Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: MARCH 31, 2016

Executive Performance Summary Review for

Tennessee Consolidated Retirement System

- Historically, emerging market performance has been closely linked with the U.S. dollar and commodities. With a collapsing dollar and rebounding commodity prices, therefore, it comes as no surprise that emerging markets enjoyed a significant rally in Q1. The MSCI EM index rose 5.7% in Q1, led by Latin America as a leveraged play on commodities. EM Europe and Middle East followed suit, rising 12.6% in the quarter, while Asia lagged the benchmark, rising only 1.9%.

- EM FX also stabilized on the back of a dovish Fed, prompting an inflection in the monetary policy stance of a number of EM central banks. Indonesia, Hungary and Taiwan all cut rates in Q1. Importantly, inflation rates across the region either moved lower or fell within central bank targets, with only a handful of countries continuing to struggle with high inflation. This trend, in turn, drove a compression in bond yields and a multiple expansion in equities, boding well for a sustained bullish view on the asset class.

- With the U.K. referendum on EU membership drawing close, investor nervousness is reflected in the decline of the Pound. Opinion polls ended the quarter quite tight, as the lead of "Remain" significantly diminished. The currency lost 2.5% in Q1, and will likely remain weak into the June EU referendum.

- All U.S. corporate bonds finished Q1 on a positive note, led by BAA-rated bonds. Treasury and Agency debt also rose and closed the quarter 3.2% and 2% higher, respectively.

- The State Street Investor Confidence Index® (ICI) measures risk appetite by analyzing the buying and selling patterns of the institutional investors. The Global ICI rose to 114.8 in March, up from February's revised reading of 106.6. The increase in sentiment was driven by an improvement in the North American ICI from 109.4 to 123.7. The European ICI rose by 5.6 points to 95.8 while the Asian ICI rose only marginally, from 111.5 to 112.

- For the period ending 3/31/16, the one quarter returns for, respectively, the NAREIT Equity index and the NCREIF Property index (one quarter lag), were 6.0% and 2.9%; one year, 4.4% and 13.3%; three years, 10.5% and 12.0%; and five years, 11.9% and 12.2%.

- Elevated volatility in world markets have resulted from concerns about global economic growth and the on-going weakness of commodity prices, emerging market currencies and the widening of credit spreads. REITs were down over 4% in the first two months of the year as the equity markets sold off. A large recovery in March had REITs up over 10% for the month of March.

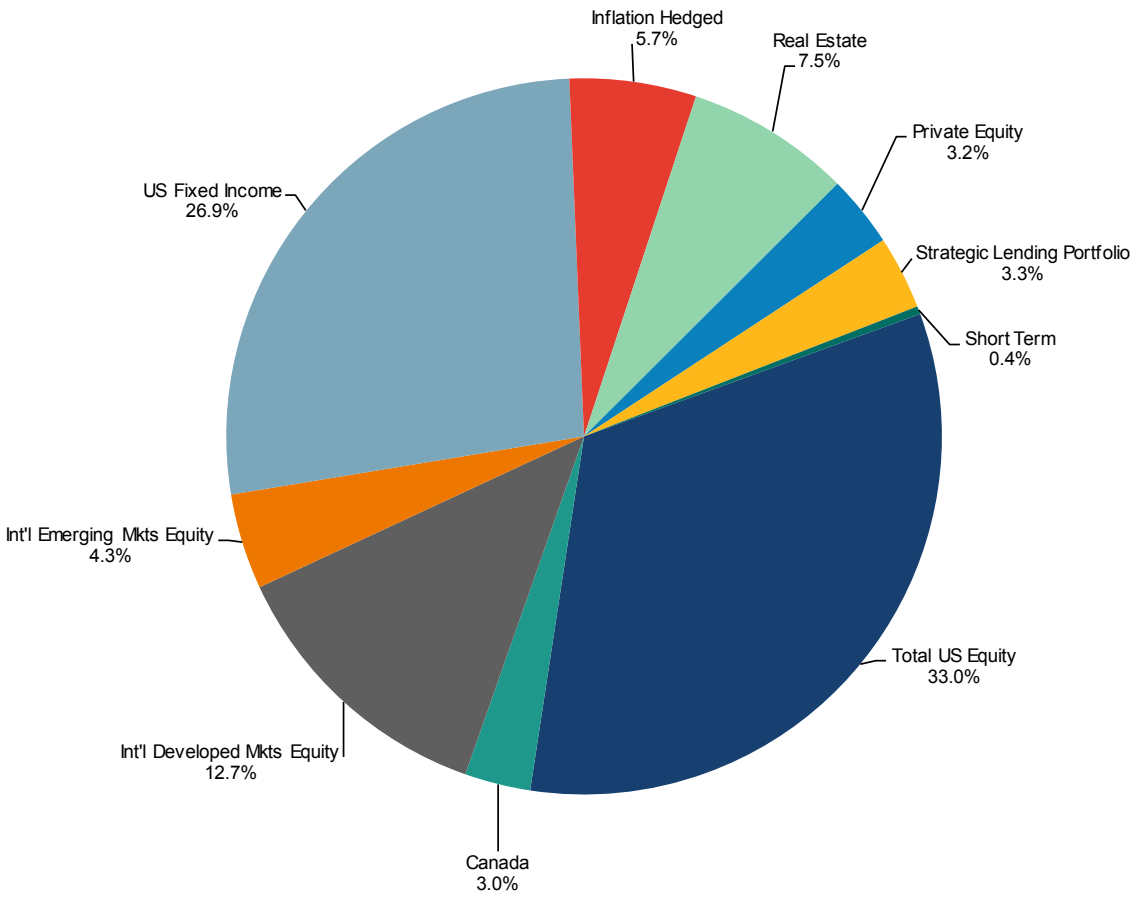
- REIT dividend yields decreased by eight bps in the first quarter to 3.8% while the ten-year US Treasury decreased by 49 bps to 1.8%, both as of March 31, 2015. As a result, the REIT dividend yield spread to Treasuries increased by 41 bps to 206 bps, well above the historical average of 111 bps.

Name	Last 3 Months	Last 6 Months	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs
US Equity								
Russell 3000	1.0	7.3	-0.3	5.8	11.1	11.0	17.1	6.9
S&P 500	1.3	8.5	1.8	7.1	11.8	11.6	17.0	7.0
Russell 1000	1.2	7.7	0.5	6.4	11.5	11.4	17.2	7.1
Russell 1000 Growth	0.7	8.1	2.5	9.1	13.6	12.4	17.9	8.3
Russell 1000 Value	1.6	7.4	-1.5	3.8	9.4	10.2	16.3	5.7
Russell MidCap	2.2	5.9	-4.0	4.4	10.4	10.3	19.1	7.4
Russell MidCap Growth	0.6	4.7	-4.7	4.9	11.0	10.0	18.7	7.4
Russell MidCap Value	3.9	7.2	-3.4	3.9	9.9	10.5	19.5	7.2
Russell 2000	-1.5	2.0	-9.8	-1.2	6.8	7.2	16.4	5.3
Russell 2000 Growth	-4.7	-0.6	-11.8	-0.6	7.9	7.7	17.2	6.0
Russell 2000 Value	1.7	4.6	-7.7	-1.8	5.7	6.7	15.5	4.4
NASDAQ Composite TR	-2.4	6.1	0.6	9.0	15.6	13.2	19.3	8.7
International Equity								
MSCI ACWI Gross	0.4	5.6	-3.8	1.0	6.1	5.8	13.2	4.6
MSCI EAFE Gross	-2.9	1.7	-7.9	-4.2	2.7	2.8	10.2	2.3
MSCI ACWI ex USA Gross	-0.3	3.0	-8.8	-4.8	0.8	0.8	9.7	2.4
MSCI Emerging Markets Gross	5.8	6.5	-11.7	-5.7	-4.2	-3.8	8.6	3.3
Citi WGBI	7.1	5.8	5.9	0.1	0.5	1.2	2.7	4.2
Citi WGBI ex US	9.1	7.6	7.7	-1.4	-0.2	0.2	2.5	4.0
Cash								
91 Day T-Bills	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
Fixed Income								
Barclays Aggregate	3.0	2.4	2.0	3.8	2.5	3.8	4.5	4.9
Barclays Govt/Credit	3.5	2.7	1.7	3.8	2.4	4.0	4.7	4.9
Barclays Mortgage	2.0	1.9	2.4	4.0	2.7	3.2	3.7	4.8
Real Estate								
NAREIT Equity	6.0	13.7	4.4	13.8	10.5	11.9	23.9	6.6
NCREIF Property Index	2.2	5.2	11.8	12.3	11.9	11.9	9.1	7.6

Total Fund

Asset Allocation Analysis

Period Ending: March 31, 2016



	Actual $	Actual %
Total US Equity	14,022,392,559	33.0%
Canada	1,264,627,633	3.0%
Int'l Developed Mkts Equity	5,403,348,187	12.7%
Int'l Emerging Mkts Equity	1,836,434,423	4.3%
US Fixed Income	11,463,697,489	26.9%
Inflation Hedged	2,433,499,761	5.7%
Real Estate	3,173,563,342	7.5%
Private Equity	1,376,831,888	3.2%
Strategic Lending Portfolio	1,412,540,943	3.3%
Short Term	152,482,392	0.4%
TOTAL	42,539,418,617	100.0%

	TARGET	ACTUAL	DIFF
Total US Equity	33.0%	33.0%	0.0%
Canada	4.0%	3.0%	-1.0%
Int'l Developed Mkts Equity	13.0%	12.7%	-0.3%
Int'l Emerging Mkts Equity	5.0%	4.3%	-0.7%
US Fixed Income	25.0%	26.9%	1.9%
Inflation Hedged	4.0%	5.7%	1.7%
Real Estate	7.0%	7.5%	0.5%
Private Equity	3.0%	3.2%	0.2%
Strategic Lending Portfolio	5.0%	3.3%	-1.7%
Short Term	1.0%	0.4%	-0.6%

	12/31/15	03/31/16	DIFF
Total US Equity	32.7%	33.0%	0.2%
Canada	2.7%	3.0%	0.3%
Int'l Developed Mkts Equity	13.3%	12.7%	-0.6%
Int'l Emerging Mkts Equity	4.0%	4.3%	0.3%
US Fixed Income	27.2%	26.9%	-0.3%
Inflation Hedged	5.7%	5.7%	0.0%
Real Estate	7.7%	7.5%	-0.2%
Private Equity	3.0%	3.2%	0.2%
Strategic Lending Portfolio	3.0%	3.3%	0.3%
Short Term	0.6%	0.4%	-0.2%

	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total Fund	**2.27**	**-0.17**	**6.08**	**7.42**	**10.47**	**5.79**
Policy Index[1]	*3.21*	*0.42*	*6.45*	*7.38*	*10.80*	*6.10*
Excess Return	-0.94	-0.59	-0.37	0.04	-0.33	-0.31
Allocation Index[2]	*3.25*	*0.39*	*6.02*	*6.98*	*10.50*	*5.83*
North American Equity	**0.92**	**-2.53**	**9.27**	**9.44**	**--**	**--**
N.A. Equity Custom[3]	*2.66*	*0.23*	*10.05*	*9.69*	--	--
Excess Return	-1.74	-2.76	-0.78	-0.25		
US Equity	**0.02**	**-1.92**	**10.62**	**10.98**	**16.57**	**6.85**
US Equity Custom[4]	*1.57*	*1.19*	*11.59*	*11.37*	*17.17*	*7.07*
Excess Return	-1.55	-3.11	-0.97	-0.39	-0.60	-0.22
Index	1.55	2.30	11.98	11.69	17.03	--
S&P 500	*1.35*	*1.78*	*11.82*	*11.58*	*16.97*	*7.01*
Excess Return	0.20	0.52	0.16	0.11	0.06	
Quant	-1.33	-3.95	9.49	10.27	15.59	6.70
S&P 500	*1.35*	*1.78*	*11.82*	*11.58*	*16.97*	*7.01*
Excess Return	-2.68	-5.73	-2.33	-1.31	-1.38	-0.31
Sector	-0.30	-1.40	11.06	11.24	16.43	6.83
S&P 500	*1.35*	*1.78*	*11.82*	*11.58*	*16.97*	*7.01*
Excess Return	-1.65	-3.18	-0.76	-0.34	-0.54	-0.18
Mid Cap[5]	2.85	-4.79	10.17	10.18	18.16	7.29
S&P MidCap 400[5]	*3.78*	*-3.60*	*9.46*	*9.52*	*18.51*	*7.42*
Excess Return	-0.93	-1.19	0.71	0.66	-0.35	-0.13

1 Effective 1/1/13, Policy Index is 33% S&P 1500/ 4% S&P TSX 60/ 13% MSCI EAFE IMI net/ 5% MSCI Emerging Markets net/ 25% Citigroup LPF/ 4% Citigroup TIPS/ 7% NCREIF 1Q Lag/ 3% S&P 500 + 3% 1Q Lag/ 1% 91 Day T-Bill / 5% Strategic Lending.

2 Effective 1/1/16, Total Fund Allocation Index is 33% S&P 1500/ 4% S&P TSX 60/ 13% MSCI EAFE IMI net/ 5% MSCI Emerging Markets net/ 24.7% Citigroup LPF/ 5.6% Citigroup TIPS/ 7.7% NCREIF 1Q Lag/ 3% S&P 500 + 3% 1Q Lag/ 3% Strategic Lending/ 1% 91 Day T-Bill.

3 Effective 1/1/13, benchmark is 89.19% S&P 1500/ 10.81% S&P TSX 60; linked to 87.5% S&P 1500/ 12.5% S&P TSX 60 Index.

4 Effective 7/1/04, benchmark is S&P 1500.

5 Effective 7/1/08, strategy was changed from SMID Cap. Benchmark is linked to 100% S&P 100 Index.

	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Small Cap [6]	**2.86**	**-3.02**	**10.45**	**9.68**	**--**	**--**
S&P 600 SmallCap	*2.66*	*-3.20*	*10.39*	*10.41*	*18.96*	*6.99*
Excess Return	0.20	0.18	0.06	-0.73		
Canada	**11.90**	**-8.09**	**-2.33**	**-2.94**	**--**	**--**
S&P/TSX 60	*11.95*	*-8.07*	*-2.39*	*-3.11*	*8.61*	*3.23*
Excess Return	-0.05	-0.02	0.06	0.17		
International Equity	**0.11**	**-5.52**	**2.17**	**3.30**	**10.98**	**3.68**
Int'l Equity Custom [7]	*0.57*	*-7.62*	*0.72*	*1.07*	*9.05*	*1.41*
Excess Return	-0.46	2.10	1.45	2.23	1.93	2.27
Int'l Developed Mkts Equity	**-2.93**	**-3.85**	**4.64**	**4.99**	**12.28**	**4.52**
MSCI EAFE IMI net	*-2.68*	*-6.83*	*2.88*	*2.71*	*10.32*	*2.23*
Excess Return	-0.25	2.98	1.76	2.28	1.96	2.29
American Century	-2.54	4.85	10.08	8.58	16.44	--
MSCI EAFE Small Cap	*-0.60*	*3.20*	*7.29*	*5.58*	*15.09*	*3.44*
Excess Return	-1.94	1.65	2.79	3.00	1.35	
Baring Asset Mgmt	-3.76	-6.73	2.05	3.25	10.63	--
MSCI EAFE	*-3.01*	*-8.27*	*2.23*	*2.29*	*9.69*	*1.80*
Excess Return	-0.75	1.54	-0.18	0.96	0.94	
FIAM	-0.41	5.06	8.70	7.47	16.38	--
MSCI EAFE Small Cap	*-0.60*	*3.20*	*7.29*	*5.58*	*15.09*	*3.44*
Excess Return	0.19	1.86	1.41	1.89	1.29	

6 Use 100% Russell 2000 Futures returns January 2011-June 2012. Use weighted blend of Russell 2000 Futures and Small Cap Fund returns July 2012- October 2012. Use 100% Small Cap Fund returns November 2012-present.

7 Effective 1/1/13, benchmark is 72.22% MSCI EAFE IMI net/ 27.78% MSCI Emerging Mkts net; linked to 100% MSCI EAFE IMI net (10/08-12/12) and 100% MSCI EAFE net Index (7/04-9/08).

	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
GE Asset	-2.59	-5.46	2.37	2.50	10.26	--
MSCI Europe	*-2.51*	*-8.44*	*2.71*	*2.07*	*9.99*	*2.05*
Excess Return	-0.08	2.98	-0.34	0.43	0.27	
Marathon	-3.30	-2.36	6.11	6.02	13.12	5.61
MSCI EAFE net	*-3.01*	*-8.27*	*2.23*	*2.29*	*9.69*	*1.82*
Excess Return	-0.29	5.91	3.88	3.73	3.43	3.79
Pacific Indexed[8]	-4.70	-8.09	1.05	2.57	8.71	0.94
MSCI Pacific net [9]	*-3.79*	*-7.95*	*1.28*	*2.81*	*9.24*	*1.32*
Excess Return	-0.91	-0.14	-0.23	-0.24	-0.53	-0.38
PanAgora Asset Mgmt	-3.85	-6.11	4.95	4.97	12.34	3.80
MSCI EAFE	*-3.01*	*-8.27*	*2.23*	*2.29*	*9.69*	*1.80*
Excess Return	-0.84	2.16	2.72	2.68	2.65	2.00
TT International	-5.63	-8.39	5.38	4.26	10.81	--
MSCI EAFE	*-3.01*	*-8.27*	*2.23*	*2.29*	*9.69*	*1.80*
Excess Return	-2.62	-0.12	3.15	1.97	1.12	
Walter Scott	0.86	-1.64	2.62	4.98	11.96	6.35
MSCI EAFE net [10]	*-3.01*	*-8.27*	*2.23*	*2.29*	*9.69*	*1.96*
Excess Return	3.87	6.63	0.39	2.69	2.27	4.39

8 Effective 9/4/10, internally managed by TCRS staff. Amundi Pacific terminated.

9 Effective 7/1/04.

10 Effective 3/1/09. Benchmark is linked to MSCI Europe Index.

	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Int'l Emerging Mkts Equity	**10.28**	**-9.89**	**-5.36**	**--**	**--**	**--**
MSCI Emerging Markets ND Custom	*9.32*	*-10.15*	*-5.08*	--	--	--
Excess Return	0.96	0.26	-0.28			
US Fixed Income	**4.79**	**1.92**	**4.09**	**6.71**	**7.93**	**6.46**
Citigroup LPF [11]	*5.09*	*2.02*	*3.92*	*6.20*	*6.07*	*6.20*
Excess Return	-0.30	-0.10	0.17	0.51	1.86	0.26
Corporate	**5.32**	**-0.04**	**4.36**	**7.89**	**11.01**	**7.55**
Citigroup LPF Credit [12]	*6.13*	*0.09*	*3.85*	*6.88*	*8.69*	*6.70*
Excess Return	-0.81	-0.13	0.51	1.01	2.32	0.85
Gov't 1-5	**6.24**	**2.49**	**5.23**	**9.20**	**8.98**	**--**
Citigroup LPF Treas/Govt Spons [13]	*6.61*	*3.08*	*4.78*	*7.50*	*6.45*	*6.46*
Excess Return	-0.37	-0.59	0.45	1.70	2.53	
Gov't 5 Plus	**6.48**	**3.20**	**4.85**	**8.03**	**7.82**	**6.60**
Citigroup LPF Treas/Govt Spons [14]	*6.61*	*3.08*	*4.78*	*7.87*	*6.52*	*7.03*
Excess Return	-0.13	0.12	0.07	0.16	1.30	-0.43
MBS	**2.10**	**2.40**	**2.72**	**3.48**	**4.33**	**4.46**
Citi BIG Mortgage	*1.96*	*2.38*	*2.68*	*3.26*	*3.69*	*4.88*
Excess Return	0.14	0.02	0.04	0.22	0.64	-0.42
Inflation Hedged	**4.79**	**1.51**	**-0.62**	**3.12**	**4.09**	**4.75**
Citi TIPS	*4.67*	*1.34*	*-0.64*	*3.14*	*4.26*	*4.70*
Excess Return	0.12	0.17	0.02	-0.02	-0.17	0.05

11 Effective 9/1/11. Benchmark is linked to 50% Citigroup BIG/ 50% Citigroup LPF (4/1/11-8/31/11) and 100% Citigroup BIG (8/1/05-3/31/11).

12 Effective 7/1/11. Benchmark is linked to 50% Citigroup BIG Credit/ 50% Citigroup LPF (4/1/11-6/30/11) and 100% Citigroup BIG Credit Index (1/1/01-3/31/11).

13 Effective 9/1/11. Benchmark is linked to Citi 1-7 Govt (7/1/11-8/31/11), 50% Citigroup 1-5 Govt/ 50% Citigroup 1-7 Govt (4/1/11-6/30/11), and 100% Citigroup 1-5 Govt (9/1/09-3/31/11).

14 Effective 7/1/11. Benchmark is linked to 50% Citigroup Core 5+ Gov't/ 50% Citigroup 7+ Govt (4/1/11-6/30/11),100% Citigroup Core 5+ Govt (9/1/09-3/31/11), and 100% Citigroup Govt (7/1/04-8/31/09).

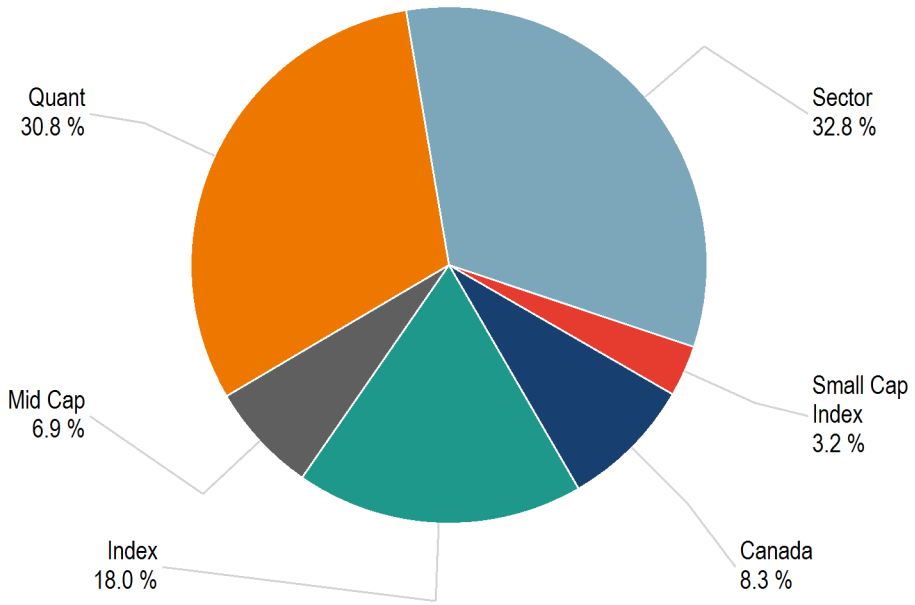
	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Real Estate	**2.57**	**12.93**	**11.81**	**11.15**	**6.96**	**6.21**
NCREIF 1Q Lag	*2.91*	*13.33*	*12.04*	*12.18*	*7.61*	*7.75*
Excess Return	-0.34	-0.40	-0.23	-1.03	-0.65	-1.54
Traditional Private Equity *	**1.62**	**13.16**	**17.36**	**15.94**		
S&P 500 +3% 1Q Lag **	*7.79*	*4.38*	*18.13*	*15.57*		
Excess Return	-6.17	8.78	-0.77	0.37		
Strategic Lending Portfolio [15]	**1.48**	**-0.89**	**--**	**--**	**--**	**--**
Strategic Lending[16]	*2.34*	*-2.36*	*2.06*	--	--	--
Excess Return	-0.86	1.47				
Short Term	**-0.74**	**0.71**	**0.86**	**1.10**	**1.40**	**--**
91 Day T-Bills	*0.07*	*0.11*	*0.05*	*0.05*	*0.07*	*1.01*
Excess Return	-0.81	0.60	0.81	1.05	1.33	
Short Duration	0.30	0.89	0.97	1.25	2.04	--
91 Day T-Bills	*0.07*	*0.11*	*0.05*	*0.05*	*0.07*	*1.01*
Excess Return	0.23	0.78	0.92	1.20	1.97	
Cash	**0.52**	**0.87**	**0.51**	**1.13**	**1.09**	**2.01**
91 Day T-Bills	*0.07*	*0.11*	*0.05*	*0.05*	*0.07*	*1.01*
Excess Return	0.45	0.76	0.46	1.08	1.02	1.00

* Effective 4/1/12. One quarter lagged IRR returns are provided by TorreyCove Capital Partners. TorreyCove replaced Cambridge Associates effective 8/1/15.

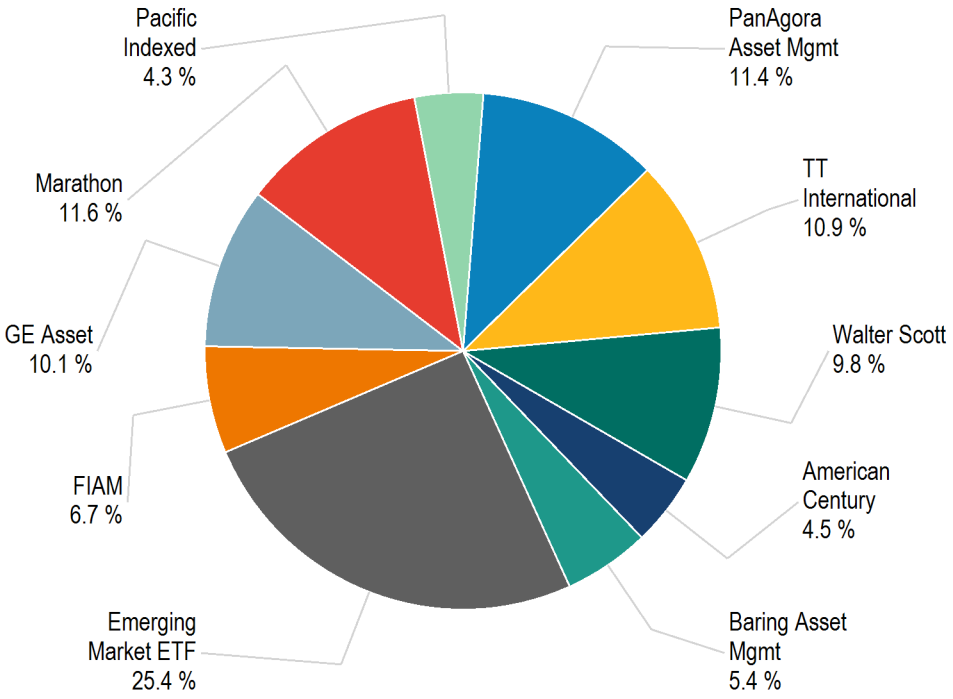
** Verus' time-weighted returns.

15 Funded 8/1/13. Reported net of fees. Hayfin, ICG Europe Fund VI, OrbiMed Royalty Opp II, and Triton Debt Opp. market values are rolled forward from Q4 2015, and adjusted for any Q1 cash flows.

16 Effective 1/1/13, benchmark is 50% Barclays HY 2% Issuer Capped/ 50% Credit Suisse Leveraged Loans.

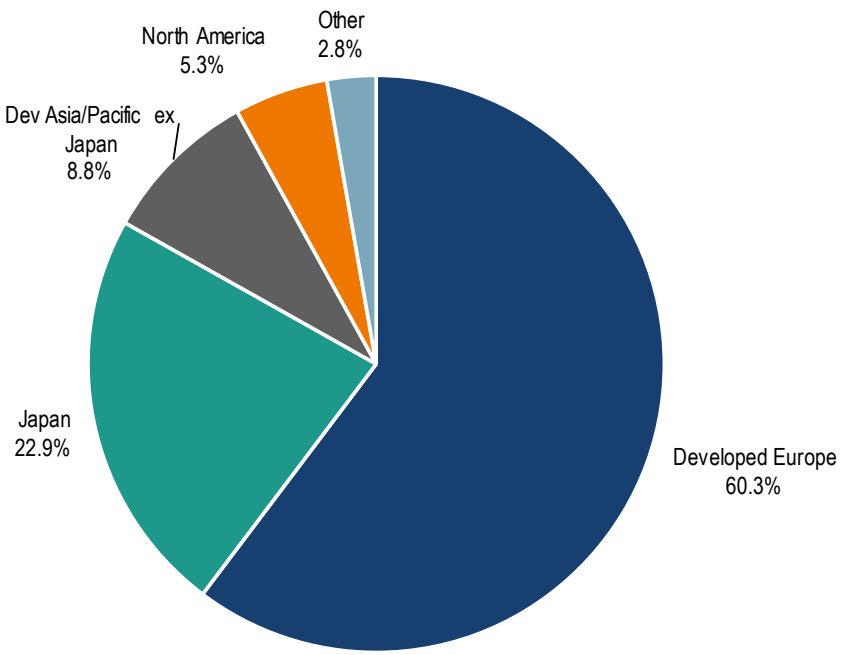


	Actual $	Actual %
Canada	$1,264,627,633	8.3%
Index	$2,752,905,974	18.0%
Mid Cap	$1,051,086,516	6.9%
Quant	$4,712,067,117	30.8%
Sector	$5,011,288,372	32.8%
Small Cap Index	$495,044,580	3.2%
Total	**$15,287,020,192**	**100.0%**

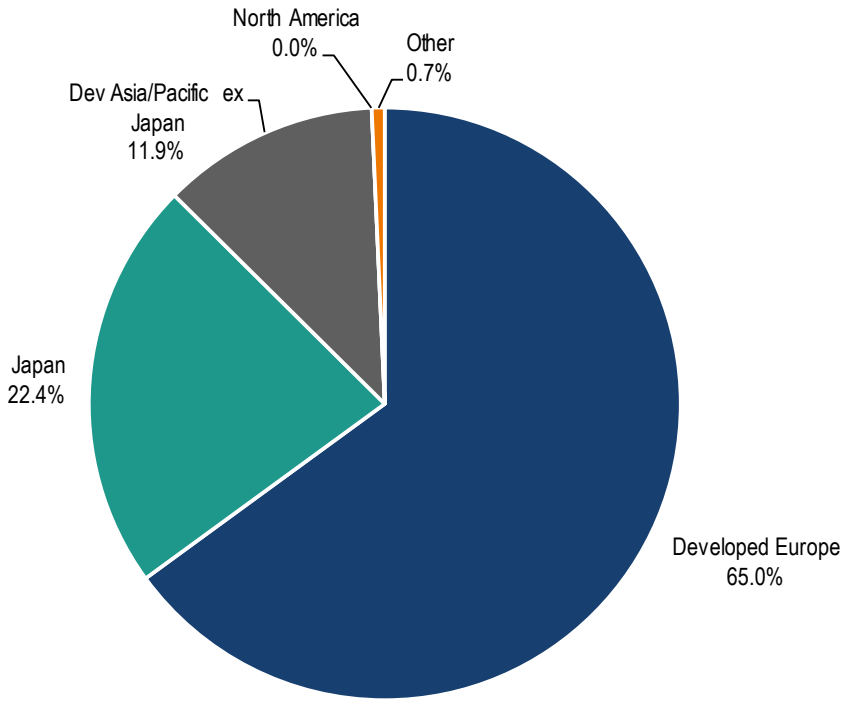


	Actual $	Actual %
American Century	$325,496,837	4.5%
Baring Asset Mgmt	$391,855,531	5.4%
Emerging Market ETF	$1,836,434,423	25.4%
FIAM	$481,875,125	6.7%
GE Asset	$728,454,898	10.1%
Marathon	$838,967,163	11.6%
Pacific Indexed	$308,575,238	4.3%
PanAgora Asset Mgmt	$828,265,416	11.4%
TT International	$788,163,102	10.9%
Walter Scott	$711,694,877	9.8%
Total	**$7,239,782,610**	**100.0%**

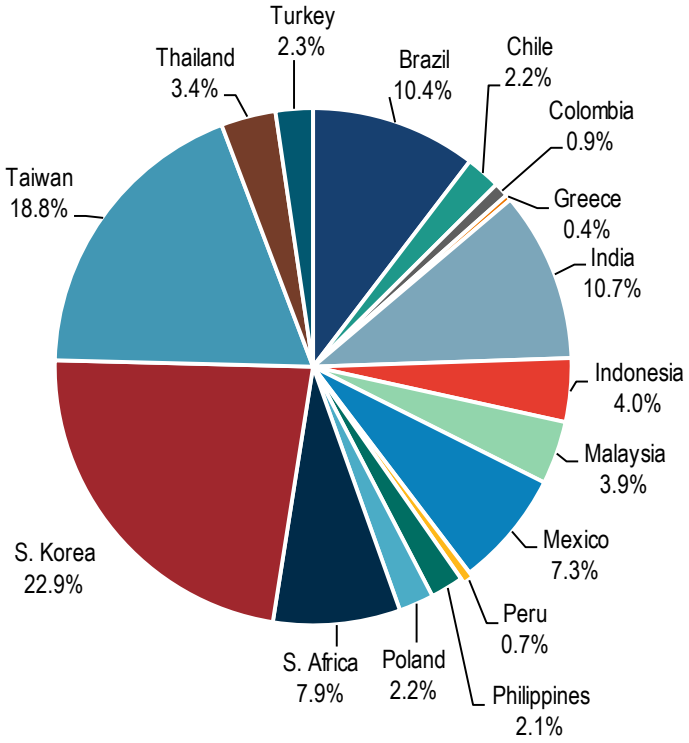
Developed International Equity



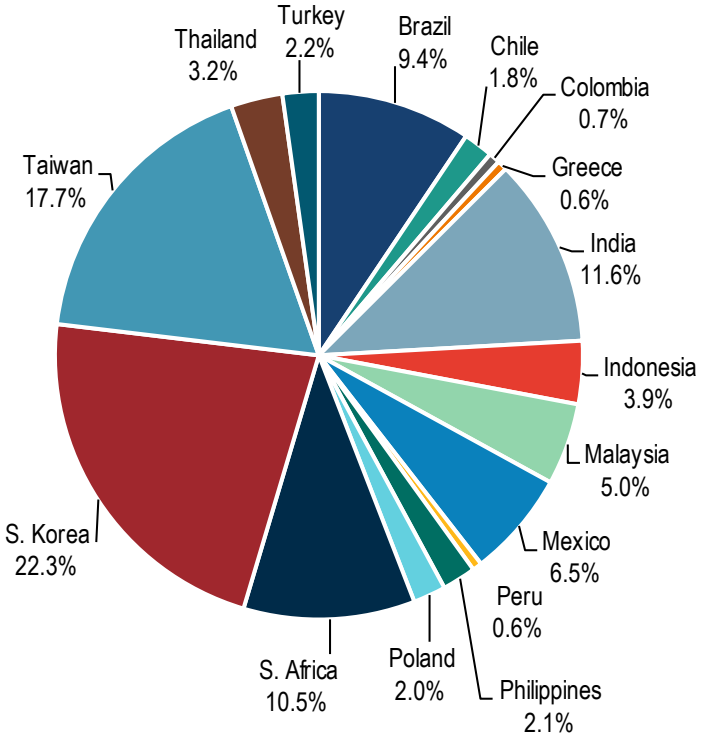
MSCI EAFE Index

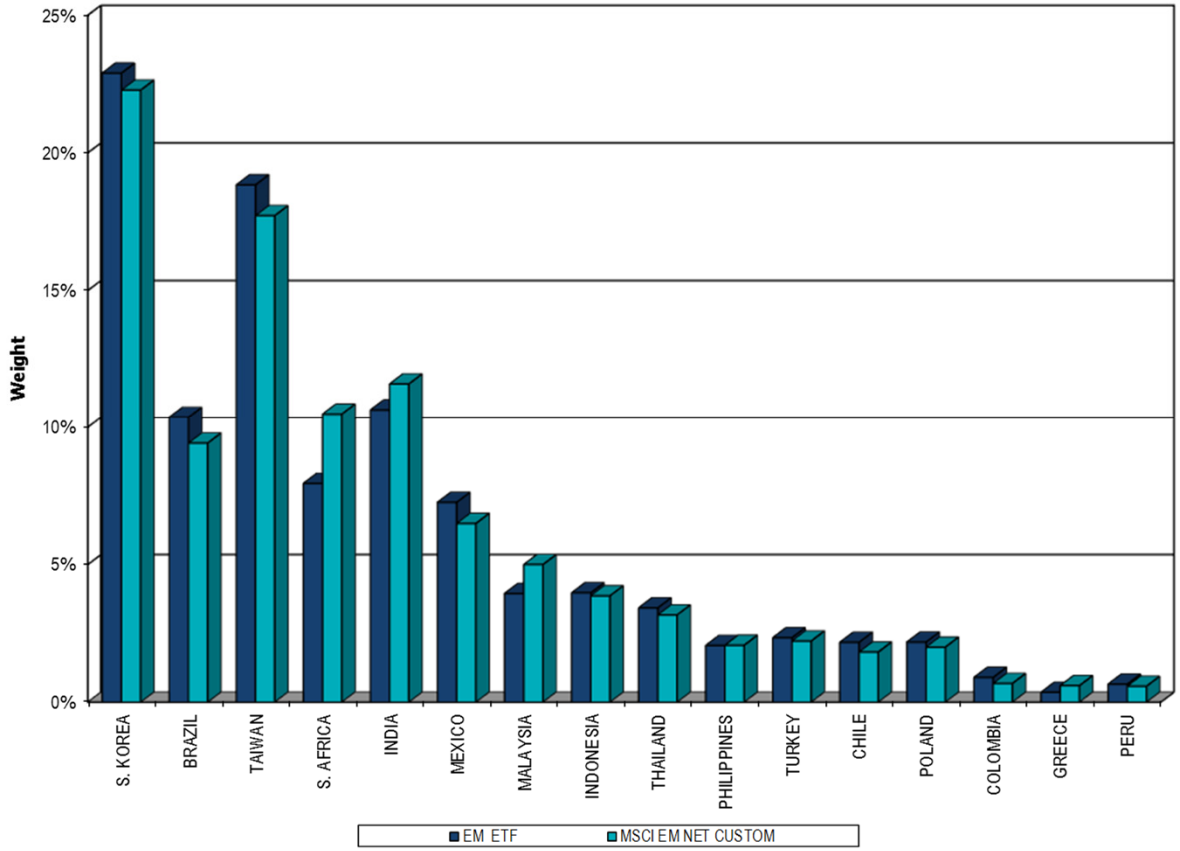


Emerging Market ETF

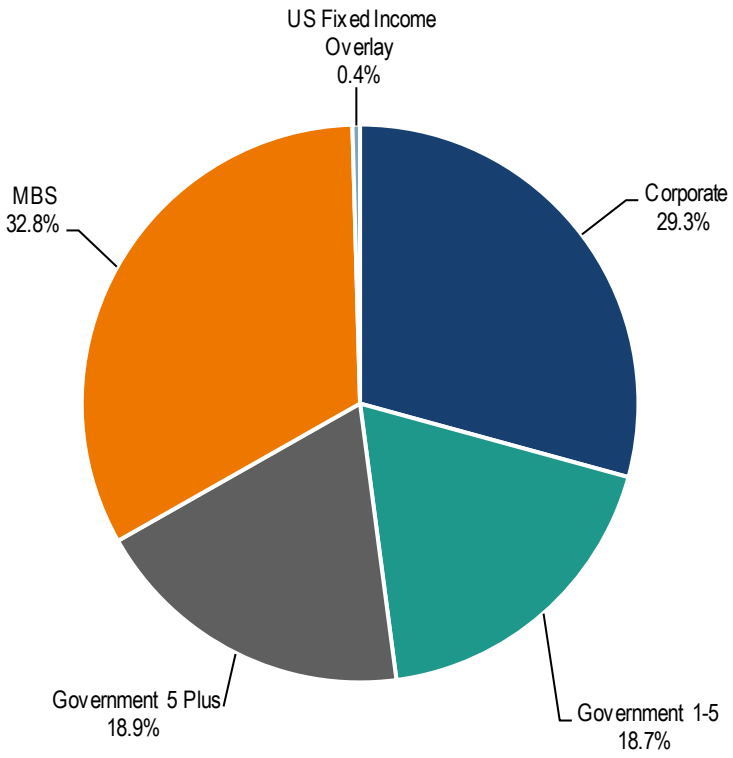


MSCI Emerging Market Net Custom Index





COUNTRY	TCRS MARKET VALUE ($ 000)	EM ETF	MSCI EM NET CUSTOM	DIFF
S. KOREA	$ 420,507	22.9%	22.3%	+0.6%
BRAZIL	$ 190,593	10.4%	9.4%	+1.0%
TAIWAN	$ 345,946	18.8%	17.7%	+1.1%
S. AFRICA	$ 145,996	7.9%	10.5%	-2.5%
INDIA	$ 195,621	10.7%	11.6%	-0.9%
MEXICO	$ 133,352	7.3%	6.5%	+0.8%
MALAYSIA	$ 72,510	3.9%	5.0%	-1.1%
INDONESIA	$ 72,997	4.0%	3.9%	+0.1%
THAILAND	$ 62,924	3.4%	3.2%	+0.3%
PHILIPPINES	$ 37,840	2.1%	2.1%	-0.0%
TURKEY	$ 42,987	2.3%	2.2%	+0.1%
CHILE	$ 39,901	2.2%	1.8%	+0.4%
POLAND	$ 40,081	2.2%	2.0%	+0.2%
COLOMBIA	$ 16,544	0.9%	0.7%	+0.2%
GREECE	$ 6,615	0.4%	0.6%	-0.2%
PERU	$ 12,020	0.7%	0.6%	+0.1%
	$ 1,836,434	100.0%	100.0%	0.0%

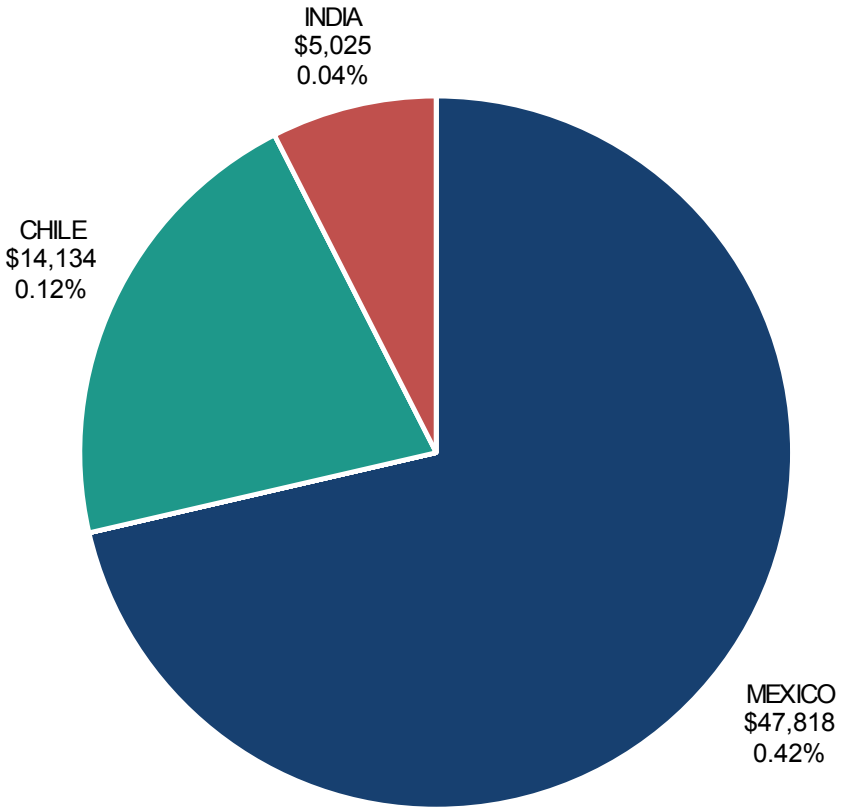


	Actual $	Actual %
Corporate	3,353,631,756	29.3%
Government 1-5	2,138,352,689	18.7%
Government 5 Plus	2,165,791,314	18.9%
MBS	3,755,360,424	32.8%
US Fixed Income Overlay	50,561,306	0.4%
TOTAL	11,463,697,489	100.0%

Emerging Markets Investment Grade Bond

Portfolio Country Weights

Period Ending: March 31, 2016



COUNTRY	TCRS MARKET VALUE ($ 000)	TCRS FI	LPF	DIFF
MEXICO	$ 47,818	0.42%	0.80%	-0.38%
OTHER*	$ -		0.79%	-0.79%
TURKEY	$ -		0.37%	-0.37%
INDONESIA	$ -		0.36%	-0.36%
BRAZIL	$ -		0.33%	-0.33%
PHILIPPINES	$ -		0.27%	-0.27%
COLOMBIA	$ -		0.25%	-0.25%
PERU	$ -		0.15%	-0.15%
S. KOREA	$ -		0.12%	-0.12%
S. AFRICA	$ -		0.07%	-0.07%
CHILE	$ 14,134	0.12%	0.06%	+0.06%
POLAND	$ -		0.05%	-0.05%
MALAYSIA	$ -		0.02%	-0.02%
INDIA	$ 5,025	0.04%		+0.04%
THAILAND	$ -			0.00%
TAIWAN	$ -			0.00%
	$ 66,977	0.58%	3.64%	-3.06%

* Includes Bahrain, British Virgin, Curacao, Iceland, Isle of Man, Panama, Qatar, Slovakia, Slovenia and Uruguay.
**Countries excluded: United States, Japan, Germany, France, The United Kingdom, Italy, Canada, Australia, Spain, Israel, Belgium, Ireland, Luxembourg, Netherlands, Norway, Sweden and Switzerland.

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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