, or US government-sponsored corporations and agencies are subject to a ten percent (10%) per issuer limit excluding investments in commingled vehicles.	✓			
	- Non-US dollar denominated securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Private mortgage-backed and asset-backed securities are limited to ten percent (10%) of the portfolio market value.	✓			
	- Commercial mortgage-backed securities are permitted but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- Commercial paper of all issuers shall not exceed \$500 million.	✓			
	- Duration must fall in the range of plus or minus twenty percent (20%) of the Barclays US Aggregate Bond Index.	✓			
	- Minimum Issue Credit Rating at the time of purchase will be: A1 or equivalent for commercial paper BBB- for Corporate Bonds BBB- for Mortgage-Backed Securities BBB- for Commercial Mortgage-Backed Securities BBB- for Asset-Backed Securities BBB- for Non-US Dollar Denominated Securities BBB- for Dollar Denominated Emerging Market Securities Standard and Poor's, Fitch, or Moody's ratings are acceptable. If the issue is rated by all three rating agencies, the middle rating will apply. If the security is rated by two rating agencies, the lower rating will apply.	✓			
	- Average portfolio credit quality must be A- or better.	✓			
	- Dollar denominated emerging market securities are permitted, but shall comprise no more than ten percent (10%) of the portfolio market value.	✓			
	- A minimum number of 25 securities shall be held.	✓			
	- Investments in mortgage interest only and principal only securities are permitted, but shall comprise no more than five percent (5%) of the portfolio market value.	✓			
	- Private placements, including 144A securities are not allowed.	✓			
	- Currency forwards and/or swaps are used only for purposes of managing currency exposure, subject to Section 10 of the State's Investment Policy.	✓			
	- Outperform the Barclays US Aggregate Bond Index by 25 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2013
	- Performance should rank in the top 40 <sup>th</sup> percentile of a peer universe over 5-years, gross of fees.			N/A	Inception date: 1/2013

		Yes	No	N/A	Explanation
<b>6. Convertible Bond Portfolios</b>					
a)	<b>Allianz Global Investors</b>				
	- Performance must exceed BofA ML All Quality Convertible Bond Index by 100 basis points, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Allianz Global Investors net of fees return was 5.6% vs. 4.1% for the BofA ML All Quality Convertible Bond Index

		Yes	No	N/A	Explanation
<b>7. Cash and Cash Equivalents Portfolios</b>					
<b>JP Morgan Cash Composite</b>					
a)	<b>JP Morgan Treasury Cash</b>				
	- Portfolio's weighted average maturity is not to exceed 90 days.	✓			
	- Portfolio's maximum average cash flow weighted duration of the portfolio must not exceed 90 days.	✓			
	- The market value of the portfolio must remain within plus or minus ½ of 1% of amortized cost.	✓			
	- A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
	- Investment in any single issuer must not exceed 5% of the outstanding issues of that issuer.	✓			
	- Investment performance must exceed Monitored Repurchase Agreement Rate plus 15 basis points and the cash equivalents allocation by the 90-day T-Bill rate, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: JP Morgan Treasury Cash net of fees return was 0.5% vs. 0.5% vs. for the BofA ML 3 Mo US T-Bill Index

b)	<b>JP Morgan Treasury Extended Cash</b>				
	- Portfolio's average cash flow weighted duration is not to exceed 3 years.	✓			
	- Average cash flow weighted duration is not to exceed 3 years.	✓			
	- Individual securities must not exceed cash flow weighted duration of greater than 5-years.	✓			
	- A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
	- Investment Performance must exceed an Equal Weighted Blend of the BofA Merrill Lynch 1-3 Year Agency, 1-3 Year Treasury, and a 0-3 Year Mortgage Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.		✗		5-year: JP Morgan Treasury Extended Cash net of fees return was 2.9% vs. 3.1% for the Blended Index.
	- The extended portfolio must not exceed 35% of the total JP Morgan managed portfolio.	✓			

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

		Yes	No	N/A	Explanation
<b>JP Morgan Wyo-Star Cash Composite</b>					
c)	<b>JP Morgan Wyo-Star Cash</b>				
	- Portfolio's weighted average maturity is not to exceed 90 days.	✓			
	- Portfolio's maximum average cash flow weighted duration of the portfolio must not exceed 90 days.	✓			
	- The market value of the portfolio must remain within plus or minus ½ of 1% of amortized cost.	✓			
	- A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
	- Investment in any single issuer must not exceed 5% of the outstanding issues of that issuer.	✓			
	- Investment performance must exceed Monitored Repurchase Agreement Rate plus 15 basis points and the cash equivalents allocation by the 90-day T-Bill rate, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: JP Morgan Wyo-Star Cash net of fees return was 0.5% vs. 0.5% for the BofA ML 3 Mo US T-Bill Index.

d)	<b>JP Morgan Wyo-Star Extended Cash</b>				
	- Portfolio's average cash flow weighted duration is not to exceed 3 years.	✓			
	- Average cash flow weighted duration is not to exceed 3 years.	✓			
	- Individual securities must not exceed cash flow weighted duration of greater than 5-years.	✓			
	- A maximum of 10% of total assets shall be placed in the securities of one issuer except for government securities.	✓			
	- Investment Performance must exceed an Equal Weighted Blend of the BofA Merrill Lynch 1-3 Year Agency, 1-3 Year Treasury, and a 0-3 Year Mortgage Index, net of fees, over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: JP Morgan Wyo-Star Extended Cash net of fees return was 3.1% vs. 3.1% for the Blended Index
	- The extended portfolio must not exceed 35% of the total JP Morgan managed portfolio.	✓			

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

		Yes	No	N/A	Explanation
<b>8. Alternative Strategies</b>					
<b>Core Real Estate</b>					
a)	<b>Clarion Lion</b>				
	- Outperform the NCREIF Fund Index – Open-End Diversified Core Equity (NFI-ODCE) by 75 basis points, 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 -4.2% vs. -2.0% for the NCREIF ODCE Index (Net) (AWA)
b)	<b>UBS Trumbull</b>				
	- Outperform the NCREIF Fund Index – Open-End Diversified Core Equity (NFI-ODCE) by 75 basis points, 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 0.0% vs. -2.0% for the NCREIF ODCE Index (Net) (AWA)
<b>Absolute Return</b>					
c)	<b>PAAMCO</b>				
	- Outperform the 90-Day T-Bills by 500 basis points, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.		✗		5-year: PAAMCO net of fees return was 0.4% vs. 0.5% for the BofA ML 3 Mo US T-Bill Index
	- Outperform the HFN Fund of Funds Multi-Strategy Index, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: PAAMCO net of fees return was 0.4% vs. -2.0% for the HFN FOF Multi-Strat Index
d)	<b>Aurora L.P.</b>				
	- Outperform the 90-Day T-Bills by 500 basis points, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.		✗		5-year: Aurora L.P. net of fees return was 0.1% vs. 0.5% for the BofA ML 3 Mo US T-Bill Index
	- Outperform the HFN Fund of Funds Multi-Strategy Index, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.	✓			5-year: Aurora L.P. net of fees return was 0.1% vs. -2.0% for the HFN FOF Multi-Strat Index

		Yes	No	N/A	Explanation
e)	<b>Aurora L.P. II</b>				
	- Outperform the 90-Day T-Bills by 500 basis points, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 7/2009
	- Outperform the HFN Fund of Funds Multi-Strategy Index, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 7/2009
f)	<b>Grosvenor Global Recovery Fund</b>				
	- Outperform the Global Recovery Custom Index, net of all fees (including underlying fund manager fees), over a full market cycle, approximated by the most recent 5-year period.			N/A	Inception date: 1/2010

## Wyoming State Treasurer's Office

### Addendum

As of December 31, 2012

#### **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 (Cap Wtd) to represent domestic large cap equities, Russell 2500 Index for domestic small/mid cap equities, MSCI ACW Ex US Index (Net) for international equities, Barclays US Aggregate Bond Index for fixed income, BofA Merrill Lynch All Convertibles Index (All Qualities) for convertible bonds, NCREIF Open-End Diversified Core Equity Index (Gross) (AWA) for core real estate, NCREIF Property Index for value-added real estate, the State's actual private equity investment returns for private equity, HFN Fund of Funds Multi-Strat Index for absolute return, and BofA Merrill Lynch 90 day US T-Bill rate for cash equivalents.

Pooled Fund actual allocation indices are calculated using beginning month asset class weights applied to the appropriate asset class benchmark return, using the S&P 500 Index (Cap Wtd) to represent domestic large cap equities, Russell 2500 Index for domestic small/mid cap equities, MSCI ACW Ex US Index (Net) for international equities, Barclays US Aggregate Bond Index for fixed income, BofA Merrill Lynch All Convertibles Index (All Qualities) for convertible bonds, NCREIF Open-End Diversified Core Equity Index for core real estate, NCREIF Property Index for value-added real estate, the State's actual private equity investment returns for private equity, HFN Fund of Funds Multi-Strat Index for absolute return, and the State Agency Pool Custom Index for the State Agency Pool allocation.

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

The Global/EM Custom Index consists of 32.5% Barclays Aggregate ex-US Hedged, 5% Barclays Aggregate ex-US Unhedged, 47.5% JP Morgan EMBI, and 15% JP Morgan GBI-EM Global Diversified Unhedged.

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

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

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

The Global Recovery Custom Index consists of 50% Credit Suisse Distressed Loan Index, 20% Credit Suisse High Yield Index, and 30% ABX Index.

#### **Performance & Holding Comments**

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

Where stated, allocations to fixed income include convertibles and Wyoming Investments.

## Wyoming State Treasurer's Office

### Addendum

As of December 31, 2012

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

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

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

PIMCO refers to the World Bank's definition in classifying countries as either Developed or Emerging based on their level of GDP per capita. Currently, over 150 countries and nations are classified as Emerging by the World Bank.

#### **Alternative Investment Comments**

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

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

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

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

#### **Miscellaneous Comments**

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

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

Per the request of the Treasurer's Office, LDIs and Other Wyoming Investments have been re-named to Wyoming Investments.

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

Effective March 19, 2012, Barclays Capital ("BC") indices have been rebranded to "Barclays". Naming conventions have been updated to "Barclays" or "B" to reflect the change.

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. Additional assets are intended to transition to two credit and two emerging markets debt (local) managers during the 1st quarter of 2013.

## Glossary

**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. There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers) such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

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

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

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

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

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

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

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

## Glossary

### Capital Markets Review -

**Baltic Dry Index** - Measures the demand for shipping capacity versus the supply of dry bulk carriers. As the supply of cargo ships is inelastic, the Baltic Dry Index provides an assessment of the price of moving major raw materials by sea.

**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.

**Capacity Utilization** - Measures the extent to which a country efficiently utilizes installed productive capacity. It measures the difference between the output that is produced using the installed equipment versus the output that *could* be produced using the installed equipment.

**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.

**Disposable Personal Income** - The difference between total personal income and personal income tax payments.

**Disposable Producer Price Index (PPI)** - Measures the average change in selling prices received by US producers for their output.

**M2** - Measures the amount of money in circulation and is often used as an indicator for forecasting 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.

**Personal Consumption Expenditures** - Measures the average increase in prices for all domestic personal consumption.

**Personal Savings** - Percentage of personal saving within the US as a percentage of disposable personal income.

**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.

**Relative Strength Index (RSI)** - Measures the current and historical strength or weakness of a stock market based on the closing prices of the most recent 14-day period. RSI is classified as a momentum oscillator and measures the velocity and magnitude of directional price movements. RSI levels at or above 70 may indicate that a market is "overbought" while RSI levels below 30 may indicate that a market is "oversold."

**Shiller 20 City YoY** - Measures the yearly change in housing prices for 20 major metropolitan areas within the US.

### US Credit Market Debt as a Percentage of GDP -

**Business** - Non-financial corporate business and non-corporate business.

**Financials** - Commercial banks, savings institutions and credit unions, government-sponsored enterprises, agency- and GSE-backed mortgage pools, ABS issuers, life insurance companies, REITs, and financial companies.

**Foreign** - US credit market instruments owed by non-US entities and debt issued by foreign companies in the US.

**Government** - Savings bonds, Treasury securities, budget agency securities, insurance reserves, and non-marketable securities held by retirement plans.

**Household** - Home mortgages, consumer credit, municipal securities, bank loans, and commercial mortgages.

**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."

**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.

## Glossary

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

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

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

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

**Effective Duration** - The weighted average duration of all the bonds in a given portfolio, weighted by their dollar values.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Glossary

### Peer Groups -

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

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

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

**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 endorses the Global Investment Performance Standards (GIPS) and calculates performance for investment managers and composites using different methodologies. Investment manager performance is calculated by revaluing the portfolio on the date of all large external cash flows while composite performance is calculated using the Modified Dietz calculation methodology. According to the CFA Institute, "Only investment management firms that actually manage assets can claim compliance with the Standards. Plan Sponsors and consultants cannot make a claim of compliance unless they actually manage assets for which they are making a claim of compliance. They can claim to endorse the Standards and/or require that their investment managers comply with the Standards."

**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.

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

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

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

## Glossary

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

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

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

**Sharpe Ratio** - Represents the excess rate of return over the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return. 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** - A measure of the price sensitivity of a bond to a 100 basis-point movement of the bond's spread relative to Treasuries.

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

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

## Glossary

**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	Core Real Estate
	Preferred Securities	Asset Backed Fixed Income	Real Return
	High Yield	Domestic Core Plus Fixed Income	Inflation Hedges
	Convertible Fixed Income	Mortgage Backed Fixed Income	REITS
	TALF Funds	International Developed Fixed Income	Commodities
	Distressed Debt	Cash Equivalents	
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

**Total Fund Attribution** - A method for identifying the sources of a total fund's over- or underperformance relative to its benchmark. The calculation identifies the contributions of positive or negative total fund excess return caused by allocation differences relative to the total fund's custom benchmark, and performance differences of the investment managers relative to the benchmark components that represent them.

**Total Fund Performance -**

**Total Fund** - The percentage return of the total fund for the specified time period.

**Total Fund Benchmark** - The percentage return of the total fund benchmark for the specified time period; calculated using the target asset allocation and the corresponding benchmark returns.

**Total Value Added** - The percentage of over- or underperformance of the total fund as compared to the total fund benchmark.

**Total Value Added -**

**Asset Allocation** - Shows how the variance of the total fund's actual allocation from its target allocation added to or subtracted from fund performance.

**Manager Value Added** - The portion of the total value added attributable to the outperformance or underperformance of the fund's investment managers, relative to the individual benchmarks that represent them in the total fund benchmark.

**Market Timing/Other** - The contribution of other residual factors, including estimation error and transaction timing.

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

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

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

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

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

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

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