



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: MARCH 31, 2018

Investment Performance Review for

Alameda County Employees' Retirement Association

1st quarter summary

THE ECONOMIC CLIMATE

- The U.S. economy is expected to grow at around 2.2% in Q1. Economists expect a slightly quicker rate of growth throughout the year. We believe that this *middle-of-the-road* expansion – characterized as not too fast and not too slow – may allow the U.S. economy to continue expanding for longer than expected.
- The U.S. has enacted a 25% tariff on steel and a 10% tariff on aluminum, which went into effect on March 23rd. The U.S. also engaged with China over allegations of asymmetrical trade policies and intellectual property theft.

PORTFOLIO IMPACTS

- Global economic growth has improved – low inflation, strong employment, and accommodative foreign central bank policies have been supportive of equity prices. In the U.S., monetary tightening has yet to have a major impact on equities.
- Concerns over increasing trade protectionism weighed on financial markets. The tariffs placed on steel and aluminum are not likely to have a material impact on asset prices, but escalating tensions and retaliatory measures could have a negative impact on global growth.

THE INVESTMENT CLIMATE

- Excitement and optimism over tax cuts helped lead equities higher to begin the year. However, markets stumbled in February – falling roughly 10%. Equities recovered much of the losses throughout the quarter, but then fell back to their lows at the end of March.
- 2018 is expected to be a banner year for U.S. corporate profits. Earnings for the calendar year are forecast to grow 17.3%, with 7.3% revenue growth. These 2018 expectations may already be priced in.
- February’s market correction appeared isolated to the equity markets. “Risk-off” selling that often accompanies market drawdowns was not apparent – credit spreads, U.S. Treasuries, and gold, reacted minimally.

ASSET ALLOCATION ISSUES

- Upward price momentum in equities has diminished following the February market correction. Investor sentiment is less positive, but the global economic and earnings backdrop remains intact. We believe a neutral or mild risk overweight is warranted in this environment.
- Equity volatility spiked in February, ending the period of extreme calm that investors experienced since the beginning of 2017. The VIX Index averaged 20.7 during the last two months of the quarter.

Changing market dynamics suggest a neutral or mild risk overweight may be warranted

U.S. economics summary

- Economic growth remained near expansion highs in the fourth quarter. U.S. real GDP growth was 2.6% from the previous year. Consumer spending and investment pushed the economy ahead, while falling exports were a drag on growth.
- The U.S. enacted a 25% tariff on steel and 10% tariff on aluminum, which went into effect March 23rd. The U.S. has engaged with China over allegations of asymmetrical trade policies and intellectual property theft, creating concerns over the risks of a trade war.
- Additions to U.S. payrolls averaged 202,000 per month in the first quarter, above the expansion average.
- In recent years, the U.S. has seen discouraged and part-time workers drawn back to full-time employment. This effect can be

quantified by the shrinking difference between U-6 and U-3 unemployment figures. The difference between these two measures fell to 3.9%, matching expansion lows.

- Core CPI inflation moved from 1.8% to 2.1% YoY during the quarter, the highest rate in more than a year. Prices jumped in March primarily due to the low base effect from an unexpected drop in wireless telecom prices one year ago.
- The Fed raised interest rates on March 21st to 1.50-1.75%. Comments made during the March meeting suggest the FOMC expects continued moderate economic activity, spending, and business investment. Unsurprisingly, the Committee stated that the U.S. inflation rate is expected to stabilize at the 2% target over the near-term.

	Most Recent	12 Months Prior
GDP (YoY)	2.6% <i>12/31/17</i>	1.8% <i>12/31/16</i>
Inflation (CPI YoY, Core)	2.1% <i>3/31/18</i>	2.0% <i>3/31/17</i>
Expected Inflation (5yr-5yr forward)	2.2% <i>3/31/18</i>	2.2% <i>3/31/17</i>
Fed Funds Target Range	1.50 – 1.75% <i>3/31/18</i>	0.75 – 1.00% <i>3/31/17</i>
10 Year Rate	2.8% <i>3/31/18</i>	2.4% <i>3/31/17</i>
U-3 Unemployment	4.1% <i>3/31/18</i>	4.5% <i>3/31/17</i>
U-6 Unemployment	8.0% <i>3/31/18</i>	8.8% <i>3/31/17</i>

International economics summary

- International economic growth was strong across countries in the fourth quarter, but a combination of recent economic data coming in below expectations and trade concerns created risks to the synchronized global growth narrative.
- The U.S. implemented 25% and 10% tariffs on steel and aluminum imports, respectively. When the tariffs were initially announced the White House pushed for all countries to be subject to them. However, many countries, such as Canada and Mexico, were given exemptions to allow for ongoing negotiations.
- In April, concerns over trade shifted to escalating tensions between the U.S. and China.
- The Eurozone experienced above-trend growth in the fourth quarter at 2.7% YoY, driven by contributions from household spending and fixed capital investment.
- Economic data out of the Eurozone consistently missed expectations in the first quarter. Industrial production was particularly disappointing – the year-over-year rate fell from 5.2% in December to 2.9% in February.
- Global PMIs remained above 50, indicating expansion in the manufacturing sector, although several countries experienced a decline. The Eurozone PMI fell from 60.8 to 56.6 during the quarter.
- The populist Five Star Movement performed better than expected in the Italian general election in March, winning the most seats of any party. However, no party won a majority in Parliament, resulting in the need to form a coalition government. Increasing support for populist governments (i.e. Hungary and Poland) across Europe remains a risk to investors.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.5% <i>12/31/17</i>	2.4% <i>3/31/18</i>	4.1% <i>3/31/18</i>
Western Europe	2.5% <i>12/31/17</i>	1.3% <i>3/31/18</i>	7.4% <i>12/31/17</i>
Japan	2.0% <i>12/31/17</i>	1.5% <i>2/28/18</i>	2.5% <i>2/28/18</i>
BRICS Nations	6.2% <i>12/31/17</i>	2.6% <i>3/31/18</i>	5.6% <i>12/31/17</i>
Brazil	2.1% <i>12/31/17</i>	2.7% <i>3/31/18</i>	12.4% <i>3/31/18</i>
Russia	0.9% <i>12/31/17</i>	2.4% <i>3/31/18</i>	5.0% <i>2/28/18</i>
India	7.2% <i>12/31/17</i>	4.4% <i>2/28/18</i>	8.8% <i>12/31/17</i>
China	6.8% <i>12/31/17</i>	2.1% <i>3/31/18</i>	3.9% <i>12/31/17</i>

- The composite Fund returned 0.9% for the first quarter of 2018 and ranked in the 10th percentile among public funds greater than \$1 billion (median of 0.1%). The Fund beat its policy index return of 0.0% during this time period. Longer term, the five (9.1%), seven (8.7%), and ten year (7.3%) returns ranked in the first quartile of large public plans.

- First quarter results were enhanced by the following factors:
 1. Next Century Growth rose 6.6% beating the Russell 2000 Growth + 2.5% (3.0%). Stock selection especially within healthcare contributed to relative outperformance.
 2. TCW beat the Russell 1000 Growth +2% (4.4% vs 2.0%). Positive security selection, primarily in the information technology and consumer discretionary sectors, drove outperformance.
 3. Templeton's quarterly return of 1.8% beat the MSCI ACWI ex US Small Cap (-0.3%). Stock selection in industrials, information technology, and financials contributed to outperformance. Regionally, Asia benefited from an outperformance in Japan, South Korea, and China.
 4. Loomis Sayles lost -0.3%, but beat the Barclays US Credit BAA (-2.2%) and ranked in the top decile of its peers. Outperformance was driven primarily by security selection, and yield curve positioning.
 5. Brandywine topped the Citi WGBI (4.1 vs 2.5%), and ranked in the top decile of its peers. Relative performance was split nearly equally between bonds and currency. The Mexican peso delivered most of the currency-related total return.
 6. Capital Group gained 0.2% beating the MSCI ACWI ex US by 1.3%. Stock selection in industrials, real estate, financials and materials contributed to positive performance.
 7. AQR rose 0.1%, beating the MSCI ACWI ex US (-1.1%). Both the global asset allocation overlay and the global stock selection strategy added value. Within global asset allocation, the currency selection was flat, while the country selection strategy added value for the period.

Total Fund
 Manager Allocation Analysis (One Quarter)

Period Ending: March 31, 2018

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
AG Opportunistic Whole Loan ¹	\$19,051,662	-\$3,030,871	\$0	\$16,020,791
AG STAR	\$7,427,035	-\$1,826,342	\$429,002	\$6,029,695
Alta	\$13,624,399	\$0	-\$52,259	\$13,572,140
AQR	\$498,563,195	\$0	\$341,102	\$498,904,298
AQR GSS	--	\$170,000,000	\$0	\$170,000,000
AQR Real Return	\$167,491,262	\$0	\$4,638,757	\$172,130,019
Artemis RE Partners Healthcare ¹	\$5,458,436	\$1,562,728	\$107,007	\$7,128,171
Baird Advisors	\$672,981,189	-\$135,582	-\$9,099,095	\$663,746,512
Bivium Cash	\$3,277	-\$3,281	\$7	\$3
Blackstone Strategic Opportunity	--	\$8,000,000	\$0	\$8,000,000
Brandywine	\$338,593,054	-\$232,155	\$13,721,070	\$352,081,970
Capital Group	\$1,068,613,779	-\$70,000,000	\$1,973,091	\$1,000,586,870
Cash Account	-\$9,240,626	\$29,706,005	\$156,403	\$20,621,782
CIM Infrastructure II	\$11,756,298	\$86,557	\$0	\$11,842,855
CIM Urban REIT & CMCT	\$14,084,851	-\$73,414	\$173,812	\$14,185,249
CIM Urban REIT VI-2	\$30,230,482	-\$260,000	\$202,127	\$30,172,609
Dyal Capital II ¹	\$9,363,151	\$1,858,114	\$0	\$11,221,265
EnTrustPermal	\$127,522,000	-\$127,522,000	\$0	--
Gresham Onshore ETAP	\$41,595,884	\$0	-\$41,685	\$41,554,199
Gresham TAP	\$53,458,341	\$0	-\$33,547	\$53,424,794
Heitman America REIT	\$53,022,733	-\$431,007	\$1,027,641	\$53,619,367
Heitman Value II	\$169,913	\$0	\$0	\$169,913
Huber	\$9,914,534	\$0	-\$320,970	\$9,593,564
Jamestown Premier Property	\$28,882,571	-\$6,823,777	\$853,694	\$22,912,489
JP Morgan Alternative	\$173,642	\$0	\$2,116	\$175,758
JP Morgan Strategic	\$69,050,373	-\$549,088	\$1,335,135	\$69,836,421
Kennedy	\$279,717,547	-\$133,274,880	-\$10,581,503	\$135,861,165
LHP Strategic Alpha	\$111,633,672	\$0	\$3,174,572	\$114,808,244

¹ Preliminary ending market value.

Total Fund
 Manager Allocation Analysis (One Quarter)

Period Ending: March 31, 2018

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Lion Industrial Trust	\$44,930,799	-\$338,580	\$1,711,112	\$46,303,331
Loomis Sayles	\$335,268,931	-\$264,061	-\$931,260	\$334,073,610
Matarin	\$10,444,714	\$8,766	-\$36,281	\$10,417,200
Mellon S&P 500	\$1,065,934,004	-\$1,084,146,729	\$18,212,725	\$0
MetLife Core Property	\$67,254,461	-\$713,769	\$1,324,563	\$67,865,255
Mondrian	\$705,585,306	-\$605,969	-\$8,676,212	\$696,303,125
Next Century-SCG	\$205,483,529	-\$81,936,205	\$11,685,816	\$135,233,140
Next Century-USCG	\$32,777	-\$32,853	\$103	\$27
OakBrook	\$14,717,649	\$0	-\$65,282	\$14,652,368
Oakland Building	\$66,501,573	-\$616,122	\$746,478	\$66,631,929
P/E Investments	\$28,708,944	\$0	-\$1,192,073	\$27,516,871
PRISA	\$52,119,518	-\$457,023	\$1,129,872	\$52,792,366
PRISA III	\$42,775,394	-\$280,383	\$781,659	\$43,276,671
Private Equity	\$445,120,310	-\$4,850,963	\$18,501,148	\$458,770,496
Private Real Assets	\$20,868,867	\$577,500	-\$1,488,095	\$19,958,272
Pzena	\$526,058,307	-\$269,521,411	-\$1,034,239	\$255,502,657
Quantum Energy Partners VII	\$6,301,318	\$1,362,305	-\$120,246	\$7,543,377
Quest	\$14,015,661	\$0	\$451,182	\$14,466,843
Sec. Lending	\$0	-\$687,685	\$687,685	\$0
TCW	\$505,518,607	-\$256,691,058	\$16,602,843	\$265,430,392
Templeton	\$265,162,204	\$0	\$4,755,257	\$269,917,462
Transition Account	\$21	\$1,780,755,545	-\$5,834,589	\$1,774,920,976
UBS Trumbull Property	\$48,031,975	-\$388,553	\$794,280	\$48,437,703
Vulcan Value	\$16,713,862	\$0	\$489,902	\$17,203,764
Total	\$8,110,691,389	-\$51,776,240	\$66,502,827	\$8,125,417,975

Bivium

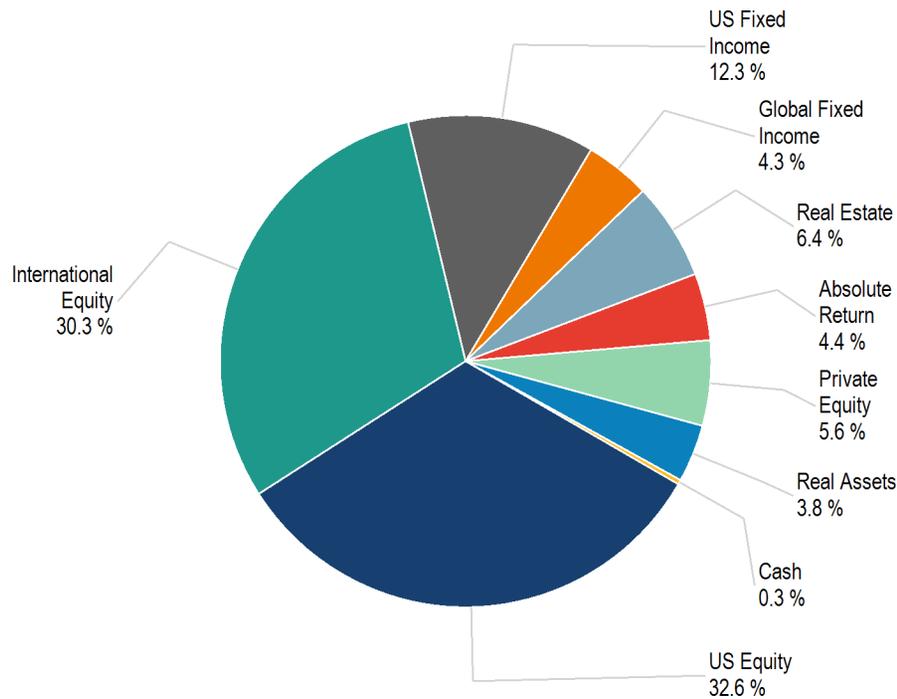
Manager Allocation Analysis (One Quarter)

Period Ending: March 31, 2018

	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Alta	\$13,624,399	\$0	-\$52,259	\$13,572,140
Bivium Cash	\$3,277	-\$3,281	\$7	\$3
Huber	\$9,914,534	\$0	-\$320,970	\$9,593,564
Matarin	\$10,444,714	\$8,766	-\$36,281	\$10,417,200
OakBrook	\$14,717,649	\$0	-\$65,282	\$14,652,368
Quest	\$14,015,661	\$0	\$451,182	\$14,466,843
Vulcan Value	\$16,713,862	\$0	\$489,902	\$17,203,764
Total	\$79,434,097	\$5,485	\$466,299	\$79,905,881

Total Fund
Asset Allocation Analysis

Period Ending: March 31, 2018



	Current Balance	Current Allocation
US Equity	\$2,646,854,237	32.6%
International Equity	\$2,465,711,755	30.3%
US Fixed Income	\$997,820,123	12.3%
Global Fixed Income	\$352,081,970	4.3%
Real Estate	\$523,507,232	6.4%
Absolute Return	\$353,596,866	4.4%
Private Equity	\$458,770,496	5.6%
Real Assets	\$306,453,516	3.8%
Cash	\$20,621,782	0.3%
Total	\$8,125,417,975	100.0%

	Policy	Current Allocation	Difference
US Equity	28.0%	32.6%	4.6%
International Equity	26.0%	30.3%	4.3%
US Fixed Income	12.8%	12.3%	-0.5%
Global Fixed Income	2.3%	4.3%	2.1%
Real Estate	8.0%	6.4%	-1.6%
Absolute Return	9.0%	4.4%	-4.6%
Private Equity	9.0%	5.6%	-3.4%
Real Assets	5.0%	3.8%	-1.2%
Cash	--	0.3%	0.3%
Total	100.0%	100.0%	

Total Fund Performance Summary

Period Ending: March 31, 2018

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fund (Gross)	0.9	10	5.3	4	14.0	3	8.3	6	9.1	14	8.7	12	7.3	9	9.8	Sep-85
Total Fund (Net)	0.9	11	5.2	4	13.7	4	8.0	9	8.7	23	8.3	24	7.0	17	9.6	
<i>Policy Index¹</i>	0.0	62	4.2	34	12.6	12	8.3	6	9.4	5	8.9	8	7.6	7	10.1	Sep-85
<i>Allocation Index</i>	-0.3	74	4.1	38	12.6	11	8.1	7	9.1	12	8.6	17	7.0	17	--	Sep-85
<i>InvestorForce Public DB > \$1B Gross Median</i>	0.1		3.8		11.1		7.1		8.0		7.8		6.4		8.9	Sep-85
US Equity (Gross)	1.4	7	7.9	6	17.4	8	10.8	16	13.4	21	12.4	25	10.2	16	11.7	Sep-85
US Equity (Net)	1.3	7	7.7	7	17.0	11	10.5	27	13.0	39	12.1	46	9.9	34	--	
<i>Russell 3000</i>	-0.6	65	5.7	56	13.8	55	10.2	41	13.0	39	12.4	28	9.6	49	11.2	Sep-85
<i>InvestorForce All DB US Eq Gross Median</i>	-0.5		5.7		13.9		10.1		12.8		12.0		9.6		11.0	Sep-85
Large Cap Active Equity (Gross)	1.3	7	8.0	6	17.9	6	11.6	6	13.5	18	12.9	8	10.8	7	7.9	Mar-00
Large Cap Active Equity (Net)	1.3	8	7.8	7	17.5	8	11.2	10	13.1	37	12.4	26	10.4	11	7.5	
<i>Russell 1000</i>	-0.7	69	5.9	43	14.0	47	10.4	32	13.2	31	12.6	19	9.6	50	5.4	Mar-00
<i>InvestorForce All DB US Eq Gross Median</i>	-0.5		5.7		13.9		10.1		12.8		12.0		9.6		6.1	Mar-00
Bivium (Gross)	0.6	28	6.1	48	14.3	45	8.8	58	11.9	55	11.5	50	--	--	9.9	Jul-08
Bivium (Net)	0.5	33	5.9	53	13.9	48	8.4	65	11.4	66	11.1	56	--	--	9.4	
<i>Russell 3000 +1%¹</i>	-0.3	47	6.1	47	14.8	36	11.2	17	14.0	21	13.7	14	--	--	--	Jul-08
<i>Russell 3000</i>	-0.6	58	5.7	55	13.8	49	10.2	34	13.0	39	12.4	34	9.6	49	10.3	Jul-08

Total Fund and asset class composites are ranked against InvestorForce universes. Managers are ranked against eVestment Alliance style universes.

Ranking of 1 is a top ranking and a ranking of 100 is a bottom ranking. The InvestorForce Public DB > \$1B Gross universe consists of 97 members with a total market value of \$1,876.0 Trillion.

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, public real estate) investment management fees will be included in the gross of fee return calculation.

* Effective Q1 2014, inception to date returns are as of the managers first full month. Prior was managers first full quarter.

¹ See Policy Index and Benchmark History.

Total Fund
Performance Summary

Period Ending: March 31, 2018

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Pzena (Gross)	-1.5	31	6.2	16	13.8	14	11.6	5	13.6	11	12.1	35	8.7	58	6.3	Jan-06
Pzena (Net)	-1.6	34	6.0	19	13.3	18	11.1	10	13.1	19	11.6	50	8.2	73	5.8	
<i>Russell 1000 Value +2%</i>	-2.0	48	3.8	55	8.9	69	9.9	24	12.8	24	13.0	15	9.8	25	9.0	Jan-06
<i>Russell 1000 Value</i>	-2.8	74	2.3	77	6.9	87	7.9	70	10.8	72	11.0	64	7.8	82	7.0	Jan-06
TCW (Gross)	4.4	22	10.2	41	23.3	34	12.0	46	13.6	76	13.2	59	12.1	21	7.0	Jun-99
TCW (Net)	4.3	23	10.0	43	22.9	37	11.7	52	13.3	80	12.8	67	11.7	31	--	
<i>Russell 1000 Growth +2%¹</i>	2.0	54	10.5	35	23.3	35	14.9	8	17.5	12	16.2	5	13.6	3	7.4	Jun-99
<i>Russell 1000 Growth</i>	1.4	64	9.4	53	21.3	51	12.9	31	15.5	42	14.1	34	11.3	42	5.0	Jun-99
Small Cap Equity (Gross)	1.3	8	7.0	14	18.1	5	8.7	89	12.9	48	10.4	95	9.7	45	13.7	Jul-85
Small Cap Equity (Net)	1.1	10	6.5	21	17.2	10	7.8	97	12.0	84	9.4	99	8.8	85	--	
<i>Russell 2000</i>	-0.1	32	3.3	97	11.8	91	8.4	93	11.5	91	10.4	95	9.8	35	9.7	Jul-85
<i>InvestorForce All DB US Eq Gross Median</i>	-0.5		5.7		13.9		10.1		12.8		12.0		9.6		10.9	Jul-85
Kennedy (Gross)	-2.6	64	1.1	57	7.5	53	8.5	50	13.0	18	11.3	40	--	--	14.3	Sep-10
Kennedy (Net)	-2.8	67	0.7	64	6.7	61	7.7	69	12.1	35	10.5	67	--	--	13.4	
<i>Russell 2000 Value +2.5%</i>	-2.0	51	0.8	61	7.6	52	10.4	20	12.5	27	11.9	24	--	--	14.4	Sep-10
<i>Russell 2000 Value</i>	-2.6	64	-0.6	84	5.1	76	7.9	65	10.0	77	9.4	81	8.6	89	11.8	Sep-10
Next Century-SCG (Gross)	6.6	14	15.3	7	32.6	8	8.2	73	11.7	80	8.1	95	8.3	96	11.7	Oct-02
Next Century-SCG (Net)	6.4	15	14.8	8	31.6	10	7.4	82	10.8	89	7.2	97	7.4	98	10.7	
<i>Russell 2000 Growth +2.5%</i>	3.0	52	8.8	42	21.1	49	11.3	31	15.4	21	13.8	21	13.5	22	14.1	Oct-02
<i>Russell 2000 Growth</i>	2.3	60	7.0	56	18.6	60	8.8	68	12.9	66	11.3	71	11.0	69	11.6	Oct-02

¹ See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: March 31, 2018

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
International Equity (Gross)	-0.1	38	5.3	27	19.4	31	8.4	24	7.8	32	6.3	33	4.3	28	8.6	Dec-90
International Equity (Net)	-0.1	39	5.1	30	19.1	34	8.0	32	7.4	44	5.9	42	3.9	36	--	
<i>MSCI ACWI ex USA IMI Gross¹</i>	-1.0	80	4.3	56	17.6	56	7.2	54	6.7	64	5.0	71	3.3	61	6.6	Dec-90
<i>InvestorForce All DB ex-US Eq Gross Median</i>	-0.4		4.4		18.0		7.3		7.2		5.5		3.6		7.1	Dec-90
AQR (Gross)	0.1	32	4.4	35	18.4	38	8.4	19	8.0	28	6.1	48	4.6	49	2.9	Oct-07
AQR (Net)	0.1	32	4.3	40	18.0	49	7.9	27	7.5	43	5.6	67	4.1	73	2.4	
<i>MSCI ACWI ex USA Gross</i>	-1.1	65	3.9	47	17.0	61	6.7	60	6.4	82	4.7	88	3.2	94	1.5	Oct-07
Capital Group (Gross)	0.2	42	6.8	27	23.3	30	9.8	32	8.3	53	6.3	61	4.1	71	8.8	Dec-90
Capital Group (Net)	0.2	42	6.7	27	23.2	30	9.5	34	8.0	57	6.0	66	3.7	77	--	
<i>MSCI ACWI ex USA Gross</i>	-1.1	74	3.9	65	17.0	70	6.7	74	6.4	85	4.7	87	3.2	88	6.6	Dec-90
<i>MSCI ACWI ex USA Growth Gross</i>	-0.8	68	5.0	48	20.3	45	7.7	60	7.2	71	5.5	75	3.6	80	--	Dec-90
Mondrian (Gross)	-1.2	54	2.8	63	12.6	74	5.7	57	6.3	68	5.4	56	3.4	46	7.7	Nov-03
Mondrian (Net)	-1.3	63	2.6	73	12.3	76	5.3	75	5.9	78	5.1	65	3.1	59	7.4	
<i>MSCI ACWI ex USA Gross</i>	-1.1	45	3.9	34	17.0	11	6.7	46	6.4	67	4.7	80	3.2	54	7.5	Nov-03
<i>MSCI ACWI ex USA Value Gross</i>	-1.4	66	2.9	56	13.9	50	5.6	58	5.5	84	3.9	96	2.7	71	7.4	Nov-03
Templeton (Gross)	1.8	48	7.5	54	24.7	57	10.5	73	9.8	64	--	--	--	--	8.4	Apr-11
Templeton (Net)	1.6	52	7.2	56	23.9	62	9.8	79	9.0	80	--	--	--	--	7.7	
<i>MSCI ACWI ex US Small Cap Gross</i>	-0.3	75	6.3	68	21.0	81	10.8	69	9.0	81	6.6	97	5.9	88	5.9	Apr-11

¹ See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: March 31, 2018

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fixed Income (Gross)	0.3	14	0.6	22	5.5	14	3.6	19	3.7	21	5.3	19	6.2	17	7.5	Sep-86
Total Fixed Income (Net)	0.2	15	0.5	24	5.3	15	3.4	23	3.5	24	5.1	22	6.0	21	--	
<i>Fixed Income Blend¹</i>	-0.5	41	0.0	40	3.2	45	2.2	62	2.1	67	3.0	84	3.9	80	6.5	Sep-86
<i>InvestorForce All DB Total Fix Inc Gross Median</i>	-0.8		-0.2		3.0		2.4		2.6		3.9		4.8		7.1	Sep-86
US Fixed Income (Gross)	-1.0	51	-0.3	36	3.2	35	2.9	24	3.7	25	5.2	23	6.2	21	7.3	Sep-86
US Fixed Income (Net)	-1.0	54	-0.4	41	3.0	39	2.8	28	3.5	29	5.0	26	6.0	23	--	
<i>BBgBarc US Aggregate TR</i>	-1.5	73	-1.1	88	1.2	79	1.2	87	1.8	77	2.9	80	3.6	80	6.2	Sep-86
<i>InvestorForce All DB US Fix Inc Gross Median</i>	-1.0		-0.6		2.4		2.2		2.7		3.9		4.7		6.5	Sep-86
Baird Advisors (Gross)	-1.4	49	-0.8	40	2.1	18	2.3	12	3.0	9	4.4	7	5.1	10	5.1	Oct-01
Baird Advisors (Net)	-1.4	53	-0.8	43	2.0	22	2.2	14	2.9	10	4.3	9	5.0	11	5.0	
<i>BBgBarc US Aggregate TR</i>	-1.5	67	-1.1	78	1.2	82	1.2	90	1.8	87	2.9	91	3.6	93	4.2	Oct-01
Loomis Sayles (Gross)	-0.3	3	0.6	2	5.3	1	4.1	1	5.0	1	6.6	1	8.0	1	8.4	Dec-00
Loomis Sayles (Net)	-0.4	4	0.4	3	5.0	1	3.8	1	4.6	1	6.2	1	7.7	1	8.1	
<i>BBgBarc US Credit BAA TR</i>	-2.2	99	-1.0	62	3.4	3	2.5	7	3.2	5	5.0	3	6.3	2	6.3	Dec-00
Global Fixed Income (Gross)	4.1	4	3.5	10	12.2	1	5.4	14	3.7	37	5.5	27	6.1	22	8.1	Nov-01
Global Fixed Income (Net)	4.0	7	3.3	13	11.9	10	5.1	30	3.4	50	5.1	40	5.8	33	7.8	
<i>Citi WGBI</i>	2.5	15	3.6	8	8.5	29	3.5	71	1.2	93	1.5	99	2.0	99	4.8	Nov-01
<i>InvestorForce All DB Gbl Fix Inc Gross Median</i>	0.5		1.3		5.9		3.9		3.3		4.8		5.2		6.9	Nov-01
Brandywine (Gross)	4.1	4	3.5	18	12.2	11	5.4	18	3.7	36	5.5	19	6.1	22	8.1	Nov-01
Brandywine (Net)	4.0	4	3.3	20	11.9	12	5.1	20	3.4	41	5.1	24	5.8	25	7.8	
<i>Citi WGBI</i>	2.5	10	3.6	16	8.5	23	3.5	57	1.2	87	1.5	90	2.0	92	4.8	Nov-01

¹ See Policy Index and Benchmark History.

Total Fund
Performance Summary

Period Ending: March 31, 2018

	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Absolute Return (Gross)	1.4	22	2.6	36	4.7	57	2.4	50	4.5	41	--	--	--	--	4.2	Sep-11
Absolute Return (Net)	1.4	22	2.6	36	4.7	57	2.4	50	4.5	41	--	--	--	--	4.2	
<i>HFRI Fund of Funds Composite Index</i>	0.3	49	2.4	44	5.6	46	1.9	59	3.4	68	2.6	76	1.6	88	3.8	Sep-11
<i>InvestorForce All DB Hedge Funds Gross Median</i>	0.3		2.2		5.2		2.3		4.1		3.8		2.9		5.0	Sep-11
Private Equity (Gross)	4.2	--	7.6	--	13.6	--	14.2	--	15.8	--	14.1	--	--	--	2.5	Nov-08
Private Equity (Net)	4.2	--	7.6	--	13.6	--	14.2	--	15.8	--	14.1	--	--	--	2.5	
<i>Thomson Reuters CIA Global All PE 1 Qtr Lag</i>	4.3	--	8.4	--	17.2	--	10.9	--	12.5	--	11.8	--	8.5	--	9.2	Nov-08
Real Assets (Gross)	1.0	--	5.1	--	1.8	--	-1.6	--	-6.3	--	--	--	--	--	-4.8	Sep-11
Real Assets (Net)	1.0	--	5.1	--	1.8	--	-1.6	--	-6.3	--	--	--	--	--	-4.8	
<i>Real Asset Blend¹</i>	-2.8	--	2.7	--	11.0	--	9.2	--	7.0	--	--	--	--	--	6.6	Sep-11
Cash (Gross)	0.2	--	0.5	--	1.3	--	0.6	--	0.4	--	0.3	--	0.4	--	3.2	Sep-85
Cash (Net)	0.2	--	0.5	--	1.3	--	0.6	--	0.4	--	0.3	--	0.4	--	3.2	
<i>91 Day T-Bills</i>	0.4	--	0.7	--	1.2	--	0.5	--	0.3	--	0.3	--	0.3	--	3.3	Sep-85
Real Estate (Gross)	1.9	46	4.5	24	9.4	16	11.3	7	12.2	19	12.5	16	5.6	33	7.1	Mar-86
Real Estate (Net)	1.9	46	4.5	24	9.4	16	10.7	18	11.4	34	11.7	38	4.7	59	6.0	
<i>NCREIF-ODCE</i>	2.2	27	4.3	28	8.1	37	10.0	32	11.4	34	11.8	35	5.1	48	7.3	Mar-86
<i>InvestorForce All DB Real Estate Pub+Priv Gross Median</i>	1.9		3.8		7.4		9.2		10.8		11.2		5.0		7.2	Mar-86

¹ See Policy Index and Benchmark History.

Equity environment

- We maintain an overweight position to equities primarily due to enthusiasm for emerging markets. Though the February market correction dampened investor excitement, it is helpful to remind ourselves that 10% equity drawdowns are fairly common.
- Upward price momentum in equities has diminished following the February market correction. Investor sentiment is less positive, but the global economic and earnings backdrop remains intact.
- 2018 is expected to be a banner year for U.S. corporate profits. Earnings for the year are forecast to grow 17.3%, with revenue growth of 7.3% according to Factset - a rare and impressive year for U.S. businesses. A continuation of this trend would be supportive of equity performance.
- Equity valuations (price-to-earnings multiples) fell to more attractive levels in Q1 due to the combination of lower equity prices and strong earnings growth.
- Equity volatility has remained extremely low since the beginning of 2017. However, the equity drawdown and volatility spike in February appears to have ended this period of calm. Investors might expect a more normal volatility environment going forward.
- Currency movement has contributed to volatility and great return disparity for investors with unhedged investments in international assets. A hedging program could allow investors to reduce or eliminate uncompensated currency risk.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	(2.0%)		(2.0%)		12.4%	
US Small Cap (Russell 2000)	(1.1%)		(1.1%)		10.5%	
US Large Value (Russell 1000 Value)	(4.0%)		(4.0%)		5.6%	
US Large Growth (Russell 1000 Growth)	(0.1%)		(0.1%)		19.3%	
International Large (MSCI EAFE)	(1.6%)	(3.8%)	(1.6%)	(3.8%)	14.4%	7.1%
Eurozone (Euro Stoxx 50)	(0.5%)	(3.2%)	(0.5%)	(3.2%)	18.0%	0.3%
U.K. (FTSE 100)	(3.8%)	(6.9%)	(3.8%)	(6.9%)	11.9%	1.2%
Japan (NIKKEI 225)	0.6%	(5.3%)	0.6%	(5.3%)	20.9%	15.2%
Emerging Markets (MSCI Emerging Markets)	1.2%	0.4%	1.2%	0.4%	23.1%	20.4%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/18

Domestic equity

U.S. equities delivered a loss in Q1 (Russell 1000 -2.0%) - a change of pace from steady and strong gains in 2017. Equity indexes around the world fell between 8-12% in early February as the recent bull run was interrupted. Since the selloff, most markets have been rangebound but relatively flat overall. Volatility seems to have returned to the markets as sizable day-to-day swings have been the norm.

While large price movements tend to naturally cause

investor fear, it is not apparent that the attractive macro picture has changed – i.e. positive economic growth, very strong earnings gains, and healthy sentiment. Equity prices typically follow growth and corporate profit trends over the medium and long-term term, which likely provides some support against larger downside equity movement.

However, the February selloff has dampened recent positive upward price momentum. Momentum is now more neutral as market prices flatten out.

Fundamentals appear unchanged despite falling prices

U.S. EQUITIES



Source: Russell Investments, as of 3/31/18

EARNINGS GROWTH



Source: S&P 500, as of 3/31/18

S&P 500 PRICE & EARNINGS



Source: Bloomberg, as of 3/31/18

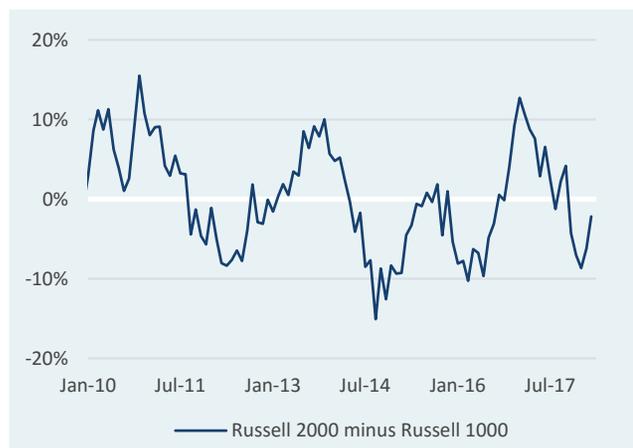
Domestic equity size & style

Large cap equities (Russell 1000 -2.0%) lagged small cap equities (Russell 2000 -1.1%) during the quarter. Value stocks delivered exceptionally poor performance in Q1 (Russell 1000 Value -4.0% vs. Russell 1000 Growth -0.1%), dragged down by the energy and materials sectors, which are heavily tilted towards value. Despite a sell-off in mega-cap tech stocks in March due mainly to company-specific issues, such as a data breach at Facebook and President Trump targeting Amazon over its relationship with the U.S. Postal Service, tech was still the best performing sector in the first quarter.

Traditional style factors – small cap and value in particular – have hit a rough patch since the 2008-2009 global financial crisis. It may be helpful to remember that these periods do occur. In fact, there are multiple points in history where the equity small-cap and value premiums delivered negative returns over more than a 10 year period.

In U.S. equities, value has continued to underperform in recent years, while momentum delivered outperformance alongside the bull market rally.

SMALL CAP VS LARGE CAP (YOY)



Source: FTSE, as of 3/31/18

VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/18

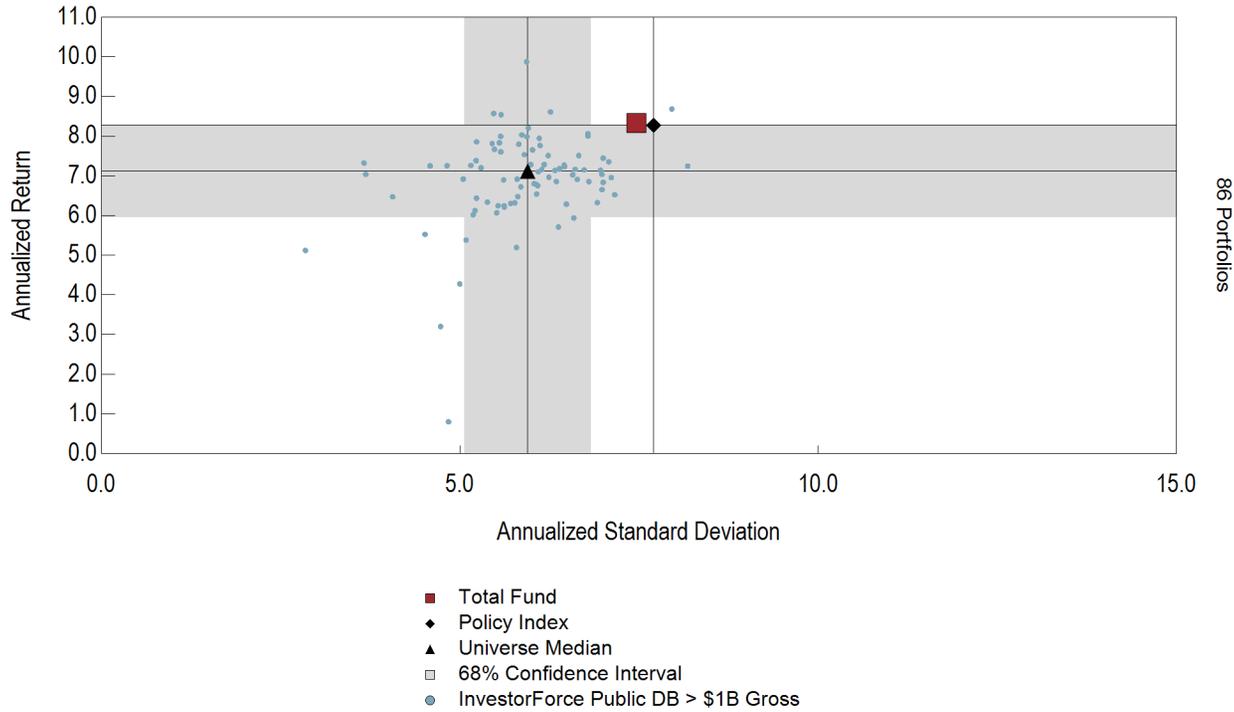
BLOOMBERG FACTOR PERFORMANCE



Source: Bloomberg, as of 3/31/18

Total Fund
Risk vs. Return (3 Years)

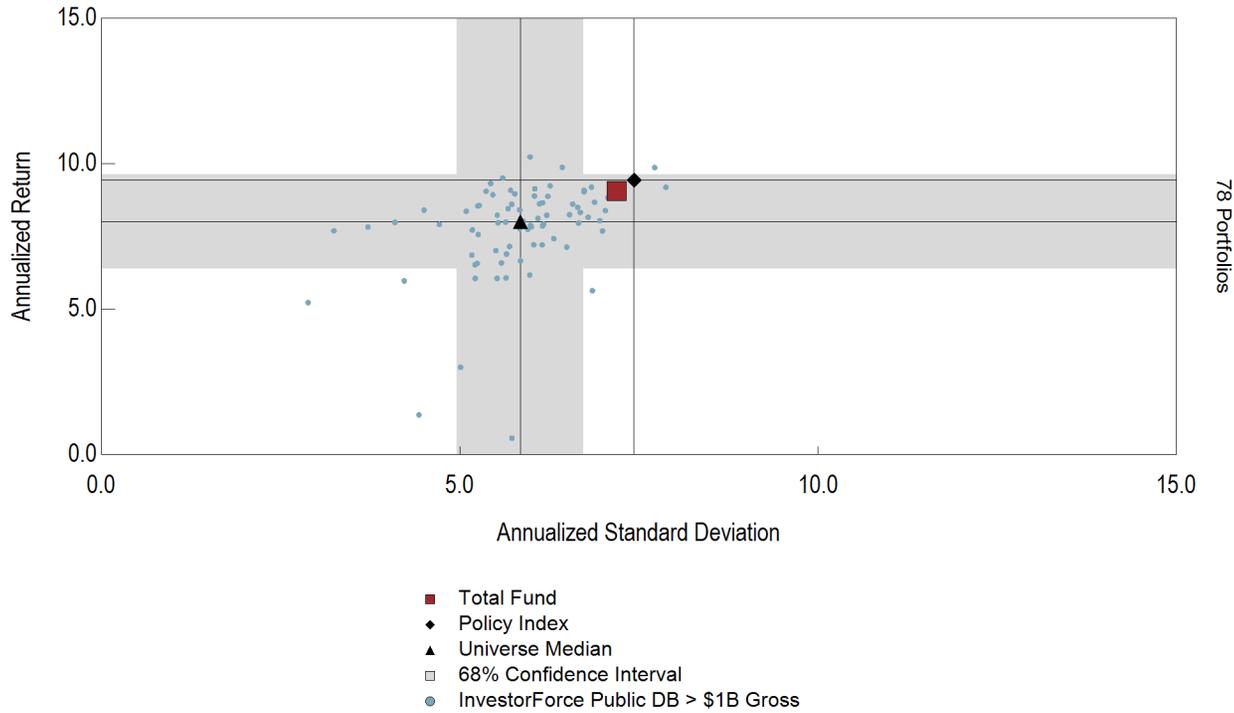
Period Ending: March 31, 2018



	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Total Fund	8.3%	6	7.5%	99	1.0	52
Policy Index	8.3%	6	7.7%	99	1.0	70
Allocation Index	8.1%	7	7.7%	99	1.0	79
InvestorForce Public DB > \$1B Gross Median	7.1%	--	5.9%	--	1.0	--

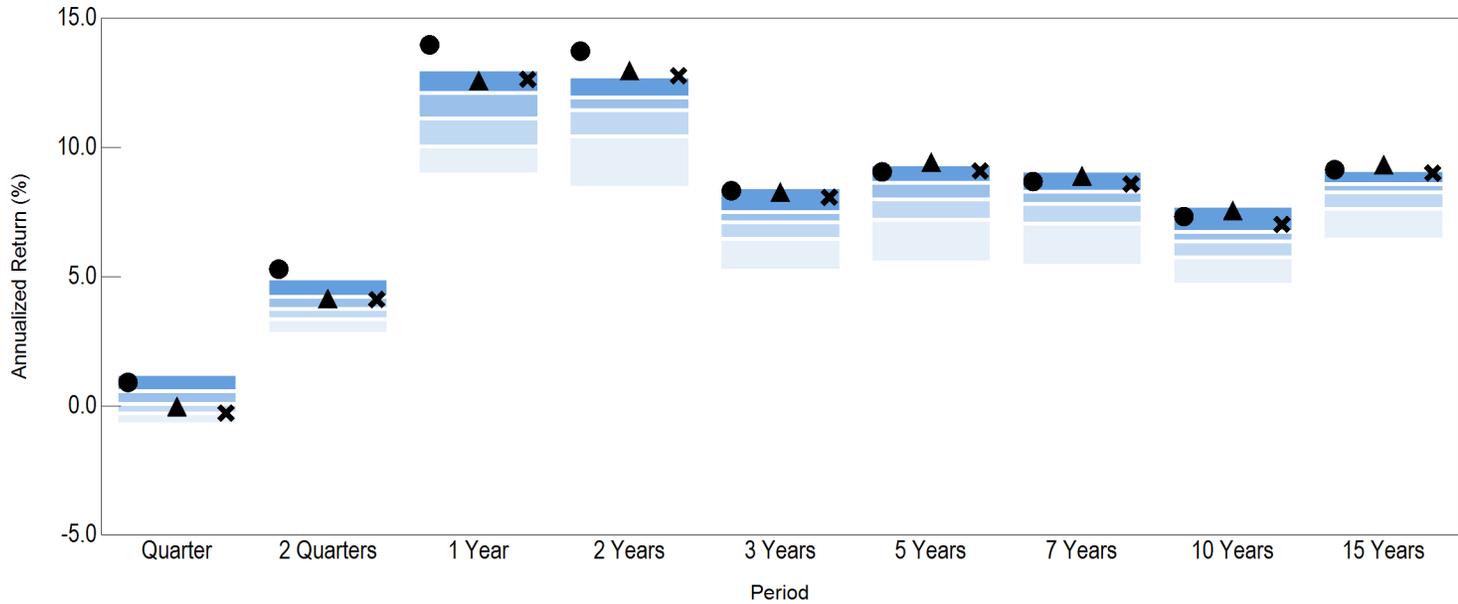
Total Fund
Risk vs. Return (5 Years)

Period Ending: March 31, 2018



	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Total Fund	9.1%	14	7.2%	98	1.2	64
Policy Index	9.4%	5	7.4%	99	1.2	62
Allocation Index	9.1%	12	7.5%	99	1.2	74
InvestorForce Public DB > \$1B Gross Median	8.0%	--	5.8%	--	1.3	--

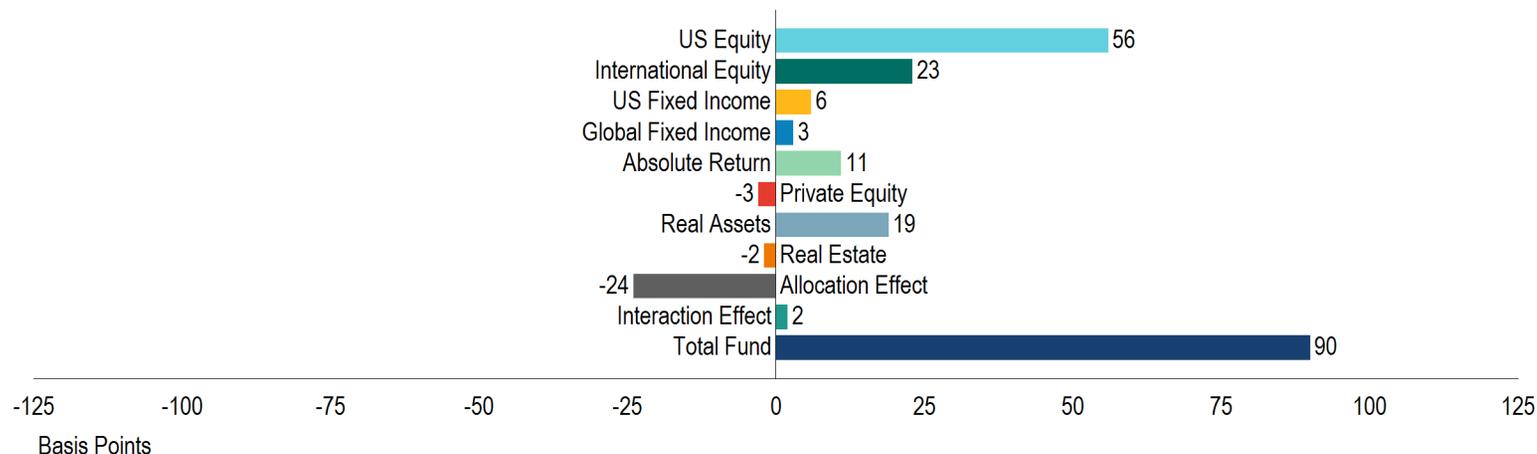
InvestorForce Public DB > \$1B Gross Return Comparison



	Return (Rank)								
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years	15 Years
5th Percentile	1.2	4.9	13.0	12.7	8.5	9.3	9.1	7.7	9.1
25th Percentile	0.6	4.2	12.1	12.0	7.5	8.6	8.3	6.7	8.6
Median	0.1	3.8	11.1	11.4	7.1	8.0	7.8	6.4	8.3
75th Percentile	-0.3	3.4	10.1	10.5	6.5	7.2	7.1	5.8	7.6
95th Percentile	-0.7	2.8	9.0	8.4	5.2	5.6	5.4	4.7	6.5
# of Portfolios	97	95	95	89	86	78	69	67	60
● Total Fund	0.9 (10)	5.3 (4)	14.0 (3)	13.7 (2)	8.3 (6)	9.1 (14)	8.7 (12)	7.3 (9)	9.1 (5)
▲ Policy Index	0.0 (62)	4.2 (34)	12.6 (12)	13.0 (4)	8.3 (6)	9.4 (5)	8.9 (8)	7.6 (7)	9.3 (1)
✕ Allocation Index	-0.3 (74)	4.1 (38)	12.6 (11)	12.8 (5)	8.1 (7)	9.1 (12)	8.6 (17)	7.0 (17)	9.0 (8)

Total Fund
Performance Attribution (One Quarter)

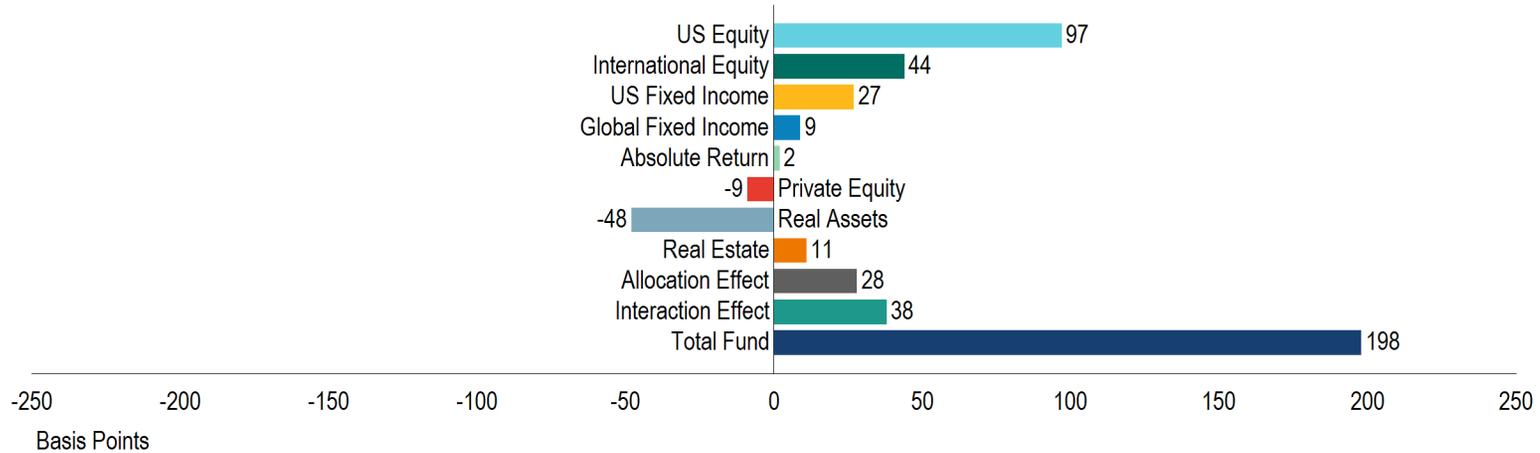
Period Ending: March 31, 2018



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	1.38%	-0.64%	2.02%	0.56%	-0.04%	0.11%	0.62%
International Equity	-0.07%	-0.96%	0.89%	0.23%	-0.07%	0.05%	0.21%
US Fixed Income	-0.99%	-1.46%	0.47%	0.06%	0.00%	0.00%	0.05%
Global Fixed Income	4.05%	2.50%	1.56%	0.03%	0.05%	0.03%	0.11%
Absolute Return	1.43%	0.29%	1.14%	0.11%	-0.04%	-0.12%	-0.05%
Private Equity	4.16%	4.32%	-0.17%	-0.03%	-0.14%	0.00%	-0.17%
Real Assets	0.98%	-2.80%	3.78%	0.19%	0.03%	-0.05%	0.17%
Real Estate	1.94%	2.20%	-0.26%	-0.02%	-0.04%	0.00%	-0.06%
Total	0.84%	-0.06%	0.90%	1.13%	-0.24%	0.02%	0.90%

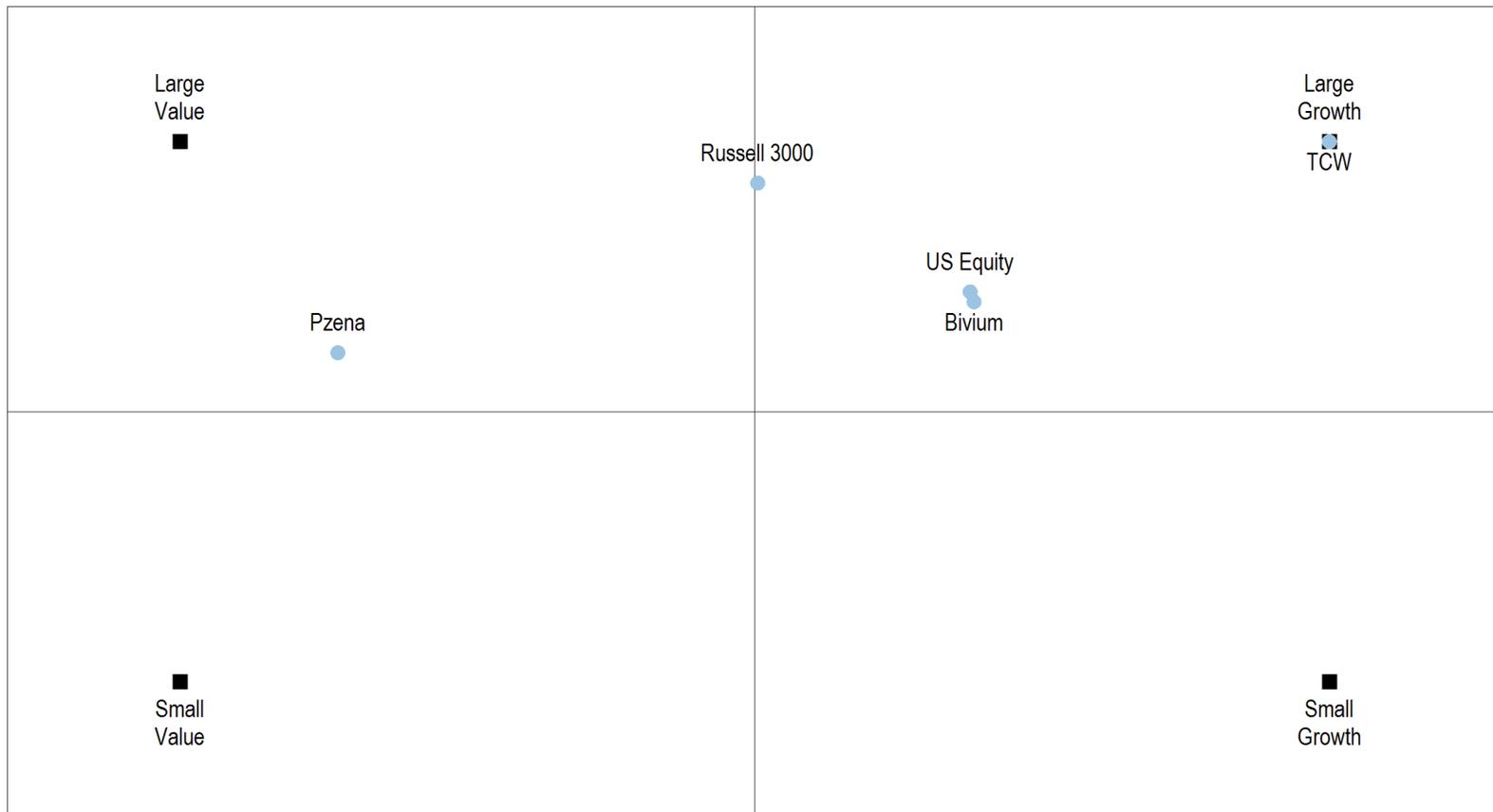
Total Fund
Performance Attribution (One Year)

Period Ending: March 31, 2018

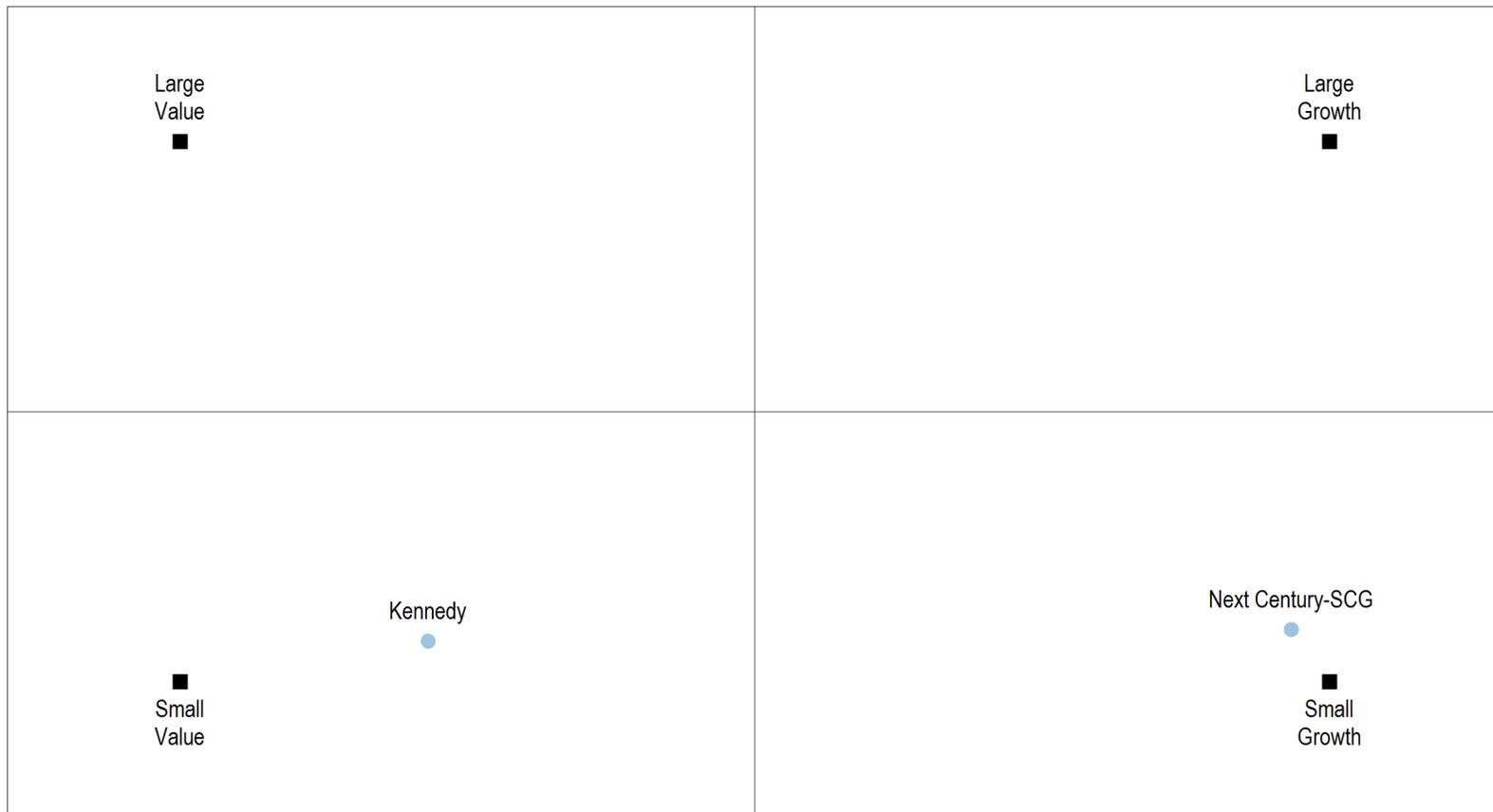


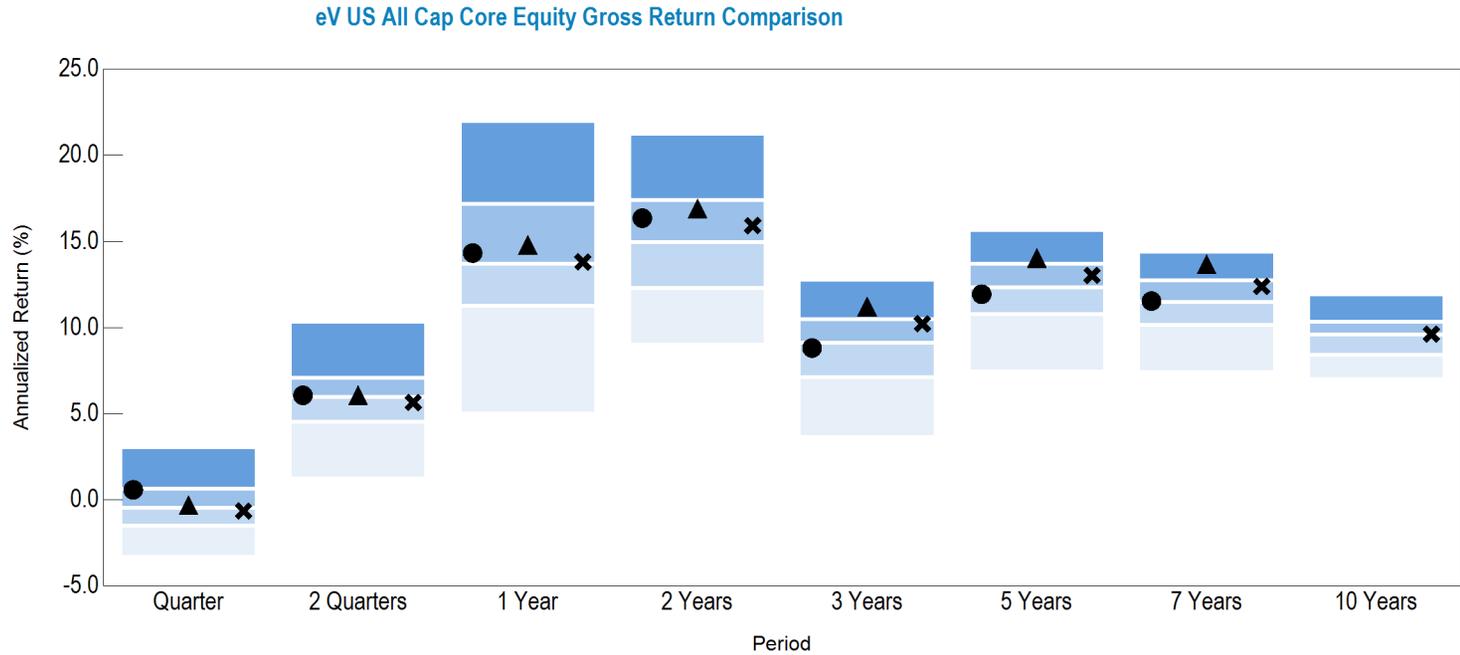
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
US Equity	17.39%	13.81%	3.58%	0.97%	0.11%	0.18%	1.26%
International Equity	19.37%	17.61%	1.76%	0.44%	0.22%	0.08%	0.74%
US Fixed Income	3.18%	1.20%	1.98%	0.27%	0.05%	-0.01%	0.31%
Global Fixed Income	12.21%	8.49%	3.72%	0.09%	-0.05%	0.07%	0.11%
Absolute Return	4.68%	5.56%	-0.88%	0.02%	0.08%	-0.08%	0.02%
Private Equity	13.62%	17.18%	-3.56%	-0.09%	-0.15%	0.03%	-0.21%
Real Assets	1.85%	10.96%	-9.11%	-0.48%	-0.01%	0.13%	-0.36%
Real Estate	9.39%	8.07%	1.32%	0.11%	0.02%	-0.02%	0.11%
Total	13.92%	10.93%	2.99%	1.32%	0.28%	0.38%	1.98%

US Effective Style Map



US Effective Style Map





	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	3.0		10.3		22.0		21.2		12.8		15.6		14.4		11.9	
25th Percentile	0.7		7.1		17.2		17.4		10.5		13.7		12.8		10.4	
Median	-0.4		6.0		13.7		15.0		9.1		12.3		11.5		9.6	
75th Percentile	-1.5		4.5		11.3		12.3		7.1		10.8		10.2		8.4	
95th Percentile	-3.3		1.2		5.0		9.0		3.7		7.5		7.4		7.0	
# of Portfolios	124		123		123		122		117		110		103		89	
● Bivium	0.6	(28)	6.1	(48)	14.3	(45)	16.4	(38)	8.8	(58)	11.9	(55)	11.5	(50)	--	(--)
▲ Russell 3000 +1%	-0.3	(47)	6.1	(47)	14.8	(36)	16.9	(32)	11.2	(17)	14.0	(21)	13.7	(14)	--	(--)
✕ Russell 3000	-0.6	(58)	5.7	(55)	13.8	(49)	15.9	(42)	10.2	(34)	13.0	(39)	12.4	(34)	9.6	(49)

Characteristics

	Portfolio	Russell 3000
Number of Holdings	152	2,958
Weighted Avg. Market Cap. (\$B)	153.0	152.0
Median Market Cap. (\$B)	53.2	1.7
Price To Earnings	25.1	23.5
Price To Book	5.0	4.3
Price To Sales	4.1	4.0
Return on Equity (%)	23.8	19.0
Yield (%)	1.6	1.8
Beta (holdings; domestic)	1.1	1.0

Top Holdings

ORACLE	5.5%
NATIONAL OILWELL VARCO	3.7%
MASTERCARD	3.0%
APPLE	2.6%
SKYWORKS SOLUTIONS	2.5%
CVS HEALTH	2.4%
STATE STREET	2.4%
SWISS RE SPN.ADR 1:4	2.3%
VISA 'A'	2.2%
ALPHABET 'C'	2.2%

Best Performers

	Return %
NETFLIX (NFLX)	53.9%
GKN SPN.ADR 1:1 (GKNLY)	48.3%
SS&C TECHNOLOGIES HDG. (SSNC)	32.7%
MICRON TECHNOLOGY (MU)	26.8%
AMAZON.COM (AMZN)	23.8%
ADOBE SYSTEMS (ADBE)	23.3%
HEWLETT PACKARD ENTER. (HPE)	22.6%
NVIDIA (NVDA)	19.8%
BOOKING HOLDINGS (BKNG)	19.7%
ESTEE LAUDER COS.'A' (EL)	18.0%

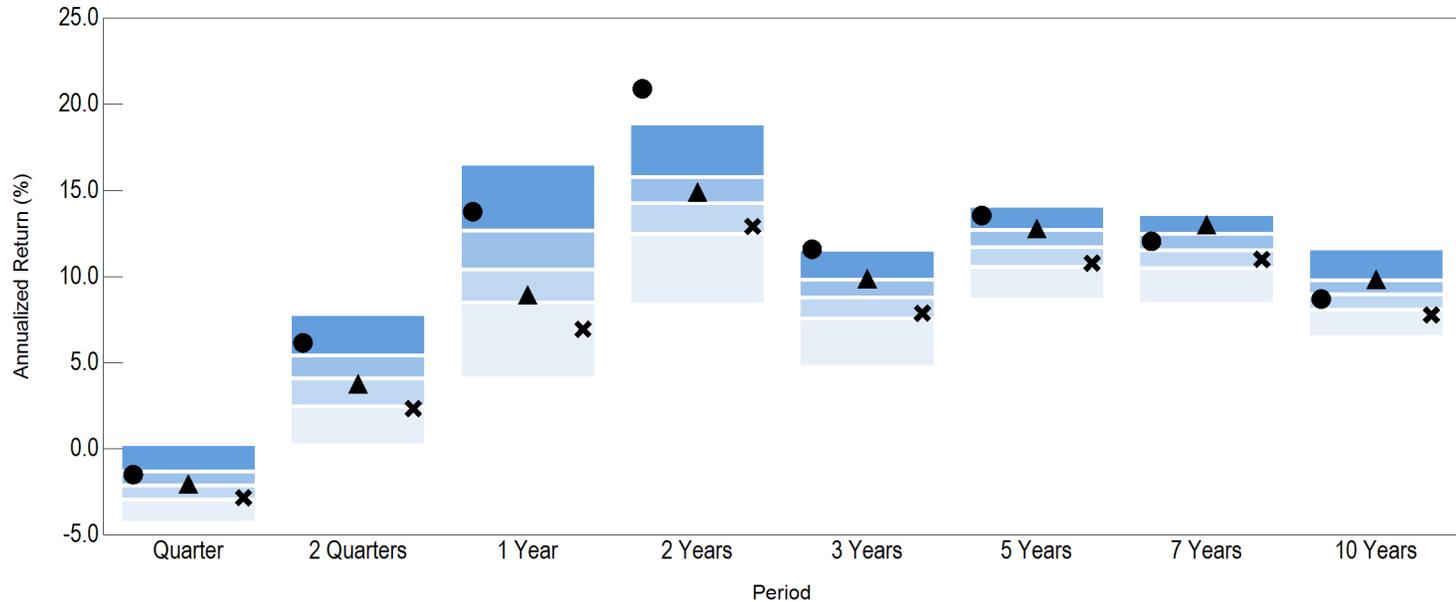
Worst Performers

	Return %
GENERAL ELECTRIC (GE)	-22.1%
KRAFT HEINZ (KHC)	-19.1%
CIGNA (CI)	-17.4%
KINDER MORGAN (KMI)	-16.1%
DOMINION ENERGY (D)	-15.9%
CELGENE (CELG)	-14.5%
BIOGEN (BIIB)	-14.0%
PARKER-HANNIFIN (PH)	-14.0%
CVS HEALTH (CVS)	-13.7%
WELLS FARGO & CO (WFC)	-13.1%

Bivium Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.3%	0.3%	0.1%	-0.1%	-0.6%	-6.0%	4.6%	5.8%			
Materials	0.1%	0.1%	0.1%	-0.1%	-2.9%	-5.3%	0.5%	3.5%			
Industrials	0.4%	0.6%	0.0%	-0.2%	3.9%	-1.8%	6.6%	11.0%			
Consumer Discretionary	0.8%	0.8%	0.0%	0.0%	8.3%	2.0%	12.5%	12.4%			
Consumer Staples	0.0%	-0.2%	0.2%	0.1%	-10.2%	-6.8%	4.7%	7.3%			
Health Care	-0.6%	-0.4%	0.0%	-0.2%	-3.6%	-0.5%	18.4%	13.3%			
Financials	0.7%	0.6%	0.0%	0.1%	3.3%	-0.4%	19.1%	15.2%			
Information Technology	0.4%	0.1%	0.3%	0.0%	4.4%	4.0%	29.5%	22.8%			
Telecommunication Services	0.1%	0.0%	0.1%	0.0%	-7.4%	-7.3%	0.8%	1.9%			
Utilities	0.1%	0.0%	0.1%	0.0%	-4.2%	-3.4%	0.8%	3.0%			
Real Estate	0.3%	0.4%	0.1%	-0.2%	3.8%	-6.2%	1.5%	3.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.4%	--	1.0%	0.0%			
Portfolio	2.7%	=	2.2%	+	1.0%	+	-0.5%	2.0%	-0.7%	100.0%	100.0%

eV US Large Cap Value Equity Gross Return Comparison



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	0.3	7.8	16.5	18.9	11.5	14.1	13.6	11.6
25th Percentile	-1.3	5.5	12.7	15.8	9.8	12.7	12.5	9.8
Median	-2.1	4.1	10.4	14.3	8.8	11.7	11.5	9.0
75th Percentile	-2.9	2.5	8.5	12.5	7.6	10.6	10.5	8.1
95th Percentile	-4.3	0.2	4.1	8.4	4.8	8.7	8.4	6.5
# of Portfolios	338	338	338	338	336	323	300	267
● Pzena	-1.5 (31)	6.2 (16)	13.8 (14)	20.9 (2)	11.6 (5)	13.6 (11)	12.1 (35)	8.7 (58)
▲ Russell 1000 Value +2%	-2.0 (48)	3.8 (55)	8.9 (69)	14.9 (39)	9.9 (24)	12.8 (24)	13.0 (15)	9.8 (25)
✕ Russell 1000 Value	-2.8 (74)	2.3 (77)	6.9 (87)	12.9 (72)	7.9 (70)	10.8 (72)	11.0 (64)	7.8 (82)

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	40	711
Weighted Avg. Market Cap. (\$B)	88.6	113.4
Median Market Cap. (\$B)	41.1	9.0
Price To Earnings	19.2	20.4
Price To Book	2.0	2.5
Price To Sales	1.9	3.0
Return on Equity (%)	12.5	11.5
Yield (%)	2.5	2.4
Beta (holdings; domestic)	1.2	1.0

Top Holdings

FORD MOTOR	4.3%
CITIGROUP	3.9%
ROYAL DUTCH SHELL A ADR 1:2	3.7%
AMERICAN INTL.GP.	3.7%
MYLAN	3.6%
HEWLETT PACKARD ENTER.	3.5%
ORACLE	3.3%
INTERPUBLIC GROUP	3.3%
CAPITAL ONE FINL.	3.2%
OMNICOM GROUP	3.1%

Best Performers

	Return %
SEAGATE TECH. (STX)	41.3%
HEWLETT PACKARD ENTER. (HPE)	22.6%
AXIS CAPITAL HDG. (AXS)	15.3%
INTERPUBLIC GROUP (IPG)	15.3%
COGNIZANT TECH.SLTN.'A' (CTSH)	13.6%
HP (HPQ)	4.9%
JP MORGAN CHASE & CO. (JPM)	3.4%
MORGAN STANLEY (MS)	3.3%
CARDINAL HEALTH (CAH)	3.1%
STATE STREET (STT)	2.6%

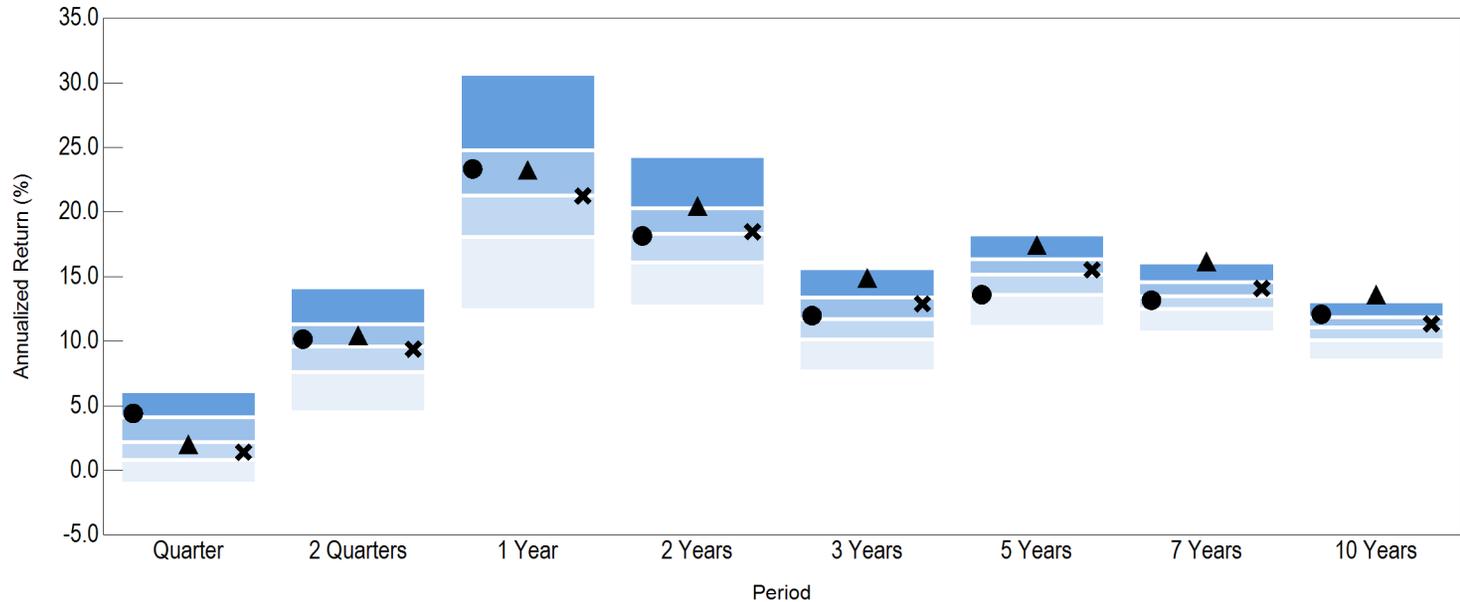
Worst Performers

	Return %
MICRO FOCUS INTL.SPN.ADR 1:1 (MFGP)	-57.7%
MURPHY OIL (MUR)	-16.0%
WELLS FARGO & CO (WFC)	-13.1%
FRANKLIN RESOURCES (BEN)	-12.4%
BRIGHTHOUSE FINANCIAL (BHF)	-12.3%
EXXON MOBIL (XOM)	-9.9%
MCKESSON (MCK)	-9.5%
WALMART (WMT)	-9.4%
FORD MOTOR (F)	-9.1%
CITIGROUP (C)	-8.9%

Pzena Performance Attribution vs. Russell 1000 Value

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.2%	-0.4%	0.3%	-3.6%	-5.8%	23.5%	11.1%			
Materials	0.1%	--	0.1%	--	--	-5.3%	0.0%	3.0%			
Industrials	0.1%	--	0.1%	--	--	-4.5%	0.0%	8.4%			
Consumer Discretionary	0.4%	0.2%	0.0%	0.2%	0.6%	-2.7%	13.1%	6.7%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	-9.4%	-8.4%	9.0%	8.6%			
Health Care	-0.4%	-1.0%	-0.1%	0.8%	-9.5%	-1.8%	3.5%	13.5%			
Financials	0.5%	0.7%	-0.1%	-0.1%	1.4%	-1.2%	22.0%	26.7%			
Information Technology	6.2%	1.4%	1.6%	3.1%	23.0%	6.1%	26.7%	8.5%			
Telecommunication Services	0.1%	--	0.1%	--	--	-7.1%	0.0%	3.0%			
Utilities	0.0%	--	0.0%	--	--	-3.1%	0.0%	5.9%			
Real Estate	0.2%	--	0.2%	--	--	-7.2%	0.0%	4.7%			
Cash	0.1%	0.0%	0.1%	0.0%	0.4%	--	2.3%	0.0%			
Portfolio	7.4%	=	1.5%	+	1.7%	+	4.2%	4.5%	-2.9%	100.0%	100.0%

eV US Large Cap Growth Equity Gross Return Comparison



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	6.1	14.2	30.7	24.3	15.6	18.2	16.1	13.1
25th Percentile	4.1	11.3	24.8	20.3	13.4	16.4	14.6	11.9
Median	2.2	9.6	21.3	18.4	11.7	15.2	13.5	11.1
75th Percentile	0.8	7.6	18.1	16.1	10.2	13.6	12.5	10.1
95th Percentile	-1.0	4.6	12.5	12.7	7.7	11.2	10.7	8.6
# of Portfolios	253	253	253	250	249	240	225	216
● TCW	4.4 (22)	10.2 (41)	23.3 (34)	18.2 (52)	12.0 (46)	13.6 (76)	13.2 (59)	12.1 (21)
▲ Russell 1000 Growth +2%	2.0 (54)	10.5 (35)	23.3 (35)	20.5 (25)	14.9 (8)	17.5 (12)	16.2 (5)	13.6 (3)
✕ Russell 1000 Growth	1.4 (64)	9.4 (53)	21.3 (51)	18.5 (50)	12.9 (31)	15.5 (42)	14.1 (34)	11.3 (42)

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	34	553
Weighted Avg. Market Cap. (\$B)	148.8	212.0
Median Market Cap. (\$B)	47.6	11.6
Price To Earnings	36.1	28.0
Price To Book	9.7	7.3
Price To Sales	7.9	5.2
Return on Equity (%)	29.6	29.9
Yield (%)	0.6	1.4
Beta (holdings; domestic)	1.1	1.1

Top Holdings

AMAZON.COM	6.4%
ALPHABET 'C'	6.1%
VISA 'A'	6.1%
ADOBE SYSTEMS	5.5%
FACEBOOK CLASS A	5.4%
SALESFORCE.COM	4.9%
AMERICAN TOWER	4.7%
SERVICENOW	4.3%
PAYPAL HOLDINGS	3.8%
BOOKING HOLDINGS	3.0%

Best Performers

	Return %
SERVICENOW (NOW)	26.9%
AMAZON.COM (AMZN)	23.8%
ADOBE SYSTEMS (ADBE)	23.3%
BOOKING HOLDINGS (BKNG)	19.7%
SPLUNK (SPLK)	18.8%
ZOETIS (ZTS)	16.1%
MASTERCARD (MA)	15.9%
SALESFORCE.COM (CRM)	13.8%
S&P GLOBAL (SPGI)	13.1%
ALIGN TECHNOLOGY (ALGN)	13.0%

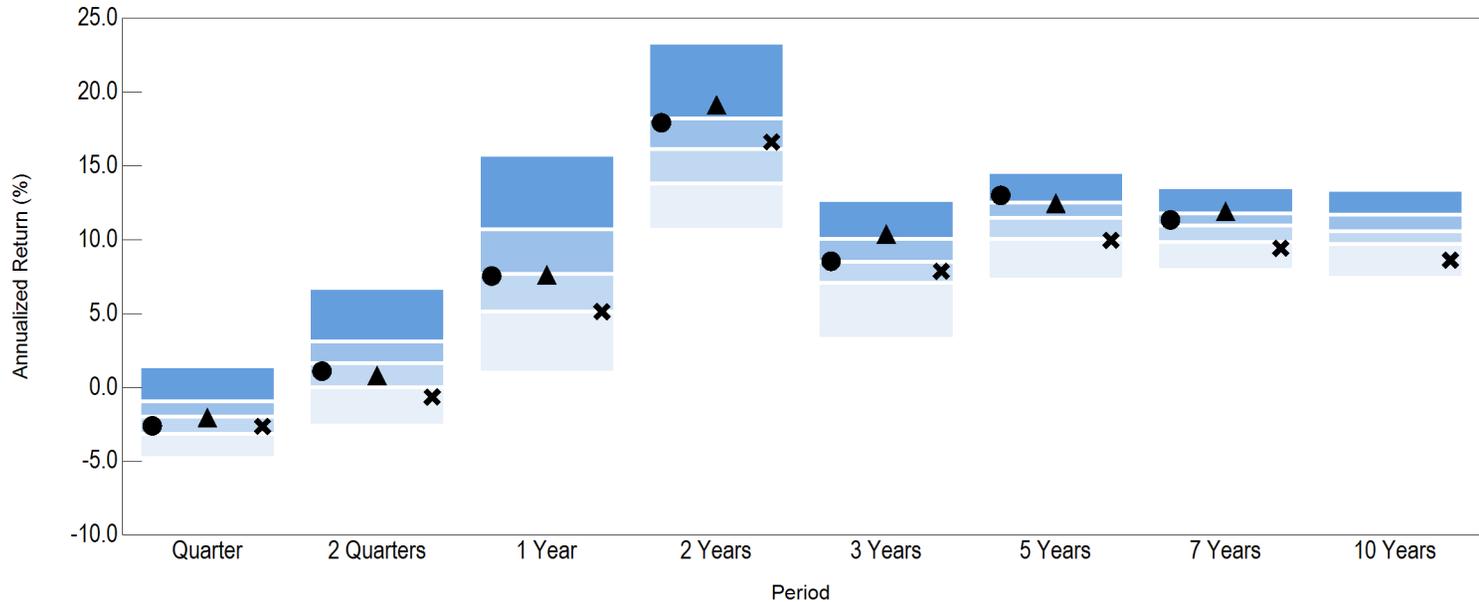
Worst Performers

	Return %
CELGENE (CELG)	-14.5%
WEST PHARM.SVS. (WST)	-10.4%
MONSTER BEVERAGE (MNST)	-9.6%
FACEBOOK CLASS A (FB)	-9.4%
BIOMARIN PHARM. (BMRN)	-9.1%
ULTA BEAUTY (ULTA)	-8.7%
EQUINIX (EQIX)	-7.2%
ALEXION PHARMS. (ALXN)	-6.8%
CHUBB (CB)	-5.9%
HOME DEPOT (HD)	-5.4%

TCW Performance Attribution vs. Russell 1000 Growth

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	0.0%	0.0%	0.1%	-5.9%	1.5%	0.9%			
Materials	0.2%	0.1%	0.2%	-0.1%	-2.4%	-5.6%	1.4%	3.7%			
Industrials	0.2%	0.2%	0.1%	-0.1%	1.6%	0.1%	5.5%	12.9%			
Consumer Discretionary	0.9%	1.4%	-0.1%	-0.3%	11.7%	4.2%	14.0%	18.1%			
Consumer Staples	0.1%	0.0%	0.1%	0.0%	-4.5%	-4.8%	5.0%	6.8%			
Health Care	-0.3%	-0.3%	0.0%	0.0%	-3.1%	-0.5%	13.0%	12.8%			
Financials	-0.1%	-0.1%	0.1%	-0.1%	0.9%	4.3%	7.7%	3.4%			
Information Technology	2.1%	1.9%	0.1%	0.1%	8.3%	3.4%	40.8%	37.9%			
Telecommunication Services	0.1%	--	0.1%	--	--	-8.1%	0.0%	1.0%			
Utilities	0.0%	--	0.0%	--	--	7.3%	0.0%	0.0%			
Real Estate	-0.1%	0.0%	-0.3%	0.1%	-1.7%	-3.4%	8.1%	2.5%			
Cash	0.0%	0.0%	0.0%	0.0%	0.4%	--	2.9%	0.0%			
Portfolio	3.0%	=	3.2%	+	0.2%	+	-0.4%	4.4%	1.4%	100.0%	100.0%

eV US Small Cap Value Equity Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	1.4		6.7		15.7		23.3		12.7		14.6		13.5		13.4	
25th Percentile	-0.9		3.1		10.7		18.2		10.1		12.5		11.8		11.7	
Median	-2.0		1.6		7.7		16.2		8.5		11.5		11.0		10.6	
75th Percentile	-3.1		0.0		5.2		13.8		7.1		10.1		9.9		9.7	
95th Percentile	-4.8		-2.6		1.0		10.7		3.3		7.3		8.0		7.5	
# of Portfolios	224		224		224		222		213		206		197		177	
● Kennedy	-2.6	(64)	1.1	(57)	7.5	(53)	17.9	(29)	8.5	(50)	13.0	(18)	11.3	(40)	--	(--)
▲ Russell 2000 Value +2.5%	-2.0	(51)	0.8	(61)	7.6	(52)	19.1	(19)	10.4	(20)	12.5	(27)	11.9	(24)	--	(--)
✕ Russell 2000 Value	-2.6	(64)	-0.6	(84)	5.1	(76)	16.6	(44)	7.9	(65)	10.0	(77)	9.4	(81)	8.6	(89)

Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	326	1,398
Weighted Avg. Market Cap. (\$B)	2.7	2.0
Median Market Cap. (\$B)	1.5	0.7
Price To Earnings	19.6	16.0
Price To Book	2.5	1.8
Price To Sales	3.0	2.7
Return on Equity (%)	9.4	6.2
Yield (%)	1.5	1.7
Beta (holdings; domestic)	1.2	1.1

Top Holdings

IBERIABANK	0.9%
SPIRE	0.9%
ALLEGHENY TECHS.	0.8%
FNB	0.8%
AMERIS BANCORP	0.8%
VERITEX HOLDINGS	0.8%
UMPQUA HOLDINGS	0.8%
UNITED RENTALS	0.7%
STERLING BANCORP	0.7%
SKYWEST	0.7%

Best Performers

	Return %
CASCADIAN THERP. (NAS) (CASC)	169.5%
TANDEM DIABETES CARE (TNDM)	110.2%
AMYRIS (AMRS)	78.4%
NEKTAR THERAPEUTICS (NKTR)	77.9%
TG THERAPEUTICS (TGTX)	73.2%
NUVECTRA (NVTR)	67.8%
KAPSTONE PAPER & PACK. (KS)	51.6%
CTI BIOPHARMA (CTIC)	45.5%
AFFIMED (AFMD)	42.3%
OCLARO (OCLR)	41.8%

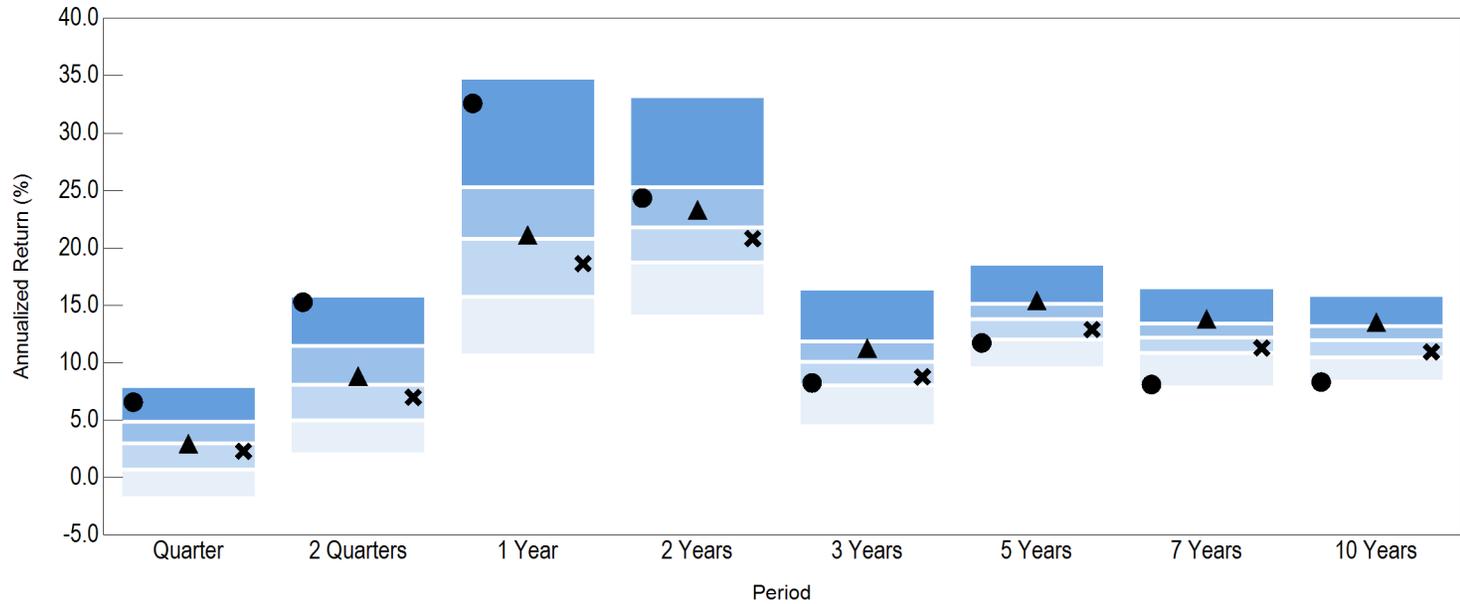
Worst Performers

	Return %
PETROQUEST ENERGY (PQUE)	-69.3%
MACOM TECH.SLTN.HDG. (MTSI)	-49.0%
CELADON GROUP (CGIP)	-42.2%
HORIZON GLOBAL (HZN)	-41.2%
CONFORMIS (CFMS)	-39.1%
CATALYST PHARMACEUTICAL PARTNERS (CPRX)	-38.9%
YRC WORLDWIDE (YRCW)	-38.6%
PATTERSON COMPANIES (PDCO)	-38.0%
TILE SHOP HOLDINGS (TTS)	-36.9%
RADISYS (RSYS)	-36.2%

Kennedy Performance Attribution vs. Russell 2000 Value

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.2%	0.0%	0.1%	0.0%	-9.0%	-9.4%	4.3%	6.4%			
Materials	0.1%	0.1%	-0.1%	0.1%	-2.9%	-5.3%	8.9%	4.5%			
Industrials	-0.9%	-0.7%	0.0%	-0.3%	-7.3%	-1.7%	17.6%	12.4%			
Consumer Discretionary	-0.7%	-0.7%	0.0%	0.0%	-8.3%	-2.1%	11.1%	11.0%			
Consumer Staples	0.3%	0.5%	0.1%	-0.3%	11.5%	-8.0%	1.0%	2.4%			
Health Care	-0.3%	-0.3%	-0.1%	0.1%	0.3%	5.3%	4.9%	6.2%			
Financials	0.2%	0.6%	-0.2%	-0.1%	2.3%	0.5%	23.3%	30.6%			
Information Technology	0.4%	0.3%	0.0%	0.1%	1.3%	-2.5%	10.3%	9.0%			
Telecommunication Services	0.0%	-0.1%	0.0%	0.1%	-33.6%	-11.0%	0.3%	0.5%			
Utilities	0.1%	0.0%	0.1%	0.0%	-5.6%	-5.9%	4.9%	6.6%			
Real Estate	0.0%	0.0%	0.0%	0.0%	-8.4%	-8.4%	9.8%	10.5%			
Cash	0.1%	0.0%	0.1%	0.0%	0.4%	--	3.7%	0.0%			
Portfolio	-0.7%	=	-0.3%	+	0.0%	+	-0.4%	-3.2%	-2.5%	100.0%	100.0%

eV US Small Cap Growth Equity Gross Return Comparison



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	7.9	15.8	34.8	33.2	16.4	18.6	16.5	15.9
25th Percentile	4.9	11.5	25.3	25.3	11.9	15.2	13.5	13.2
Median	3.0	8.1	20.8	21.8	10.1	13.8	12.2	12.0
75th Percentile	0.7	5.0	15.7	18.7	8.1	12.1	10.9	10.5
95th Percentile	-1.8	2.1	10.7	14.0	4.5	9.6	7.9	8.4
# of Portfolios	169	169	169	165	163	155	151	139
● Next Century-SCG	6.6 (14)	15.3 (7)	32.6 (8)	24.3 (31)	8.2 (73)	11.7 (80)	8.1 (95)	8.3 (96)
▲ Russell 2000 Growth +2.5%	3.0 (52)	8.8 (42)	21.1 (49)	23.3 (37)	11.3 (31)	15.4 (21)	13.8 (21)	13.5 (22)
✕ Russell 2000 Growth	2.3 (60)	7.0 (56)	18.6 (60)	20.8 (58)	8.8 (68)	12.9 (66)	11.3 (71)	11.0 (69)

Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	61	1,188
Weighted Avg. Market Cap. (\$B)	3.9	3.0
Median Market Cap. (\$B)	2.8	1.0
Price To Earnings	24.3	18.5
Price To Book	8.9	5.2
Price To Sales	6.8	3.7
Return on Equity (%)	-2.2	8.0
Yield (%)	0.2	0.5
Beta (holdings; domestic)	1.1	1.2

Top Holdings

KINSALE CAPITAL GROUP	3.5%
MARKETAXESS HOLDINGS	3.4%
ABIOMED	3.2%
DYCOM INDS.	3.1%
COSTAR GP.	3.0%
IRHYTHM TECHNOLOGIES	2.7%
INSULET	2.7%
QUOTIENT TECHNOLOGY	2.6%
HEALTH EQUITY	2.6%
AMERIS BANCORP	2.6%

Best Performers

	Return %
ABIOMED (ABMD)	55.3%
TECHTARGET (TTGT)	42.8%
SAILPOINT TECHS.HDG. (SAIL)	42.7%
PAYCOM SOFTWARE (PAYC)	33.7%
RINGCENTRAL (RNG)	31.2%
2U (TWOU)	30.3%
HEALTH EQUITY (HQY)	29.7%
AXOGEN (AXGN)	29.0%
CARGURUS (CARG)	28.3%
NEW RELIC (NEWR)	28.3%

Worst Performers

	Return %
COHERENT (COHR)	-33.6%
US CONCRETE (USCR)	-27.8%
AMER.WOODMARK (AMWD)	-24.4%
EXACT SCIS. (EXAS)	-23.2%
ACCELERATE DIAGNOSTICS (AXDX)	-12.8%
QUANTA SERVICES (PWR)	-12.2%
GRANITE CON. (GVA)	-11.7%
AERIE PHARMACEUTICALS (AERI)	-9.2%
EAGLE MATERIALS (EXP)	-9.0%
NEOGENOMICS (NEO)	-7.9%

Next Century-SCG Performance Attribution vs. Russell 2000 Growth

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.2%	--	0.2%	--	--	-14.9%	0.0%	1.4%			
Materials	-1.2%	-0.7%	-0.1%	-0.4%	-15.8%	-0.9%	7.2%	4.5%			
Industrials	-0.1%	0.1%	-0.2%	0.0%	-2.5%	-3.0%	23.5%	19.0%			
Consumer Discretionary	1.1%	2.3%	0.6%	-1.9%	13.4%	-3.2%	2.7%	13.9%			
Consumer Staples	0.2%	--	0.2%	--	--	-4.1%	0.0%	2.6%			
Health Care	2.0%	2.2%	-0.1%	-0.2%	15.7%	6.4%	22.1%	24.0%			
Financials	0.6%	0.3%	0.0%	0.4%	6.5%	2.4%	14.8%	6.2%			
Information Technology	0.0%	0.0%	0.0%	0.0%	9.9%	9.9%	24.2%	23.6%			
Telecommunication Services	0.2%	0.1%	-0.1%	0.2%	10.1%	-1.8%	2.0%	0.8%			
Utilities	0.1%	--	0.1%	--	--	-10.5%	0.0%	0.7%			
Real Estate	0.3%	--	0.3%	--	--	-7.3%	0.0%	3.4%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.4%	--	3.5%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
Portfolio	3.4%	=	4.3%	+	1.0%	+	-1.9%	5.7%	2.3%	100.0%	100.0%

International developed equity

Unhedged International equities were in line with U.S. equities during Q1, delivering slightly negative performance. The MSCI EAFE Index returned -1.5%. Positive currency returns masked underperformance of local developed market equities. On a hedged basis, the MSCI EAFE Index posted a -3.8% return. Looking forward, accelerating corporate earnings, and more attractive valuations following the February fall in equity prices, may be supportive for another positive year in 2018. Forward one year earnings growth is expected to be around 15%.

Along with the U.S., most developed markets also experienced an approximate 10% drawdown in February, but were not as quick to recover. Most regional benchmarks finished the quarter still 7-10% below recent peaks.

Trailing P/E ratios for the EAFE Index have moved to below average, providing a possible value opportunity. However, downside risks to these markets, including political issues and reliance on central bank support may be a justification for low valuations.

EQUITY PERFORMANCE (3-YEAR ROLLING)



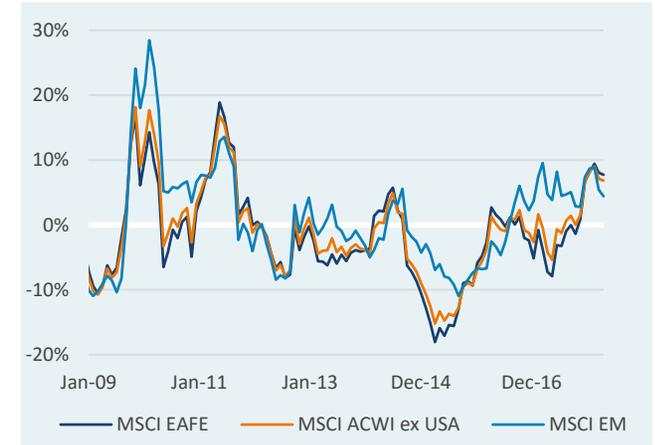
Source: Bloomberg, as of 3/31/18

EARNINGS GROWTH (YOY)



Source: MSCI, as of 3/31/18 – YoY growth in forward earnings

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 3/31/18

Emerging market equity

We maintain an overweight to emerging market equities. Emerging market equities have exhibited more modest valuations relative to developed markets such as the U.S., while these economies in aggregate continue to outpace developed economies by a wide margin. Furthermore, emerging market currencies remain depressed relative to history. Cheaper valuations, much stronger economic growth, and a currency tailwind may bode well for future performance.

Emerging economies have led the way over the past year in terms of economic growth, earnings, and equity performance. Emerging market equities have delivered positive performance year-to-date despite the February sell-off (MSCI Emerging Markets +1.2%) while developed markets were in negative territory to end the first quarter.

Coordinated global growth has helped propel emerging market equities forward

EQUITY PERFORMANCE (3YR ROLLING)



Source: Standard & Poor's, MSCI, as of 3/31/18

ECONOMIC MOMENTUM



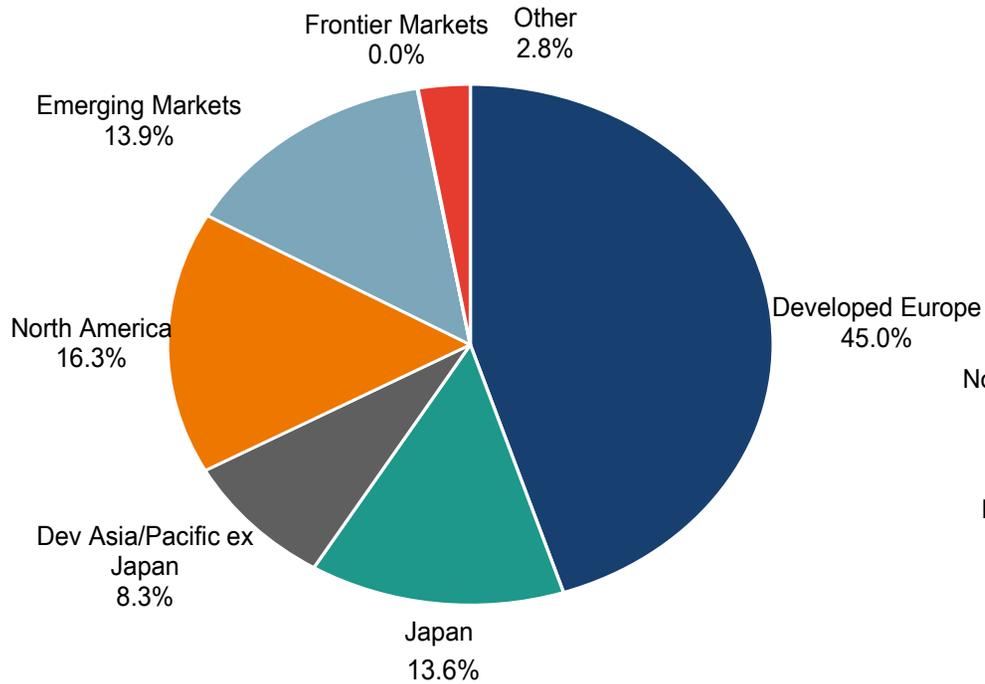
Source: Bloomberg, as of 12/31/18

BRIC VALUATIONS

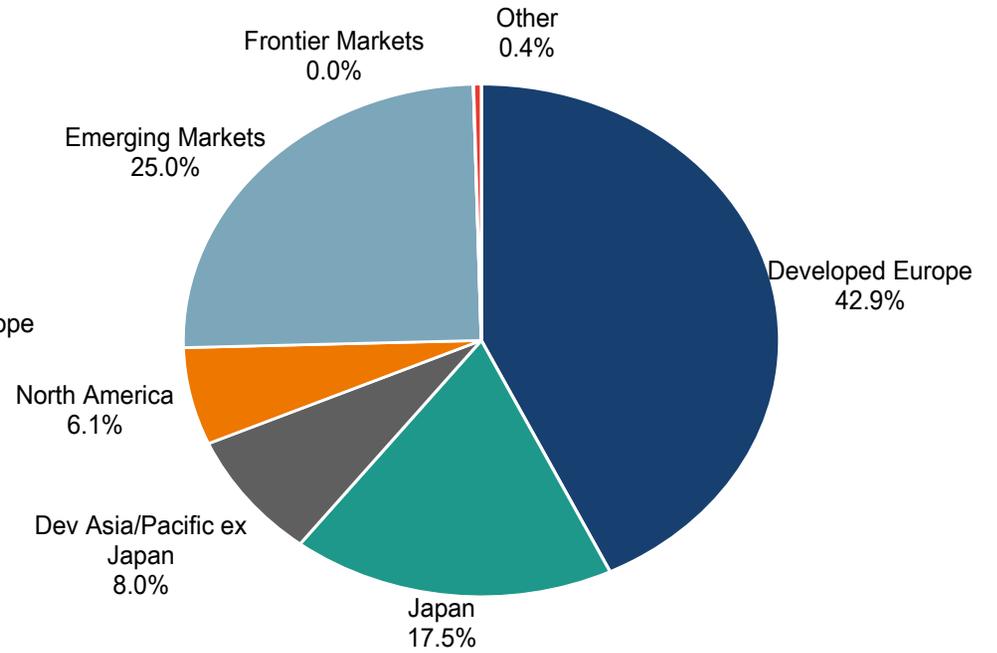


Source: MSCI, as of 3/31/18

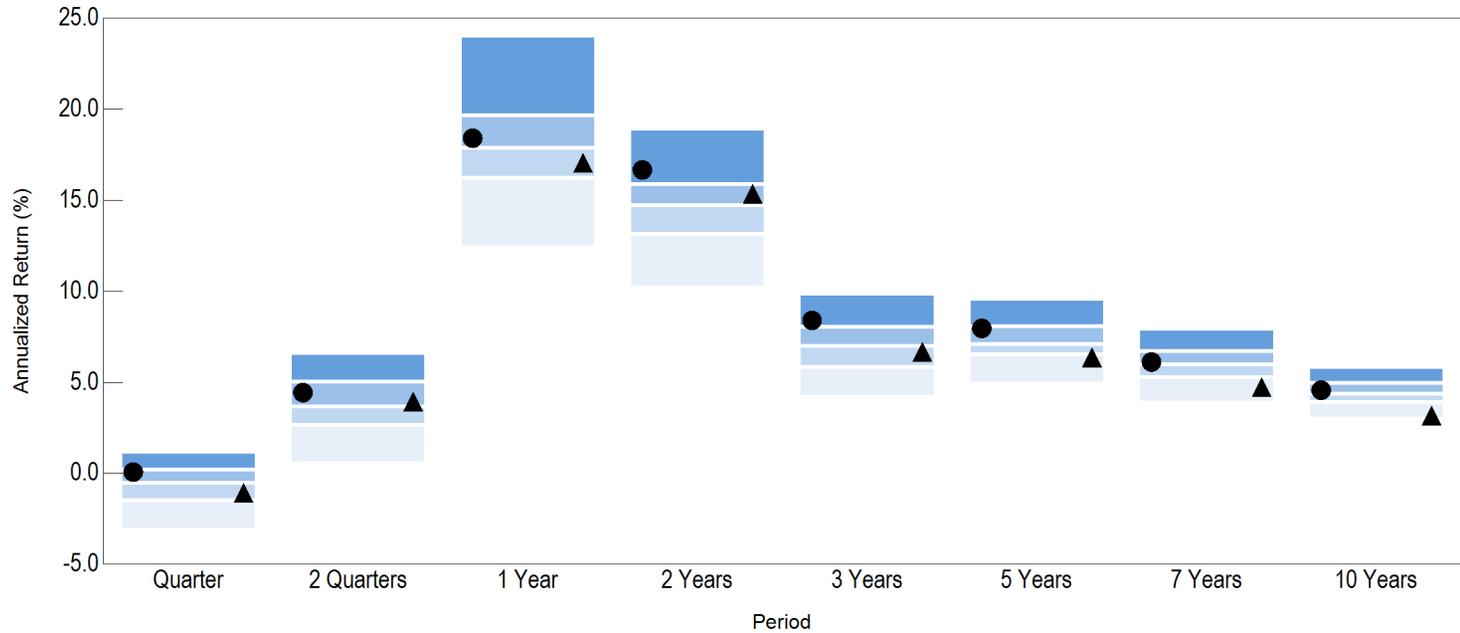
International Equity



MSCI ACWI ex US IMI



eV ACWI ex-US Large Cap Core Eq Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	1.2		6.6		24.0		18.9		9.9		9.6		7.9		5.8	
25th Percentile	0.2		5.0		19.7		15.9		8.1		8.1		6.7		5.0	
Median	-0.5		3.7		17.9		14.8		7.0		7.1		6.0		4.4	
75th Percentile	-1.5		2.7		16.3		13.2		5.9		6.6		5.3		3.9	
95th Percentile	-3.1		0.6		12.4		10.2		4.2		4.9		3.9		3.0	
# of Portfolios	59		59		59		59		57		50		44		37	
● AQR	0.1	(32)	4.4	(35)	18.4	(38)	16.7	(14)	8.4	(19)	8.0	(28)	6.1	(48)	4.6	(49)
▲ MSCI ACWI ex USA Gross	-1.1	(65)	3.9	(47)	17.0	(61)	15.4	(38)	6.7	(60)	6.4	(82)	4.7	(88)	3.2	(94)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	768	1,864
Weighted Avg. Market Cap. (\$B)	44.0	65.0
Median Market Cap. (\$B)	14.7	8.5
Price To Earnings	16.1	18.6
Price To Book	2.6	2.5
Price To Sales	2.1	2.3
Return on Equity (%)	17.8	15.4
Yield (%)	3.1	3.0
Beta (holdings; global)	1.1	1.1

Top Holdings

NESTLE 'R'	2.2%
ROCHE HOLDING	1.6%
COVESTRO (XET)	1.5%
INTESA SANPAOLO	1.4%
LLOYDS BANKING GROUP	1.4%
NOVO NORDISK 'B'	1.3%
PERSIMMON	1.2%
NIPPON TELG. & TEL.	1.2%
PEUGEOT	1.2%
SANOFI	1.2%

Best Performers

	Return %
GKN (UKIR:GKN)	50.3%
SKY (UKIR:SKY)	35.6%
TDC (DK:TDC)	34.5%
SHISEIDO (J:SHDO)	32.5%
OTSUKA (J:OTSK)	31.4%
SEGA SAMMY HDG. (J:SESA)	29.2%
DASSAULT SYSTEMES (F:DSY)	27.6%
SHIMADZU (J:ZU@N)	24.2%
ROYAL MAIL (UKIR:RMG)	23.9%
SHOPIFY SUBD.VTG.SHS.'A' (C:SHOP)	22.6%

Worst Performers

	Return %
VALEANT PHARMS.INTL. (C:VRX)	-23.9%
SEIKO EPSON (J:SEEP)	-23.4%
SODEXO (F:SDX)	-23.1%
NIPPON ELEC.GLASS (J:LO@N)	-22.2%
TATE & LYLE (UKIR:TATE)	-19.7%
OSRAM LICHT (D:OSR)	-17.2%
MIXI (J:MIXI)	-16.6%
YANGZIJANG SHIPBUILDING (HOLDINGS) (T:YSHL)	-16.1%
GENTING SINGAPORE (T:GINT)	-16.0%
NOK (J:IV@N)	-15.8%

AQR Performance Attribution vs. MSCI ACWI ex USA Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	-0.1%	0.0%	0.0%	-2.8%	-1.6%	5.2%	6.8%			
Materials	0.0%	0.0%	0.0%	0.0%	-2.6%	-2.8%	10.3%	8.0%			
Industrials	-0.1%	-0.1%	0.0%	0.1%	-2.5%	-1.5%	14.6%	11.9%			
Consumer Discretionary	0.3%	0.3%	0.0%	0.0%	1.4%	-1.1%	12.1%	11.4%			
Consumer Staples	0.0%	-0.1%	0.1%	0.0%	-2.9%	-2.7%	6.2%	9.6%			
Health Care	-0.2%	-0.2%	0.0%	0.0%	-2.8%	0.0%	8.5%	7.7%			
Financials	-0.1%	-0.1%	-0.1%	0.1%	-0.8%	-1.0%	16.7%	23.2%			
Information Technology	-0.4%	-0.5%	-0.1%	0.3%	-0.7%	1.7%	7.3%	11.5%			
Telecommunication Services	0.2%	0.2%	0.0%	-0.1%	3.2%	-4.0%	2.9%	4.0%			
Utilities	0.1%	0.2%	0.0%	0.0%	8.5%	1.4%	2.3%	2.9%			
Real Estate	0.0%	0.0%	0.0%	0.0%	-1.9%	-1.3%	4.3%	3.1%			
Cash	0.3%	0.0%	0.3%	0.0%	0.4%	--	9.7%	0.0%			
Portfolio	0.1%	=	-0.4%	+	0.2%	+	0.3%	-1.0%	-1.1%	100.0%	100.0%

AQR Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	--	2.2%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	3.0%	0.6%	1.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.1%
Czech Republic*	--	6.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	7.4%	-1.1%	1.9%	1.3%	0.1%	0.0%	0.0%	0.1%	0.2%
Finland	10.0%	8.6%	1.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%
France	2.8%	0.5%	8.7%	7.2%	0.2%	0.0%	0.0%	0.0%	0.3%
Germany	-2.5%	-3.5%	8.7%	6.8%	0.1%	-0.1%	0.0%	0.0%	0.1%
Greece*	--	-6.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-1.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	-5.7%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Italy	7.7%	5.5%	2.1%	1.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Netherlands	0.0%	1.0%	4.0%	2.5%	0.0%	0.0%	0.1%	0.0%	0.0%
Norway	--	2.4%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Poland*	--	-8.2%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	--	3.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	--	9.5%	0.0%	0.8%	--	-0.1%	0.0%	--	-0.1%
Spain	0.3%	-1.7%	2.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Sweden	-1.6%	-1.8%	2.6%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Switzerland	-4.9%	-3.9%	7.2%	5.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
United Kingdom	-0.7%	-3.8%	14.0%	12.1%	0.4%	-0.1%	0.1%	0.1%	0.4%

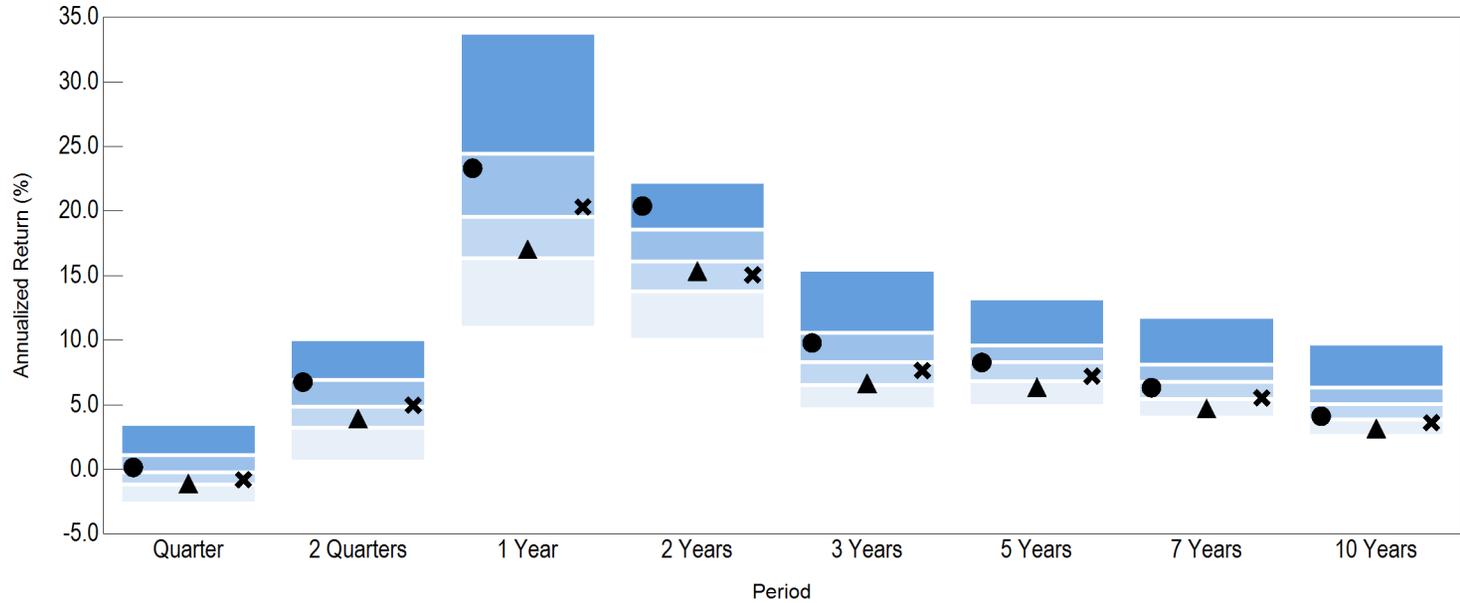
AQR Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	-7.5%	-6.1%	5.2%	4.8%	-0.1%	0.0%	0.0%	0.0%	-0.1%
China*	--	1.8%	0.0%	7.4%	--	-0.4%	0.0%	--	-0.4%
Hong Kong	-1.3%	-1.4%	3.1%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
India*	--	-6.9%	0.0%	2.2%	--	0.0%	0.0%	--	0.1%
Indonesia*	--	-7.0%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
Japan	-0.9%	0.8%	19.4%	16.6%	-0.3%	-0.1%	0.1%	0.0%	-0.2%
Korea*	--	-0.9%	0.0%	3.8%	--	-0.1%	0.0%	--	-0.1%
Malaysia*	--	8.7%	0.0%	0.6%	--	0.0%	0.0%	--	-0.1%
New Zealand	--	-4.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Pakistan*	--	11.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	--	-11.4%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Singapore	-9.0%	2.9%	1.1%	0.9%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Taiwan*	--	5.6%	0.0%	2.8%	--	-0.2%	-0.1%	--	-0.2%
Thailand*	--	9.1%	0.0%	0.6%	--	0.0%	0.0%	--	-0.1%
Americas									
Brazil*	--	12.5%	0.0%	1.7%	--	-0.3%	0.0%	--	-0.3%
Canada	-4.3%	-7.2%	7.4%	6.4%	0.2%	0.0%	0.0%	0.0%	0.2%
Chile*	--	1.6%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	4.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	--	0.9%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
Peru*	--	10.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%

AQR Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	12.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-5.3%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Qatar*	--	4.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
South Africa*	--	-4.0%	0.0%	1.8%	--	0.1%	-0.1%	--	0.0%
Turkey*	--	-4.8%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	-0.8%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Totals									
Americas	-4.3%	-2.4%	7.4%	9.4%	0.0%	0.0%	-0.1%	0.0%	-0.2%
Europe	0.0%	-1.7%	54.1%	44.9%	0.7%	-0.1%	0.3%	0.1%	1.0%
Asia/Pacific	-2.4%	-0.1%	28.8%	43.1%	-1.6%	-0.1%	0.1%	0.5%	-1.1%
Other	--	-3.4%	0.0%	2.7%	--	0.1%	-0.1%	--	0.0%
Cash	0.4%	--	9.7%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%
Total	-1.0%	-1.1%	100.0%	100.0%	-0.9%	0.2%	0.2%	0.7%	0.1%
Totals									
Developed	-1.1%	-1.9%	90.3%	75.2%	0.6%	-0.2%	0.4%	0.1%	0.9%
Emerging*	--	1.4%	0.0%	24.8%	--	-0.9%	-0.2%	--	-1.1%
Cash	0.4%	--	9.7%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%

eV All ACWI ex-US Equity Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	3.5	10.1	33.8	22.2	15.4	13.2	11.8	9.7								
25th Percentile	1.2	7.0	24.4	18.6	10.6	9.6	8.1	6.4								
Median	-0.2	4.9	19.6	16.1	8.3	8.3	6.8	5.1								
75th Percentile	-1.1	3.3	16.4	13.8	6.5	6.9	5.5	3.9								
95th Percentile	-2.6	0.6	11.0	10.1	4.7	4.9	4.1	2.6								
# of Portfolios	278	278	278	277	263	228	194	155								
● Capital Group	0.2 (42)	6.8 (27)	23.3 (30)	20.4 (14)	9.8 (32)	8.3 (53)	6.3 (61)	4.1 (71)								
▲ MSCI ACWI ex USA Gross	-1.1 (74)	3.9 (65)	17.0 (70)	15.4 (59)	6.7 (74)	6.4 (85)	4.7 (87)	3.2 (88)								
✕ MSCI ACWI ex USA Growth Gross	-0.8 (68)	5.0 (48)	20.3 (45)	15.1 (64)	7.7 (60)	7.2 (71)	5.5 (75)	3.6 (80)								

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	214	1,864
Weighted Avg. Market Cap. (\$B)	56.4	65.0
Median Market Cap. (\$B)	18.2	8.5
Price To Earnings	24.4	18.6
Price To Book	4.3	2.5
Price To Sales	3.9	2.3
Return on Equity (%)	20.1	15.4
Yield (%)	2.1	3.0
Beta (holdings; global)	1.2	1.1

Top Holdings

VALE ON ADR 1:1	2.4%
AIRBUS	2.2%
SAMSUNG ELECTRONICS	2.0%
AIA GROUP	1.9%
TAIWAN SEMICON.MNFG.	1.9%
ENEL	1.7%
ASTRAZENECA	1.7%
MERCADOLIBRE	1.6%
CTRIIP.COM INTL.ADR 8:1	1.5%
NASPERS	1.4%

Best Performers

	Return %
OCADO GROUP (UKIR:OCDO)	38.6%
PETROLEO BRASILEIRO ADR 1:2 (PBR)	37.4%
NAGACORP (K:NAGA)	33.4%
GENMAB (DK:GEN)	29.0%
PRADA (K:PRAD)	27.6%
ITAU UNIBANCO BANCO HLDG.ADR 1:1 (ITUB)	25.4%
CIA ENERGETICA DE MINAS GERAIS PN (BR:GP4)	24.4%
CHINA RESOURCES LAND (K:CHBE)	23.6%
LONGFOR PROPERTIES (K:LNGF)	22.1%
MR PRICE GROUP (R:MRPJ)	21.6%

Worst Performers

	Return %
MICRO FOCUS INTL. (UKIR:MCRO)	-59.0%
AA (UKIR:AA.)	-50.9%
PZ CUSSONS (UKIR:PZC)	-26.0%
HUTCHISON CHINA MEDITECH (UKIR:HCM)	-25.9%
BHARTI AIRTEL (IN:ART)	-25.9%
ENSCO CLASS A (ESV)	-25.6%
STEEL AUTHORITY OF INDIA (IN:SAI)	-25.4%
MINTH GROUP (K:MINT)	-24.5%
INMARSAT (UKIR:ISAT)	-23.5%
ALTICE A (H:ATC)	-21.6%

Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Total Effects	Attribution Effects				Returns		Sector Weights			
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	-0.2%	0.0%	0.1%	-4.6%	-1.6%	2.4%	6.8%			
Materials	0.2%	0.4%	0.1%	-0.3%	1.8%	-2.8%	4.3%	8.0%			
Industrials	0.5%	0.5%	0.0%	0.0%	3.0%	-1.5%	11.3%	11.9%			
Consumer Discretionary	0.2%	0.1%	-0.1%	0.1%	-0.6%	-1.1%	17.1%	11.4%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	-3.8%	-2.7%	7.5%	9.6%			
Health Care	-0.3%	-0.2%	0.0%	0.0%	-3.4%	0.0%	7.0%	7.7%			
Financials	0.2%	0.4%	0.0%	-0.2%	0.2%	-1.0%	21.9%	23.2%			
Information Technology	0.3%	0.0%	0.1%	0.2%	2.5%	1.7%	15.1%	11.5%			
Telecommunication Services	-0.2%	-0.2%	0.0%	0.0%	-9.0%	-4.0%	4.2%	4.0%			
Utilities	0.0%	0.0%	0.0%	0.0%	0.7%	1.4%	2.7%	2.9%			
Real Estate	0.5%	0.3%	0.0%	0.2%	9.4%	-1.3%	4.8%	3.1%			
Cash	0.1%	0.0%	0.1%	0.0%	0.4%	--	1.6%	0.0%			
Portfolio	1.3%	=	1.0%	+	0.2%	+	0.0%	0.2%	-1.1%	100.0%	100.0%

Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	--	2.2%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	1.9%	0.6%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	--	6.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	1.7%	-1.1%	3.4%	1.3%	0.0%	0.0%	0.0%	0.1%	0.1%
Finland	--	8.6%	0.0%	0.6%	--	-0.1%	0.0%	--	-0.1%
France	4.6%	0.5%	8.3%	7.2%	0.3%	0.0%	0.0%	0.0%	0.4%
Germany	-0.2%	-3.5%	5.0%	6.8%	0.2%	0.0%	0.0%	-0.1%	0.2%
Greece*	--	-6.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-1.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	7.2%	-5.7%	1.1%	0.3%	0.0%	0.0%	0.0%	0.1%	0.1%
Italy	1.2%	5.5%	1.6%	1.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	-13.5%	-1.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	0.0%	1.0%	3.2%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Norway	4.4%	2.4%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	--	-8.2%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	--	3.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	6.9%	9.5%	0.2%	0.8%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Spain	-4.5%	-1.7%	1.3%	2.2%	-0.1%	0.0%	0.0%	0.0%	0.0%
Sweden	0.5%	-1.8%	1.1%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Switzerland	-2.7%	-3.9%	4.0%	5.5%	0.1%	0.0%	0.0%	0.0%	0.1%
United Kingdom	-7.1%	-3.8%	13.7%	12.1%	-0.4%	-0.1%	0.0%	-0.1%	-0.5%

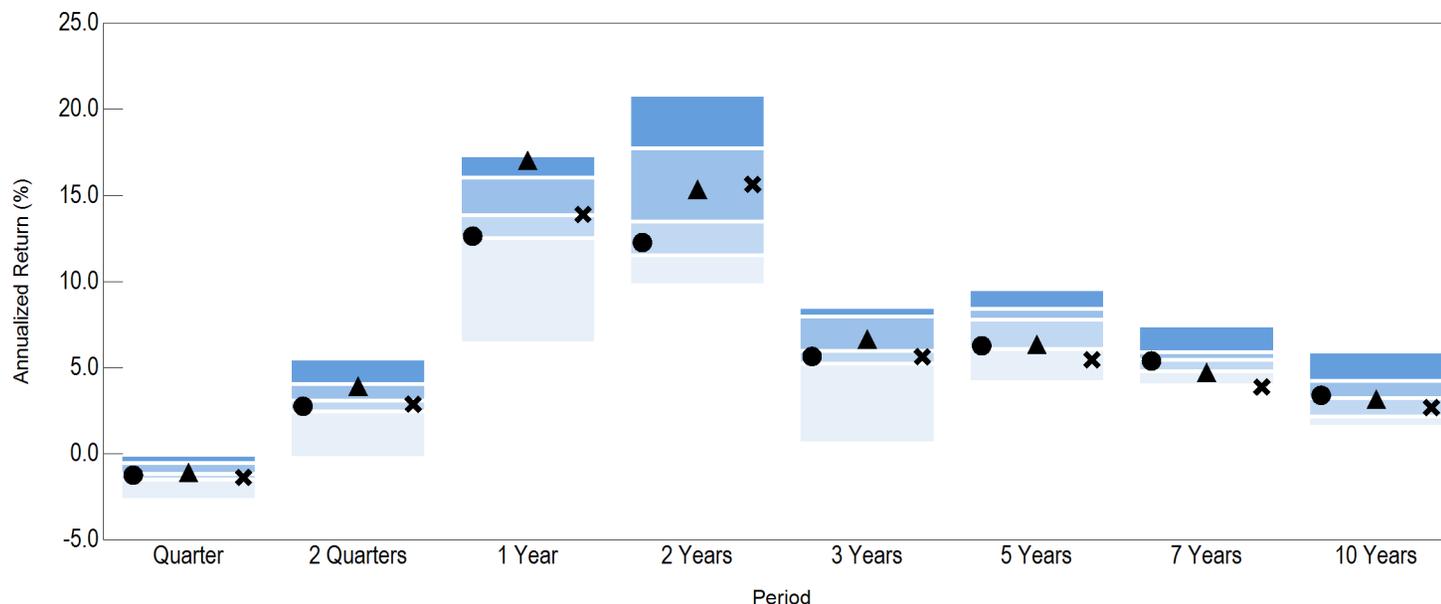
Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	-13.7%	-6.1%	0.5%	4.8%	-0.4%	0.1%	0.1%	0.3%	0.1%
China*	-2.4%	1.8%	6.8%	7.4%	-0.3%	0.0%	0.0%	0.0%	-0.3%
Hong Kong	4.1%	-1.4%	7.7%	2.5%	0.1%	0.1%	0.0%	0.3%	0.5%
India*	-3.2%	-6.9%	6.9%	2.2%	0.1%	-0.1%	-0.1%	0.2%	0.1%
Indonesia*	2.5%	-7.0%	2.2%	0.6%	0.1%	0.0%	0.0%	0.2%	0.1%
Japan	1.9%	0.8%	12.0%	16.6%	0.2%	0.1%	-0.3%	0.0%	0.0%
Korea*	-3.4%	-0.9%	2.1%	3.8%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Malaysia*	--	8.7%	0.0%	0.6%	--	0.0%	0.0%	--	-0.1%
New Zealand	-5.3%	-4.9%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Pakistan*	--	11.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	--	-11.4%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Singapore	4.0%	2.9%	0.6%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	9.1%	5.6%	3.1%	2.8%	0.1%	0.0%	0.0%	0.0%	0.1%
Thailand*	-0.1%	9.1%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	-0.1%
Americas									
Brazil*	8.9%	12.5%	4.2%	1.7%	-0.1%	0.4%	0.0%	-0.1%	0.2%
Canada	-14.6%	-7.2%	0.8%	6.4%	-0.5%	0.1%	0.2%	0.4%	0.2%
Chile*	--	1.6%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	4.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	8.5%	0.9%	0.6%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%
Peru*	9.5%	10.4%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	15.7%	-0.8%	2.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%

Capital Group Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	12.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	-0.2%	-5.3%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	--	4.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
South Africa*	-8.3%	-4.0%	2.8%	1.8%	-0.1%	-0.1%	0.0%	0.0%	-0.1%
Turkey*	--	-4.8%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	21.5%	-0.8%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	8.1%	-2.4%	7.9%	9.4%	0.9%	0.0%	0.1%	-0.1%	0.8%
Europe	-1.4%	-1.7%	43.9%	44.9%	0.1%	0.0%	0.0%	0.0%	0.1%
Asia/Pacific	0.9%	-0.1%	42.7%	43.1%	0.7%	0.0%	-0.3%	0.0%	0.4%
Other	-5.1%	-3.4%	3.9%	2.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Cash	0.4%	--	1.6%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Total	0.2%	-1.1%	100.0%	100.0%	1.6%	0.0%	-0.1%	-0.2%	1.3%
Totals									
Developed	0.1%	-1.9%	68.4%	75.2%	1.3%	0.1%	0.0%	-0.1%	1.3%
Emerging*	0.5%	1.4%	30.0%	24.8%	-0.1%	0.2%	-0.1%	0.0%	-0.1%
Cash	0.4%	--	1.6%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%

eV ACWI ex-US Large Cap Value Eq Gross Return Comparison



	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-0.1	5.5	17.3	20.8	8.5	9.6	7.4	5.9
25th Percentile	-0.5	4.1	16.1	17.8	8.0	8.4	5.9	4.3
Median	-1.1	3.1	13.9	13.5	6.0	7.8	5.5	3.3
75th Percentile	-1.5	2.5	12.5	11.6	5.3	6.1	4.8	2.2
95th Percentile	-2.7	-0.2	6.5	9.8	0.6	4.2	4.0	1.6
# of Portfolios	21	21	21	21	20	17	16	14
● Mondrian	-1.2 (54)	2.8 (63)	12.6 (74)	12.3 (65)	5.7 (57)	6.3 (68)	5.4 (56)	3.4 (46)
▲ MSCI ACWI ex USA Gross	-1.1 (45)	3.9 (34)	17.0 (11)	15.4 (41)	6.7 (46)	6.4 (67)	4.7 (80)	3.2 (54)
✕ MSCI ACWI ex USA Value Gross	-1.4 (66)	2.9 (56)	13.9 (50)	15.6 (41)	5.6 (58)	5.5 (84)	3.9 (96)	2.7 (71)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	64	1,864
Weighted Avg. Market Cap. (\$B)	54.9	65.0
Median Market Cap. (\$B)	36.4	8.5
Price To Earnings	13.5	18.6
Price To Book	1.6	2.5
Price To Sales	1.4	2.3
Return on Equity (%)	11.6	15.4
Yield (%)	4.1	3.0
Beta (holdings; global)	1.0	1.1

Top Holdings

SANOFI	3.4%
ENEL	3.4%
TESCO	3.4%
UNITED OVERSEAS BANK	3.4%
HONDA MOTOR	3.3%
ENI	3.1%
LLOYDS BANKING GROUP	3.0%
TELIA COMPANY	3.0%
DAIMLER	3.0%
BP	2.9%

Best Performers

	Return %
OTSUKA HOLDINGS (J:OTHD)	14.1%
GLAXOSMITHKLINE (UKIR:GSK)	11.2%
NEXT (UKIR:NXT)	10.1%
ZURICH INSURANCE GROUP (S:ZURN)	7.5%
KONINKLIJKE AHOLD DELHAIZE (H:AD)	7.5%
ENI (I:ENI)	6.0%
UNITED OVERSEAS BANK (T:UOBS)	6.0%
KIRIN HOLDINGS (J:KB@N)	5.6%
BMW PREF. (D:BMW3)	5.1%
SOCIETE GENERALE (F:SGE)	5.1%

Worst Performers

	Return %
WOOD GROUP (JOHN) (UKIR:WG.)	-13.8%
TAKEDA PHARMACEUTICAL (J:TA@N)	-12.8%
WPP (UKIR:WPP)	-12.4%
SEKISUI CHEMICAL (J:EK@N)	-12.2%
ABB LTD N (S:ABBN)	-11.5%
QBE INSURANCE GROUP (A:QBEX)	-11.2%
KINGFISHER (UKIR:KGF)	-10.2%
SUMITOMO ELECTRIC IND. (J:SUEL)	-8.5%
DEUTSCHE TELEKOM (D:DTE)	-7.9%
ISUZU MOTORS (J:IM@N)	-7.5%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	-0.2%	0.0%	0.1%	-3.7%	-1.6%	1.8%	6.8%			
Materials	0.0%	--	0.1%	--	--	-2.8%	0.0%	8.0%			
Industrials	-0.8%	-0.8%	0.0%	0.0%	-9.1%	-1.5%	9.5%	11.9%			
Consumer Discretionary	0.8%	0.3%	-0.1%	0.5%	2.4%	-1.1%	18.5%	11.4%			
Consumer Staples	0.1%	0.5%	0.2%	-0.5%	5.6%	-2.7%	1.8%	9.6%			
Health Care	0.9%	0.3%	0.0%	0.5%	4.8%	0.0%	14.8%	7.7%			
Financials	0.4%	0.5%	-0.1%	0.0%	2.0%	-1.0%	16.7%	23.2%			
Information Technology	-0.6%	-1.0%	-0.2%	0.6%	-4.1%	1.7%	5.9%	11.5%			
Telecommunication Services	0.0%	0.0%	-0.2%	0.2%	-3.5%	-4.0%	10.2%	4.0%			
Utilities	-0.2%	-0.2%	0.0%	0.0%	-4.9%	1.4%	4.8%	2.9%			
Real Estate	-0.1%	--	0.0%	--	--	-1.3%	0.0%	3.1%			
Cash	0.5%	0.0%	0.5%	0.0%	0.4%	--	16.0%	0.0%			
Portfolio	1.0%	=	-0.6%	+	0.4%	+	1.2%	-0.1%	-1.1%	100.0%	100.0%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	--	2.2%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	--	0.6%	0.0%	0.8%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	6.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-4.8%	-1.1%	3.4%	1.3%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Finland	--	8.6%	0.0%	0.6%	--	-0.1%	0.0%	--	-0.1%
France	--	0.5%	0.0%	7.2%	--	-0.1%	-0.2%	--	-0.3%
Germany	-1.1%	-3.5%	22.6%	6.8%	0.2%	-0.4%	0.4%	0.4%	0.5%
Greece*	--	-6.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-1.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	-5.7%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Italy	--	5.5%	0.0%	1.6%	--	-0.1%	0.0%	--	-0.1%
Netherlands	-3.7%	1.0%	1.8%	2.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Norway	--	2.4%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Poland*	--	-8.2%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	--	3.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	--	9.5%	0.0%	0.8%	--	-0.1%	0.0%	--	-0.1%
Spain	1.2%	-1.7%	0.4%	2.2%	0.1%	0.0%	0.0%	-0.1%	0.0%
Sweden	--	-1.8%	0.0%	1.9%	--	-0.1%	0.0%	--	0.0%
Switzerland	-1.4%	-3.9%	20.7%	5.5%	0.1%	-0.4%	0.3%	0.4%	0.4%
United Kingdom	5.6%	-3.8%	14.6%	12.1%	1.1%	-0.1%	0.1%	0.2%	1.4%

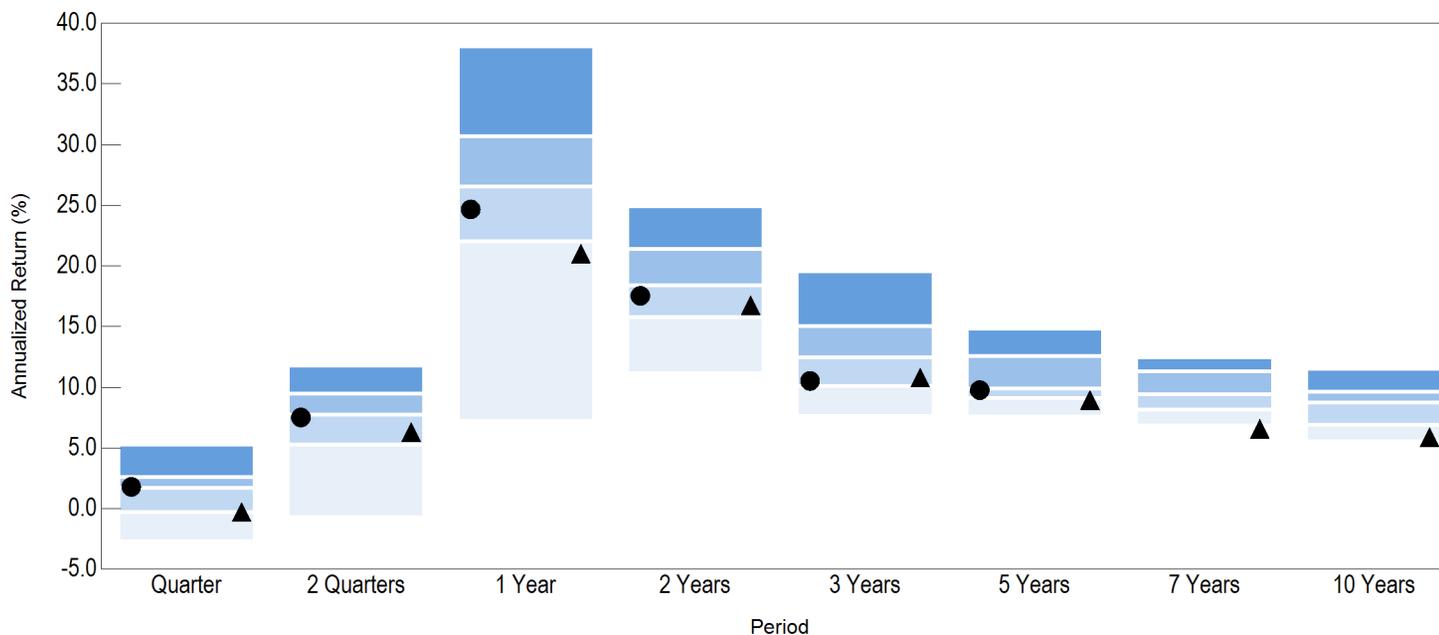
Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	--	-6.1%	0.0%	4.8%	--	0.1%	0.1%	--	0.2%
China*	--	1.8%	0.0%	7.4%	--	-0.4%	0.0%	--	-0.4%
Hong Kong	--	-1.4%	0.0%	2.5%	--	0.0%	0.0%	--	0.0%
India*	--	-6.9%	0.0%	2.2%	--	0.0%	0.0%	--	0.1%
Indonesia*	--	-7.0%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
Japan	1.0%	0.8%	10.7%	16.6%	0.0%	0.1%	-0.3%	0.0%	-0.2%
Korea*	--	-0.9%	0.0%	3.8%	--	-0.1%	0.0%	--	-0.1%
Malaysia*	--	8.7%	0.0%	0.6%	--	0.0%	0.0%	--	-0.1%
New Zealand	--	-4.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Pakistan*	--	11.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Philippines*	--	-11.4%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Singapore	-3.7%	2.9%	9.8%	0.9%	-0.1%	0.4%	0.2%	-0.6%	-0.1%
Taiwan*	--	5.6%	0.0%	2.8%	--	-0.2%	-0.1%	--	-0.2%
Thailand*	--	9.1%	0.0%	0.6%	--	0.0%	0.0%	--	-0.1%
Americas									
Brazil*	--	12.5%	0.0%	1.7%	--	-0.3%	0.0%	--	-0.3%
Canada	--	-7.2%	0.0%	6.4%	--	0.1%	0.2%	--	0.3%
Chile*	--	1.6%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	4.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	--	0.9%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
Peru*	--	10.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%

Mondrian Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	12.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-5.3%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Qatar*	--	4.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
South Africa*	--	-4.0%	0.0%	1.8%	--	0.1%	-0.1%	--	0.0%
Turkey*	--	-4.8%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	-0.8%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Totals									
Americas	--	-2.4%	0.0%	9.4%	--	-0.2%	0.1%	--	-0.1%
Europe	0.1%	-1.7%	63.4%	44.9%	0.7%	-0.2%	0.5%	0.3%	1.4%
Asia/Pacific	-1.2%	-0.1%	20.5%	43.1%	-1.3%	-0.2%	-0.1%	0.7%	-0.9%
Other	--	-3.4%	0.0%	2.7%	--	0.1%	-0.1%	--	0.0%
Cash	0.4%	--	16.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%
Total	-0.1%	-1.1%	100.0%	100.0%	-0.5%	0.1%	0.5%	1.0%	1.0%
Totals									
Developed	-0.2%	-1.9%	84.0%	75.2%	0.9%	-0.1%	0.6%	0.1%	1.5%
Emerging*	--	1.4%	0.0%	24.8%	--	-0.9%	-0.2%	--	-1.1%
Cash	0.4%	--	16.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%

eV ACWI ex-US Small Cap Equity Gross Return Comparison



	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
Return (Rank)																
5th Percentile	5.3	11.8	38.1	24.9	19.5	14.8	12.5	11.5	5.3	11.8	38.1	24.9	19.5	14.8	12.5	11.5
25th Percentile	2.6	9.5	30.7	21.4	15.1	12.6	11.3	9.7	2.6	9.5	30.7	21.4	15.1	12.6	11.3	9.7
Median	1.7	7.8	26.6	18.4	12.5	9.9	9.5	8.8	1.7	7.8	26.6	18.4	12.5	9.9	9.5	8.8
75th Percentile	-0.3	5.3	22.0	15.8	10.2	9.1	8.2	6.9	-0.3	5.3	22.0	15.8	10.2	9.1	8.2	6.9
95th Percentile	-2.7	-0.7	7.3	11.2	7.7	7.6	6.9	5.6	-2.7	-0.7	7.3	11.2	7.7	7.6	6.9	5.6
# of Portfolios	56	56	56	56	51	39	30	26	56	56	56	56	51	39	30	26
● Templeton	1.8 (48)	7.5 (54)	24.7 (57)	17.5 (60)	10.5 (73)	9.8 (64)	-- (--)	-- (--)	1.8 (48)	7.5 (54)	24.7 (57)	17.5 (60)	10.5 (73)	9.8 (64)	-- (--)	-- (--)
▲ MSCI ACWI ex US Small Cap Gross	-0.3 (75)	6.3 (68)	21.0 (81)	16.8 (68)	10.8 (69)	9.0 (81)	6.6 (97)	5.9 (88)	-0.3 (75)	6.3 (68)	21.0 (81)	16.8 (68)	10.8 (69)	9.0 (81)	6.6 (97)	5.9 (88)

Characteristics

	Portfolio	MSCI ACWI ex US Small Cap Gross
Number of Holdings	100	4,329
Weighted Avg. Market Cap. (\$B)	2.5	2.5
Median Market Cap. (\$B)	1.8	1.0
Price To Earnings	21.1	19.1
Price To Book	3.7	2.6
Price To Sales	1.7	2.4
Return on Equity (%)	16.6	13.2
Yield (%)	2.1	2.3
Beta (holdings; global)	0.9	1.0

Top Holdings

TECHNOGYM	2.2%
AMER SPORTS	2.1%
TSUMURA	2.0%
THULE GROUP	2.0%
HUHTAMAKI	2.0%
INTERPUMP GROUP	1.9%
BUCHER INDUSTRIES	1.9%
ANICOM HOLDINGS	1.8%
DEWAN HOUSING FINANCE	1.8%
GERRESHEIMER	1.8%

Best Performers

	Return %
LAIRD (UKIR:LRD)	51.0%
XTEP INTERNATIONAL HDG. (K:XREP)	42.4%
N FIELD (J:NFLD)	37.6%
CAPCOM (J:CAPO)	36.9%
SHANGHAI HAOHAI BILG. TECH.'H' (K:SHBT)	30.4%
TOMRA SYSTEMS (N:TOM)	29.9%
ANICOM HOLDINGS (J:ANIC)	29.8%
HYUNDAI MIPO DOCKYARD (KO:HMO)	27.6%
CONST Y AUXILIAR DE FERR (E:CAF)	25.9%
GOODBABY INTL.HOLDINGS (K:GBIH)	24.4%

Worst Performers

	Return %
VECTURA GROUP (UKIR:VEC)	-31.6%
CHINA ZHENG TONG AUTO SVS. (K:CZTA)	-28.2%
BETER BED HOLDING (H:BET)	-28.0%
ACCELL GROUP (H:ACCE)	-22.5%
SIG (UKIR:SHI)	-20.4%
NILFISK HOLDING (DK:NFH)	-20.1%
ALAMOS GOLD 'A' (NYS) (AGI)	-20.0%
ONTEX GROUP (B:ONTE)	-19.3%
KYB (J:AI@N)	-17.8%
CANADIAN WESTERN BANK (C:CWB)	-17.6%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.1%	0.0%	-0.1%	-5.7%	-5.4%	2.8%	3.5%			
Materials	0.0%	-0.4%	0.1%	0.2%	-5.1%	-3.4%	5.2%	11.3%			
Industrials	0.9%	0.8%	0.0%	0.2%	3.1%	-1.3%	21.2%	19.5%			
Consumer Discretionary	0.1%	0.1%	-0.1%	0.1%	-1.1%	-1.3%	24.8%	15.8%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	6.6%	6.7%			
Health Care	-0.1%	-0.1%	-0.1%	0.1%	6.0%	6.3%	5.6%	7.1%			
Financials	0.3%	0.4%	0.0%	-0.1%	1.8%	-0.1%	12.7%	10.6%			
Information Technology	0.8%	0.8%	0.0%	0.0%	9.6%	2.3%	11.6%	11.7%			
Telecommunication Services	0.0%	--	0.1%	--	--	-6.5%	0.0%	1.2%			
Utilities	0.0%	--	0.0%	--	--	-1.9%	0.0%	2.8%			
Real Estate	-0.4%	-0.3%	-0.2%	0.1%	-0.4%	1.9%	3.0%	9.9%			
Cash	0.1%	0.0%	0.1%	0.0%	0.4%	--	5.0%	0.0%			
Unclassified	0.1%	0.0%	0.1%	0.0%	1.1%	--	1.5%	0.0%			
Portfolio	1.9%	=	1.4%	+	0.0%	+	0.4%	1.7%	-0.2%	100.0%	100.0%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	--	3.3%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
Belgium	1.6%	1.1%	2.1%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	--	-2.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	--	4.3%	0.0%	1.1%	--	0.0%	0.0%	--	-0.1%
Finland	8.8%	0.9%	4.0%	1.1%	0.1%	0.0%	0.1%	0.2%	0.4%
France	--	-1.1%	0.0%	2.7%	--	0.0%	-0.1%	--	0.0%
Germany	1.7%	0.0%	6.0%	4.2%	0.1%	0.0%	0.0%	0.0%	0.1%
Greece*	--	2.6%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Hungary*	--	0.8%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Ireland	--	4.2%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
Italy	12.2%	2.6%	5.0%	2.9%	0.3%	0.1%	0.1%	0.2%	0.6%
Luxembourg	2.2%	-0.2%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Netherlands	-10.7%	-0.2%	4.4%	1.8%	-0.2%	0.0%	0.1%	-0.3%	-0.4%
Norway	29.9%	3.8%	1.0%	1.2%	0.3%	0.0%	0.0%	-0.1%	0.2%
Poland*	-17.0%	-10.0%	1.0%	0.2%	0.0%	-0.1%	0.0%	-0.1%	-0.1%
Portugal	--	0.7%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Russia*	--	5.9%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Spain	25.9%	3.2%	1.2%	1.8%	0.4%	0.0%	0.0%	-0.1%	0.2%
Sweden	-3.6%	-2.5%	3.9%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Switzerland	4.0%	-2.1%	3.5%	3.4%	0.2%	0.0%	0.0%	0.0%	0.2%
United Kingdom	-6.8%	-1.6%	7.0%	13.1%	-0.7%	0.2%	-0.2%	0.3%	-0.4%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
AsiaPacific									
Australia	--	-4.1%	0.0%	4.8%	--	0.0%	0.1%	--	0.1%
China*	30.4%	3.2%	0.5%	4.3%	1.2%	-0.2%	0.0%	-1.0%	-0.1%
Hong Kong	-2.9%	-0.7%	8.0%	1.4%	0.0%	0.1%	0.0%	-0.1%	-0.1%
India*	-14.3%	-12.1%	1.9%	3.4%	-0.1%	0.1%	0.0%	0.0%	0.1%
Indonesia*	--	5.5%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Japan	5.7%	2.2%	21.1%	21.9%	0.7%	0.0%	0.0%	0.0%	0.7%
Korea*	15.9%	2.7%	3.5%	3.7%	0.5%	0.0%	0.0%	0.0%	0.5%
Malaysia*	--	-0.6%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
New Zealand	--	7.5%	0.0%	0.7%	--	-0.1%	0.0%	--	-0.1%
Pakistan*	--	6.9%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Philippines*	3.8%	-2.9%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	--	4.1%	0.0%	1.2%	--	-0.1%	0.0%	--	-0.1%
Taiwan*	2.4%	1.8%	4.5%	3.9%	0.0%	0.0%	0.0%	0.0%	0.1%
Thailand*	4.2%	-1.4%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Americas									
Brazil*	-2.8%	5.4%	3.1%	1.2%	-0.1%	0.2%	0.0%	-0.2%	-0.1%
Canada	-7.6%	-8.1%	7.2%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Chile*	--	-2.9%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	-3.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	--	6.8%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Peru*	--	-5.2%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
United States	6.0%	-0.8%	3.7%	0.0%	0.0%	0.1%	0.0%	0.3%	0.3%

Templeton Performance Attribution vs. MSCI ACWI ex US Small Cap Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	--	24.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Israel	--	-0.3%	0.0%	1.1%	--	0.0%	0.0%	--	0.0%
Qatar*	--	3.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
South Africa*	--	1.7%	0.0%	1.2%	--	0.0%	-0.1%	--	0.0%
Turkey*	-10.8%	4.5%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	-0.1%
United Arab Emirates*	--	1.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Totals									
Americas	-2.9%	-5.2%	14.0%	9.1%	0.2%	-0.1%	-0.1%	0.1%	0.2%
Europe	1.5%	-0.3%	40.1%	40.4%	0.8%	0.0%	-0.1%	0.0%	0.7%
Asia/Pacific	3.8%	0.6%	40.4%	47.6%	1.3%	0.0%	0.0%	-0.2%	1.1%
Other	-10.8%	2.1%	0.5%	2.9%	-0.2%	-0.1%	-0.1%	0.2%	-0.2%
Cash	0.4%	--	5.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Total	1.7%	-0.2%	100.0%	100.0%	2.0%	0.0%	-0.2%	0.1%	1.9%
Totals									
Developed	1.8%	-0.4%	79.1%	77.8%	1.8%	0.0%	-0.1%	0.0%	1.7%
Emerging*	1.7%	0.3%	15.9%	22.2%	0.4%	-0.1%	-0.1%	-0.1%	0.1%
Cash	0.4%	--	5.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%

Interest rate environment

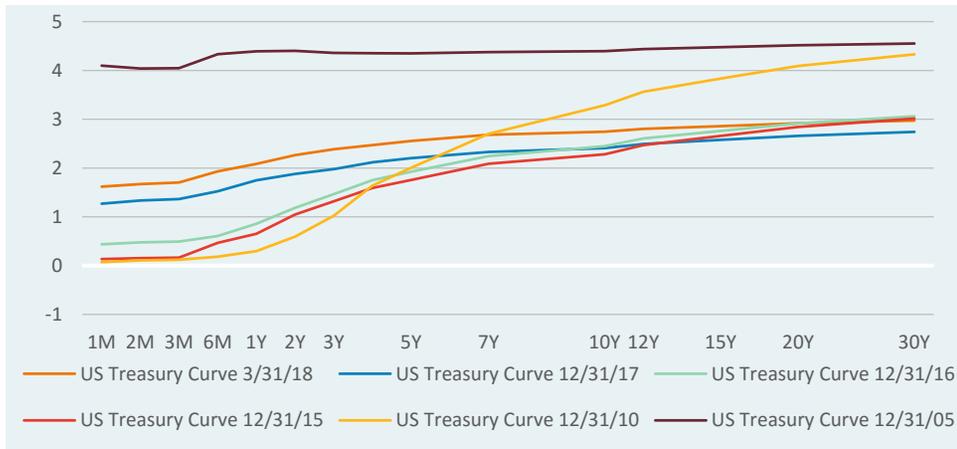
- The Fed raised interest rates by 25 bps to a target range of 1.50% - 1.75% in March, as expected. In his first public comments since taking over as Fed chairman, Jerome Powell's views appeared to support a continuation of gradual monetary tightening.
- According to the Fed dot plot, officials are expecting two additional rate hikes this year, on par with market pricing.
- Long-term Treasury yields rose at the beginning of the year, likely influenced by increasing growth and inflation expectations. The 10-year yield peaked at 2.95% in late February, up 55 bps from year-end. Yields failed to hold these levels, however, and finished the quarter at 2.74%.
- Short-term borrowing costs continued to rise during the quarter, especially in debt tied to Libor. The 3-month USD Libor rate moved steadily higher from 1.7% to 2.3%. Much of this increase was likely mechanical due to record high Treasury bill issuance and repatriation of foreign profits.
- Sovereign yields in developed Europe also ticked up in January, coinciding with yield increases in U.S. Treasuries, but came back down in the last two months of the quarter. German 10-year yields peaked at a two year high of 0.77% in early February before finishing the quarter at 0.50%.
- Developed international central banks remain accommodative compared to the Fed, but they have increasingly hinted towards policy normalization. The ECB is likely next in line to begin monetary tightening by ending asset purchases and raising rates sometime next year. The BOJ has yet to provide any details on ending its stimulus program, but officials have noted internal discussions have begun.

Area	Short Term (3M)	10 Year
United States	1.70%	2.74%
Germany	(0.75%)	0.50%
France	(0.58%)	0.72%
Spain	(0.50%)	1.16%
Italy	(0.43%)	1.79%
Greece	1.31%	4.32%
U.K.	0.49%	1.35%
Japan	(0.17%)	0.04%
Australia	2.03%	2.60%
China	3.12%	3.77%
Brazil	6.31%	9.50%
Russia	6.01%	7.16%

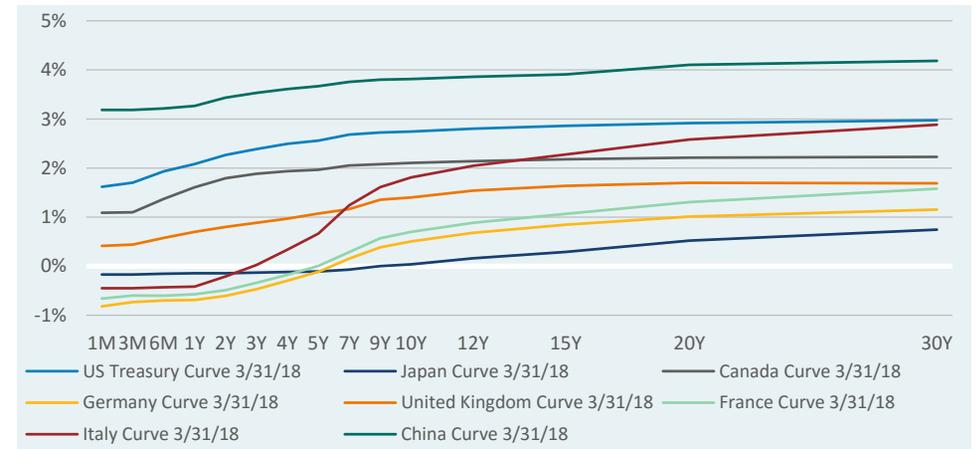
Source: Bloomberg, as of 3/31/18

Yield environment

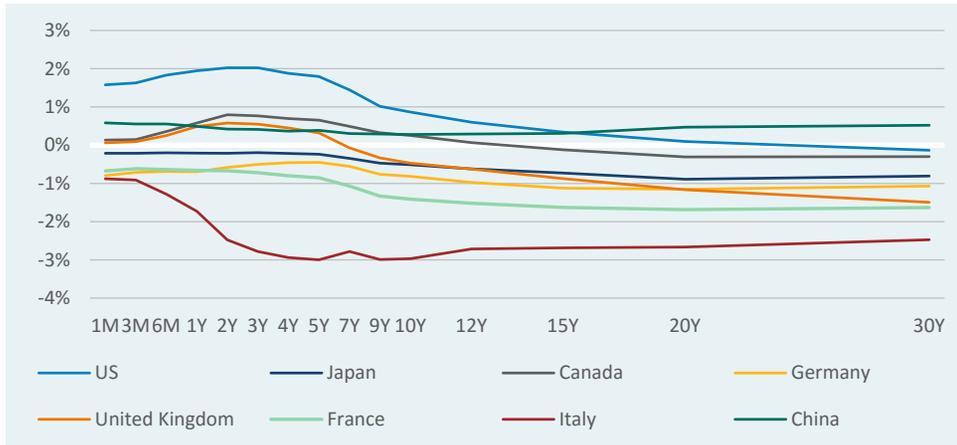
U.S. YIELD CURVE



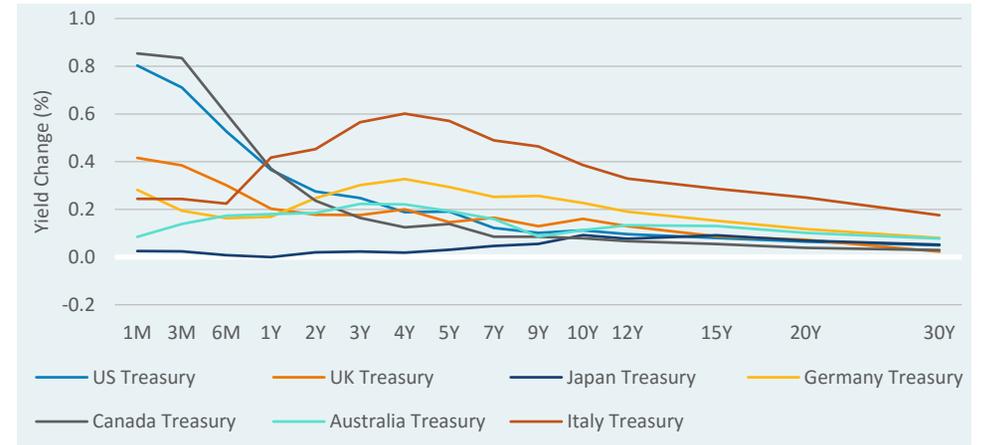
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/18

Currency

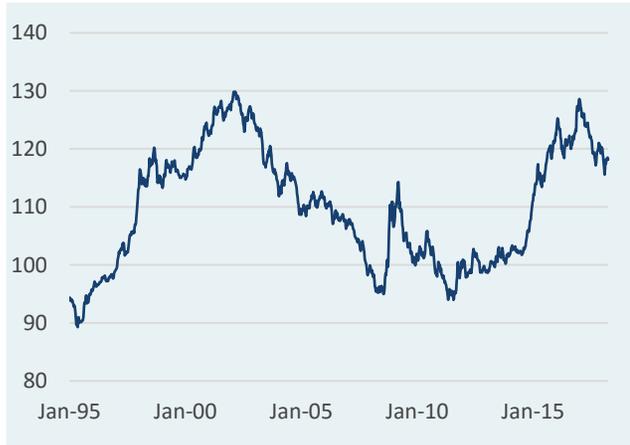
The U.S. dollar declined further to begin the quarter, but recovered slightly over the past two months. The broad U.S. trade weighted index fell 1.9% in the first quarter. This index was down 8.5% since peaking at the end of 2016.

Dollar depreciation has occurred despite widening short-term interest rate differentials between the U.S. and the rest of the developed world. Typically, higher interest rate differentials result in currency appreciation as investors take advantage of the yield, at least in the short-term.

Based on purchasing power parity (PPP), the dollar is overvalued against the currencies with the biggest weights in international equity benchmarks: the euro, yen, and pound.

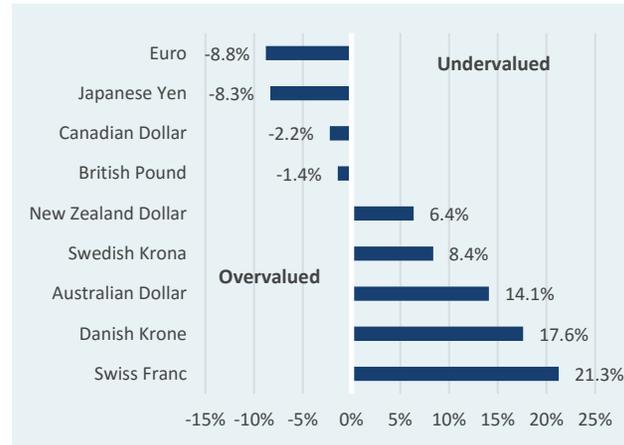
Unhedged foreign currency exposure added to equity returns over the past year, especially in developed markets. Although currency exposure has been positive lately, it has historically tended to experience large swings that add volatility to portfolios.

U.S. DOLLAR TRADE WEIGHTED INDEX



Source: Federal Reserve, as of 3/28/18

CURRENCY VALUATIONS VS USD (PPP)



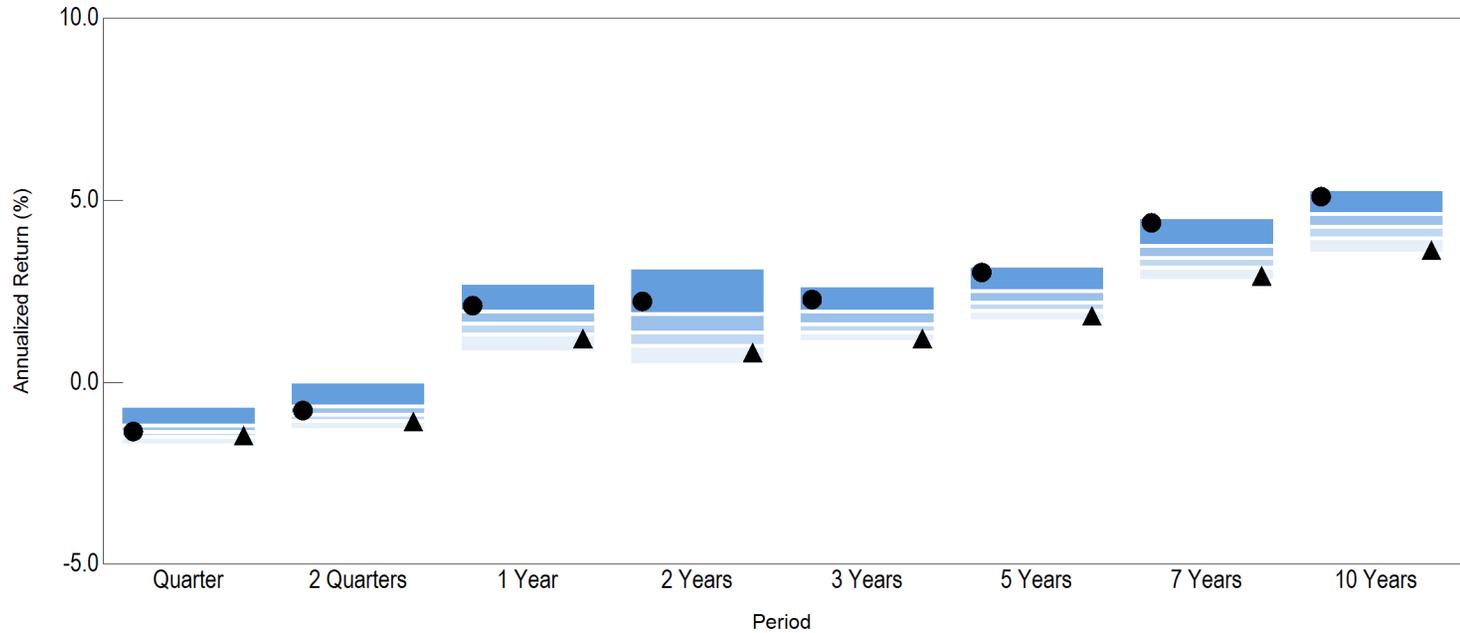
Source: OECD, as of 3/31/2018 (see appendix)

EFFECT OF CURRENCY (1-YR ROLLING)



Source: MSCI, as of 3/31/18

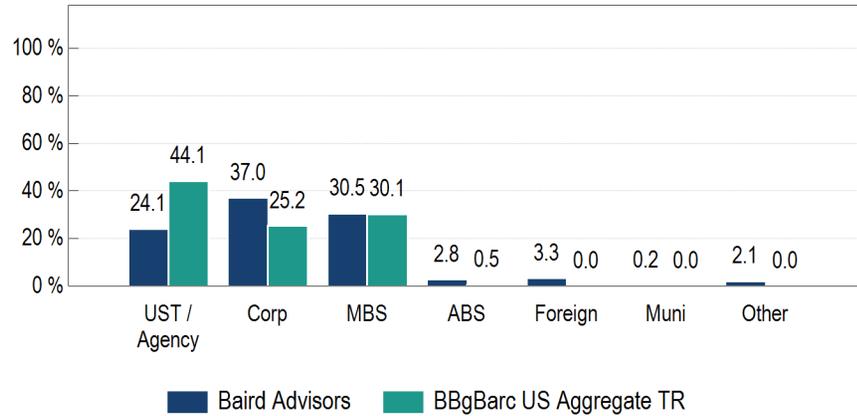
eV US Core Fixed Inc Gross Return Comparison



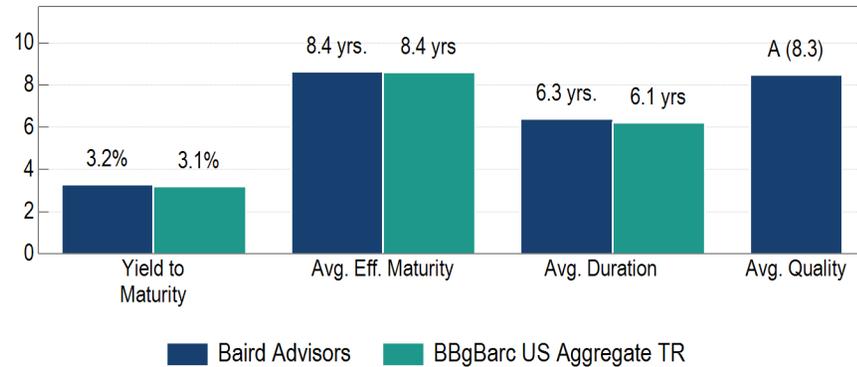
Return (Rank)

5th Percentile	-0.6	0.0	2.7	3.1	2.6	3.2	4.5	5.3
25th Percentile	-1.2	-0.7	2.0	1.9	2.0	2.5	3.8	4.6
Median	-1.4	-0.9	1.6	1.4	1.6	2.2	3.4	4.3
75th Percentile	-1.5	-1.1	1.3	1.0	1.4	2.0	3.2	4.0
95th Percentile	-1.7	-1.3	0.8	0.5	1.1	1.7	2.8	3.5
# of Portfolios	234	234	234	232	230	227	221	204
● Baird Advisors	-1.4 (49)	-0.8 (40)	2.1 (18)	2.2 (14)	2.3 (12)	3.0 (9)	4.4 (7)	5.1 (10)
▲ BBgBarc US Aggregate TR	-1.5 (67)	-1.1 (78)	1.2 (82)	0.8 (83)	1.2 (90)	1.8 (87)	2.9 (91)	3.6 (93)

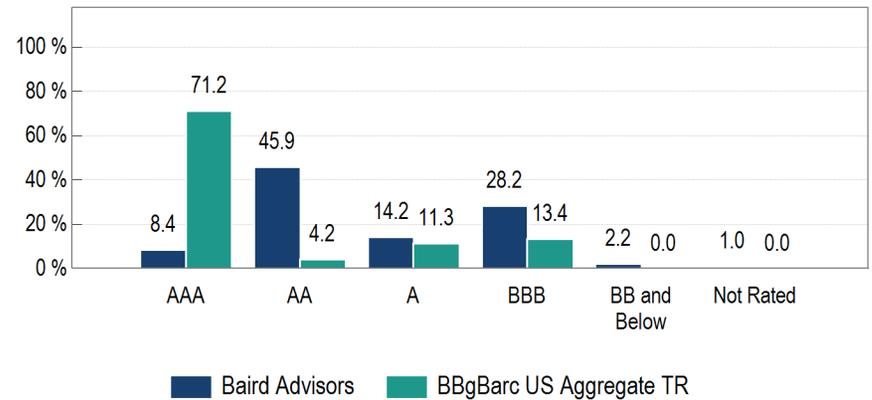
Sectors
Baird Advisors



Characteristics
Baird Advisors



Quality Ratings
Baird Advisors

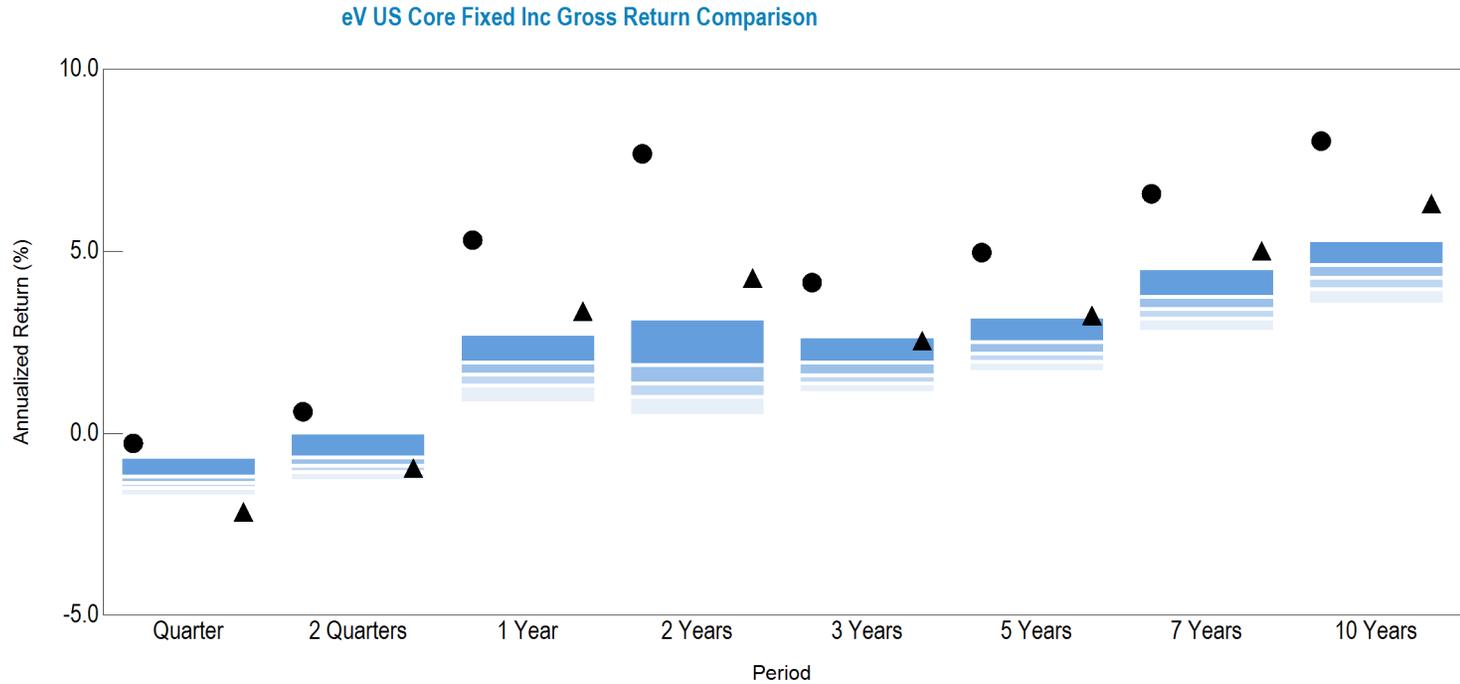


PERFORMANCE BY QUALITY

	<u>NUMBER OF ISSUES</u>	<u>FINAL MARKET VALUE (\$000)</u>	<u>FINAL MARKET VALUE %</u>	<u>QUARTERLY RETURN %</u>	<u>QUARTERLY CONTRIBUTION TO TOTAL RETURN %</u>
Cash & Equiv	1	5,310	0.8	0.40	0.00
Govt & Agency	96	326,563	49.2	-1.48	-0.73
AAA	19	55,755	8.4	-1.05	-0.09
AA	14	13,275	2.0	-0.89	-0.02
A	46	96,243	14.5	-1.33	-0.19
BAA	66	139,387	21.0	-1.78	-0.37
Below BAA	23	27,214	4.1	1.10	0.05
Other	0	-	0.0	0.00	0.00
Total Account	265	\$663,747	100.0	-1.35	-1.35

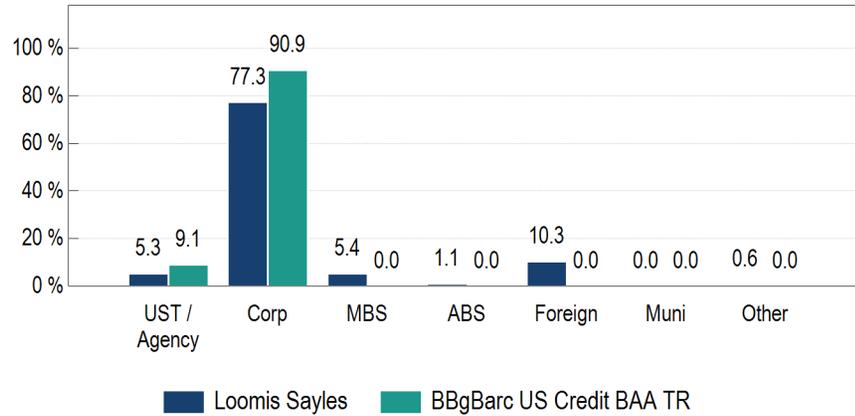
PERFORMANCE BY DURATION

	<u>NUMBER OF ISSUES</u>	<u>FINAL MARKET VALUE (\$000)</u>	<u>FINAL MARKET VALUE %</u>	<u>QUARTERLY RETURN %</u>	<u>QUARTERLY CONTRIBUTION TO TOTAL RETURN %</u>
Under 1 Year	29	46,462	7.0	1.62	0.11
1 - 3 Years	53	88,942	13.4	-0.40	-0.05
3 - 6 Years	113	329,882	49.7	-1.08	-0.54
Over 6 Years	70	198,460	29.9	-2.92	-0.87
Total Account	265	\$663,747	100.0	-1.35	-1.35

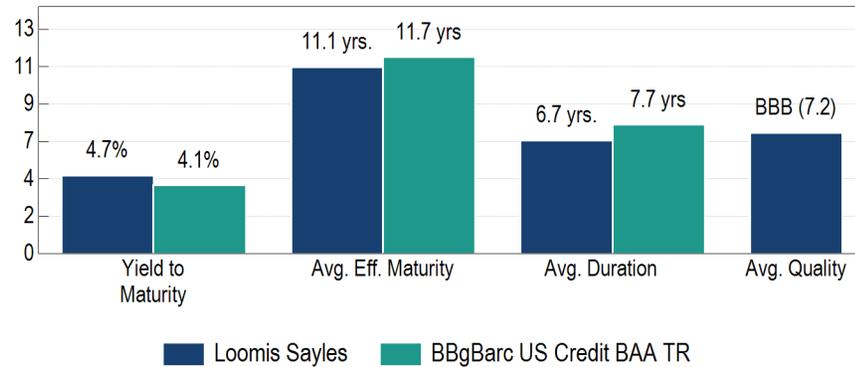


	Return (Rank)							
	Quarter	2 Quarters	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-0.6	0.0	2.7	3.1	2.6	3.2	4.5	5.3
25th Percentile	-1.2	-0.7	2.0	1.9	2.0	2.5	3.8	4.6
Median	-1.4	-0.9	1.6	1.4	1.6	2.2	3.4	4.3
75th Percentile	-1.5	-1.1	1.3	1.0	1.4	2.0	3.2	4.0
95th Percentile	-1.7	-1.3	0.8	0.5	1.1	1.7	2.8	3.5
# of Portfolios	234	234	234	232	230	227	221	204
● Loomis Sayles	-0.3 (3)	0.6 (2)	5.3 (1)	7.7 (1)	4.1 (1)	5.0 (1)	6.6 (1)	8.0 (1)
▲ BBgBarc US Credit BAA TR	-2.2 (99)	-1.0 (62)	3.4 (3)	4.3 (3)	2.5 (7)	3.2 (5)	5.0 (3)	6.3 (2)

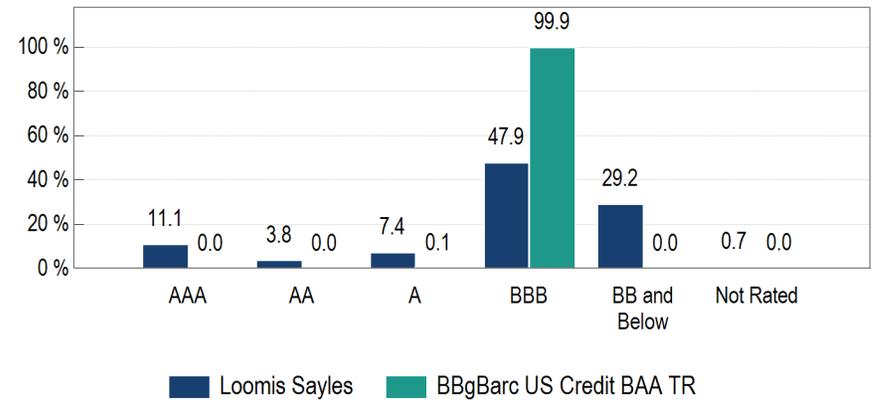
Sectors
Loomis Sayles



Characteristics
Loomis Sayles



Quality Ratings
Loomis Sayles



Attribution Summary

Returns	
Account Return	-0.26
Benchmark Return	-2.16
Excess Return	1.89
Excess Due To:	
Sector Allocation	0.17
Security Selection	1.75
Trading	-0.02
Pricing Differences	-
Compounding	-

Attribution Details

Name	Acct Avg Weight	Acct Return	Acct Contrib	Bench Avg Weight	Bench Return	Bench Contrib	Quality Alloc	Security Selection	Total Effect
Quality	100.00	-0.24	-0.24	100.00	-2.16	-2.16	0.17	1.75	1.92
CASH	3.70	0.48	0.01	-	-2.16	-	-	0.18	0.18
AAA	12.70	1.20	0.18	-	-2.16	-	-	0.38	0.38
AA	2.77	-0.10	-	-	-2.16	-	-	0.04	0.04
A	5.53	2.74	0.16	0.04	-0.38	-	0.10	0.17	0.27
BAA	40.67	-1.46	-0.59	99.95	-2.16	-2.16	-	0.30	0.30
BA	17.45	-0.43	-0.08	0.01	-0.26	-	0.07	0.23	0.30
B	7.48	-1.31	-0.10	-	-2.16	-	-	0.06	0.06
CAA	1.28	-2.10	-0.02	-	-2.16	-	-	0.01	0.01
CA	0.03	4.71	-	-	-2.16	-	-	-	-
C	0.45	12.68	0.08	-	-2.16	-	-	0.09	0.09
NR	7.93	1.16	0.11	-	-2.16	-	-	0.29	0.29

Loomis Sayles
Performance Attribution Analysis

Period Ending: March 31, 2018

Attribution Summary

Returns	
Account Return	-0.26
Benchmark Return	-2.16
Excess Return	1.89
Excess Due To:	
Yield Curve Total	0.64
Parallel Shift	0.92
Nonparallel Shift	-0.28
Sector Allocation	0.14
Security Selection	1.14
Trading	-0.02
Pricing Differences	-
Compounding	-

Attribution Details

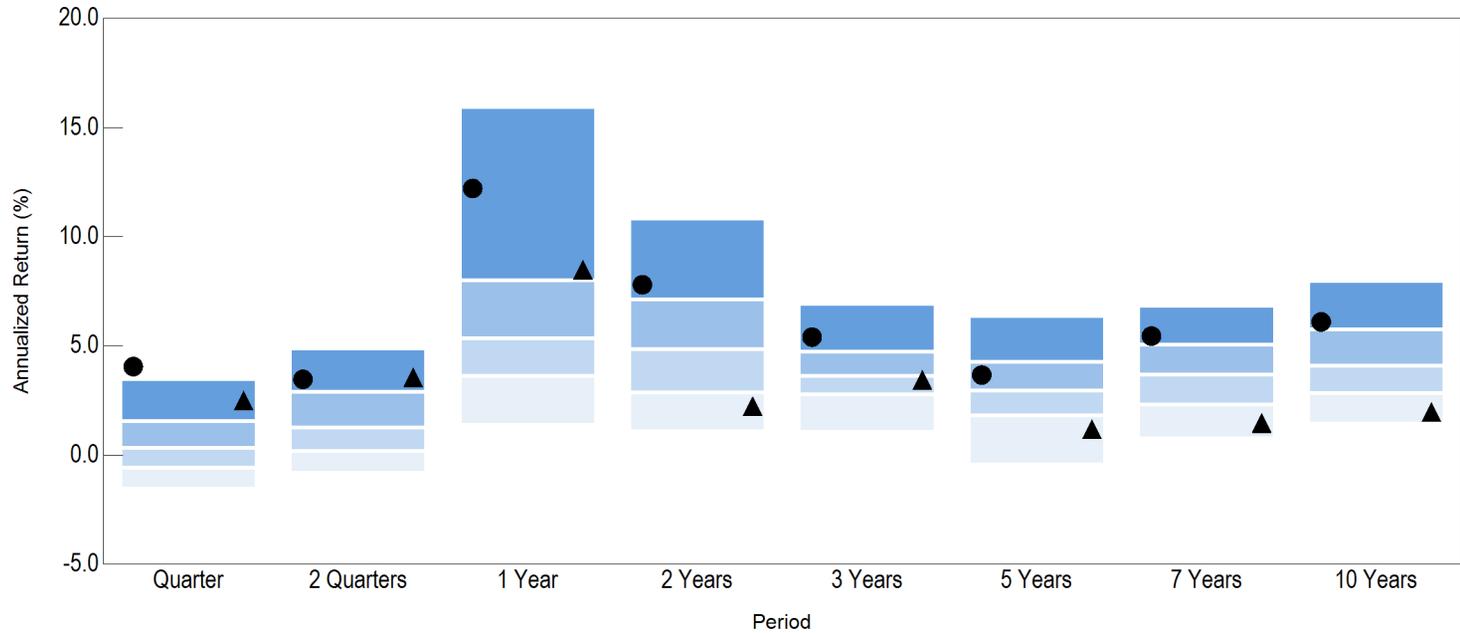
Name	Acct Avg Duration	Acct Avg Weight	Acct Return	Acct Lcl Return	Acct Rtn Over TSY	Acct Contrib	Bench Avg Duration	Bench Avg Weight	Bench Return	Bench Lcl Return	Bench Rtn Over	Bench Contrib	Yield Curve Total	Parallel Shift	Nonparallel Shift	Sector Allocation	Security Selection	Total Effect
Duration	5.11	100.00	-0.24	-0.42	-0.23	-0.24	7.57	100.00	-2.16	-2.16	-2.14	-2.16	0.64	0.92	-0.28	0.14	1.14	1.92
Less than 0.5	0.06	10.95	1.59	2.57	1.59	0.18	0.15	0.10	0.19	0.19	0.19	-	0.32	0.38	-0.06	0.03	0.16	0.50
0.5 - 1.0	0.77	2.82	0.75	0.68	0.75	0.02	0.94	0.93	0.29	0.29	0.29	-	0.03	0.03	-0.01	0.01	0.01	0.05
1.0 - 1.5	1.29	5.01	1.96	0.89	1.96	0.10	1.24	3.60	0.08	0.08	0.08	-	-	0.01	-0.01	0.02	0.09	0.11
1.5 - 2.0	1.74	5.53	1.25	1.43	1.25	0.08	1.77	3.94	-0.28	-0.28	-0.28	-0.01	-0.01	-	-0.01	0.02	0.09	0.10
2.0 - 2.5	2.21	4.40	0.45	0.45	0.45	0.03	2.27	4.25	-0.60	-0.60	-0.60	-0.02	0.02	0.02	-	-0.01	0.06	0.07
2.5 - 3.0	2.75	4.68	0.44	-0.52	0.44	0.01	2.74	5.04	-0.74	-0.74	-0.73	-0.04	-0.02	-0.02	-	0.01	0.05	0.04
3.0 - 3.5	3.27	3.94	-0.76	-0.76	-0.76	-0.03	3.26	4.50	-0.93	-0.93	-0.93	-0.04	-0.01	-0.01	-	-	0.02	-
3.5 - 4.0	3.72	3.25	0.27	0.27	0.28	-	3.75	5.08	-1.07	-1.07	-1.06	-0.05	-0.01	-0.02	0.01	-0.01	0.03	0.02
4.0 - 4.5	4.26	3.34	-2.43	-2.43	-2.42	-0.07	4.24	5.27	-1.41	-1.41	-1.40	-0.07	-0.03	-0.03	-	-	-0.03	-0.05
4.5 - 5.0	4.72	4.32	-0.65	-0.70	-0.64	-0.05	4.73	4.95	-1.46	-1.46	-1.45	-0.08	-	-0.01	-	-	0.02	0.01
5.0 - 5.5	5.27	6.56	-1.67	-2.18	-1.66	-0.12	5.23	3.49	-1.81	-1.81	-1.80	-0.06	0.01	0.02	-0.01	-	-	-
5.5 - 6.0	5.74	6.38	-1.64	-2.00	-1.63	-0.10	5.75	4.03	-1.97	-1.97	-1.96	-0.08	0.01	0.02	-0.01	-0.01	0.03	0.03
6.0 - 6.5	6.20	8.00	-0.76	-1.19	-0.75	-0.07	6.23	5.94	-2.16	-2.16	-2.14	-0.13	0.01	0.01	-0.01	-0.01	0.11	0.11
6.5 - 7.0	6.70	5.23	-2.36	-2.53	-2.34	-0.13	6.72	4.21	-2.39	-2.39	-2.37	-0.11	-	0.01	-0.01	-0.01	0.01	-
7.0 - 7.5	7.23	4.36	-2.60	-2.60	-2.58	-0.11	7.28	4.73	-2.52	-2.52	-2.51	-0.12	-	-	-	-	-	-
7.5 - 8.0	7.72	4.02	-2.00	-2.00	-1.98	-0.08	7.73	4.80	-2.86	-2.86	-2.84	-0.14	-	-	-	-	0.04	0.05
8.0 - 8.5	8.14	2.59	-2.42	-2.42	-2.40	-0.07	8.21	3.18	-2.75	-2.75	-2.73	-0.08	-	-	-	-	0.01	-
8.5 - 9.0	8.78	0.33	10.40	2.42	10.43	0.03	8.71	1.08	-2.31	-2.31	-2.28	-0.03	0.01	-	-	-0.01	0.04	0.04
9.0 - 9.5	9.38	0.88	-1.71	-2.74	-1.69	0.02	9.23	0.89	-1.68	-1.68	-1.65	-0.02	-	-	-	-	0.02	0.03
9.5 - 10.0	9.78	1.66	7.79	3.19	7.82	0.08	9.73	0.53	-2.59	-2.59	-2.56	-0.01	-0.02	-0.02	-0.01	0.01	0.16	0.15
10.0 - 10.5	10.22	1.13	2.26	0.58	2.28	0.09	10.27	0.46	-2.12	-2.12	-2.10	-0.01	0.01	0.01	-	0.01	0.07	0.09

Loomis Sayles
Performance Attribution Analysis

Period Ending: March 31, 2018

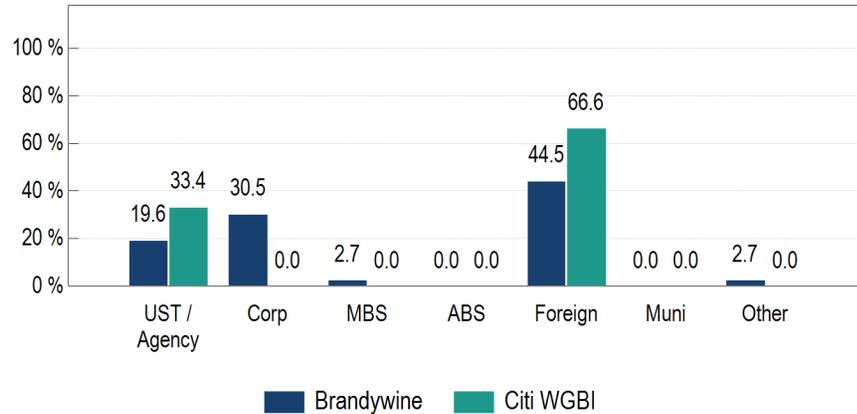
Name	Acct Avg Duration	Acct Avg Weight	Acct Return	Acct Lcl Return	Acct Rtn Over TSY	Acct Contrib	Bench Avg Duration	Bench Avg Weight	Bench Return	Bench Lcl Return	Bench Rtn Over	Bench Contrib	Yield Curve Total	Parallel Shift	Nonparallel Shift	Sector Allocation	Security Selection	Total Effect
10.5 - 11.0	9.92	0.25	-2.49	-4.14	-2.46	0.03	10.76	0.87	-2.70	-2.70	-2.67	-0.02	-	-	-	-	0.03	0.04
11.0 - 11.5	11.31	0.48	-1.33	-1.33	-1.30	-0.01	11.26	1.49	-2.55	-2.55	-2.52	-0.05	0.01	0.01	-	-	-	0.01
11.5 - 12.0	11.72	1.01	-4.30	-4.30	-4.27	-0.04	11.75	2.45	-3.38	-3.38	-3.36	-0.08	0.01	0.02	-	-	-0.01	0.01
12.0 - 12.5	12.24	2.18	-2.23	-2.23	-2.20	-0.02	12.23	2.45	-2.49	-2.49	-2.46	-0.07	0.02	0.01	-	-0.01	0.02	0.03
12.5 - 13.0	12.68	1.38	-1.36	-1.36	-1.33	-0.04	12.74	1.89	-2.83	-2.83	-2.80	-0.07	-	-	-	-	0.02	0.02
13.0 - 13.5	13.22	1.27	-3.38	-3.38	-3.36	-0.05	13.23	1.89	-3.17	-3.17	-3.14	-0.05	-	0.01	-0.01	-	-	-
13.5 - 14.0	13.74	0.35	-2.08	-2.08	-2.05	-	13.74	1.62	-3.25	-3.25	-3.22	-0.05	0.01	0.02	-0.01	0.01	-	0.02
14.0 - 14.5	14.33	0.74	-6.62	-6.62	-6.59	-0.05	14.25	2.01	-3.43	-3.43	-3.40	-0.07	0.02	0.03	-0.01	0.01	-0.03	-0.01
14.5 - 15.0	14.71	1.23	1.11	1.11	1.14	0.02	14.76	2.95	-3.30	-3.30	-3.27	-0.10	0.03	0.05	-0.02	-	0.05	0.08
15.0 - 15.5	15.19	0.42	-0.93	-0.93	-0.90	-0.02	15.26	3.42	-4.55	-4.55	-4.52	-0.17	0.03	0.06	-0.03	0.05	0.01	0.09
15.5 - 16.0	13.09	0.36	3.89	3.89	3.90	0.01	15.74	3.06	-4.23	-4.23	-4.20	-0.13	0.04	0.07	-0.04	0.02	0.02	0.08
16.0 - 16.5	0.99	0.02	2.96	2.96	2.95	0.01	16.23	2.25	-3.95	-3.95	-3.92	-0.09	0.05	0.09	-0.04	-0.01	0.01	0.05
16.5 - 17.0	-	-	-	-	-	-	16.75	1.34	-4.90	-4.90	-4.87	-0.07	0.03	0.05	-0.02	0.01	-	0.04
17.0 - 17.5	-	-	-	-	-	-	17.19	0.75	-3.53	-3.53	-3.50	-0.02	0.01	0.02	-0.01	-	-	0.01
17.5 - 18.0	-	-	-	-	-	-	17.70	0.25	-6.39	-6.39	-6.36	-0.02	0.01	0.02	-0.01	-	-	0.01
18.0 - 18.5	-	-	-	-	-	-	18.22	0.12	-6.33	-6.33	-6.30	-0.01	-	0.01	-	-	-	0.01
18.5 - 19.0	-	-	-	-	-	-	18.75	0.07	-3.04	-3.04	-3.01	-	-	-	-	-	-	-
19.0 - 19.5	-	-	-	-	-	-	17.47	0.08	-4.15	-4.15	-4.10	-	-	-	-	-	-	-
19.5 - 20.0	6.40	0.90	3.44	3.44	3.41	0.09	11.23	0.04	-4.35	-4.35	-4.32	-	0.06	0.04	0.02	-0.01	0.02	0.08
20.0 - 20.5	-	-	-	-	-	-	8.12	0.02	-2.40	-2.40	-2.37	-	-	-	-	-	-	-
20.5 - 21.0	-	-	-	-	-	-	5.41	0.01	-1.59	-1.59	-1.56	-	-	-	-	-	-	-
21.0 - 21.5	-	-	-	-	-	-	0.65	-	1.36	1.36	1.35	-	-	-	-	-	-	-
Greater than 25.0	34.84	0.01	0.85	0.85	0.89	-	-	-	-2.16	-2.16	-2.14	-	-	-	-	-	-	-

eV All Global Fixed Inc Gross Return Comparison

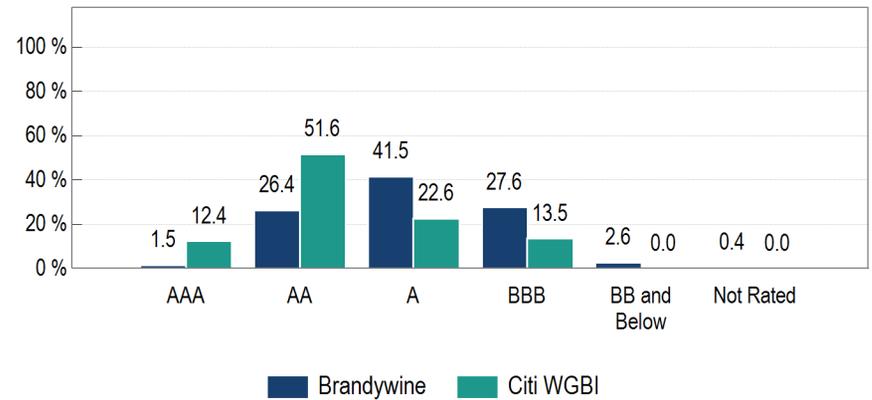


	Quarter		2 Quarters		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	3.5	4.9	15.9	10.8	6.9	6.4	6.8	8.0								
25th Percentile	1.6	2.9	8.0	7.2	4.8	4.3	5.1	5.8								
Median	0.4	1.3	5.4	4.9	3.7	3.0	3.7	4.1								
75th Percentile	-0.6	0.2	3.7	2.9	2.8	1.8	2.3	2.9								
95th Percentile	-1.5	-0.8	1.4	1.1	1.1	-0.4	0.8	1.4								
# of Portfolios	449	449	447	439	424	369	296	200								
● Brandywine	4.1 (4)	3.5 (18)	12.2 (11)	7.8 (21)	5.4 (18)	3.7 (36)	5.5 (19)	6.1 (22)								
▲ Citi WGBI	2.5 (10)	3.6 (16)	8.5 (23)	2.2 (86)	3.5 (57)	1.2 (87)	1.5 (90)	2.0 (92)								

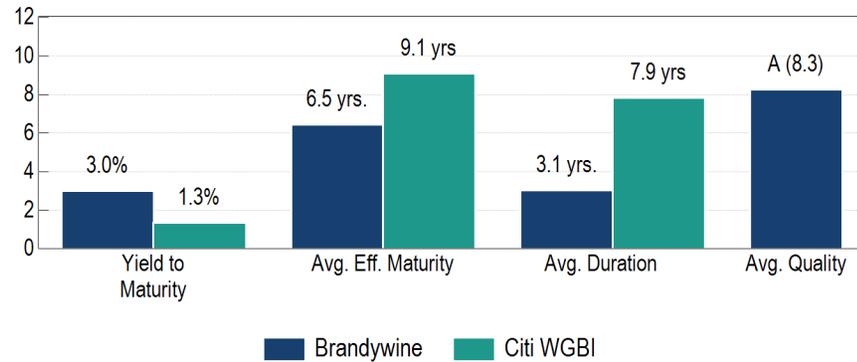
Sectors
Brandywine



Quality Ratings
Brandywine



Characteristics
Brandywine



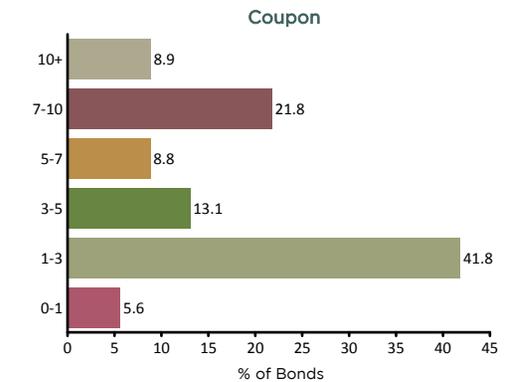
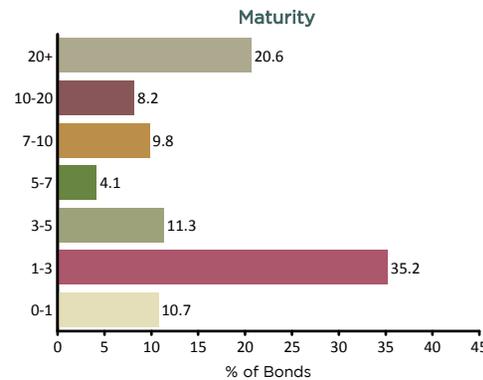
Brandywine

Portfolio Characteristics

Period Ending: March 31, 2018

Portfolio Characteristics

	Portfolio	Primary Benchmark
Yield to Maturity (%)	4.49	1.35
Yield to Worst (%)	4.51	1.35
Modified Duration	3.98	7.87
Effective Duration	3.86	7.99
Average Maturity	8.70	9.14
Average Market Price	101.36	-
Average Coupon (%)	4.61	2.33
Current Yield (%)	4.36	-
# of Issues	133	1,036



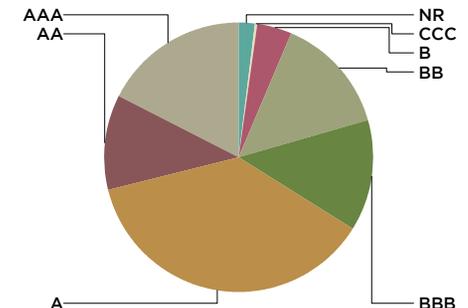
Sector Breakdown

	Market Value (%)	Duration Contribution (in Years)
Government Sovereign	66.24	3.53
Corporate Bond - High Yield	4.83	0.21
Corporate Bond - Investment Grade	19.92	0.15
Mortgage Backed Securities	1.97	0.08
Government Regional Agencies	2.89	0.04
Supranational	0.83	0.01
Bank Loan	0.06	0.00
Government Sovereign Agency	0.80	0.00
Cash	2.32	-
Derivatives	0.15	(0.03)
Total:	100.00	3.98

Portfolio Credit Quality (Blended Weighted Average Rating)

Combined Rating	%	Cumulative %
AAA	17.6	17.6
AA	11.4	29.0
A	37.0	66.0
BBB	13.6	79.6
BB	14.0	93.5
B	4.2	97.7
CCC	0.4	98.1
NR	1.9	100.0

Average Quality: A-



PRIMARY BENCHMARK is Citigroup WGBI (USD)

All Averages are US DOLLAR - weighted by the net market value. Average Market Price includes accrued interest. The "Blended Weighted Average Rating" is determined as follows: in line with the methodology used by Barclays Global indices, the middle rating from the three major NRSROs (S & P, Moody's, and Fitch) will be assigned to each security. In the event that ratings are provided by only two agencies, the lowest rating will be assigned. If only one agency assigns a rating, that rating will be applied. If the security is not rated by one of the three major agencies, it is given a rating equivalent to a defaulted bond. The equivalent numerical rating is assigned to each security based on the Security Level scale. A Portfolio Level scale is applied on the weighted average calculation to round for fractional numerical ratings and then converted to an alpha weighted average rating. Cash is included and received the highest rating.

Data included on this page show the aggregate holdings of the Brandywine Emerging Markets Debt Fund ("EMD Fund"), in which the portfolio is invested. Holdings in the EMD Fund are not subject to ACERA's Investment Guidelines. Please note that ACERA owns units of the EMD Fund, not the underlying holdings. Data and characteristics shown are for illustrative purposes only.

Derivatives market value represents the unrealized profit/loss of all derivatives in the portfolio.

Brandywine

Country & Currency Allocation

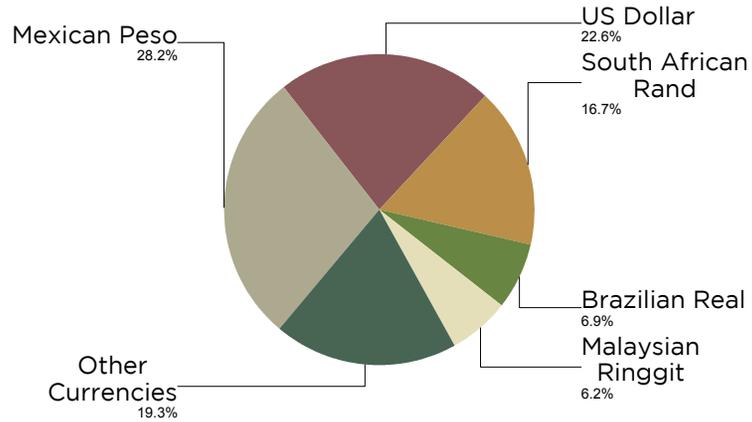
Period Ending: March 31, 2018

Country Allocation	3/31/2018			12/31/2017	
	Portfolio	Index	Active	Portfolio	Change
Japan	-	20.06	(20.06)	-	-
Mexico	11.28	0.67	10.61	10.33	0.95
France	0.07	8.55	(8.49)	-	0.07
Italy	0.39	8.03	(7.64)	0.43	(0.04)
Malaysia	6.66	0.39	6.27	6.47	0.19
South Africa	6.42	0.54	5.87	5.45	0.97
Australia	7.44	1.70	5.74	7.82	(0.39)
*Brazil	5.69	-	5.69	5.84	(0.15)
Poland	5.87	0.55	5.32	5.98	(0.11)
Spain	0.83	5.03	(4.20)	0.83	(0.01)
Germany	1.61	5.77	(4.16)	-	1.61
*Indonesia	2.85	-	2.85	4.11	(1.27)
United States	36.14	33.49	2.65	37.85	(1.70)
*Colombia	2.17	-	2.17	2.08	0.09
Belgium	-	2.07	(2.07)	-	-
Peru	2.07	-	2.07	2.25	(0.18)
*Egypt	2.00	-	2.00	1.84	0.16
Netherlands	-	1.75	(1.75)	-	-
Canada	0.05	1.66	(1.60)	0.06	-
*Turkey	1.42	-	1.42	1.62	(0.20)
Austria	-	1.28	(1.28)	-	-
Supranational	0.83	-	0.83	0.86	(0.03)
Ireland	-	0.68	(0.68)	0.04	(0.04)
Finland	-	0.52	(0.52)	-	-
*Jamaica	0.13	-	0.13	0.16	(0.03)
United Kingdom	5.86	5.76	0.11	5.92	(0.06)
*Argentina	0.07	-	0.07	-	0.07
European Union	0.03	-	0.03	-	0.03
Other Countries	-	1.50	(1.50)	0.07	(0.07)
Derivative P/L	0.15	-	0.15	(0.01)	0.16
Total:	100.00	100.00	-	100.00	-

Currency Allocation	3/31/2018			12/31/2017	
	Portfolio	Index	Active	Portfolio	Change
Euro	1.31	33.68	(32.37)	1.32	(0.01)
US Dollar	16.21	33.49	(17.28)	0.69	15.52
Mexican Peso	11.28	0.67	10.61	10.33	0.95
Japanese Yen	12.02	20.06	(8.04)	7.67	4.35
Malaysian Ringgit	6.66	0.39	6.27	6.47	0.19
Swedish Krona	5.81	0.31	5.50	8.23	(2.42)
Norwegian Krone	5.62	0.25	5.37	7.62	(2.00)
*Brazilian Real	5.05	-	5.05	5.14	(0.09)
British Pound Sterling	9.95	5.76	4.20	12.34	(2.38)
*Colombian Peso	3.98	-	3.98	2.08	1.89
Polish Zloty	4.50	0.55	3.95	7.61	(3.11)
South African Rand	4.00	0.54	3.46	1.87	2.13
*New Turkish Lira	2.92	-	2.92	3.25	(0.33)
*Indonesian Rupiah	2.85	-	2.85	4.12	(1.27)
Peruvian Nuevo Sol	2.07	-	2.07	2.25	(0.18)
*Egyptian Pound	1.87	-	1.87	1.84	0.02
Canadian Dollar	-	1.66	(1.66)	-	-
Australian Dollar	3.14	1.70	1.44	5.72	(2.58)
*Philippine Peso	0.78	-	0.78	1.51	(0.73)
Danish Krone	-	0.48	(0.48)	-	-
Singapore Dollar	-	0.32	(0.32)	-	-
Swiss Franc	-	0.14	(0.14)	-	-
*Indian Rupee	-	-	-	3.64	(3.64)
Czech Koruna	-	-	-	1.38	(1.38)
New Zealand Dollar	-	-	-	4.94	(4.94)
Total:	100.00	100.00	-	100.00	-

*Emerging Markets are defined as non-WGBI markets with local currency long-term debt rating below A- (or the equivalent) assigned by all NRSROs that provide such a rating. NRSRO means one of the following Nationally Recognized Statistical Rating Organizations: Standard & Poor's Ratings Services, Moody's Investors Service and Fitch, Inc.

Source of Portfolio Duration by Currency Denomination



**Duration Contribution by Currency
(In Years)**

Currency	3/31/2018				12/31/2017	
	0-3	>3-10	>10-20	>20+	Total	Total Change
Mexican Peso	-	-	0.21	0.91	1.13	0.08
US Dollar	0.03	0.20	0.03	0.65	0.90	(0.31)
South African Rand	-	-	-	0.66	0.66	0.15
*Brazilian Real	-	0.28	-	-	0.28	0.00
Malaysian Ringgit	0.09	0.16	-	-	0.25	(0.00)
*Indonesian Rupiah	-	0.01	0.19	-	0.20	(0.10)
Peruvian Nuevo Sol	-	-	0.20	-	0.20	(0.01)
*Colombian Peso	-	0.10	-	-	0.10	(0.00)
Polish Zloty	0.09	-	-	-	0.09	(0.12)
Australian Dollar	0.07	-	-	-	0.07	(0.02)
*New Turkish Lira	-	0.07	-	-	0.07	(0.01)
British Pound Sterling	0.02	-	-	-	0.02	(0.01)
Euro	-	(0.03)	-	0.05	0.01	(0.01)
*Egyptian Pound	0.00	-	-	-	0.00	(0.00)
Total	0.29	0.79	0.63	2.27	3.98	(0.36)

**Duration Contribution by Country
vs. Citigroup WGBI (USD)**

(In Years)

Country	3/31/2018				12/31/2017		Active Change	Total
	0-3	>3-10	>10-20	>20+	Total	Index		
Japan	-	-	-	-	-	2.10	(2.10)	-
United States	0.01	0.15	0.03	0.64	0.84	2.03	(1.19)	(0.32)
Mexico	-	-	0.21	0.91	1.13	0.04	1.09	0.08
United Kingdom	0.02	0.01	-	-	0.02	0.73	(0.70)	(0.02)
France	-	0.00	-	-	0.00	0.68	(0.68)	0.00
South Africa	-	-	-	0.66	0.66	0.04	0.62	0.15
Italy	-	-	-	0.00	0.00	0.56	(0.56)	(0.00)
Germany	0.00	(0.03)	-	-	(0.03)	0.43	(0.46)	0.00
Spain	-	-	-	0.04	0.04	0.37	(0.33)	(0.01)
*Brazil	0.00	0.30	-	0.01	0.31	-	0.31	0.00
Malaysia	0.09	0.16	-	-	0.25	0.02	0.22	(0.00)
*Indonesia	-	0.01	0.19	-	0.20	-	0.20	(0.10)
Peru	-	-	0.20	-	0.20	-	0.20	(0.01)
Belgium	-	-	-	-	-	0.20	(0.20)	-
Netherlands	-	-	-	-	-	0.14	(0.14)	-
Austria	-	-	-	-	-	0.12	(0.12)	-
Canada	-	0.00	-	-	0.00	0.11	(0.11)	(0.00)
*Colombia	-	0.10	-	-	0.10	-	0.10	(0.00)
*Turkey	-	0.07	-	-	0.07	-	0.07	(0.01)
Poland	0.09	-	-	-	0.09	0.02	0.06	(0.12)
Ireland	-	-	-	-	-	0.05	(0.05)	(0.00)
Denmark	-	-	-	-	-	0.04	(0.04)	-
Australia	0.08	-	-	-	0.08	0.11	(0.03)	(0.02)
Finland	-	-	-	-	-	0.03	(0.03)	-
Singapore	-	-	-	-	-	0.02	(0.02)	-
*Egypt	0.00	0.00	-	-	0.01	-	0.01	0.00
Supranational	0.01	-	-	-	0.01	-	0.01	(0.00)
*Argentina	-	0.00	-	-	0.00	-	0.00	0.00
*Jamaica	0.00	-	-	-	0.00	-	0.00	(0.00)
Other Countries	-	-	-	-	-	0.04	(0.04)	(0.00)
Total	0.29	0.79	0.63	2.27	3.98	7.87	(3.89)	(0.36)

*Emerging Markets are defined as non-WGBI markets with local currency long-term debt rating below A- (or the equivalent) assigned by all NRSROs that provide such a rating. NRSRO mean one of the following Nationally Recognized Statistical Rating Organizations: Standard & Poor's Ratings Services, Moody's Investors Service and Fitch, Inc.

Manager Compliance Checklist

Period Ending: March 31, 2018

MANAGER	INDEX OUTPERFORMANCE						DATABASE BENCHMARK		MANAGER TO BE PLACED ON WATCH LIST	MANAGER TO BE PLACED ON PROBATION
	AFTER FEE VS. INDEX		BEFORE FEE VS. INDEX		RISK ADJUSTED (SHARPE RATIO)		MEDIAN			
	3 YEAR	5 YEAR	3 YEAR	5 YEAR	3 YEAR	5 YEAR	3 YEAR	5 YEAR		
AQR (MSCI ACWI EX US GROSS)	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
BAIRD ADVISORS (BBGBARC US AGGREGATE)	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
BIVIUM (RUSSELL 3000 +1%) ¹	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
BRANDYWINE FIXED INCOME (CITI WGBI)	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
CAPITAL GROUP (MSCI ACWI EX US GROSS)	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
KENNEDY (RUSSELL 2000 VALUE +2.5%)	NO	YES	NO	YES	NO	YES	YES	YES	NO	NO
LOOMIS SAYLES (BBGBARC US CREDIT BAA)	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
MONDRIAN (MSCI ACWI EX US GROSS)	NO	NO	NO	NO	YES	YES	NO	NO	YES	YES
NEXT CENTURY-SCG (RUSSELL 2000 GROWTH +2.5%)	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
PZENA (RUSSELL 1000 VALUE +2%)	YES	YES	YES	YES	NO	NO	YES	YES	NO	NO
TCW (RUSSELL 1000 GROWTH +2%) ²	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES
TEMPLETON (MSCI ACWI EX US SMALL CAP GROSS)	NO	YES	NO	YES	NO	YES	NO	NO	YES	YES

¹ Prior to 7/1/13, benchmark was linked to Russell 3000 +2%. ² Prior to 7/1/13, benchmark was linked to Russell 1000 Growth +2.5%.

Policy Index and Benchmark History

Period Ending: March 31, 2018

Total Plan Policy Index	As of:													
	10/1/17	7/1/16	1/1/13	10/1/11	4/1/11	1/1/09	7/1/06	4/1/03	6/1/01	10/1/97	1/1/96	10/1/94	1/1/92	1/1/80
91-day UST Bill										1%	1%	1%	1%	2%
BBgBarc Aggregate	11.25%	11.25%	11.25%	15%	18%	18%	21%	23%	26%	33%	29%	32%	37%	30%
BBgBarc High Yield	1.50%	1.50%	1.50%	2.0%	2.4%	2%	3%	3%	3%					
Bloomberg Commodity	0.75%	0.75%												
Citigroup WGBl ex US	2.25%	2.25%	2.25%	3%	3.6%	3.6%	4%	4%	5%					
CPI-U +3% (RR)			5.00%	5%										
MSCI ACWI ex US						23%	22%	22%	22%					
MSCI ACWI ex US IMI	26.00%	26.00%	27.00%	25%	23%									
MSCI EAFE										10%	10%	10%	10%	
MSCI Emg Mkts Free ex Malaysia										3%				
MSCI World net														10%
NCREIF					6%	6%	9%	9%	9%					
NCREIF ODCE	8.00%	8.00%	6.00%	6%										
Russell 3000	28.00%	28.00%	32.00%	34%	37%	37%	41%	39%	35%	42%	49%	47%	40%	
HFRI FoFComposite	9.00%													
Thomson Reuters CJA Global All PE	9.00%													
Russell 3000 +1% (PE)		18.00%	15.00%	10%										
Russell 3000 +1.5% (PE)					10%	10%								
Russell 3000 +4% (AI)										2%				
S&P 500														55%
S&P Global Infrastructure	1.75%	1.75%												
S&P Global Natural Resources	2.50%	2.50%												
Wilshire RE										9%	11%	10%	12%	3%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

US Equity Benchmark	As of:	
	1/1/92	1/1/80
Russell 3000	100%	0%
S&P 500	0%	100%
	100.0%	100.0%

International Equity Benchmark	As of:				
	4/1/11	6/1/01	10/1/97	1/1/92	1/1/80
MSCI ACWI ex US		100%			
MSCI ACWI ex US IMI	100%				
MSCI EAFE			77%	100%	
MSCI Emg Mkts Free ex Malaysia			23%		
MSCI World net					100%
	100.0%	100.0%	100.0%	100.0%	100.0%

Fixed Income Benchmark	As of:	
	6/1/01	1/1/80
BBgBarc Aggregate	75%	100%
BBgBarc High Yield	10%	
Citigroup WGBI ex US	15%	
	100.0%	100.0%

Real Estate Benchmark	As of:	
	1/1/80	
NCREIF ODCE	100%	
	100.0%	

Real Assets Benchmark	As of:	
	7/1/16	10/1/11
CPI-U +3%		100%
Bloomberg Commodity	15%	
S&P Global Infrastructure	35%	
S&P Global Natural Resources	50%	
	100.0%	100.0%

Bivium Benchmark	As of:	
	7/1/13	8/1/08
Russell 3000 +1%	100%	
Russell 3000 +2%		100%
	100.0%	100.0%

Pzena Benchmark	As of:	
	2/1/06	
Russell 1000 Value +2%	100%	
	100.0%	

TCW Benchmark	As of:	
	7/1/13	7/1/99
Russell 1000 Growth +2%	100%	
Russell 1000 Growth +2.5%		100%
	100.0%	100.0%

Kennedy Benchmark	As of:	
	10/1/10	
Russell 2000 Value +2.5%	100%	
	100.0%	

Next Century Benchmark	As of:	
	11/1/02	
Russell 2000 Growth +2.5%	100%	
	100.0%	

Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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