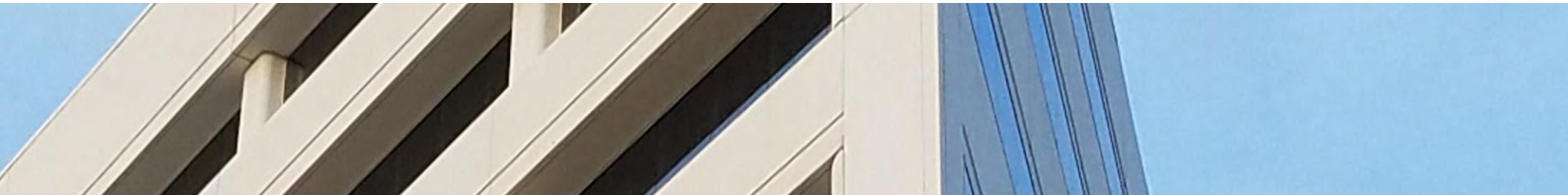




WILSHIRE ASSOCIATES

Wilshire Consulting



Police and Fire Retirement System

Executive Summary of Investment Performance

March 31, 2019

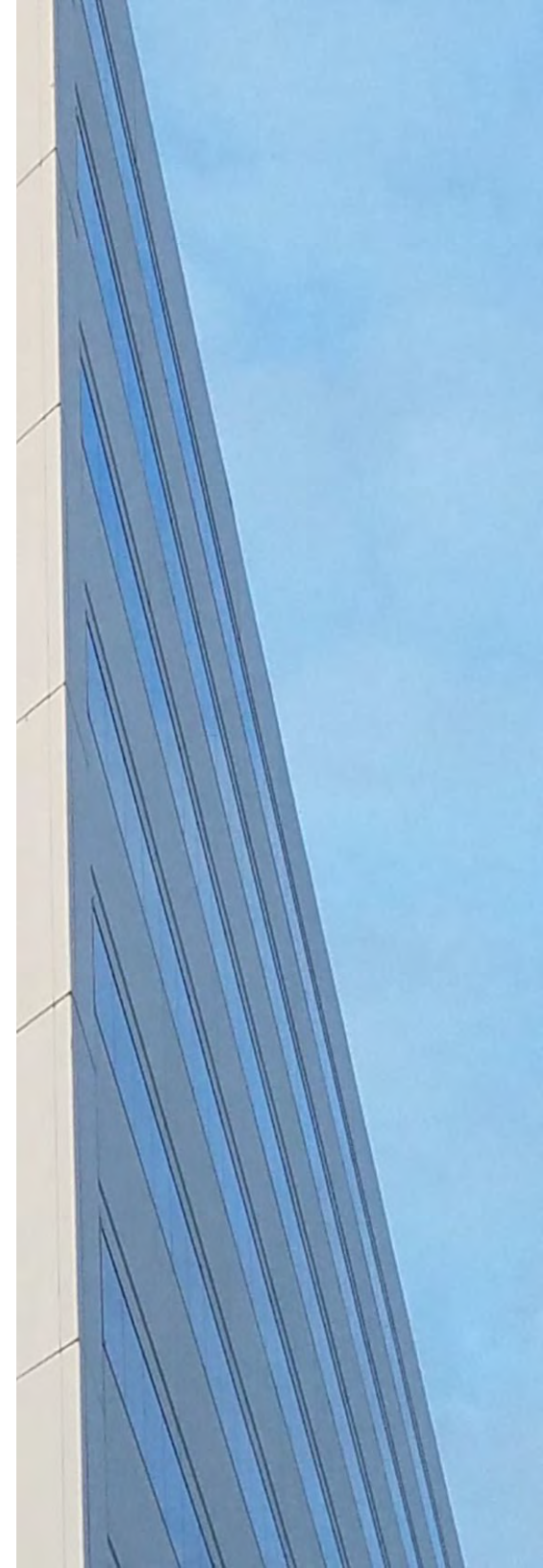
Wilshire Consulting
Contents

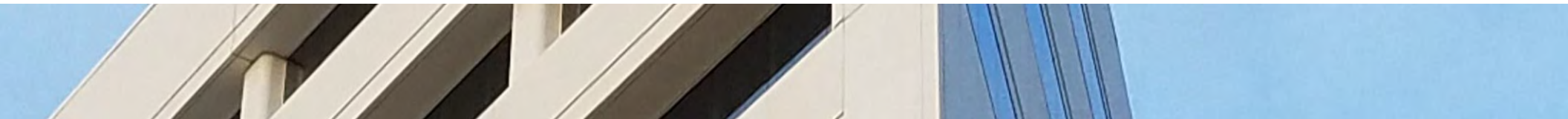
Capital Market Review

Tab 1

Investment Performance

Tab 2





CAPITAL MARKET REVIEW

MARKET COMMENTARY

U.S. Equity

The U.S. stock market was up 14.1% for the first quarter of 2019. This marks the strongest quarter for U.S. equities since 2009. Concerns about global growth were dwarfed by the Fed's updated forecast for no rate increases in 2019 and a looser stance on unwinding quantitative easing enacted during the recovery.

Several developments led to a yield curve with two key characteristics – an inverted portion from short-term to 3-year yields and almost no difference between short-term and 10-year yields. The Fed's move towards a more dovish stance on monetary policy, a weak report on the European economy and a drop in U.S. retail sales contributed to yields moving lower.

Consumer price increases have slowed recently with very little growth during the past six months. CPI was up 0.1% for the three months ending February and 1.5% for the one-year period.

Non-U.S. Equity

Equity markets outside of the U.S. enjoyed a strong start to 2019. While there are signs of an economic slowdown in Europe, by far the biggest unknown is the result of the U.K.'s Brexit. The latest draft proposal to exit the European Union (EU), agreed upon by Prime Minister Theresa May and EU officials, was again rejected by the U.K. Parliament. While the final exit date has been delayed, a failure to reach an agreement on a transition period would mean significant uncertainty for markets.

Fixed Income

The U.S. Treasury yield curve fell across most maturities during the quarter with the biggest decreases occurring in the 5 to 10-year portion of the curve. The bellwether 10-year Treasury yield ended the quarter at 2.41%, down 28 basis points from December. Credit spreads tightened during the quarter.

ASSET CLASS PERFORMANCE

ASSET CLASS RETURNS - BEST TO WORST						ANNUALIZED 5-YEAR AS OF 3/2019
2014	2015	2016	2017	2018	2019 YTD	
REITs 31.8%	REITs 4.2%	MLPs 18.3%	Emrg Mrkts 37.7%	T-Bills 1.9%	MLPs 16.8%	U.S. Equity 10.5%
U.S. Equity 12.7%	U.S. Equity 0.7%	High Yield 17.1%	Developed 25.6%	Core Bond 0.0%	REITs 16.0%	REITs 9.0%
Core Bond 6.0%	Core Bond 0.6%	U.S. Equity 13.4%	U.S. Equity 21.0%	U.S. TIPS -1.3%	U.S. Equity 14.1%	High Yield 4.7%
MLPs 4.8%	T-Bills 0.1%	Commodities 11.8%	High Yield 7.5%	High Yield -2.1%	Developed 10.1%	Emrg Mrkts 4.1%
U.S. TIPS 3.6%	Developed -0.4%	Emrg Mrkts 11.6%	REITs 4.2%	REITs -4.8%	Emrg Mrkts 10.0%	Developed 2.8%
High Yield 2.5%	U.S. TIPS -1.4%	REITs 7.2%	Core Bond 3.6%	U.S. Equity -5.3%	High Yield 7.3%	Core Bond 2.7%
T-Bills 0.0%	High Yield -4.5%	U.S. TIPS 4.7%	U.S. TIPS 3.0%	Commodities -11.2%	Commodities 6.3%	U.S. TIPS 1.9%
Emrg Mrkts -1.8%	Emrg Mrkts -14.6%	Core Bond 2.6%	Commodities 1.7%	MLPs -12.4%	U.S. TIPS 3.2%	T-Bills 0.7%
Developed -4.5%	Commodities -24.7%	Developed 1.5%	T-Bills 0.8%	Developed -13.4%	Core Bond 2.9%	MLPs -4.7%
Commodities -17.0%	MLPs -32.6%	T-Bills 0.3%	MLPs -6.5%	Emrg Mrkts -14.2%	T-Bills 0.6%	Commodities -8.9%

Data sources: Wilshire Compass

Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

MARCH 2019 ASSET CLASS ASSUMPTIONS

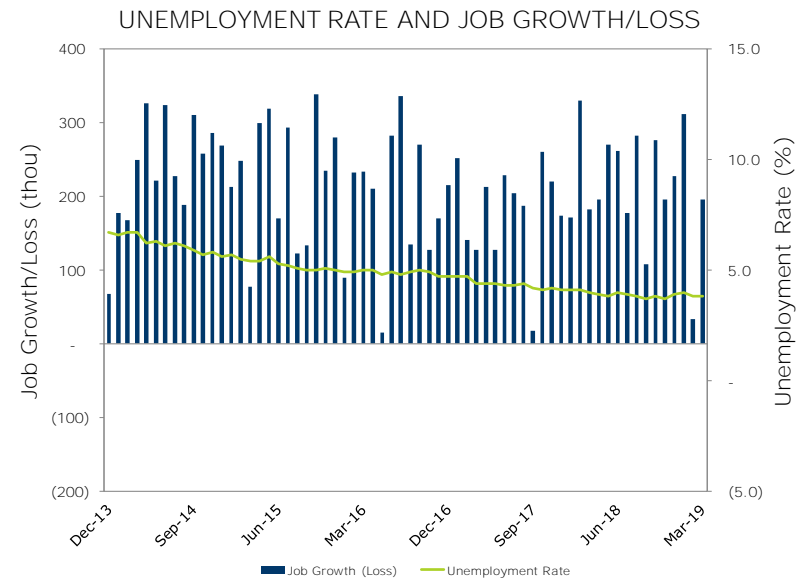
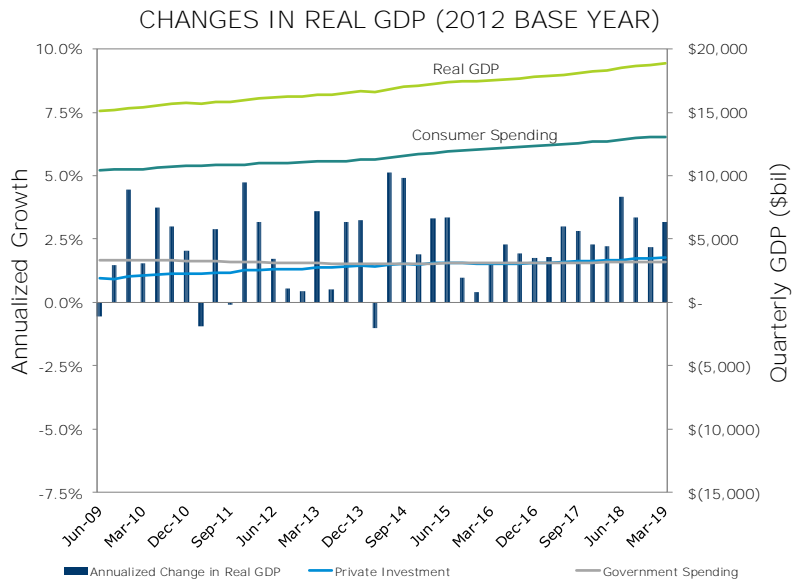
	EQUITY						FIXED INCOME						REAL ASSETS					
	US STOCK	DEV	EMG	GLOBAL	GLOBAL STOCK	PRIVATE EQUITY	CASH	CORE BOND	LT	US TIPS	HIGH YIELD	NON-US BOND (HDG)	REAL ESTATE			COMDTY	REAL ASSETS	US CPI
		EX-US STOCK	MRKT STOCK	EX-US STOCK					CORE BOND				US RES	GLOBAL RES	PRIVATE RE			
EXPECTED COMPOUND RETURN (%)	6.25	6.75	6.75	7.00	6.70	8.95	2.45	3.40	3.85	2.70	4.80	1.05	5.15	5.35	6.70	4.35	6.10	1.90
EXPECTED ARITHMETIC RETURN (%)	7.55	8.20	9.70	8.60	8.00	12.30	2.45	3.55	4.30	2.85	5.25	1.10	6.50	6.50	7.60	5.40	6.45	1.90
EXPECTED RISK (%)	17.00	18.00	26.00	18.80	17.05	28.00	1.25	5.15	9.85	6.00	10.00	3.50	17.00	15.80	14.00	15.00	8.75	1.75
CASH YIELD (%)	2.00	3.50	2.50	3.25	2.55	0.00	2.45	3.55	4.75	3.10	8.00	1.65	3.75	3.75	2.60	2.45	2.65	0.00
CORRELATIONS																		
US STOCK	1.00																	
DEV EX-US STOCK (USD)	0.81	1.00																
EMERGING MARKET STOCK	0.74	0.74	1.00															
GLOBAL EX-US STOCK	0.83	0.96	0.86	1.00														
GLOBAL STOCK	0.94	0.92	0.82	0.94	1.00													
PRIVATE EQUITY	0.74	0.64	0.62	0.67	0.74	1.00												
CASH EQUIVALENTS	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00											
CORE BOND	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00										
LT CORE BOND	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.93	1.00									
US TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.60	0.47	1.00								
HIGH YIELD BOND	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00							
NON-US BOND (HDG)	0.16	0.25	-0.01	0.18	0.18	0.26	0.10	0.67	0.66	0.39	0.26	1.00						
US RE SECURITIES	0.59	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00					
GLOBAL RE SECURITIES	0.65	0.59	0.56	0.62	0.66	0.58	-0.05	0.17	0.22	0.11	0.62	0.03	0.94	1.00				
PRIVATE REAL ESTATE	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.77	0.76	1.00			
COMMODITIES	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00		
REAL ASSET BASKET	0.42	0.43	0.50	0.48	0.47	0.43	0.01	0.24	0.25	0.41	0.53	0.06	0.65	0.69	0.69	0.59	1.00	
INFLATION (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00

ECONOMIC REVIEW

AS OF MAR. 31, 2019 KEY ECONOMIC INDICATORS

CPI (ALL ITEMS)	MONTHLY CHANGE		CUMULATIVE CHANGE	
SEASONALLY ADJUSTED	Mar-19	0.4	3-Mo.	0.6
	Feb-19	0.2	12-Mo.	1.9
	Jan-19	0.0	10-Yr. (Annual)	1.8
	10-Yr.	1.9		
BREAKEVEN INFLATION				
CONSUMER SENTIMENT	Mar-19	98.4		
U. OF MICHIGAN SURVEY	Feb-19	93.8		
	1-Yr. Ago	101.4	10-Yr. Avg	83.4
MANUFACTURING	Mar-19	55.3	CHANGE IN SECTOR	
INST. FOR SUPPLY MGMT	Feb-19	54.2	>50	Expansion
PURCHASING MNGRS' IDX	1-Yr. Avg.	57.7	<50	Contraction

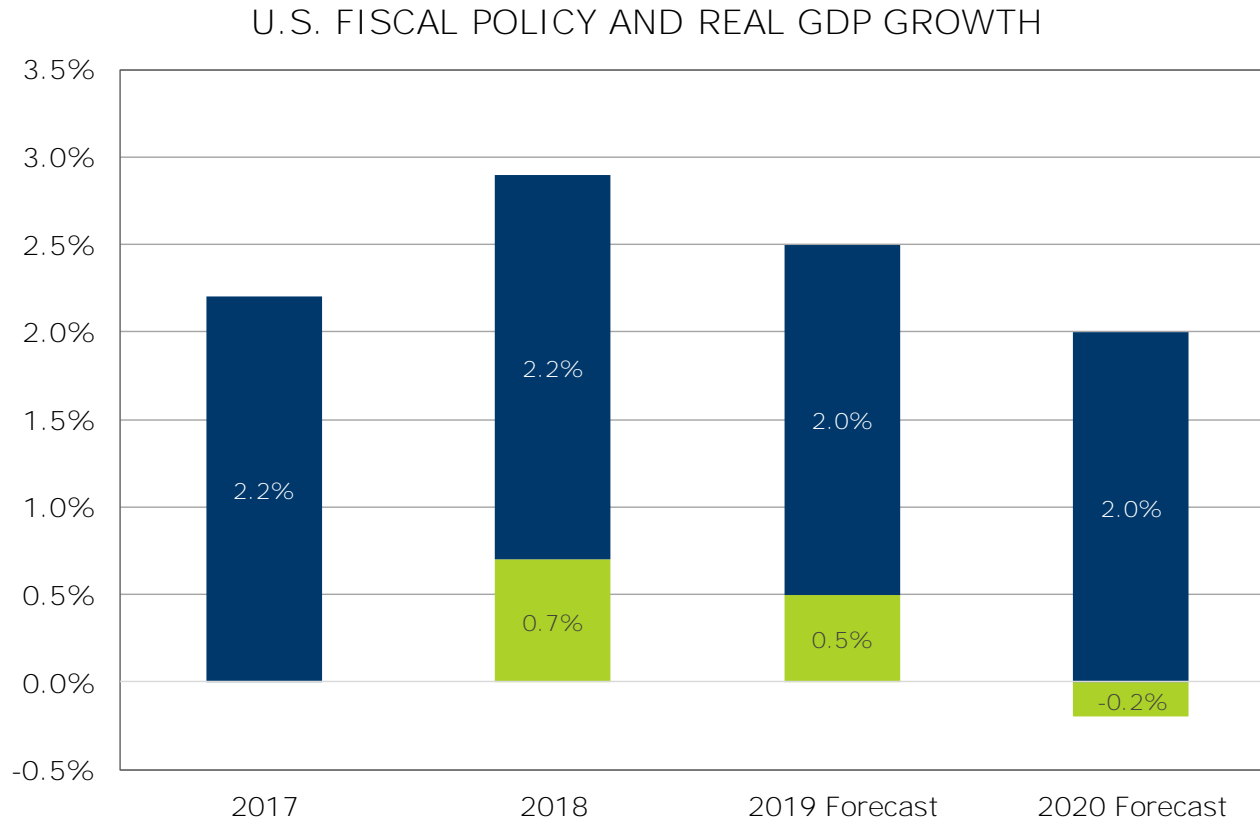
Note: Seasonally adjusted CPI data is utilized to better reflect short-term pricing activity.



Data sources: Bureau of Labor Statistics, U.S. Treasury, University of Michigan, Institute for Supply Management, Bureau of Economic Analysis

FISCAL POLICY BOOST

- Estimates show that U.S. fiscal policy added nearly three-quarters of a percent to real GDP growth in 2018
- Slight detraction from growth forecasted as fiscal support fades



Data source: Prudential Financial

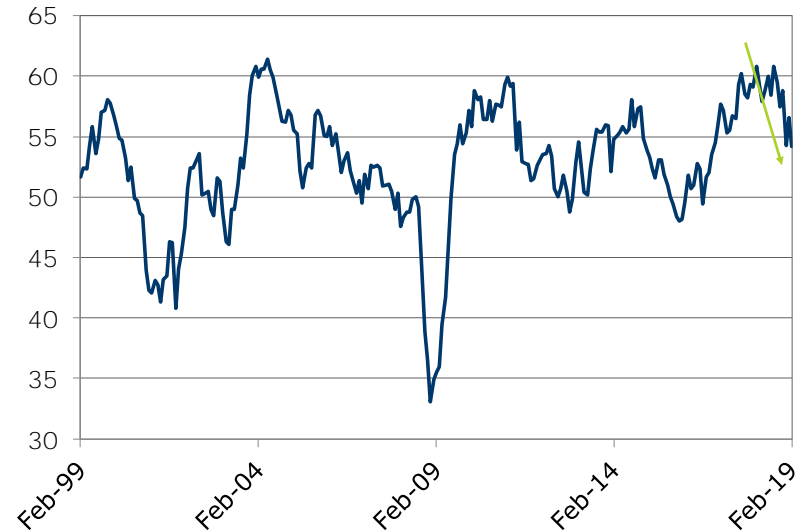
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■ Real U.S. GDP Growth before Stimulus
■ Contribution to U.S. GDP from Fiscal Stimulus

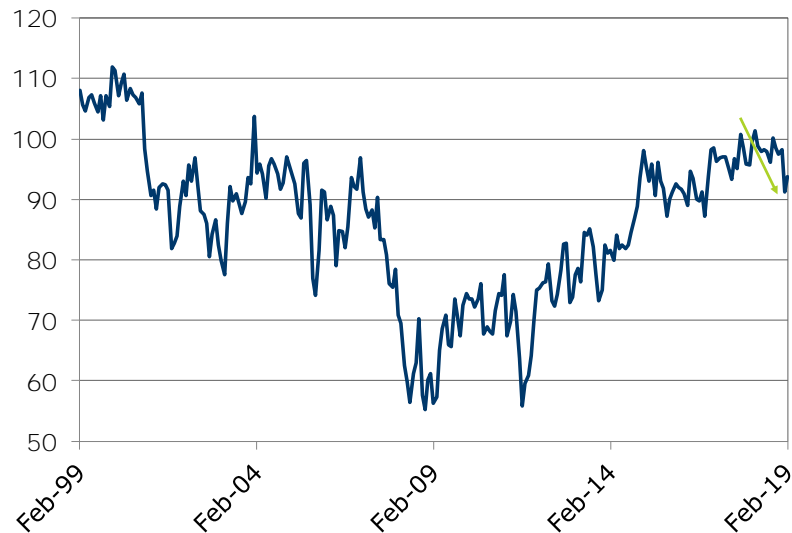
SIGNS OF SLOWING

- Surveys provide up-to-date proxy for economic activity
- Business activity continues to grow but has slowed; Consumer confidence proxies future demand
- Rate-sensitive sectors are slowing

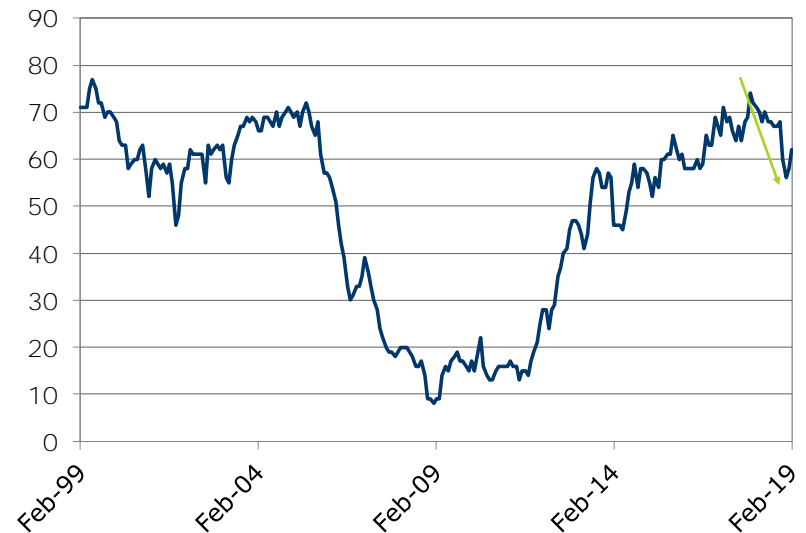
ISM MANUFACTURING INDEX



U. OF MI CONSUMER SENTIMENT INDEX

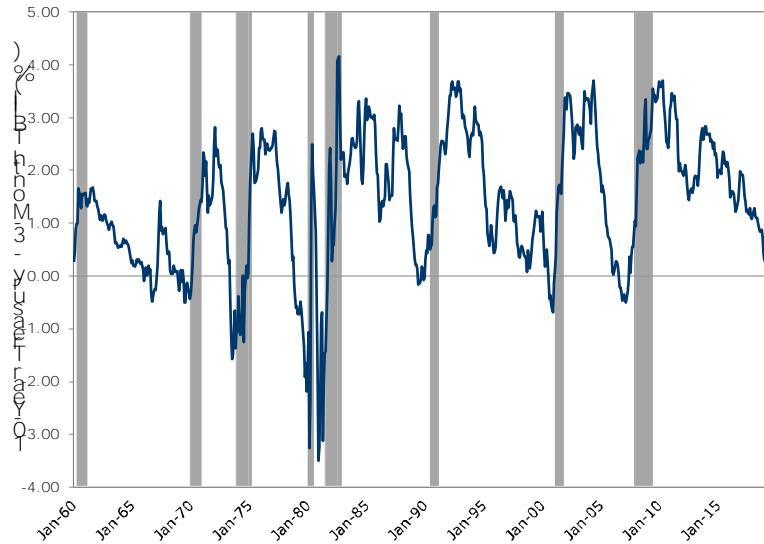


HOME BUILDERS HOME MARKET INDEX

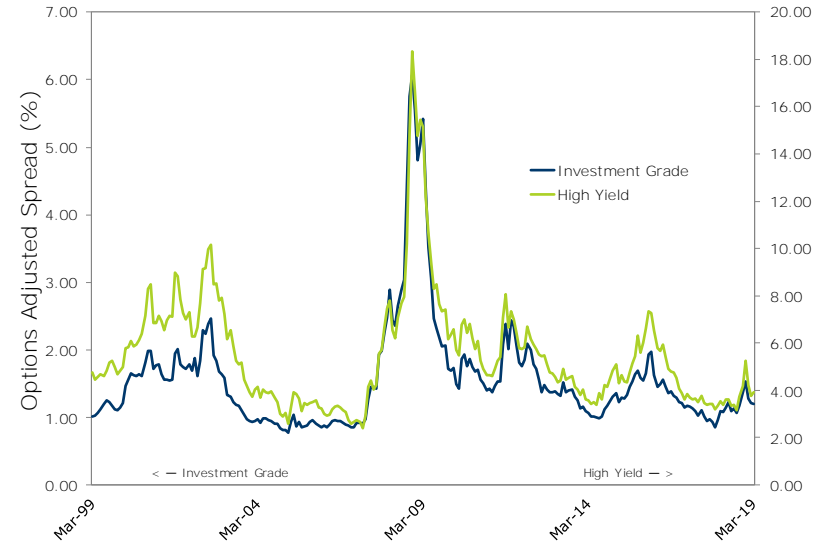


RISK MONITOR

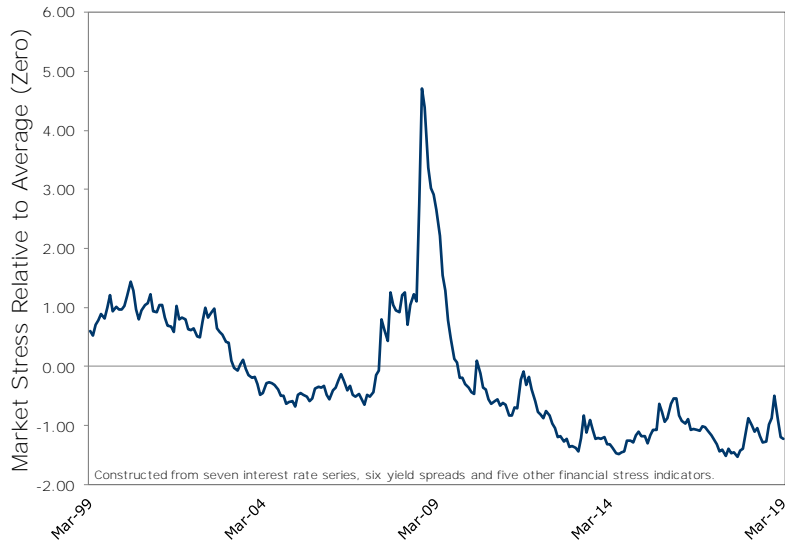
YIELD CURVE SLOPE VS RECESSIONS (IN GRAY)



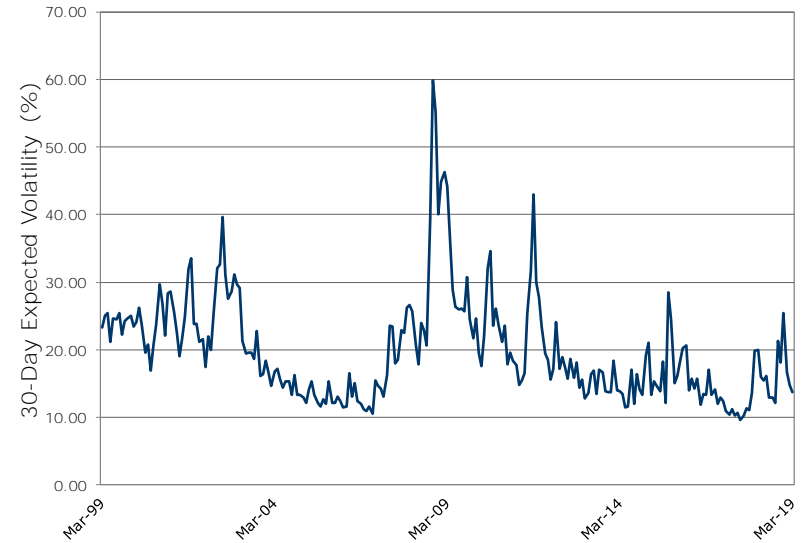
BLOOMBERG BARCLAYS CREDIT INDEXES



ST. LOUIS FED FINANCIAL STRESS INDEX



CBOE VOLATILITY INDEX



Data sources: Federal Reserve, Bloomberg Barclays

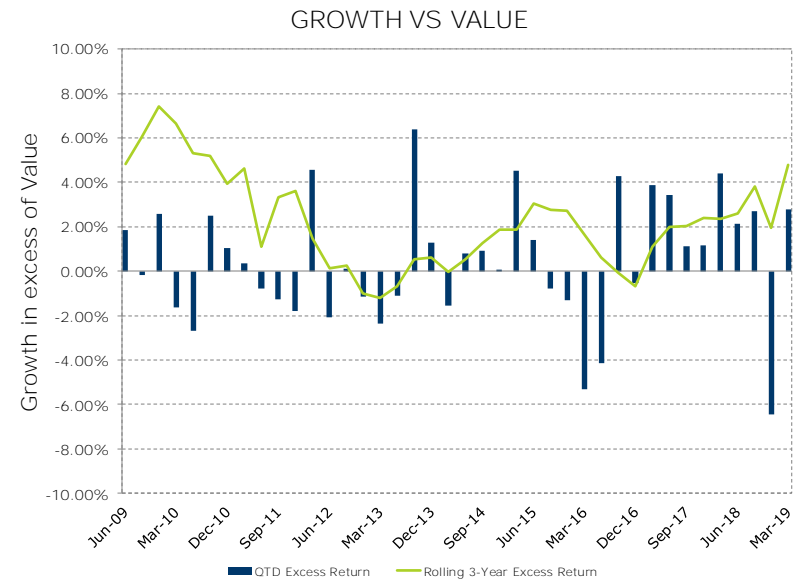
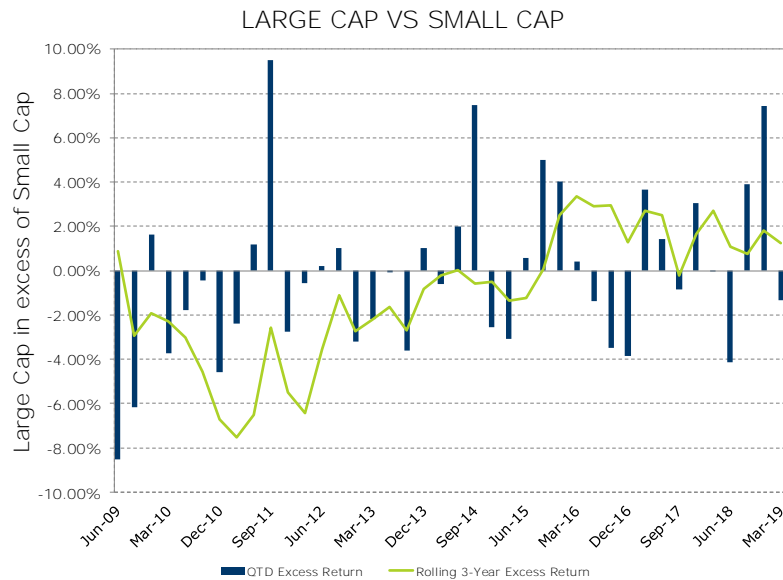
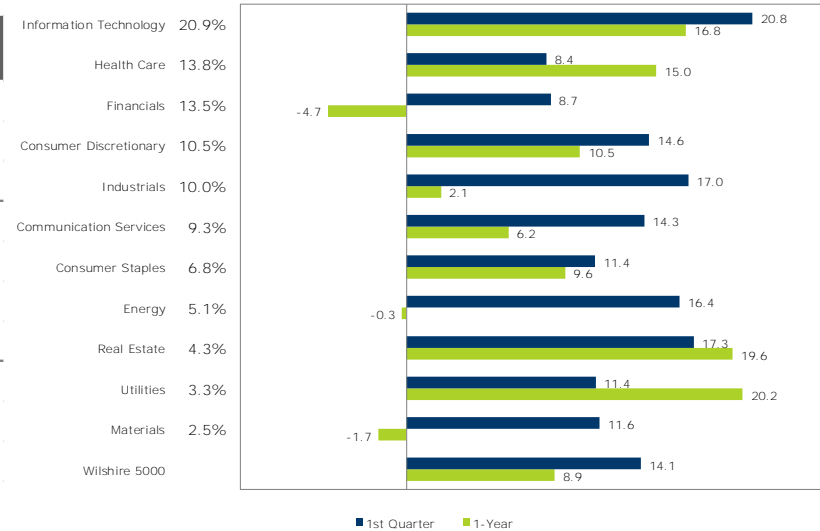
Wilshire Consulting

U.S. EQUITY MARKET



AS OF MARCH 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
WILSHIRE 5000 INDEX	14.1	14.1	8.9	13.6	10.5	16.0
WILSHIRE U.S. LARGE CAP	14.0	14.0	9.5	13.7	10.9	15.9
WILSHIRE U.S. SMALL CAP	15.5	15.5	3.7	12.4	7.2	17.1
WILSHIRE U.S. LARGE GROWTH	15.7	15.7	10.1	16.4	12.6	16.9
WILSHIRE U.S. LARGE VALUE	12.4	12.4	9.0	11.0	9.2	14.8
WILSHIRE U.S. SMALL GROWTH	16.4	16.4	3.6	14.7	7.3	17.6
WILSHIRE U.S. SMALL VALUE	14.6	14.6	3.9	9.9	7.0	16.5
WILSHIRE REIT INDEX	16.0	16.0	19.3	5.4	9.0	18.7
MSCI USA MIN. VOL. INDEX	12.5	12.5	14.9	11.9	12.0	15.4
FTSE RAFI U.S. 1000 INDEX	12.2	12.2	5.5	11.4	8.6	19.4

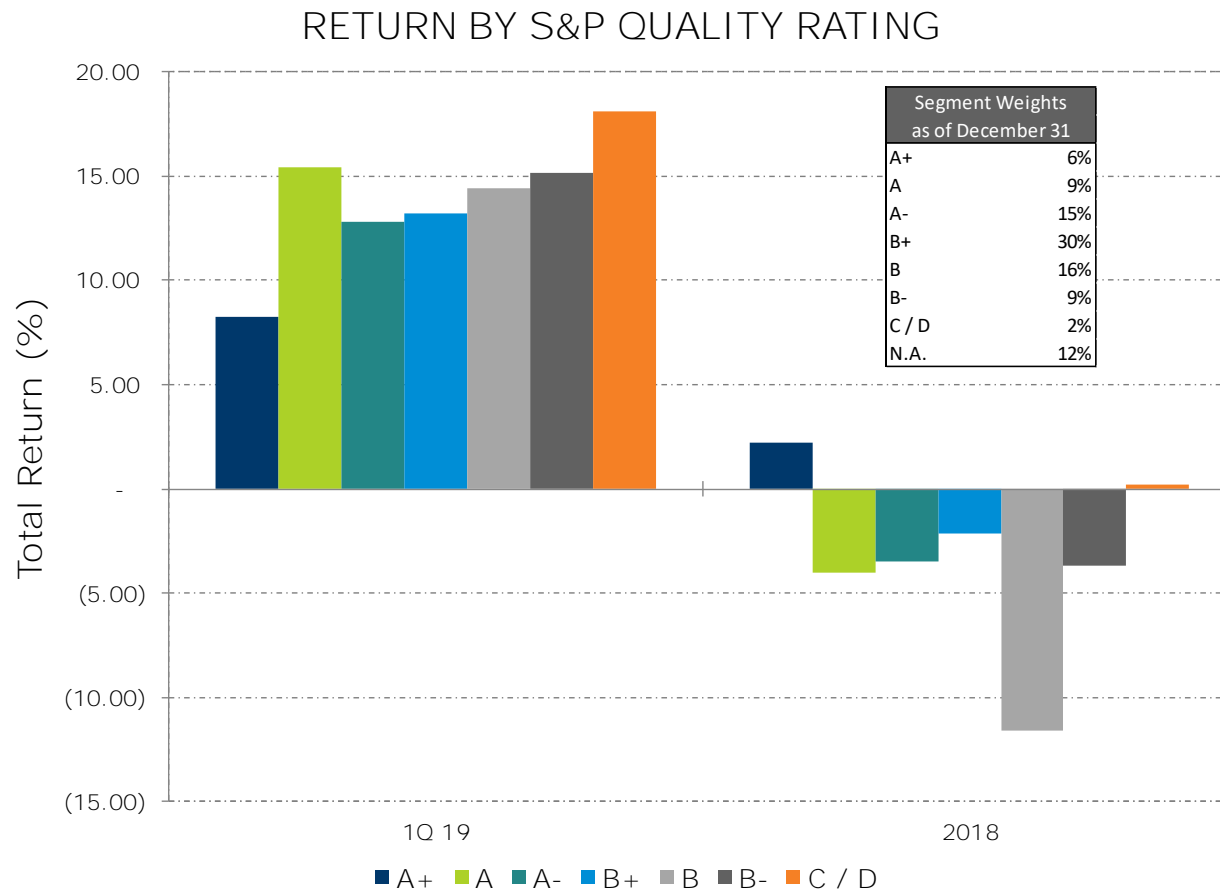
WILSHIRE 5000 SECTOR WEIGHT & RETURN (%)



Data sources: Wilshire Compass, Wilshire Atlas

RETURNS BY QUALITY SEGMENT

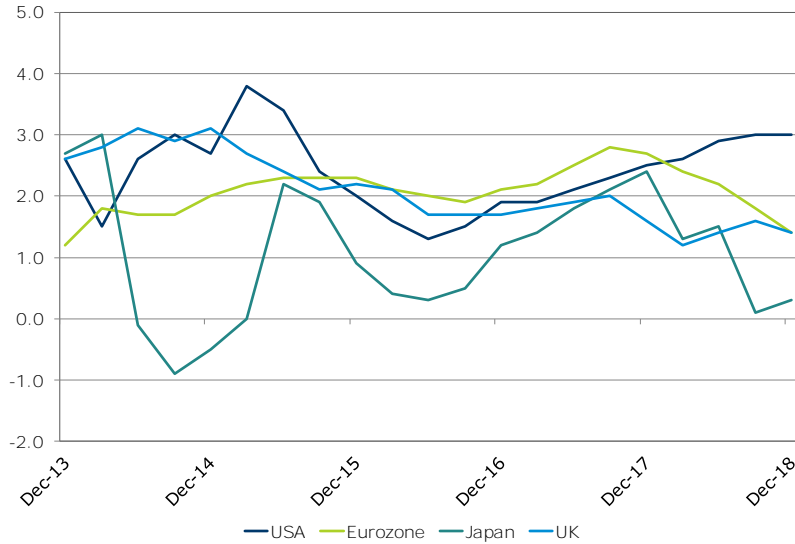
Lower quality names led the market during the first quarter



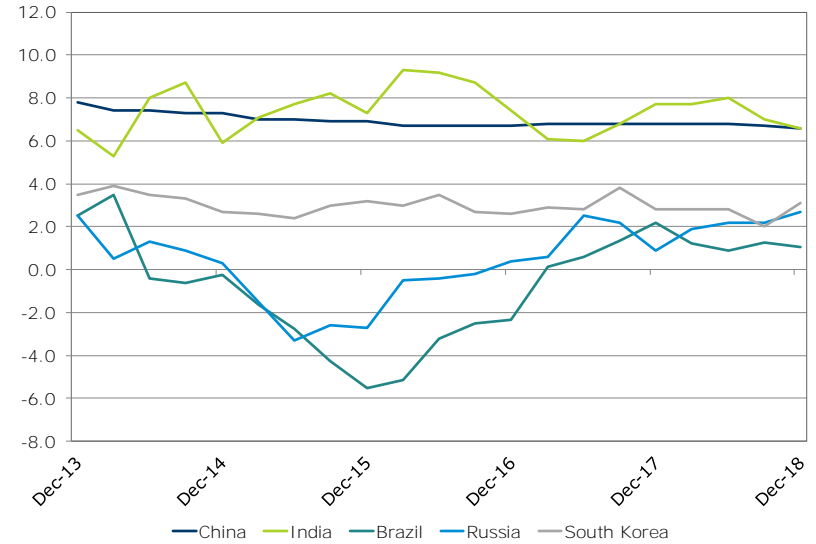
Data sources: Wilshire Atlas

NON-U.S. GROWTH AND INFLATION

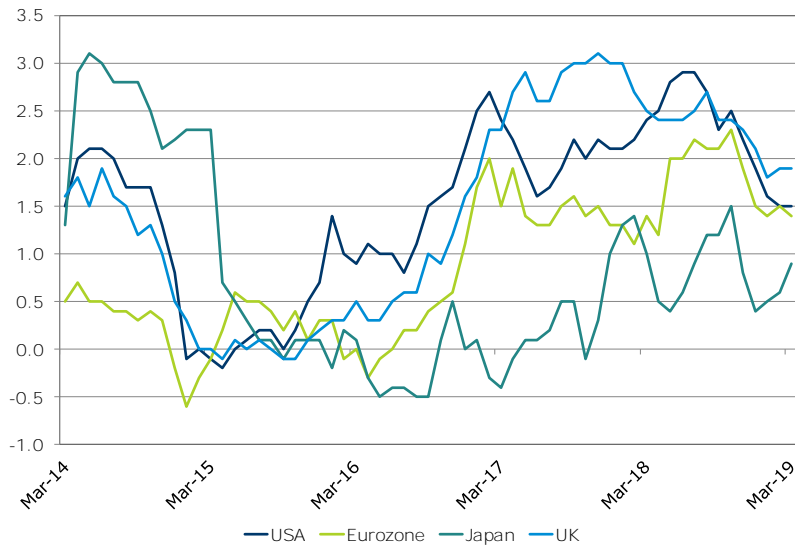
DEVELOPED MARKETS REAL GDP GROWTH YoY (%)



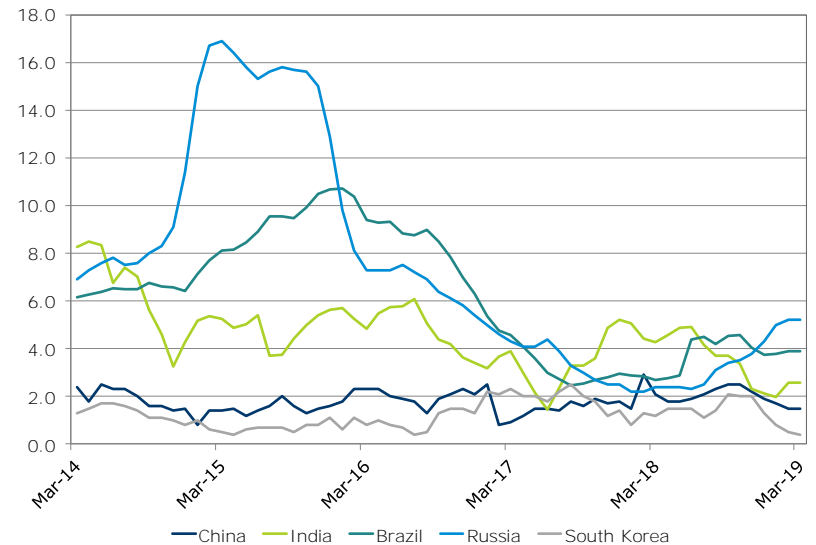
EMERGING MARKETS REAL GDP GROWTH YoY (%)



DEVELOPED MARKETS CPI GROWTH YoY (%)



EMERGING MARKETS CPI GROWTH YoY (%)



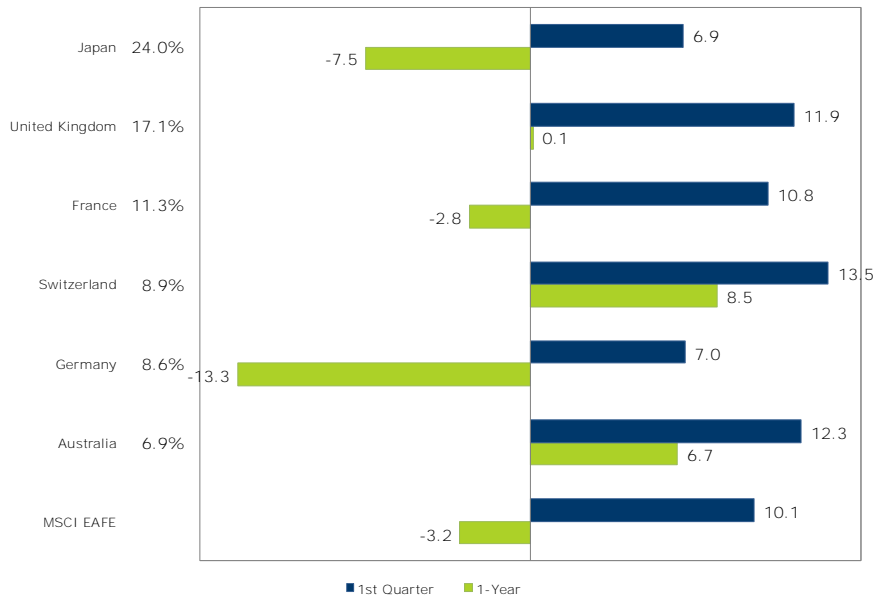
Data sources: Bloomberg

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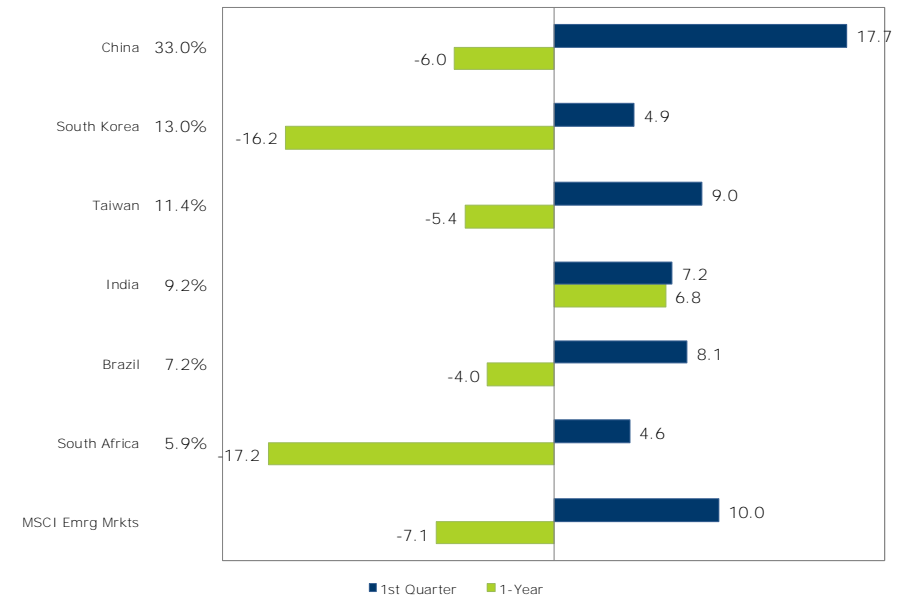
NON-U.S. EQUITY MARKET

AS OF MARCH 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI EX-US (\$G)	10.4	10.4	-3.7	8.6	3.0	9.3
MSCI EAFE (\$G)	10.1	10.1	-3.2	7.8	2.8	9.5
MSCI EMERGING MARKETS (\$G)	10.0	10.0	-7.1	11.1	4.1	9.3
MSCI FRONTIER MARKETS (\$G)	6.9	6.9	-14.8	7.2	0.9	8.2
MSCI ACWI EX-US GROWTH (\$G)	12.4	12.4	-2.7	8.8	4.4	9.9
MSCI ACWI EX-US VALUE (\$G)	8.5	8.5	-4.8	8.4	1.7	8.8
MSCI ACWI EX-US SMALL (\$G)	10.4	10.4	-9.1	7.6	3.7	12.3
MSCI ACWI MINIMUM VOLATILITY	10.1	10.1	9.7	9.7	9.7	13.0
MSCI EAFE MINIMUM VOLATILITY	8.0	8.0	1.8	6.5	6.5	10.8
FTSE RAFI DEVELOPED EX-US	8.7	8.7	-5.2	8.7	2.2	9.9
MSCI EAFE LC (G)	10.7	10.7	3.4	9.1	6.5	10.3

MSCI EAFE: LARGEST COUNTRIES & RETURN (USD)



MSCI EM: LARGEST COUNTRIES & RETURN (USD)



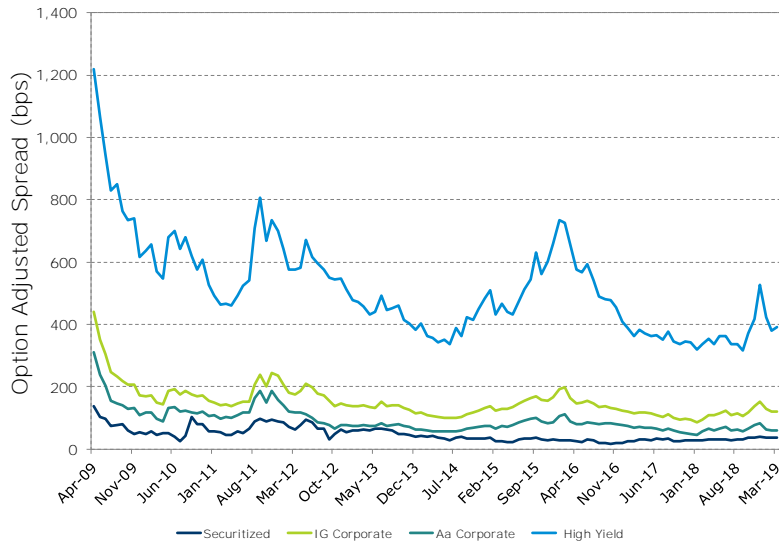
Data sources: Wilshire Compass

U.S. FIXED INCOME

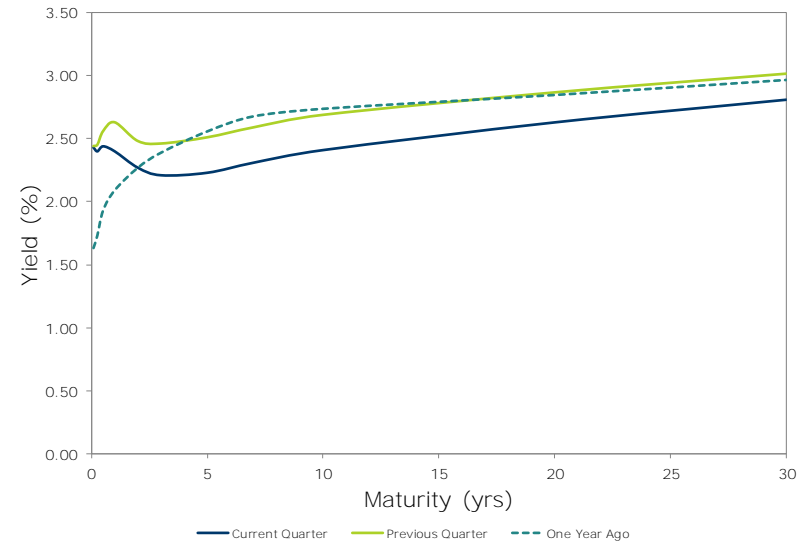
AS OF MARCH 31, 2019	YTM	DURATION	QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS AGGREGATE	2.9	5.8	2.9	2.9	4.5	2.0	2.7	3.8
BLOOMBERG BARCLAYS TREASURY	2.4	6.2	2.1	2.1	4.2	1.0	2.2	2.4
BLOOMBERG BARCLAYS GOV'T-REL.	3.0	5.5	3.1	3.1	4.5	2.4	2.8	3.2
BLOOMBERG BARCLAYS SECURITIZED	3.1	4.1	2.2	2.2	4.5	1.8	2.6	3.5
BLOOMBERG BARCLAYS CORPORATE	3.6	7.4	5.1	5.1	4.9	3.6	3.7	6.7
BLOOMBERG BARCLAYS LT G/C	3.7	15.3	6.5	6.5	5.2	3.8	5.3	7.2
BLOOMBERG BARCLAYS LT TREASURY	2.8	17.7	4.7	4.7	6.2	1.5	5.4	5.1
BLOOMBERG BARCLAYS LT GOV'T-REL.	4.1	12.1	6.6	6.6	5.7	4.7	5.6	7.0
BLOOMBERG BARCLAYS LT CORP.	4.4	13.9	8.0	8.0	4.4	5.3	5.3	9.2
BLOOMBERG BARCLAYS U.S. TIPS *	2.4	7.6	3.2	3.2	2.7	1.7	1.9	3.4
BLOOMBERG BARCLAYS HIGH YIELD	6.7	3.4	7.3	7.3	5.9	8.6	4.7	11.3
TREASURY BILLS	2.4	0.25	0.6	0.6	2.1	1.2	0.7	0.4

* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index

BLOOMBERG BARCLAYS FIXED INCOME INDEXES



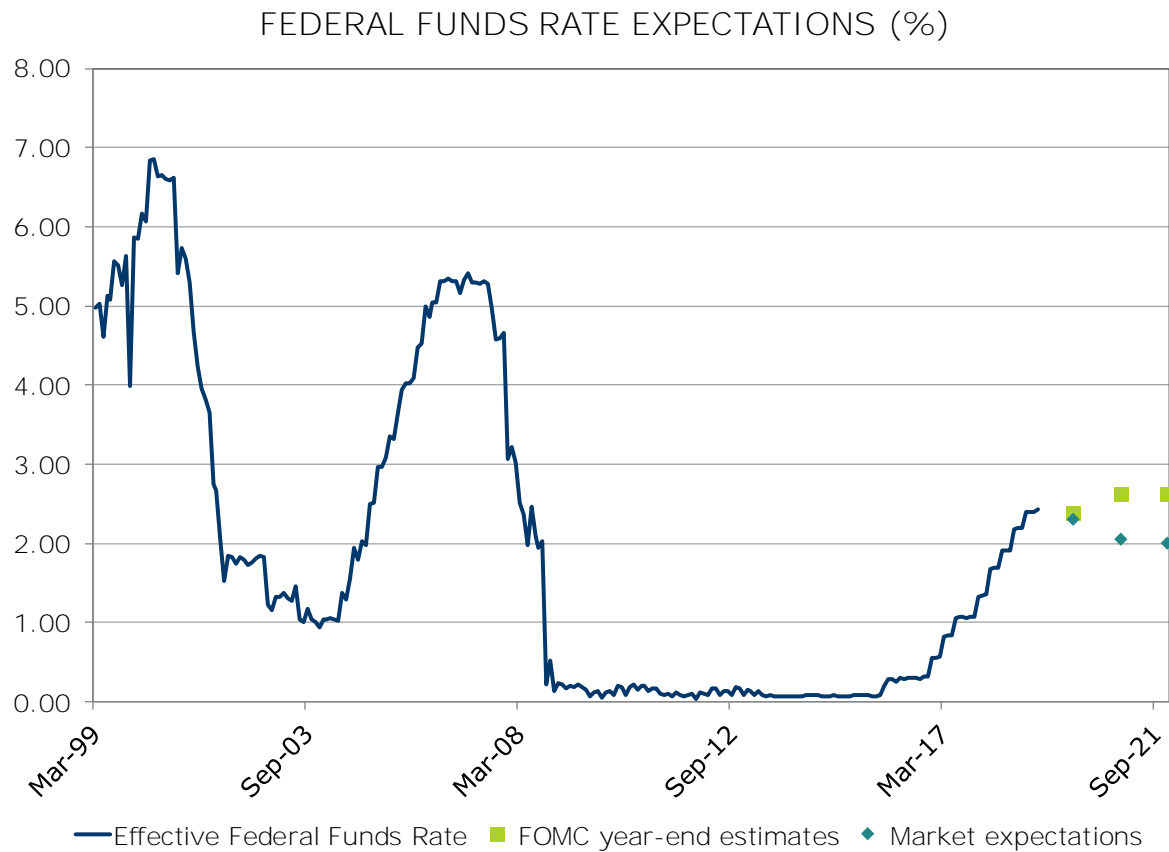
TREASURY YIELD CURVE



Data sources: Wilshire Compass, Bloomberg Barclays, U.S. Treasury

SHORT-TERM RATES

- Federal Reserve changed their forecast for rate increases for 2019 to zero
- Longer term, the market expects the short-term rate to fall during the next couple years

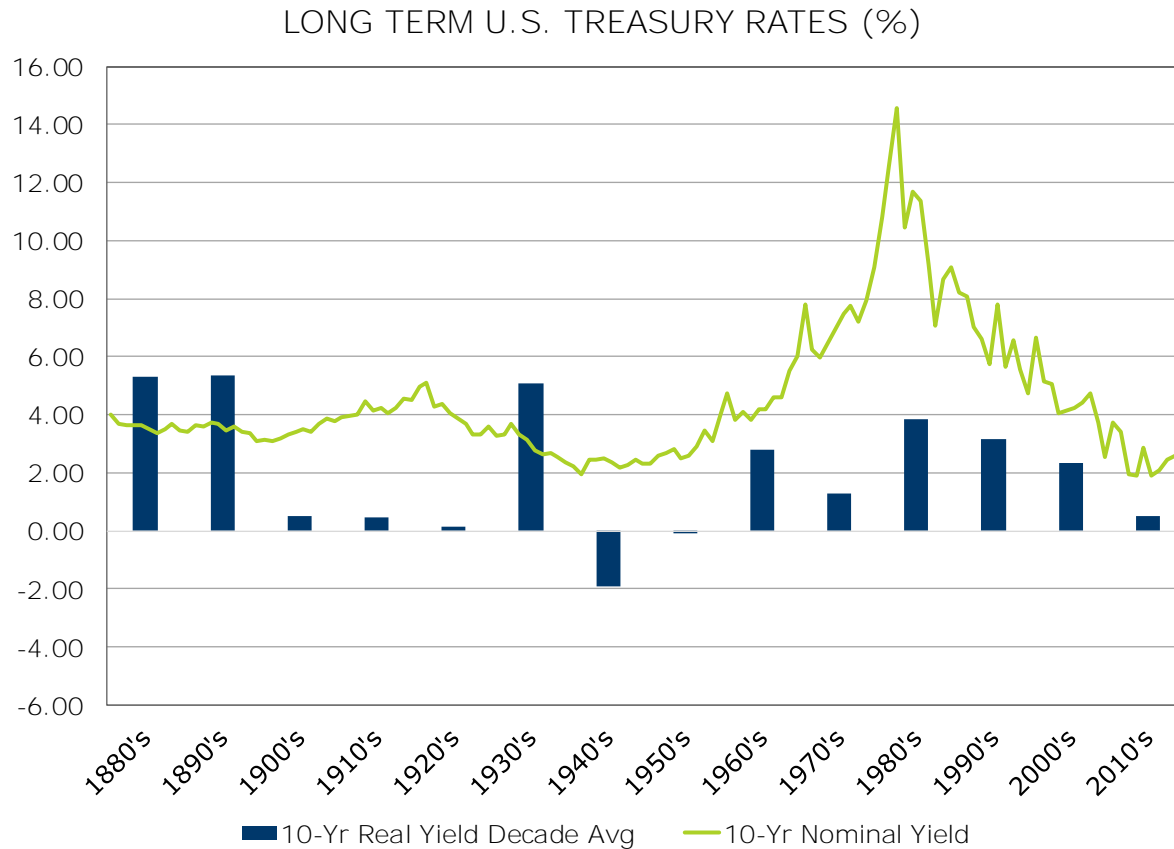


Data sources: U.S. Treasury, J.P. Morgan

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LONG-TERM RATES

- Historically, long-term rates have been in the low to mid-single digits
- Average for the entire period is 4.50% with an average real yield of 2.05%

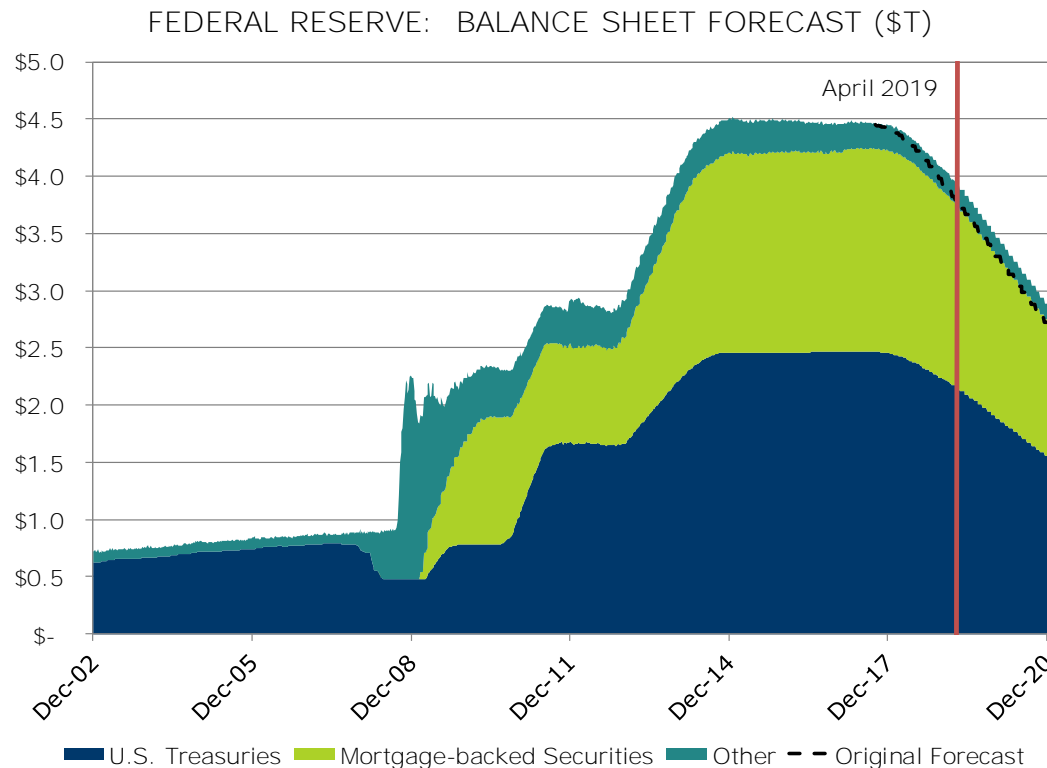


Note: Pre-TIPS Real Yield = 10-year nominal minus 5-year trailing average annual inflation

Data sources: Robert Shiller - Yale, U.S. Treasury

FED BALANCE SHEET

- Federal Reserve began their balance sheet normalization program during October 2017; targeting \$10B in reductions per month while increasing to \$50B per month in Q4 2018
- Fed stated in early January that future reductions will be data dependent; total reductions so far equal \$500 billion

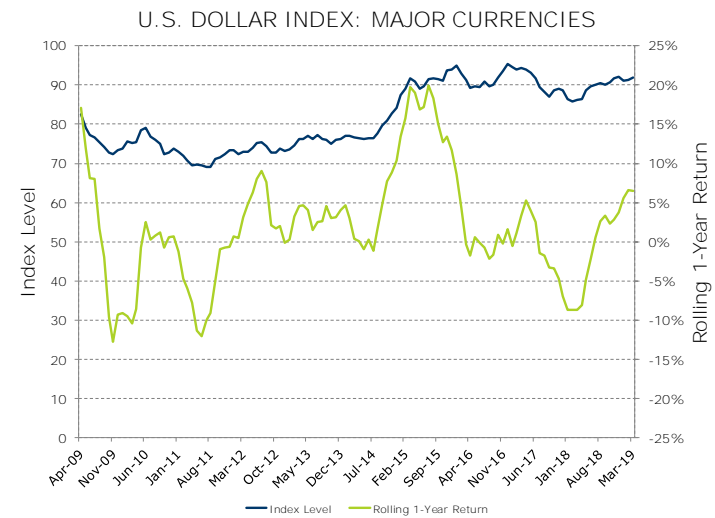
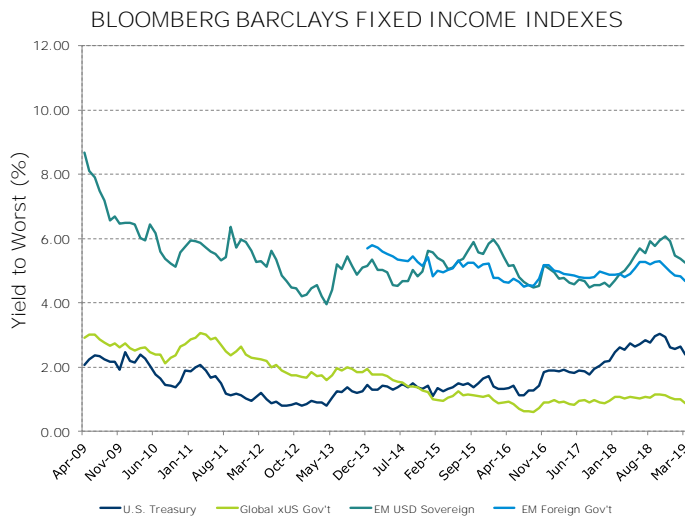


Data sources: Federal Reserve

NON-U.S. FIXED INCOME

AS OF MARCH 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
DEVELOPED MARKETS						
BLMBRG BRCLYS GBL AGGREGATE xUS	1.5	1.5	-4.1	1.0	-0.3	2.5
BLMBRG BRCLYS GBL AGGREGATE xUS *	3.0	3.0	5.2	3.3	4.3	4.3
BLMBRG BRCLYS GLOBAL INF LNKD xUS	4.4	4.4	-4.8	3.0	1.2	4.7
BLMBRG BRCLYS GLOBAL INF LNKD xUS *	4.4	4.4	5.0	6.5	6.6	6.2
EMERGING MARKETS (HARD CURRENCY)						
BLMBRG BRCLYS EM USD AGGREGATE	5.4	5.4	4.4	5.3	4.8	8.5
EMERGING MARKETS (FOREIGN CURRENCY)						
BLMBRG BRCLYS EM LOCAL CURR. GOVT	2.4	2.4	-3.9	3.3	0.7	5.1
BLMBRG BRCLYS EM LOCAL CURR. GOVT *	2.2	2.2	3.9	2.9	3.2	3.5
EURO vs. DOLLAR	-1.8	-1.8	-8.7	-0.5	-4.0	-1.7
YEN vs. DOLLAR	-0.9	-0.9	-3.9	0.5	-1.4	-1.1
POUND vs. DOLLAR	2.3	2.3	-7.1	-3.2	-4.8	-0.9

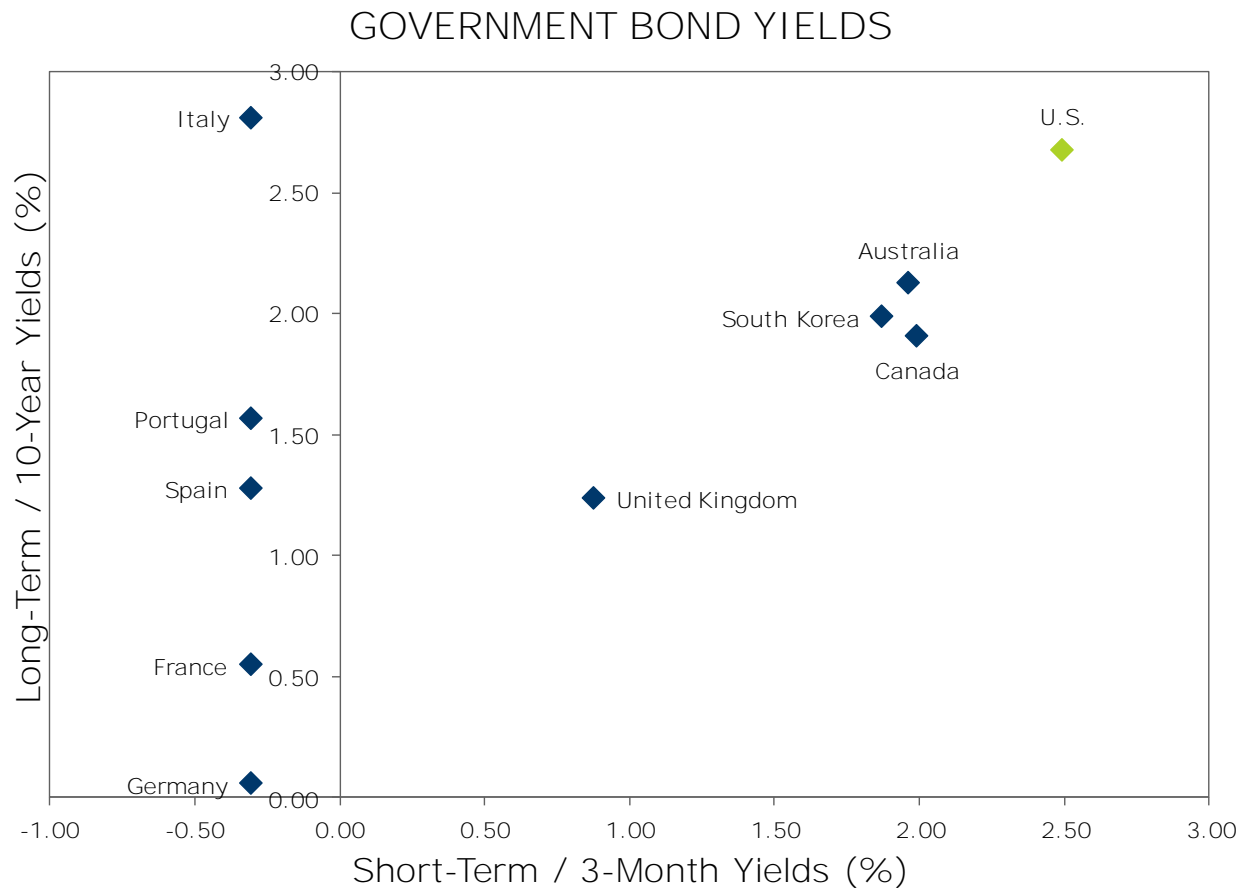
* Returns are reported in terms of local market investors, which removes currency effects.



Data sources: Wilshire Compass, Bloomberg Barclays, Federal Reserve Bank of St. Louis

GLOBAL INTEREST RATES

Negative short-term rates remain in Europe; Long rates are down globally during the past three months

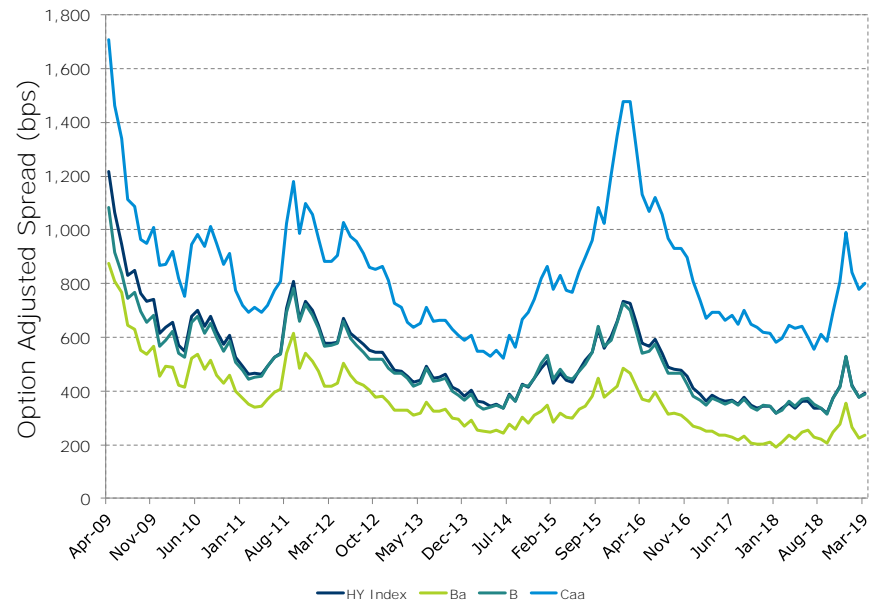


Data sources: Organization for Economic Co-operation and Development

HIGH YIELD BOND MARKET

AS OF MARCH 31, 2019		QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS HIGH YIELD		7.3	7.3	5.9	8.6	4.7	11.3
CREDIT SUISSE LEVERAGED LOAN		3.8	3.8	3.3	5.9	3.8	8.0
HIGH YIELD QUALITY DISTRIBUTION	WEIGHT						
Ba U.S. HIGH YIELD	45.7%	7.2	7.2	6.3	6.8	5.1	10.1
B U.S. HIGH YIELD	40.0%	7.2	7.2	6.4	8.4	4.2	10.0
Caa U.S. HIGH YIELD	13.2%	7.2	7.2	2.7	12.9	4.7	14.1
Ca to D U.S. HIGH YIELD	0.8%	17.5	17.5	13.5	32.2	-8.0	9.3
Non-Rated U.S. HIGH YIELD	0.3%	3.6	3.6	4.6	7.9	-1.0	7.7

BLOOMBERG BARCLAYS HIGH YIELD INDEXES



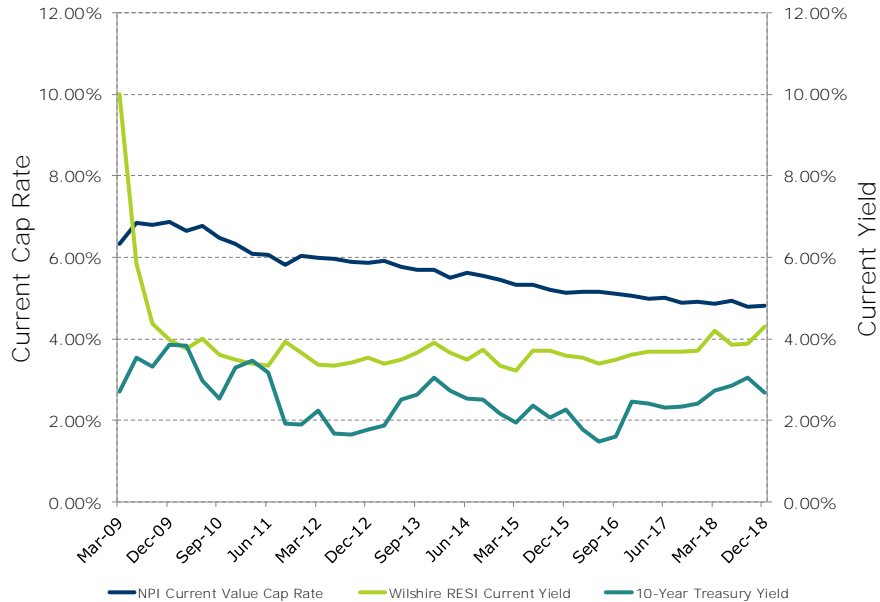
Data sources: Wilshire Compass, Bloomberg Barclays

Wilshire Consulting REAL ASSETS

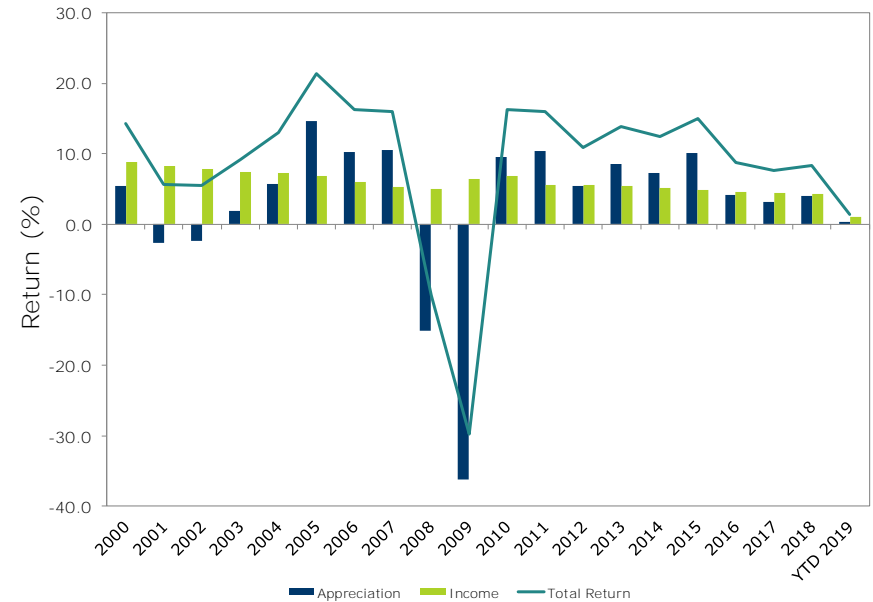


AS OF MARCH 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS U.S. TIPS	3.2	3.2	2.7	1.7	1.9	3.4
BLOOMBERG COMMODITY INDEX	6.3	6.3	-5.3	2.2	-8.9	-2.6
WILSHIRE GLOBAL RESI INDEX	15.0	15.0	14.8	6.3	7.9	16.4
NCREIF ODCE FUND INDEX	1.4	1.4	7.5	8.0	10.2	8.7
NCREIF TIMBERLAND INDEX	0.1	0.1	2.4	3.3	4.6	3.7
ALERIAN MLP INDEX (OIL & GAS)	16.8	16.8	15.1	5.7	-4.7	10.1

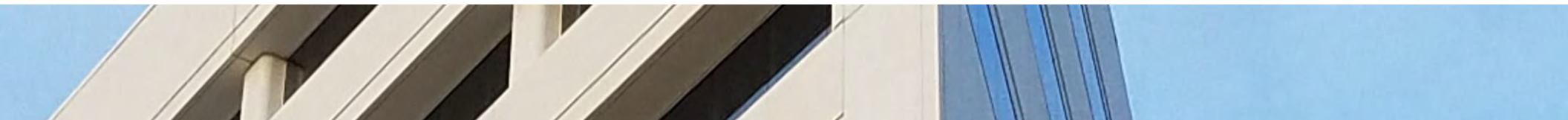
REAL ESTATE VALUATION



NCREIF ODCE FUND INDEX RETURN



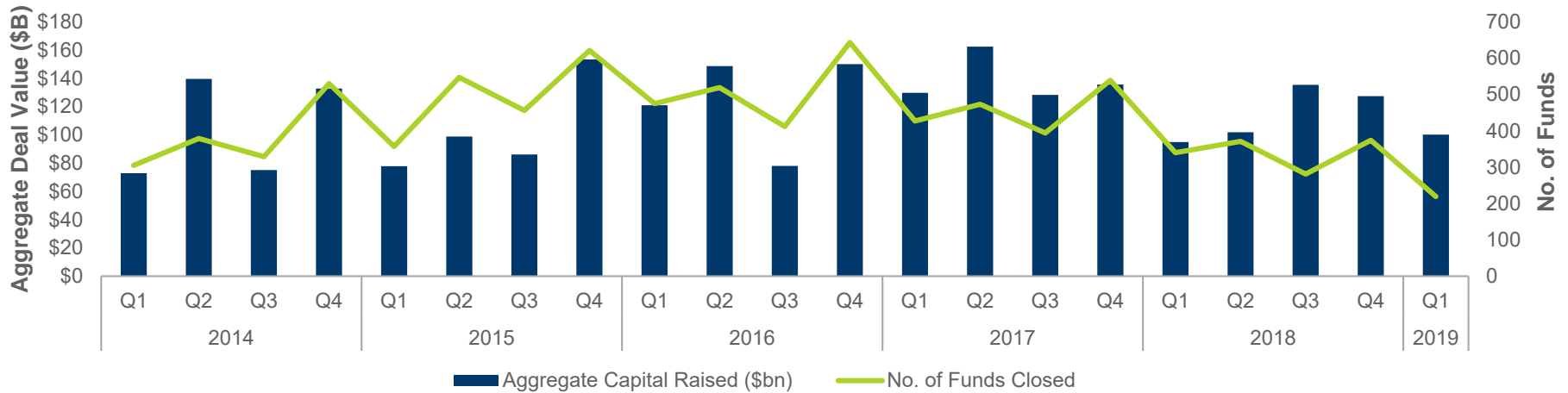
Data sources: Wilshire Compass, National Council of Real Estate Investment Fiduciaries



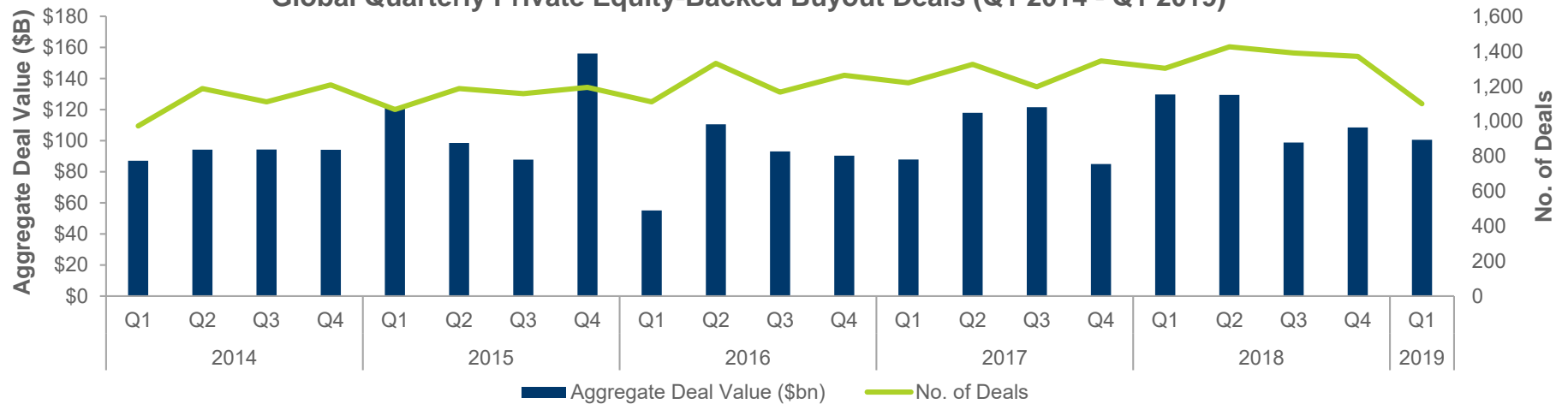
APPENDIX: PRIVATE MARKETS UPDATE

PRIVATE EQUITY – FUNDRAISING & INVESTMENT ACTIVITY

Global Quarterly Private Equity Fundraising (Q1 2014 - Q1 2019)



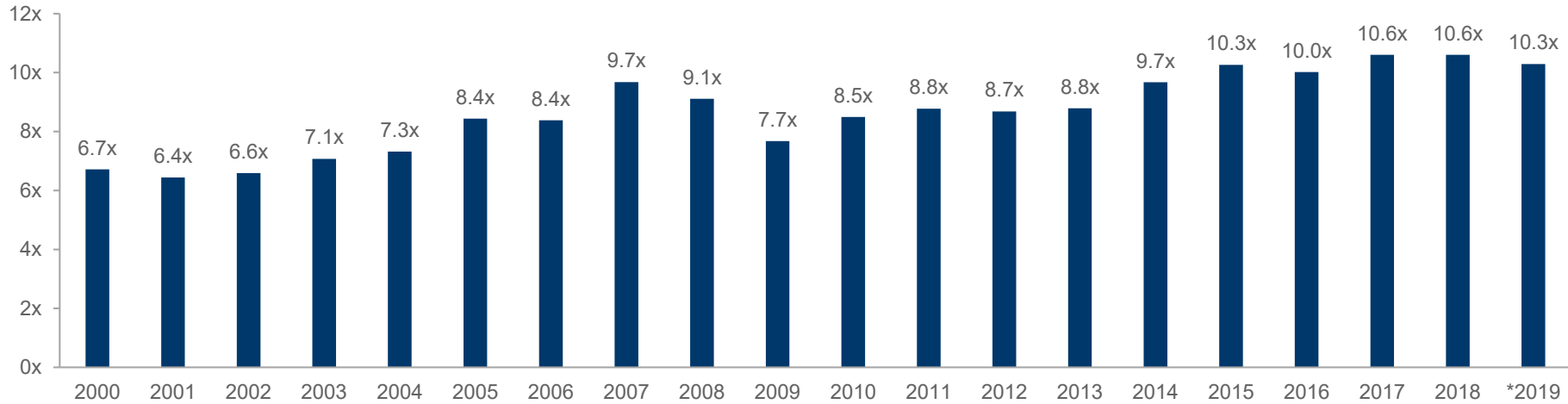
Global Quarterly Private Equity-Backed Buyout Deals (Q1 2014 - Q1 2019)



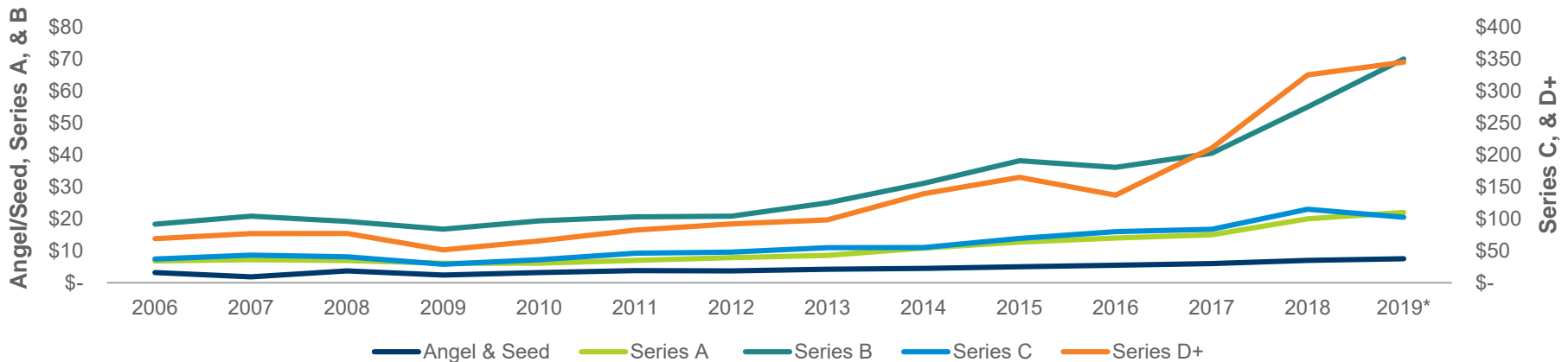
Source: Preqin, as of March 31, 2019.

PRIVATE EQUITY – PRICING & VALUATIONS

LBO Purchase Price Multiples (2000 - Q1 2019)



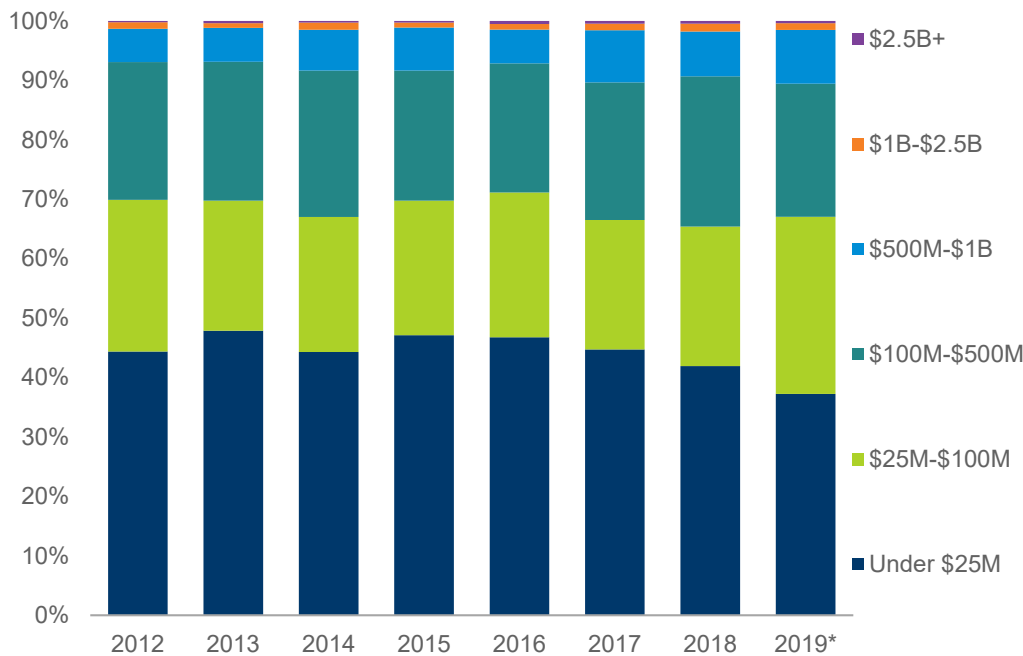
Venture Capital Pre-Money Valuations (\$M) (2006 - Q1 2019)



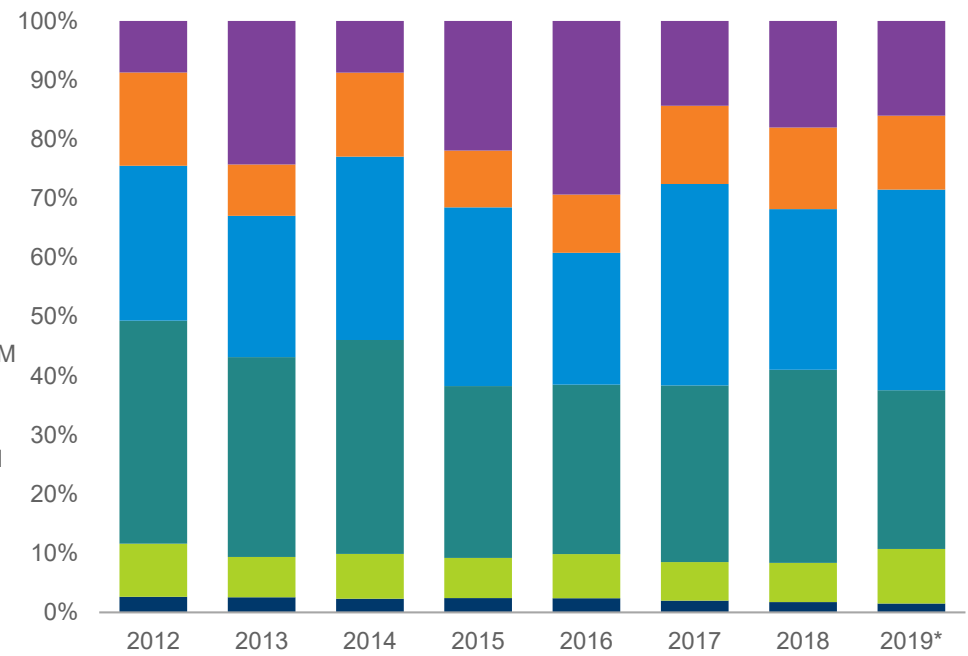
Source: S&P LBO; PitchBook, *as of March 31, 2019.

U.S. INVESTMENT ACTIVITY BY DEAL SIZE

Percentage of Deal Volume by Deal Size (by Count)



Percentage of Deal Volume by Deal Size (by Dollars)

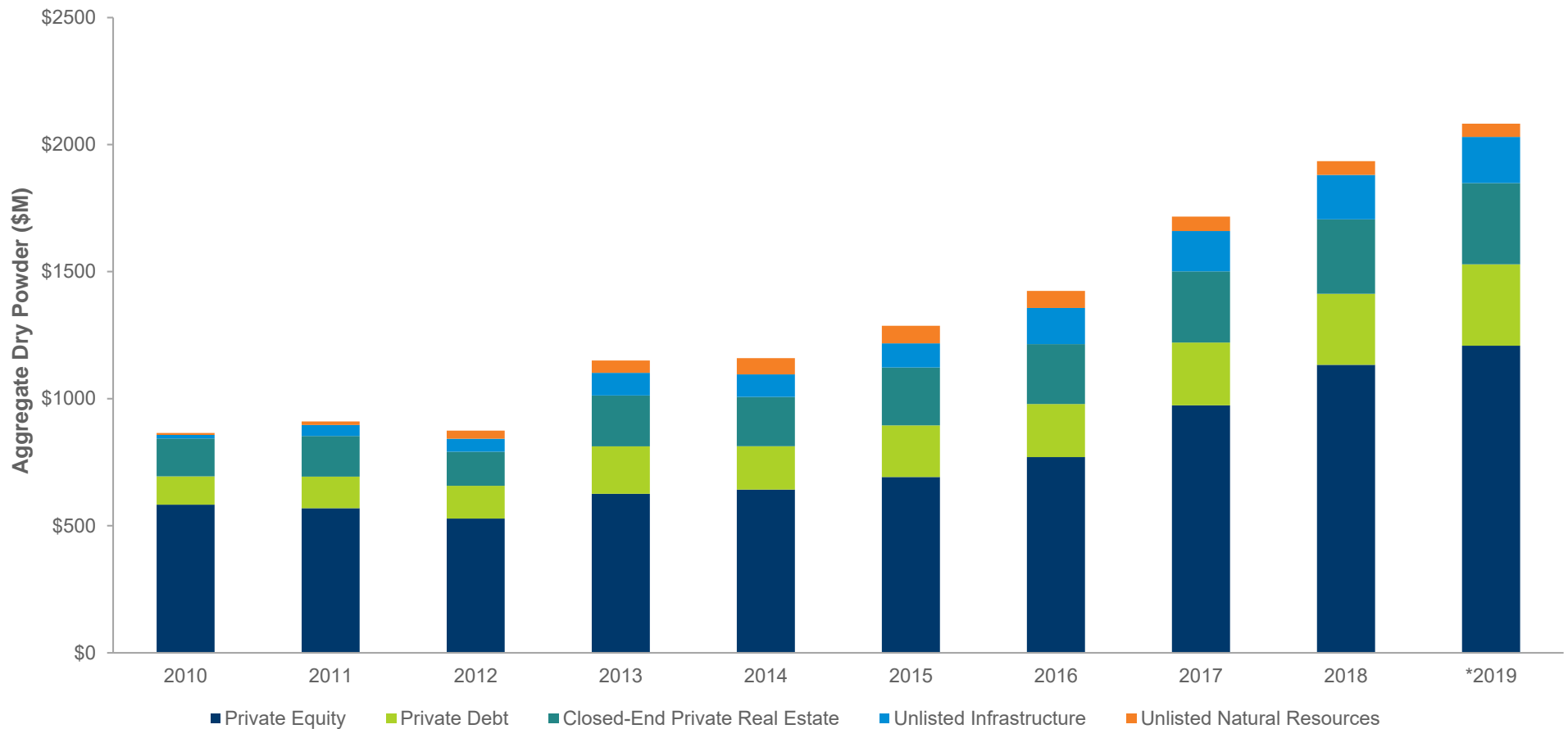


- Deal volume continues to be dominated by lower middle market deals with investment sizes below \$100 million through the first quarter of 2019
- However, deals with below \$100 million check sizes comprised only 11% of all deal volume by amount of capital invested in the first quarter of 2019

Source: PitchBook, *as of March 31, 2019.

PRIVATE CAPITAL DRY POWDER

Private Capital Dry Powder by Fund Type (2010 - Q1 2019)

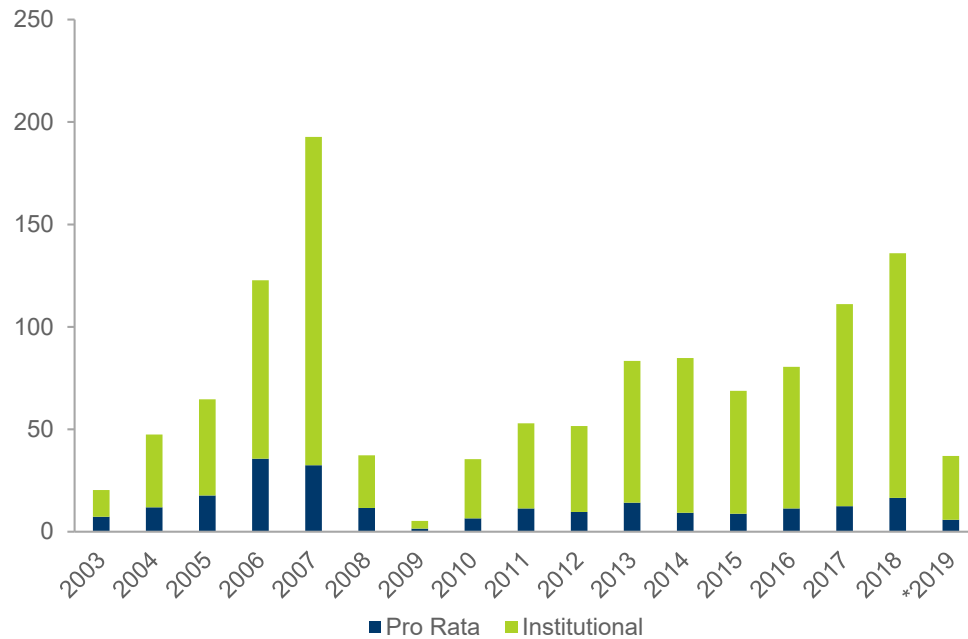


- Global private capital dry powder continues to increase, topping \$2 trillion across all fund types
- Private equity comprises just under 60% of total dry powder in the market as of Q1 2019

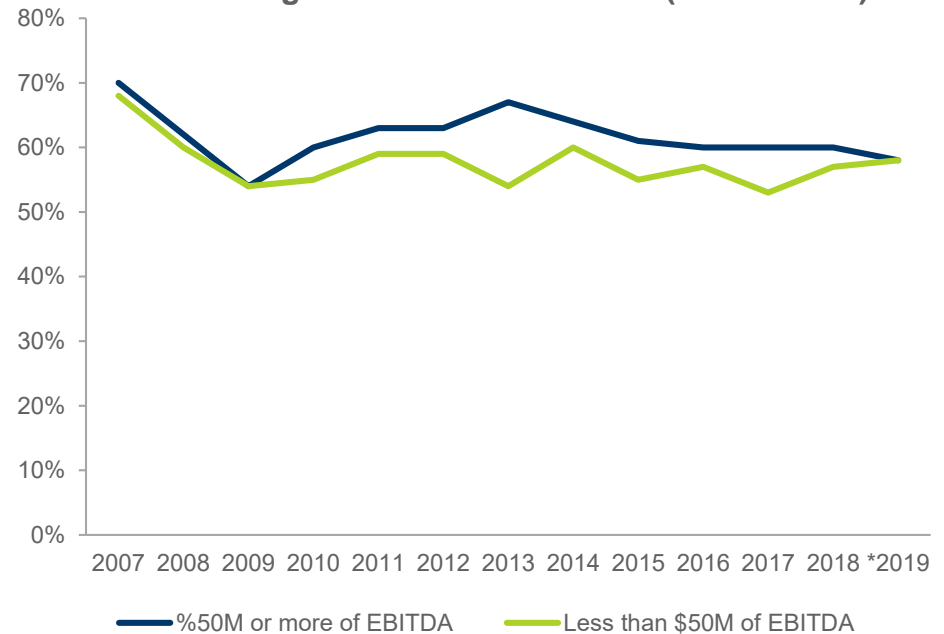
Source: Preqin, as of *May 1, 2019.

PRIVATE EQUITY - U.S. DEBT MARKETS

Total U.S. LBO Loan Volume (\$B) (2003 - Q1 2019)



Percentage of Debt Used in LBOs (2007 - *2019)

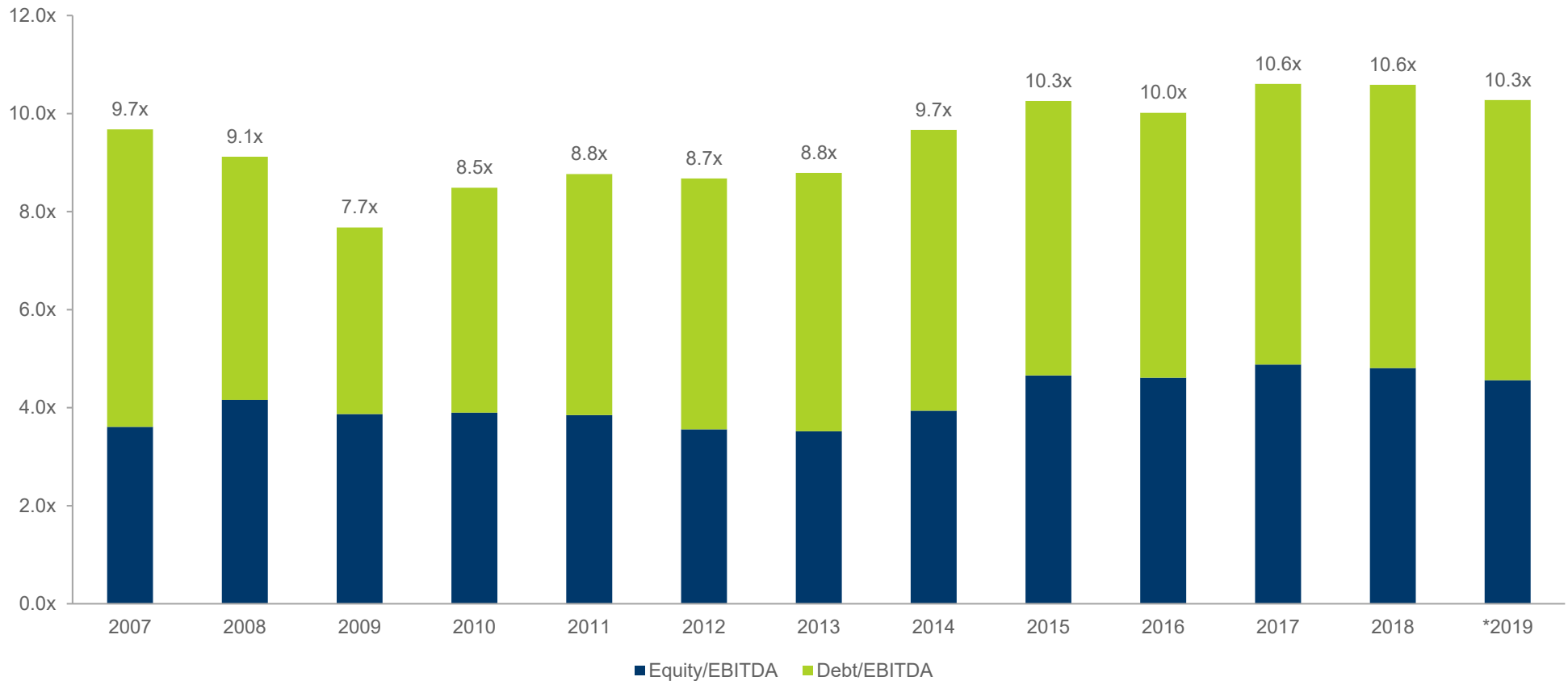


- 2019 began with approximately \$37 billion in loan volume and is on pace to once again increase year-over-year through the first quarter of 2019
- Availability of debt capital has driven up the percentage of debt used to finance leveraged buyouts of less than \$50 million of EBITDA through the first quarter of 2019

Source: S&P LBO, as of *March 31, 2019.

PRIVATE EQUITY - U.S. LBO PURCHASE PRICE MULTIPLES

Purchase Price Multiples of U.S. LBO Transactions (2007 - Q1 2019)



- Due to the amount of debt that is readily available, purchase price multiples for U.S. LBOs have remained fairly consistent through Q1 2019 relative to 2018 levels.

Source: S&P LBO, as of *March 31, 2019.



TOTAL FUND

Proposed Policy Allocation vs Actual Allocation

Total Fund Composite

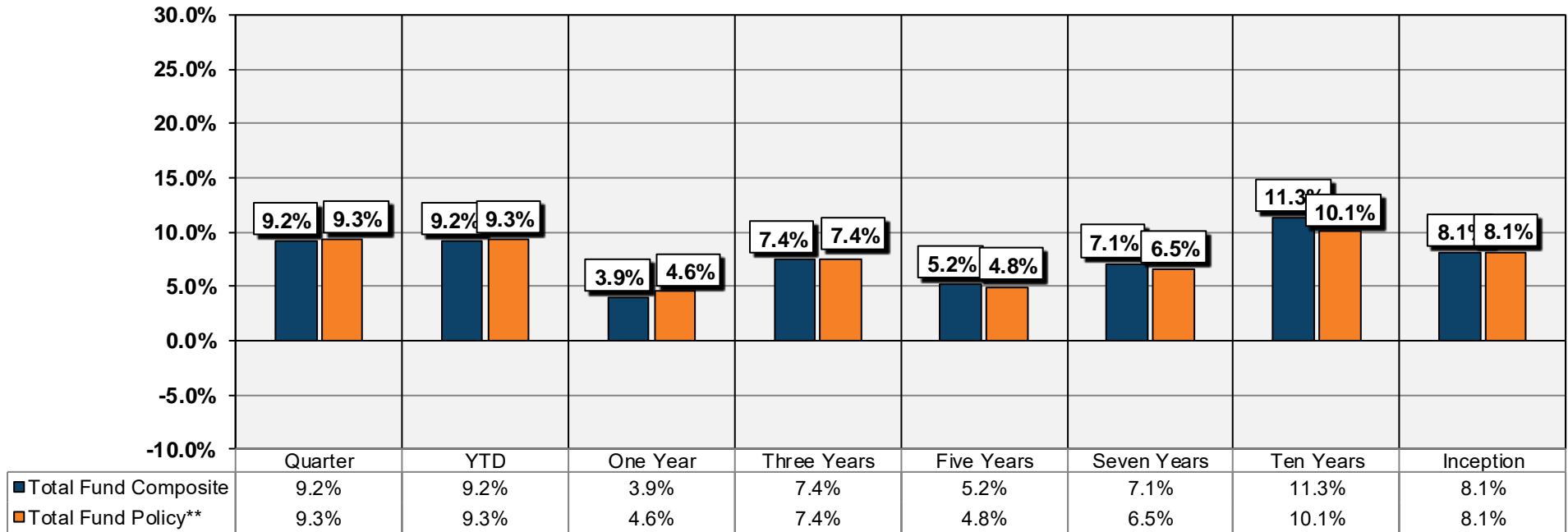
As of March 31, 2019

	Market Value (in '\$'000)	Asset Allocation			
		Actual	Prior Policy	Approved Policy	Variance *
US Equity	\$99,445	23.73%	22.50%	17.75%	5.98%
Non - US Equity	\$93,455	22.30%	22.50%	17.75%	4.55%
Global Low Volatility Equity	\$0	0.00%	0.00%	10.00%	-10.00%
Private Equity	\$20,894	4.99%	5.00%	5.00%	-0.01%
Private Credit	\$9,055	2.16%	0.00%	5.00%	-2.84%
Total Growth Assets	\$222,849	53.18%	50.00%	55.50%	-2.32%
Core Fixed Income	\$104,775	25.00%	25.00%	24.50%	0.50%
Cash	\$2,816	0.67%	0.00%	0.00%	0.67%
Total Diversifying Assets	\$107,591	25.67%	25.00%	24.50%	1.17%
TIPS	\$29,484	7.04%	10.00%	5.00%	2.04%
Commodities	\$16,874	4.03%	5.00%	5.00%	-0.97%
Real Estate	\$21,270	5.08%	5.00%	5.00%	0.08%
MLPs	\$21,002	5.01%	5.00%	5.00%	0.01%
Total Inflation Hedging Assets	\$88,630	21.15%	25.00%	20.00%	1.15%
Total Fund	\$419,070	100.00%	100.00%	100.00%	0.00%

* Variance column represents Actual weight minus Approved Policy Weight

Investment Performance Total Fund Composite*

As of March 31, 2019



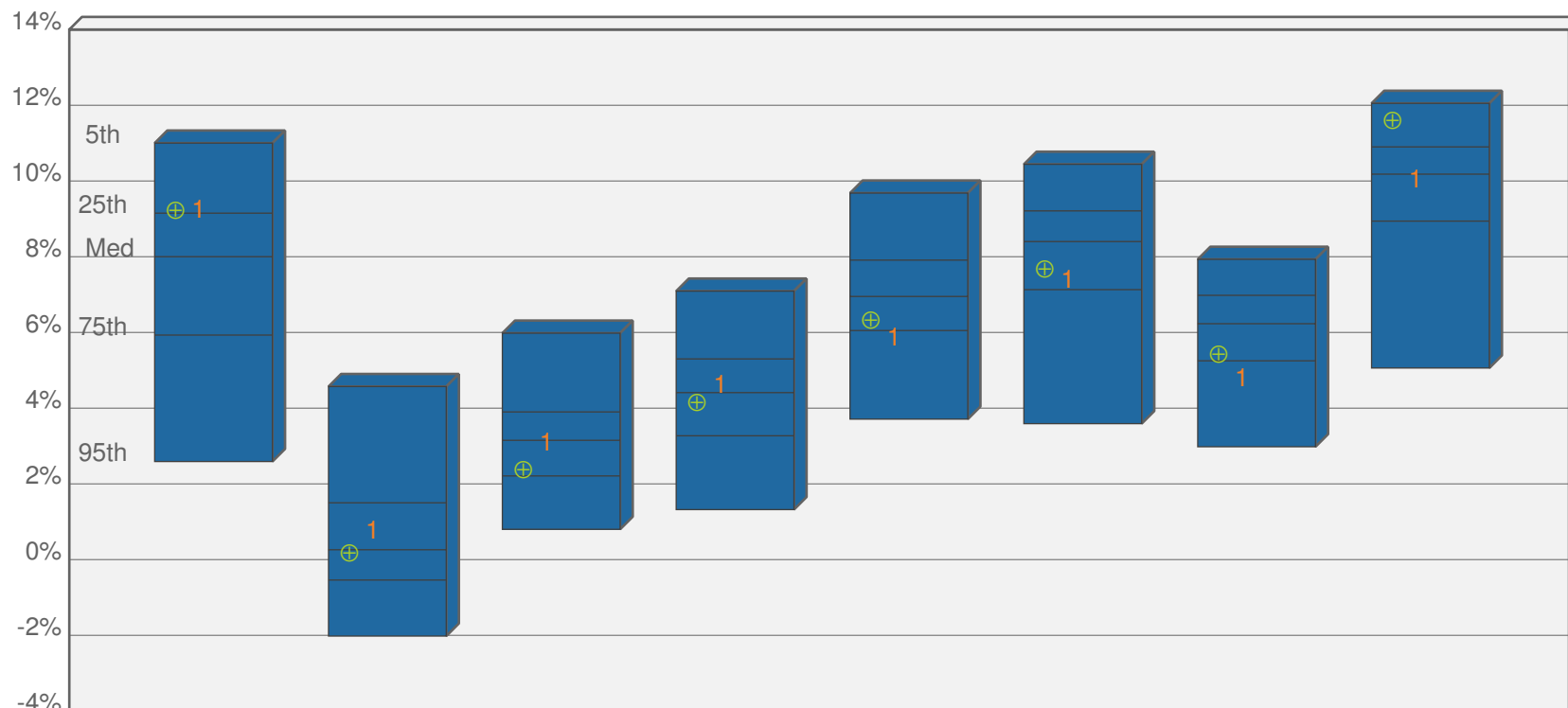
*Returns are net of fees.

**Policy index = Wilshire 5000 (22.50%), MSCI ACWI ex U.S. (22.50%), Bloomberg Barclays Aggregate (25.00%), Bloomberg Barclays TIPS (10.00%), FTSE EPRA NAREIT Dev RE (5.00%), Wilshire 5000 +2.5% (5.00%), Bloomberg Commodity Index (5.00%), S&P MLP Index (5.00%)

PERFORMANCE COMPARISON

Total Fund Composite

Periods Ended March 31, 2019



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊕ Total Fund	9.23 (22)	0.20 (55)	2.38 (70)	4.16 (54)	6.33 (70)	7.68 (69)	5.43 (73)	11.62 (8)
1 Policy Index	9.27 (22)	0.78 (40)	3.12 (51)	4.63 (46)	5.89 (76)	7.42 (72)	4.82 (81)	10.06 (54)
5th %tile	11.00	4.57	5.98	7.09	9.68	10.44	7.93	12.05
25th %tile	9.15	1.50	3.90	5.30	7.91	9.21	6.98	10.90
Median	8.00	0.26	3.15	4.41	6.95	8.40	6.23	10.18
75th %tile	5.93	-0.54	2.21	3.27	6.05	7.13	5.25	8.94
95th %tile	2.59	-2.02	0.80	1.32	3.71	3.59	2.98	5.06
Number of Funds	218	216	214	214	209	208	199	179

*Wilcop Total Returns of Total Fund Portfolios Universe - Gross of Fees

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
U.S. Equity Composite									
Net of Fee Return	14.70	14.70	8.68	14.16	10.56	12.94	17.13	9/30/87	9.58
Wilshire 5000	14.11	14.11	8.93	13.59	10.52	12.66	16.00	9/30/87	9.56
Value Added	0.59	0.59	-0.25	0.57	0.04	0.27	1.13	9/30/87	0.02
Non-U.S. Equity Composite									
Net of Fee Return	11.65	11.65	-4.72	6.91	3.49	6.04	10.17	12/31/89	7.86
Policy Benchmark	10.31	10.31	-4.22	8.09	2.57	4.72	8.85	12/31/89	4.44
Value Added	1.33	1.33	-0.50	-1.18	0.92	1.32	1.32	12/31/89	3.42
Private Equity Composite									
Net of Fee Return	2.37	2.37	17.11	14.44	13.25	10.34		6/30/10	9.37
Wilshire 5000 +2.5%	14.73	14.73	11.43	16.09	13.02	15.16		6/30/10	16.98
Value Added	-12.36	-12.36	5.68	-1.65	0.23	-4.82		6/30/10	-7.60
Private Credit Composite									
Net of Fee Return	0.85	0.85						9/30/18	0.33
S&P LSTA Leverage Loan Index	4.00	4.00						9/30/18	0.41
Value Added	-3.15	-3.15						9/30/18	-0.08
Core Fixed Composite									
Net of Fee Return	3.57	3.57	4.43	3.36	3.61	3.65	6.65	9/30/87	6.75
Bloomberg Aggregate	2.94	2.94	4.48	2.03	2.74	2.48	3.77	9/30/87	6.34
Value Added	0.63	0.63	-0.05	1.33	0.86	1.17	2.88	9/30/87	0.41
Real Estate Composite									
Net of Fee Return	15.16	15.16	10.61	3.96	5.06	6.28		6/30/09	9.62
FTSE EPRA/NAREIT Dev (N)	14.59	14.59	13.27	5.68	6.42	7.55		6/30/09	10.87
Value Added	0.57	0.57	-2.66	-1.72	-1.36	-1.28		6/30/09	-1.25

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
Commodities Composite									
Net of Fee Return	7.54	7.54	-5.11	4.58	-6.36			3/31/13	-6.53
Bloomberg Commodity Index	6.32	6.32	-5.25	2.22	-8.92			3/31/13	-7.81
Value Added	1.21	1.21	0.14	2.36	2.55			3/31/13	1.29
MLP Composite									
Net of Fee Return	20.69	20.69	15.08	7.60				3/31/15	-4.70
Alerian MLP Index	16.82	16.82	16.51	8.53				3/31/15	-5.34
Value Added	3.87	3.87	-1.42	-0.94				3/31/15	0.64
TIPS Composite									
Net of Fee Return	3.19	3.19	2.33	1.55				6/30/15	1.95
Barclays U.S. TIPS	3.19	3.19	2.70	1.70				6/30/15	2.05
Value Added	0.00	0.00	-0.37	-0.15				6/30/15	-0.10
Total Real Assets Composite									
Net of Fee Return	10.46	10.46	5.28	3.84				3/31/15	0.03
Policy Index	9.21	9.21	6.47	4.37				3/31/15	0.18
Value Added	1.25	1.25	-1.20	-0.53				3/31/15	-0.15
Total Fund									
Net of Fee Return	9.15	9.15	3.90	7.42	5.17	7.10	11.32	9/30/87	8.09
Policy Index	9.27	9.27	4.63	7.42	4.82	6.53	10.06	9/30/87	8.12
Value Added	-0.12	-0.12	-0.73	0.00	0.36	0.57	1.26	9/30/87	-0.02

CUSTOM BENCHMARK SPECIFICATION

Total Fund

March 31, 2019

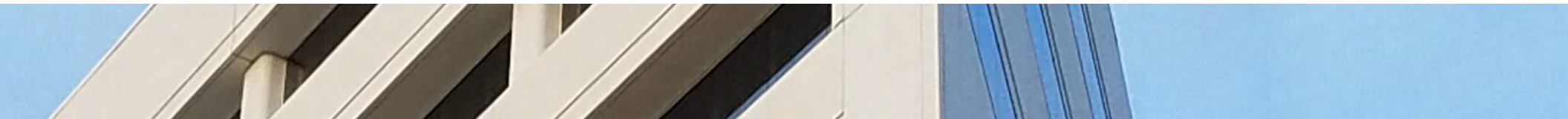
	Quarter Start	Quarter End	Percent	Description
Policy Index	12/79	6/98	55.00	Wilshire 5000
			40.00	Bloomberg Aggregate
			5.00	MSCI EAFE Index (N)
	9/98	9/02	50.00	Wilshire 5000
			40.00	Bloomberg Aggregate
			10.00	MSCI EAFE Index (N)
	12/02	3/06	50.00	Wilshire 5000
			35.00	Bloomberg Aggregate
			15.00	MSCI EAFE Index (N)
	6/06	6/06	55.00	Wilshire 5000
30.00			Bloomberg Aggregate	
15.00			MSCI EAFE Index (N)	
9/06	6/09	55.00	Wilshire 5000	
		30.00	Bloomberg Aggregate	
		15.00	MSCI ACWI ex US (N)	
9/09	3/10	5.00	FTSE EPRA/NAREIT Dev (N)	
		15.00	MSCI ACWI ex US (N)	
		30.00	Bloomberg Aggregate	
		50.00	Wilshire 5000	
6/10	12/12	5.00	FTSE EPRA/NAREIT Dev (N)	
		5.00	Wilshire 5000 + 2.5%	
		30.00	Bloomberg Aggregate	
		15.00	MSCI ACWI ex US (N)	
		45.00	Wilshire 5000	
3/13	3/15	5.00	FTSE EPRA/NAREIT Dev (N)	
		40.00	Wilshire 5000	
		15.00	MSCI ACWI ex US (N)	
		30.00	Bloomberg Aggregate	
		5.00	Wilshire 5000 + 2.5%	

CUSTOM BENCHMARK SPECIFICATION

Total Fund

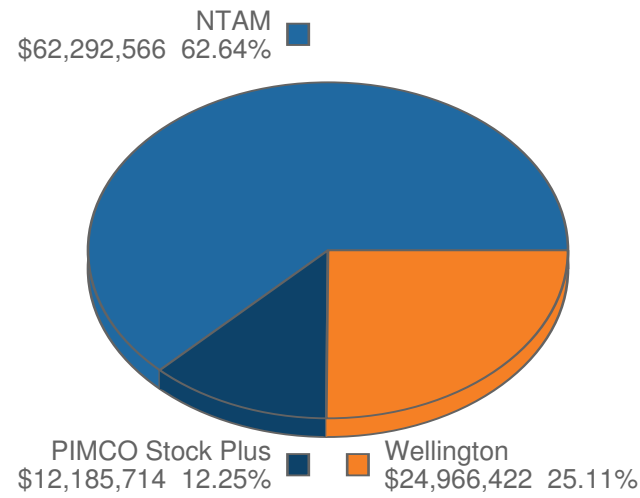
March 31, 2019

	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)			5.00	Bloomberg Commodity Index
	6/15	3/19	22.50	Wilshire 5000
			5.00	Wilshire 5000 + 2.5%
			22.50	MSCI ACWI ex US (N)
			25.00	Bloomberg Aggregate
			5.00	FTSE EPRA/NAREIT Dev (N)
			5.00	Bloomberg Commodity Index
			10.00	Bloomberg U.S. TIPS
		5.00	S&P MLP Index	



U.S. EQUITY

Wilshire Consulting
MANAGER ALLOCATION
U.S. Equity Composite
As of March 31, 2019

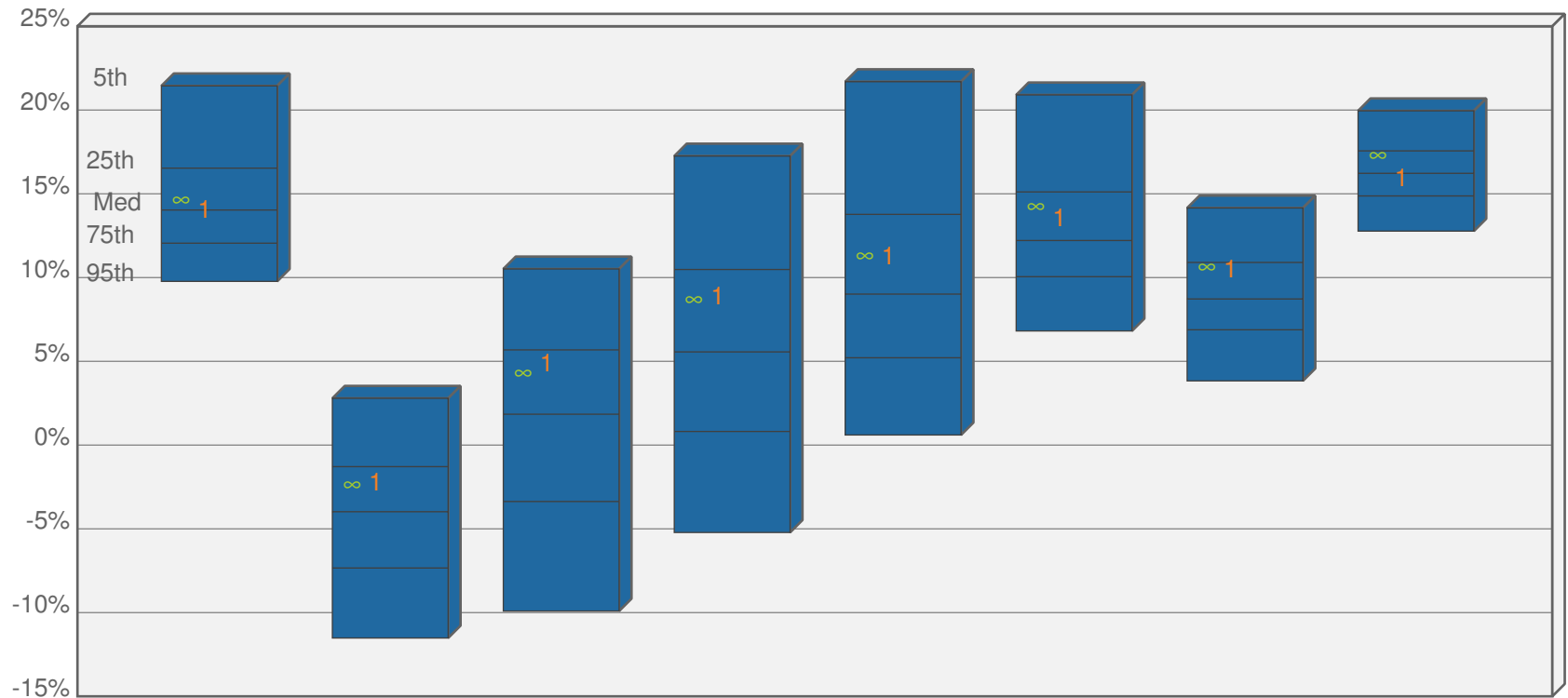


Wilshire Consulting

PERFORMANCE COMPARISON

U.S. Equity Composite

Periods Ended March 31, 2019



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
∞ U.S. Equity Composite	14.75 (41)	-2.24 (33)	4.43 (33)	8.83 (33)	11.44 (34)	14.35 (30)	10.76 (26)	17.40 (27)
1 Wilshire 5000	14.11 (49)	-2.20 (32)	4.91 (30)	8.93 (33)	11.28 (36)	13.59 (36)	10.52 (28)	16.00 (54)
5th %tile	21.44	2.79	10.51	17.25	21.69	20.90	14.15	19.95
25th %tile	16.53	-1.29	5.68	10.48	13.77	15.11	10.90	17.56
Median	14.03	-3.98	1.84	5.56	9.01	12.21	8.72	16.22
75th %tile	12.05	-7.34	-3.37	0.81	5.21	10.05	6.88	14.87
95th %tile	9.77	-11.52	-9.91	-5.22	0.60	6.81	3.83	12.77
Number of Funds	1531	1524	1506	1505	1495	1477	1427	1247

*Compass Total Returns of Equity Portfolios Universe - Gross of Fees

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

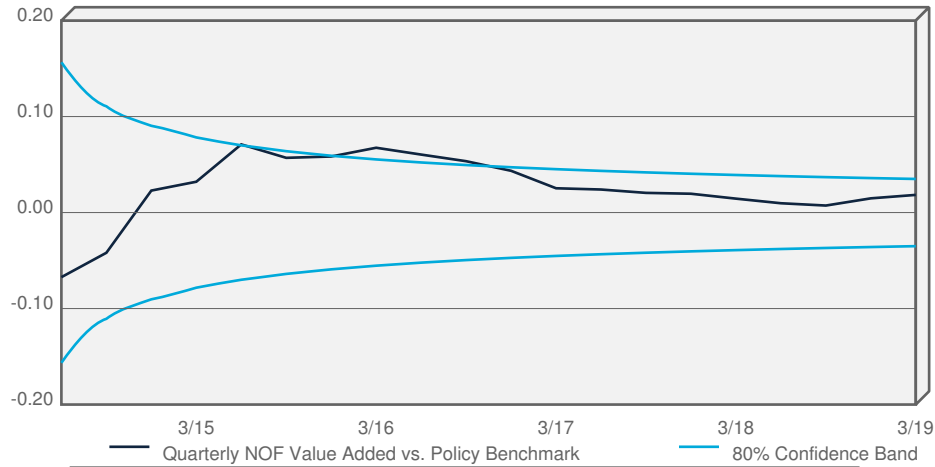
	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
NTAM									
Net of Fee Return	13.67	13.67	9.54	13.49	10.93	12.87	15.98	9/30/98	7.37
Policy Benchmark	13.65	13.65	9.50	13.51	10.91	12.85	15.92	9/30/98	7.37
Value Added	0.02	0.02	0.04	-0.02	0.02	0.02	0.06	9/30/98	0.01
PIMCO Stock Plus									
Net of Fee Return	14.37	14.37	9.42	14.02	10.69	13.49	17.88	9/30/00	6.34
Standard & Poor's 500	13.65	13.65	9.50	13.51	10.91	12.85	15.92	9/30/00	5.81
Value Added	0.72	0.72	-0.08	0.51	-0.22	0.64	1.96	9/30/00	0.53
Wellington									
Net of Fee Return	17.56	17.56	6.44	16.04	9.52	13.50	20.13	9/30/99	11.38
Russell 2000	14.58	14.58	2.05	12.92	7.05	10.74	15.36	9/30/99	8.22
Value Added	2.97	2.97	4.39	3.12	2.47	2.76	4.77	9/30/99	3.16
U.S. Equity Composite									
Net of Fee Return	14.70	14.70	8.68	14.16	10.56	12.94	17.13	9/30/87	9.58
Wilshire 5000	14.11	14.11	8.93	13.59	10.52	12.66	16.00	9/30/87	9.56
Value Added	0.59	0.59	-0.25	0.57	0.04	0.27	1.13	9/30/87	0.02

INVESTMENT MANAGER ANALYSIS

NTAM

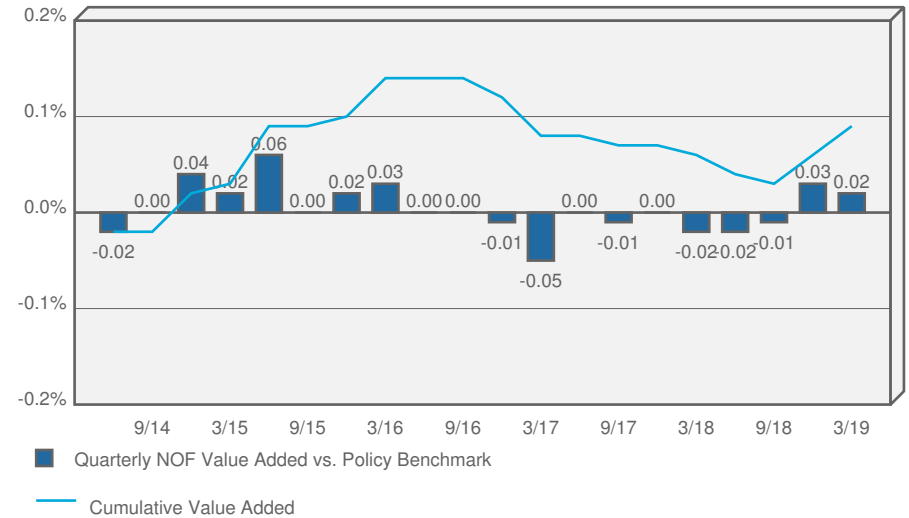
March 31, 2019

Cumulative Skill Analysis vs Benchmark

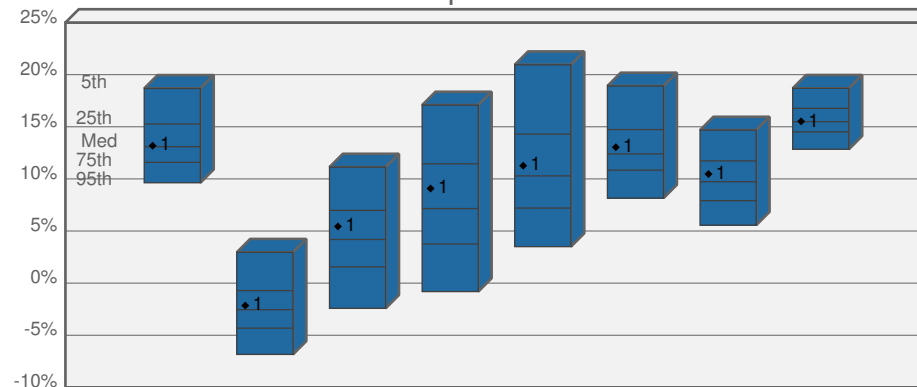


Excess Return:	0.02	Information Ratio:	0.39
Excess Risk:	0.05	T-Stat:	0.86

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
◆ NTAM	13.69 (41)	-1.64 (36)	5.95 (33)	9.59 (35)	11.78 (38)	13.55 (37)	10.98 (32)	16.03 (38)
▮ Policy Benchma	13.65 (41)	-1.72 (37)	5.86 (33)	9.50 (35)	11.72 (39)	13.51 (37)	10.91 (33)	15.92 (39)
Median	13.09	-2.55	4.19	7.15	10.29	12.40	9.73	15.49
Number of Funds	543	541	530	530	527	522	511	453

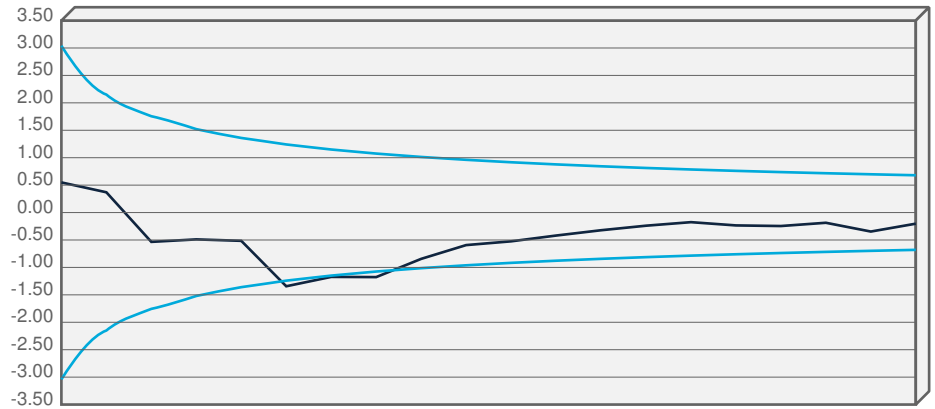
*Compass Total Returns of Active Large Cap Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

PIMCO Stock Plus

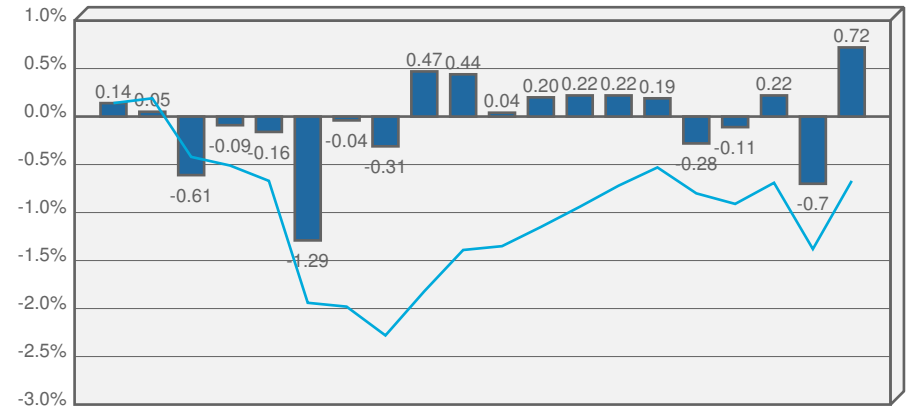
March 31, 2019

Cumulative Skill Analysis vs Benchmark



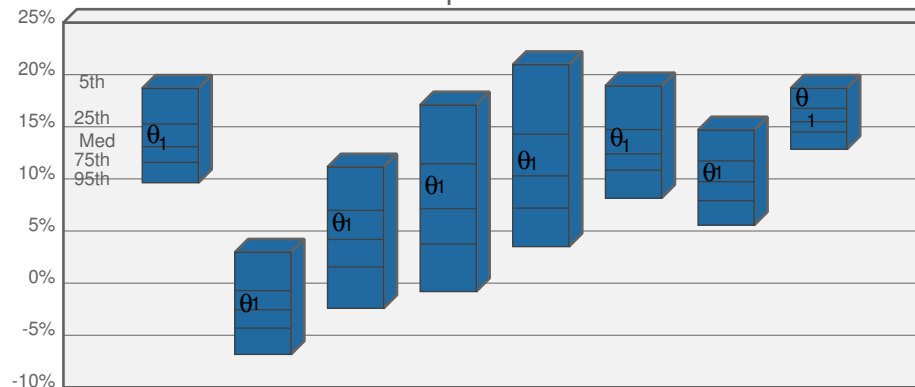
Quarterly NOF Value Added vs. Standard & Poor's 500		80% Confidence Band
Excess Return:	-0.20	Information Ratio: -0.22
Excess Risk:	0.92	T-Stat: -0.49

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Standard & Poor's 500	Cumulative Value Added
---	------------------------

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
θ_1 PIMCO Stock PI	14.37 (35)	-1.89 (39)	5.89 (33)	9.42 (36)	11.86 (38)	14.02 (31)	10.69 (35)	17.88 (10)
$\mathbf{1}$ Standard & Poo	13.65 (41)	-1.72 (37)	5.86 (33)	9.50 (35)	11.72 (39)	13.51 (37)	10.91 (33)	15.92 (39)
Median	13.09	-2.55	4.19	7.15	10.29	12.40	9.73	15.49
Number of Funds	543	541	530	530	527	522	511	453

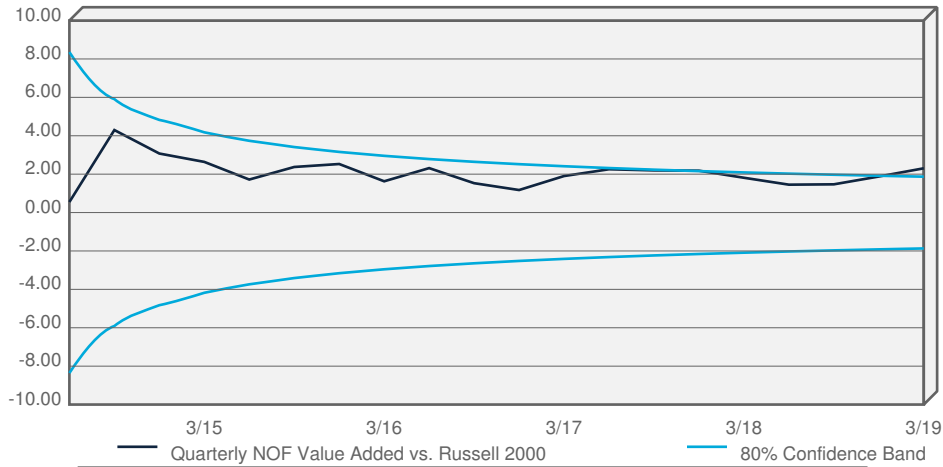
*Compass Total Returns of Active Large Cap Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Wellington

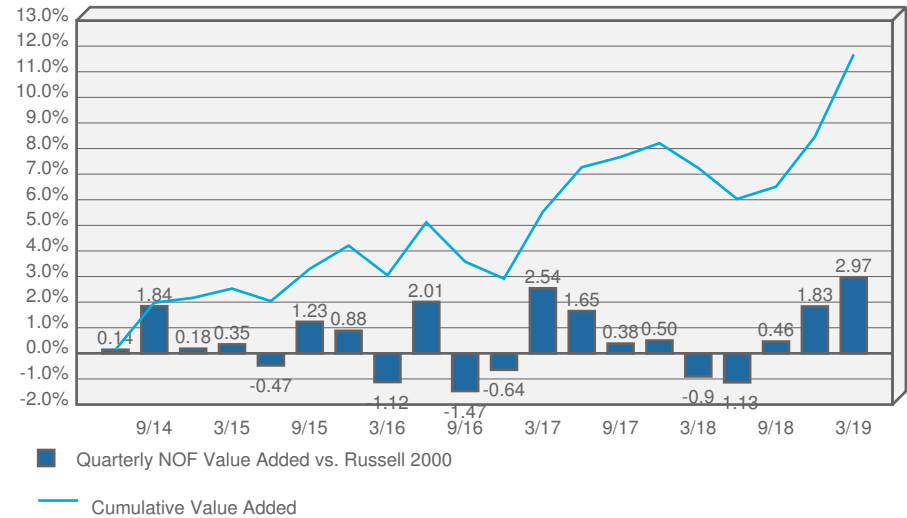
March 31, 2019

Cumulative Skill Analysis vs Benchmark

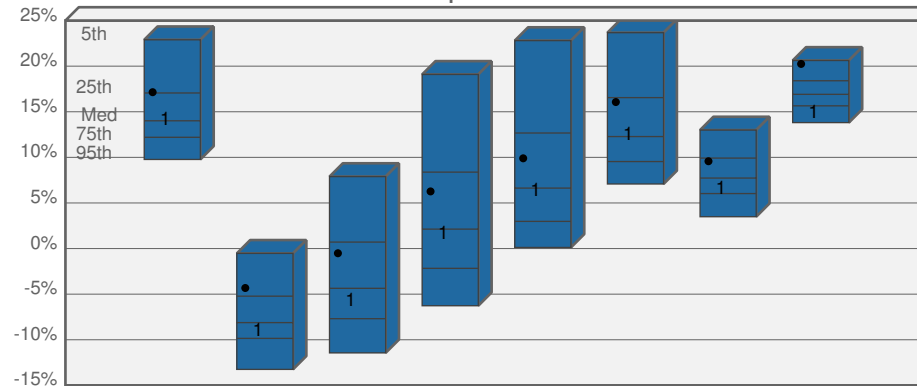


Excess Return:	2.31	Information Ratio:	0.91
Excess Risk:	2.54	T-Stat:	2.03

Value-Added Analysis vs Benchmark

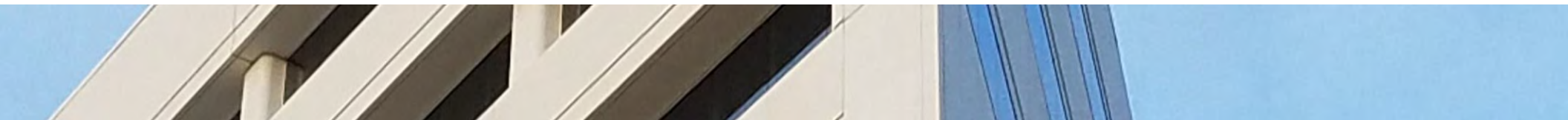


Performance Comparison vs Peer Universe*



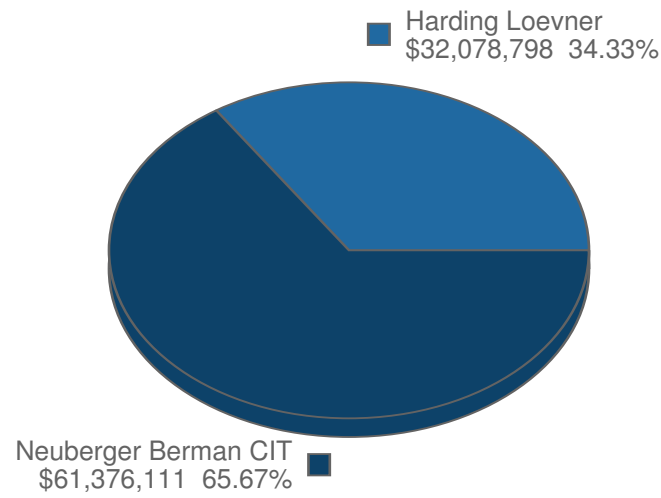
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
● Wellington	17.73 (21)	-3.74 (15)	0.07 (27)	6.85 (30)	10.48 (32)	16.65 (24)	10.16 (23)	20.83 (4)
1 Russell 2000	14.58 (44)	-8.56 (56)	-5.29 (57)	2.05 (50)	6.81 (48)	12.92 (43)	7.05 (60)	15.36 (78)
Median	14.01	-8.12	-4.36	2.13	6.63	12.28	7.73	16.91
Number of Funds	426	425	419	418	416	415	405	364

*Compass Total Returns of Active Small Cap Equity Portfolios Universe - Gross of Fees



NON-U.S. EQUITY

Wilshire Consulting
MANAGER ALLOCATION
Non-U.S. Equity Composite
As of March 31, 2019

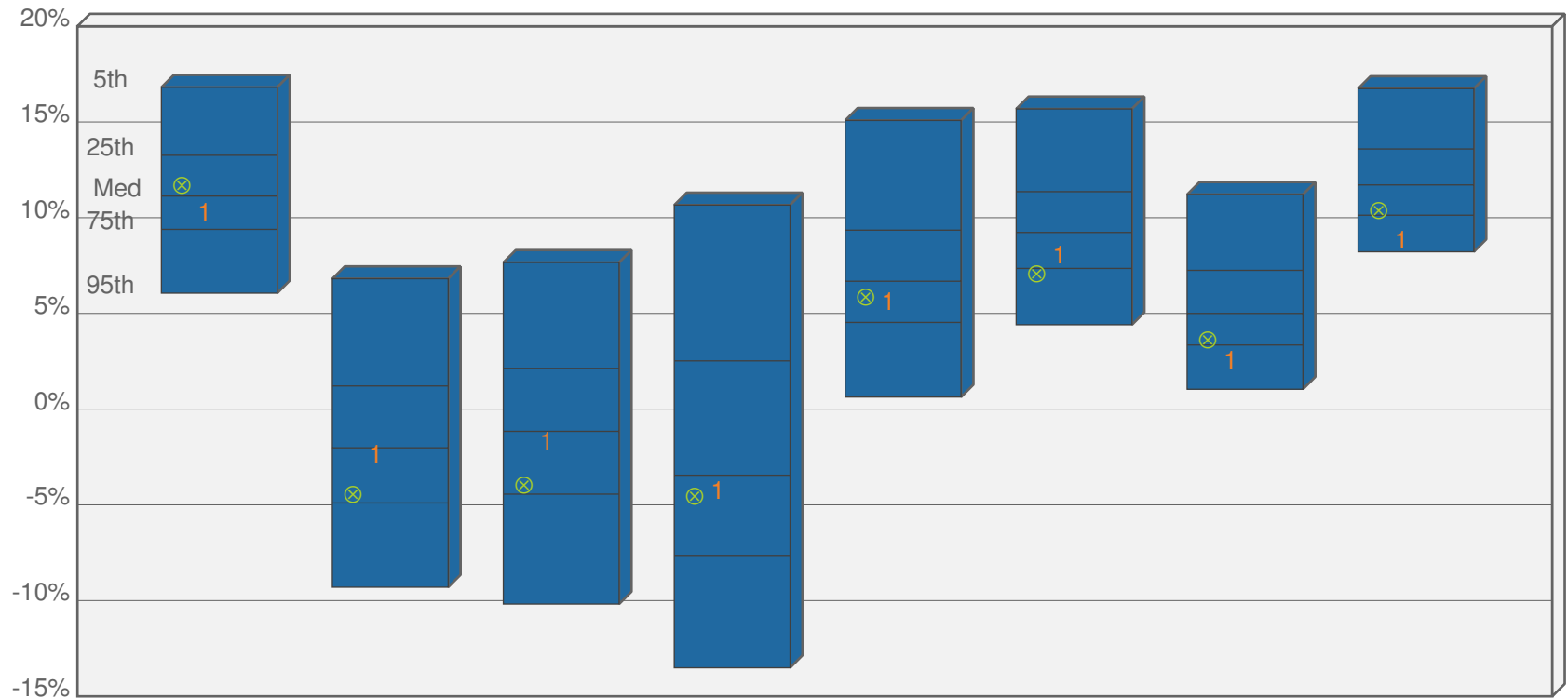


Wilshire Consulting

PERFORMANCE COMPARISON

Non-U.S. Equity Composite

Periods Ended March 31, 2019



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ Non-U.S. Equity Composite	11.69 (42)	-4.43 (71)	-3.92 (71)	-4.54 (56)	5.89 (58)	7.10 (77)	3.62 (70)	10.39 (70)
1 Policy Benchmark	10.31 (62)	-2.33 (52)	-1.64 (54)	-4.22 (55)	5.65 (60)	8.09 (65)	2.57 (84)	8.85 (90)
5th %tile	16.81	6.81	7.66	10.66	15.08	15.68	11.21	16.74
25th %tile	13.26	1.21	2.13	2.52	9.35	11.36	7.25	13.59
Median	11.13	-2.02	-1.16	-3.45	6.68	9.23	5.00	11.71
75th %tile	9.39	-4.90	-4.44	-7.64	4.53	7.35	3.35	10.13
95th %tile	6.06	-9.30	-10.18	-13.51	0.63	4.41	1.04	8.22
Number of Funds	1522	1518	1497	1487	1454	1416	1264	860

*Compass Total Returns of International Equity Portfolios Universe - Gross of Fees

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

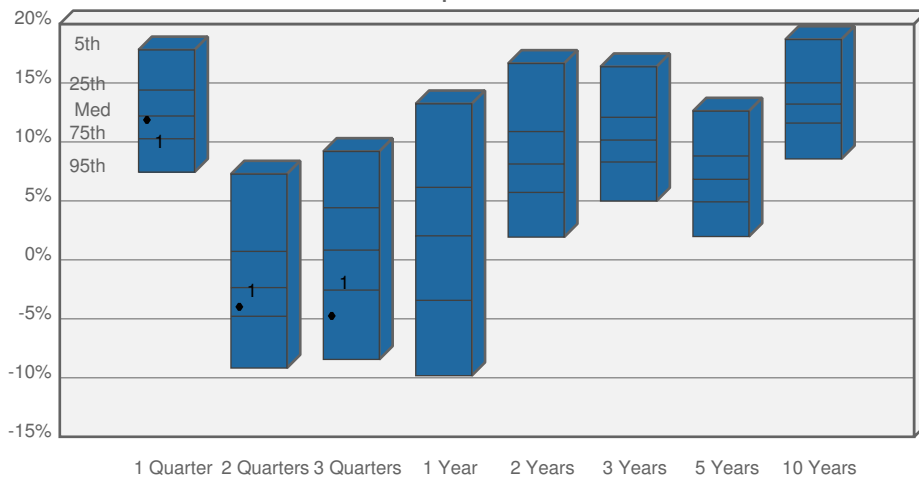
	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
Neuberger Berman CIT									
Net of Fee Return	12.32	12.32						6/30/18	-4.30
MSCI ACWI ex US (N)	10.31	10.31						6/30/18	-1.64
Value Added	2.01	2.01						6/30/18	-2.66
Neuberger Berman Composite									
Net of Fee Return	12.32	12.32	-4.38	6.26	3.36	5.93	10.08	6/30/06	3.21
MSCI ACWI ex US (N)	10.31	10.31	-4.22	8.09	2.57	4.72	8.85	6/30/06	3.39
Value Added	2.01	2.01	-0.17	-1.82	0.79	1.20	1.24	6/30/06	-0.18
Harding Loevner									
Net of Fee Return	10.37	10.37	-5.36	8.22				3/31/15	4.48
MSCI ACWI X US (N)	10.31	10.31	-4.22	8.09				3/31/15	3.48
Value Added	0.06	0.06	-1.15	0.13				3/31/15	0.99
Non-U.S. Equity Composite									
Net of Fee Return	11.65	11.65	-4.72	6.91	3.49	6.04	10.17	12/31/89	7.86
Policy Benchmark	10.31	10.31	-4.22	8.09	2.57	4.72	8.85	12/31/89	4.44
Value Added	1.33	1.33	-0.50	-1.18	0.92	1.32	1.32	12/31/89	3.42

INVESTMENT MANAGER ANALYSIS

Neuberger Berman CIT

March 31, 2019

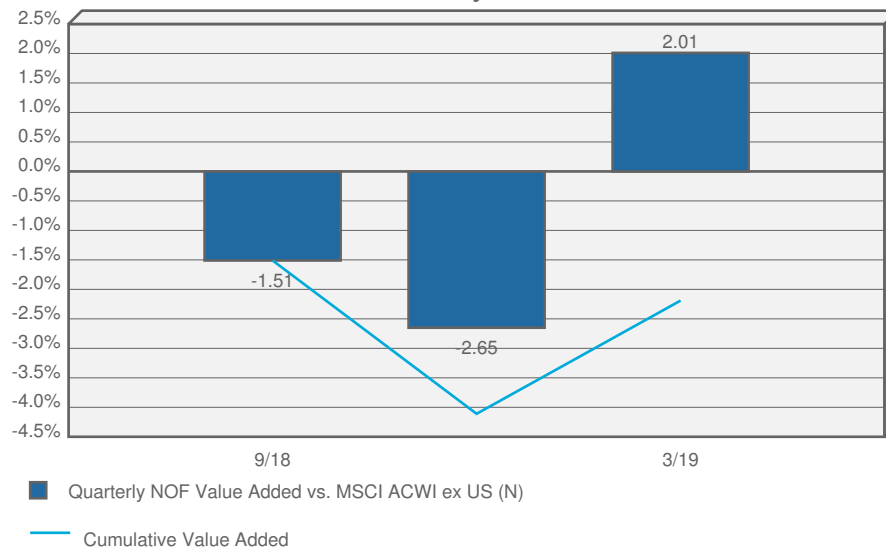
Performance Comparison vs Peer Universe*



● Neuberger Berm 12.32 (48) -3.53 (62) -4.30 (83)
 1 MSCI ACWI ex U 10.31 (74) -2.33 (49) -1.64 (70)

Median	12.20	-2.35	0.83	2.04	8.13	10.16	6.83	13.21
Number of Funds	443	442	438	437	428	416	381	259

Value-Added Analysis vs Benchmark



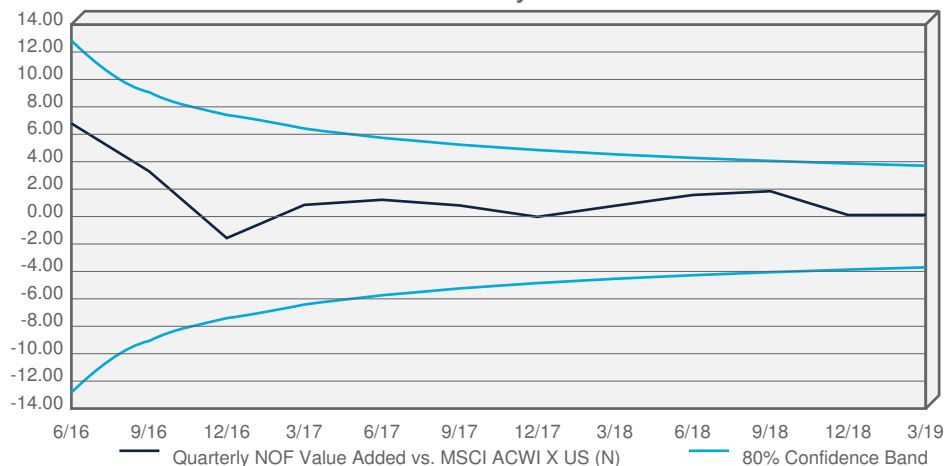
*Compass Total Returns of Active Global International Equity Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Harding Loevner

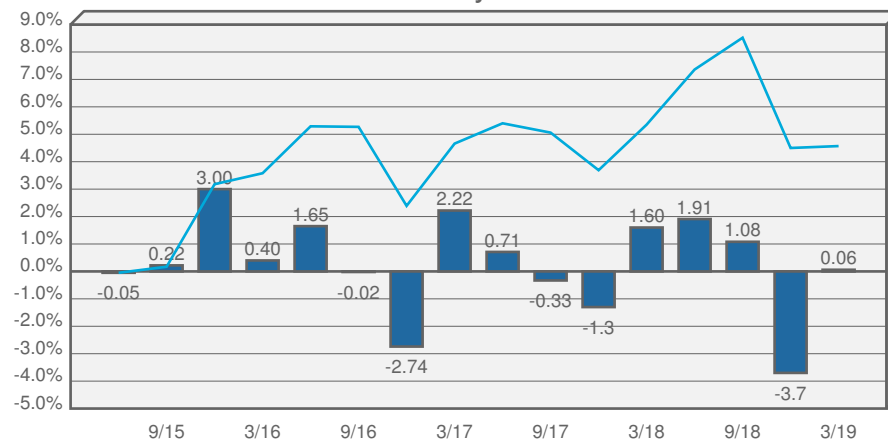
March 31, 2019

Cumulative Skill Analysis vs Benchmark



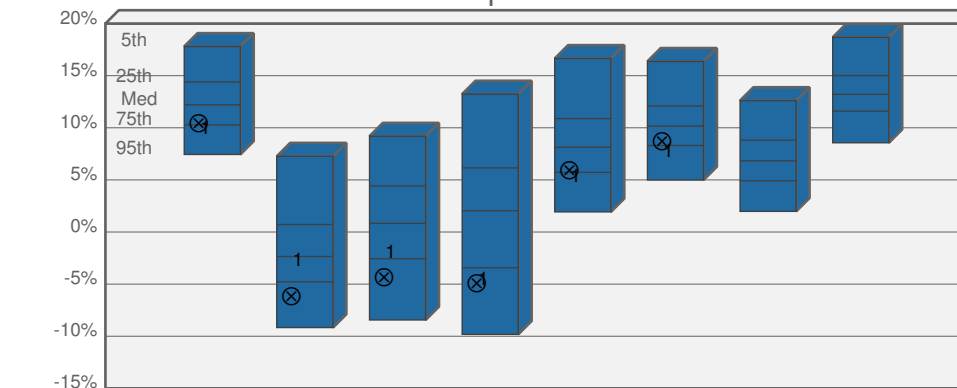
Excess Return:	0.12	Information Ratio:	0.03
Excess Risk:	3.90	T-Stat:	0.05

Value-Added Analysis vs Benchmark



■ Quarterly NOF Value Added vs. MSCI ACWI X US (N)
— Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ Harding Loevne	10.51 (72)	-6.11 (84)	-4.32 (83)	-4.86 (81)	5.94 (73)	8.78 (69)		
1 MSCI ACWI X US	0.31 (74)	-2.33 (49)	-1.64 (70)	-4.22 (79)	5.65 (75)	8.09 (77)		
Median	12.20	-2.35	0.83	2.04	8.13	10.16	6.83	13.21
Number of Funds	443	442	438	437	428	416	381	259

*Compass Total Returns of Active Global International Equity Portfolios Universe - Gross of Fees



ALTERNATIVE INVESTMENTS

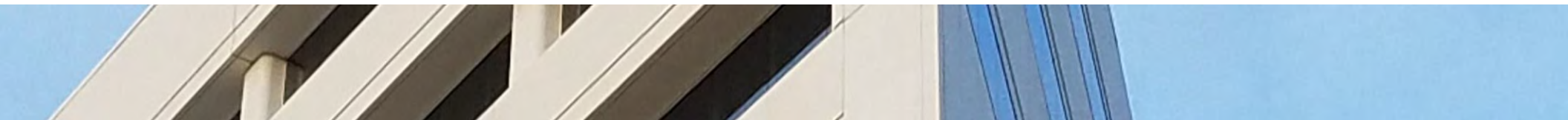
Investment Performance

Private Partnerships

As of March 31, 2019

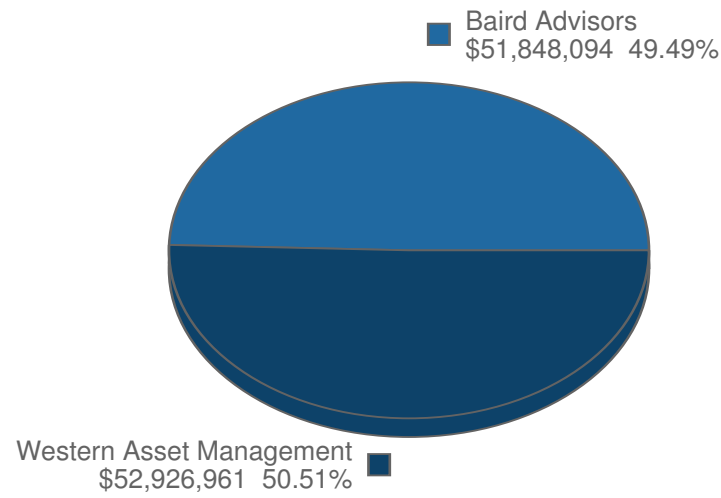
Partnership	Commitment Value	Inception Date	Capital Called		Capital Distributed		Fair Value	Total Value / Paid-In Capital ¹	Annualized IRR
			Amount	%	Amount	%			
Private Equity Program									
Adams Street Direct 2010 Fund	\$500,000	April 27, 2010	\$474,500	95%	\$561,555	112%	\$269,130	1.75	12.72%
Adams Street Non-US Dev. 2010 Fund	\$1,500,000	April 27, 2010	\$1,313,250	88%	\$948,774	63%	\$1,028,293	1.51	11.33%
Adams Street Non-US EM 2010 Fund	\$500,000	January 3, 2011	\$449,000	90%	\$118,384	24%	\$588,139	1.57	10.82%
Adams Street US 2010 Fund	\$2,500,000	April 27, 2010	\$2,202,500	88%	\$1,556,658	62%	\$2,174,113	1.69	13.82%
Adams Street 2013 Global Fund	\$5,000,000	July 3, 2013	\$4,090,000	82%	\$773,189	15%	\$4,815,786	1.37	10.95%
Aberdeen Global Partners	\$5,000,000	January 17, 2012	\$4,900,000	98%	\$1,711,516	34%	\$5,463,114	1.46	11.16%
Adams Street 2015 Global	\$6,500,000	September 30, 2015	\$4,222,868	65%	\$825,449	13%	\$4,634,225	1.29	23.18%
Adams Street 2017 Global	\$6,000,000	June 17, 2017	\$1,853,455	31%	\$0	0%	\$1,921,590	1.04	5.86%
Private Equity Composite	\$27,500,000	April 27, 2010	\$19,505,573	71%	\$6,495,525	24%	\$20,894,390	1.40	12.49%
Private Credit Managers									
Grosvenor Opportunistic Credit V	\$14,000,000	September 17, 2018	\$7,089,845	51%	\$0	\$0	\$7,137,319	1.01	-
50 South Sponsor Backed Credit	\$7,000,000	October 4, 2018	\$1,928,113	28%	\$0	\$0	\$1,918,002	0.99	-
Private Credit Composite	\$21,000,000	September 17, 2018	\$9,017,958	43%	\$0	0%	\$9,055,321	1.00	-

¹TVPI = Fair Value + Capital Distributed / Capital Called
 ©2019 Wilshire Associates.



CORE FIXED INCOME

Wilshire Consulting
MANAGER ALLOCATION
Core Fixed Composite
As of March 31, 2019

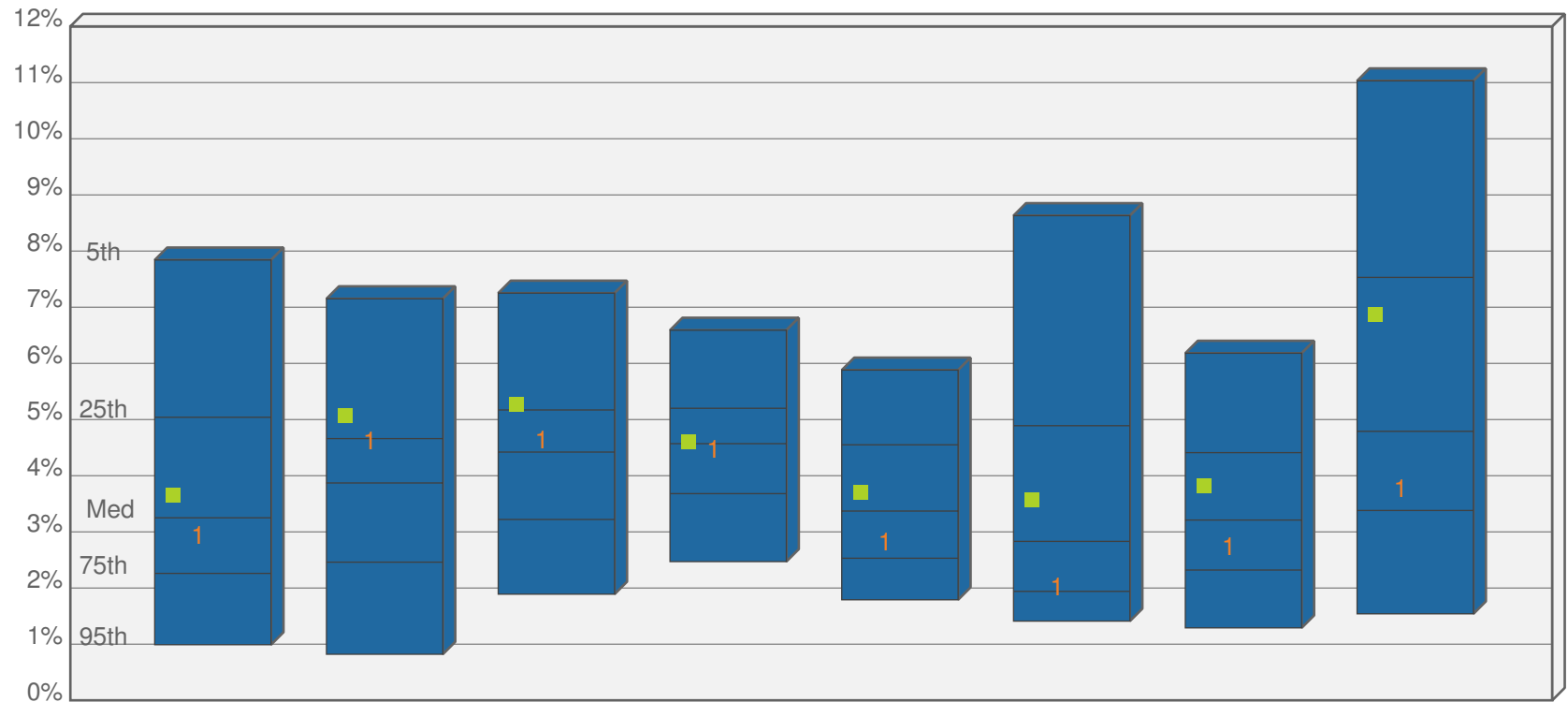


Wilshire Consulting

PERFORMANCE COMPARISON

Core Fixed Composite

Periods Ended March 31, 2019



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
■ Core Fixed Composite	3.68 (38)	5.10 (14)	5.30 (22)	4.63 (46)	3.72 (41)	3.60 (39)	3.85 (35)	6.90 (29)
1 Bloomberg Aggreg	2.94 (58)	4.63 (26)	4.65 (43)	4.48 (56)	2.83 (66)	2.03 (71)	2.74 (65)	3.77 (65)
5th %tile	7.84	7.15	7.25	6.59	5.88	8.63	6.18	11.03
25th %tile	5.04	4.66	5.17	5.20	4.55	4.89	4.41	7.53
Median	3.25	3.87	4.42	4.57	3.37	2.83	3.21	4.79
75th %tile	2.26	2.46	3.22	3.68	2.53	1.94	2.32	3.38
95th %tile	0.99	0.82	1.89	2.47	1.79	1.41	1.29	1.54
Number of Funds	1327	1322	1312	1299	1284	1260	1195	946

*Compass Total Returns of Fixed Income Portfolios Universe - Gross of Fees

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

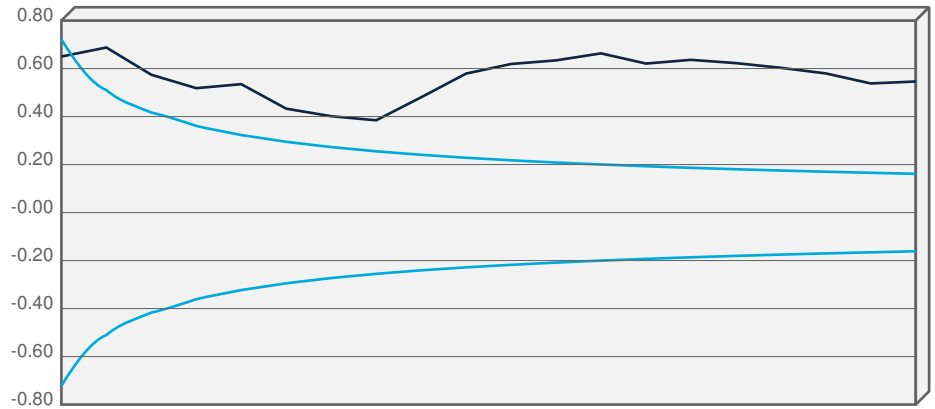
	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
Baird Advisors									
Net of Fee Return	3.12	3.12	4.73	2.69	3.30	3.22	5.15	3/31/03	4.35
Bloomberg Aggregate	2.94	2.94	4.48	2.03	2.74	2.48	3.77	3/31/03	3.98
Value Added	0.18	0.18	0.25	0.67	0.56	0.75	1.39	3/31/03	0.37
Western Asset Management									
Net of Fee Return	4.03	4.03	4.00	3.98	3.88	4.05	8.06	3/31/04	4.95
Bloomberg Aggregate	2.94	2.94	4.48	2.03	2.74	2.48	3.77	3/31/04	3.89
Value Added	1.08	1.08	-0.48	1.95	1.14	1.57	4.30	3/31/04	1.06
Core Fixed Composite									
Net of Fee Return	3.57	3.57	4.43	3.36	3.61	3.65	6.65	9/30/87	6.75
Bloomberg Aggregate	2.94	2.94	4.48	2.03	2.74	2.48	3.77	9/30/87	6.34
Value Added	0.63	0.63	-0.05	1.33	0.86	1.17	2.88	9/30/87	0.41

INVESTMENT MANAGER ANALYSIS

Baird Advisors

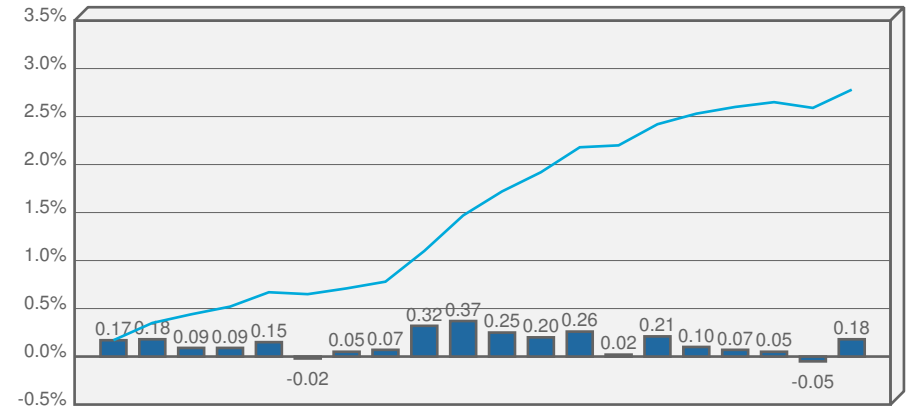
March 31, 2019

Cumulative Skill Analysis vs Benchmark



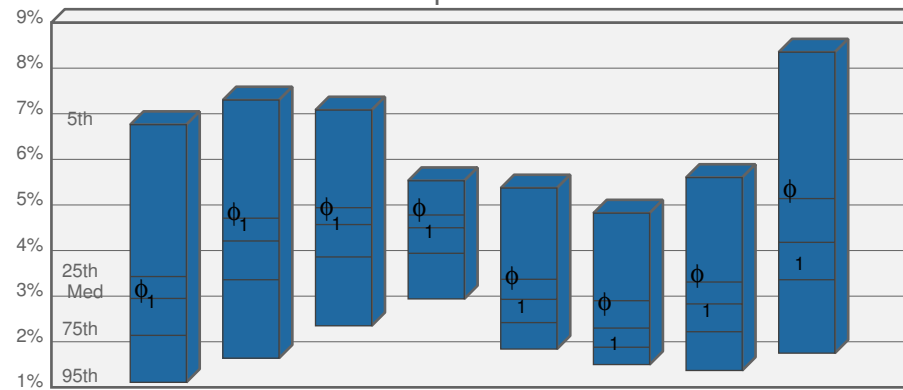
Excess Return:	0.55	Information Ratio:	2.49
Excess Risk:	0.22	T-Stat:	5.56

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Bloomberg Aggregate
Cumulative Value Added

Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
φ Baird Advisors	3.18 (37)	4.87 (20)	4.99 (22)	4.96 (17)	3.47 (20)	2.91 (24)	3.52 (18)	5.38 (21)
1 Bloomberg Aggr	2.94 (50)	4.63 (30)	4.65 (46)	4.48 (52)	2.83 (56)	2.03 (67)	2.74 (54)	3.77 (64)
Median	2.95	4.21	4.57	4.50	2.93	2.30	2.83	4.18
Number of Funds	413	411	410	407	403	398	383	335

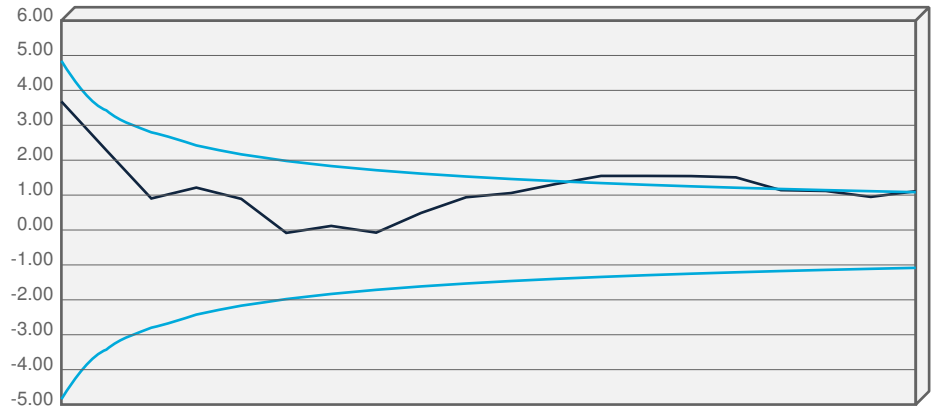
*Compass Total Returns of Active Core Fixed Income Portfolios Universe - Gross of Fees

INVESTMENT MANAGER ANALYSIS

Western Asset Management

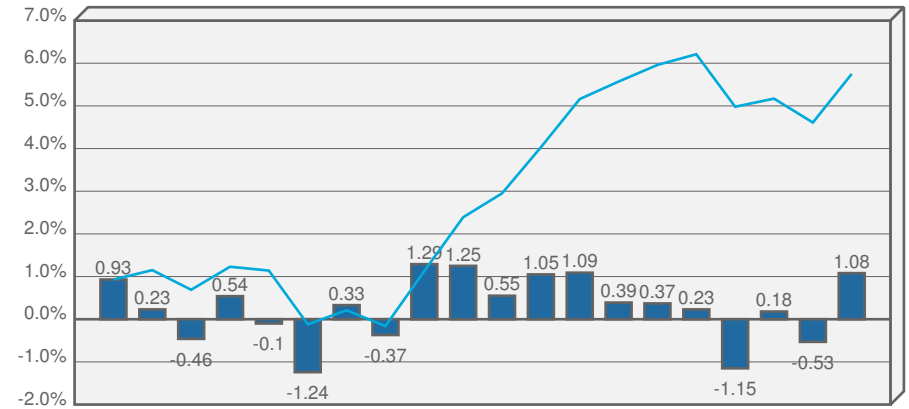
March 31, 2019

Cumulative Skill Analysis vs Benchmark



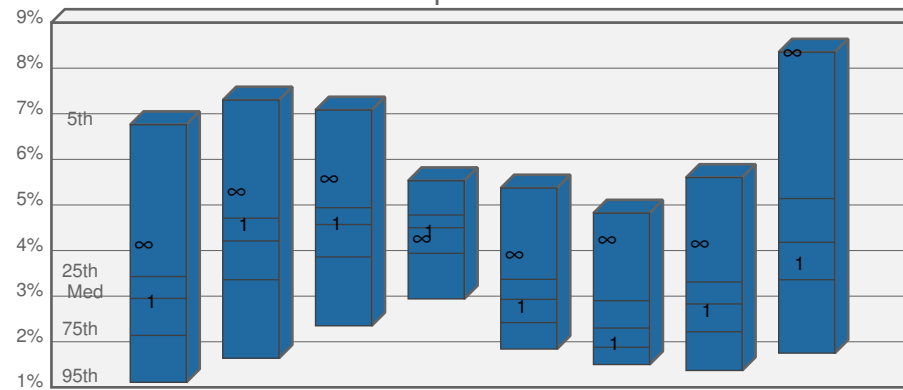
Excess Return:	1.11	Information Ratio:	0.75
Excess Risk:	1.47	T-Stat:	1.69

Value-Added Analysis vs Benchmark



Quarterly NOF Value Added vs. Bloomberg Aggregate
Cumulative Value Added

Performance Comparison vs Peer Universe*



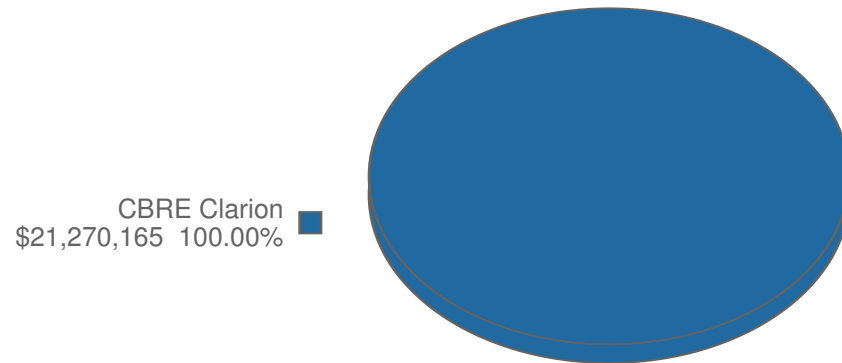
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
∞ Western Asset	4.17 (12)	5.33 (11)	5.61 (12)	4.31 (62)	3.96 (13)	4.28 (8)	4.19 (13)	8.38 (4)
1 Bloomberg Aggr	2.94 (50)	4.63 (30)	4.65 (46)	4.48 (52)	2.83 (56)	2.03 (67)	2.74 (54)	3.77 (64)
Median	2.95	4.21	4.57	4.50	2.93	2.30	2.83	4.18
Number of Funds	413	411	410	407	403	398	383	335

*Compass Total Returns of Active Core Fixed Income Portfolios Universe - Gross of Fees



REAL ESTATE

Wilshire Consulting
MANAGER ALLOCATION
Real Estate Composite
As of March 31, 2019

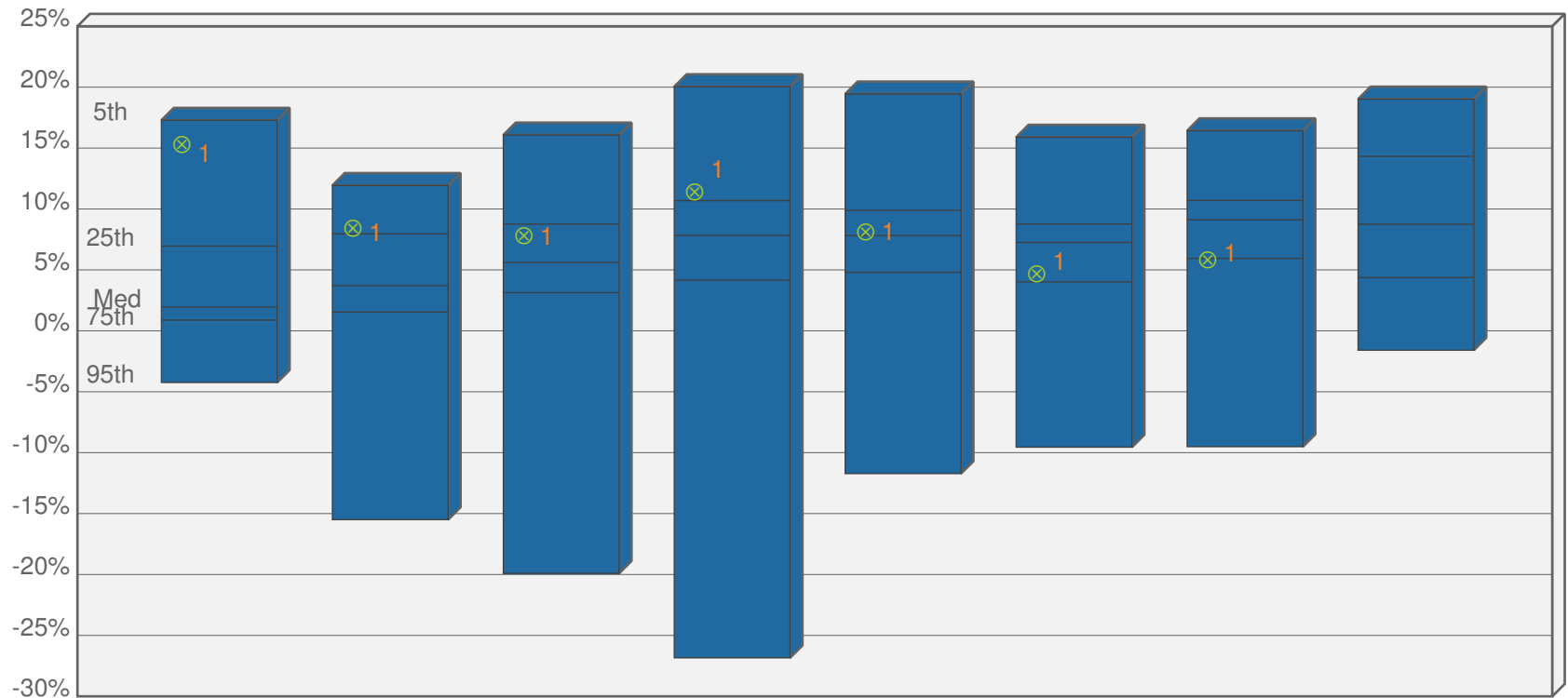


Wilshire Consulting

PERFORMANCE COMPARISON

Real Estate Composite

Periods Ended March 31, 2019



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ Real Estate Composite	15.36 (11)	8.49 (20)	7.88 (27)	11.43 (24)	8.16 (37)	4.74 (69)	5.85 (76)	
1 FTSE EPRA/NAREIT	14.59 (15)	8.07 (24)	7.75 (27)	13.27 (21)	8.13 (40)	5.68 (67)	6.42 (70)	
5th %tile	17.28	11.93	16.07	20.04	19.44	15.89	16.42	19.02
25th %tile	6.96	7.96	8.76	10.69	9.89	8.77	10.70	14.32
Median	1.96	3.71	5.62	7.84	7.82	7.26	9.11	8.75
75th %tile	0.88	1.54	3.13	4.16	4.81	4.02	5.94	4.37
95th %tile	-4.24	-15.50	-19.91	-26.84	-11.72	-9.55	-9.51	-1.59
Number of Funds	185	184	183	181	178	168	153	87

*Wilcop Total Returns of Real Estate Portfolios Universe - Gross of Fees

PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

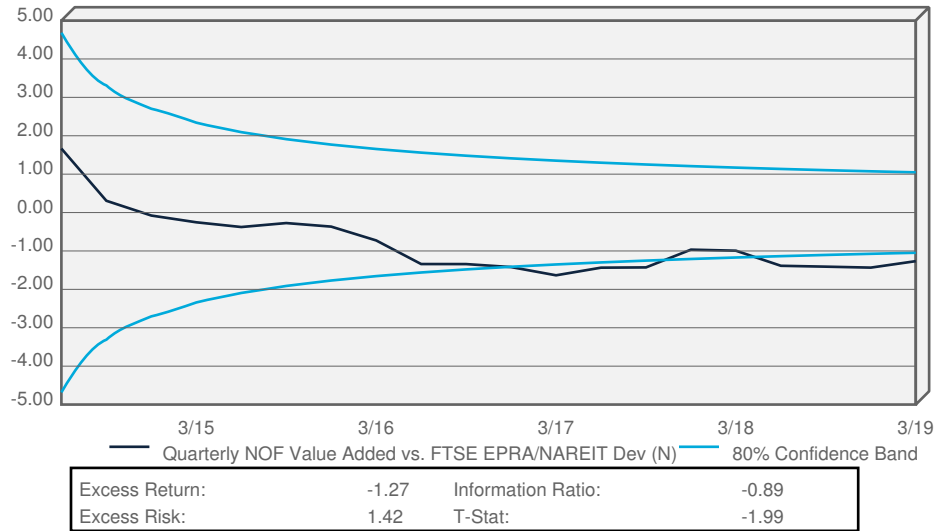
	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
CBRE Clarion									
Net of Fee Return	15.16	15.16	10.61	3.96	5.07	6.28		6/30/09	9.62
FTSE EPRA/NAREIT Dev (N)	14.59	14.59	13.27	5.68	6.42	7.55		6/30/09	10.87
Value Added	0.57	0.57	-2.66	-1.72	-1.35	-1.27		6/30/09	-1.25
Real Estate Composite									
Net of Fee Return	15.16	15.16	10.61	3.96	5.06	6.28		6/30/09	9.62
FTSE EPRA/NAREIT Dev (N)	14.59	14.59	13.27	5.68	6.42	7.55		6/30/09	10.87
Value Added	0.57	0.57	-2.66	-1.72	-1.36	-1.28		6/30/09	-1.25

INVESTMENT MANAGER ANALYSIS

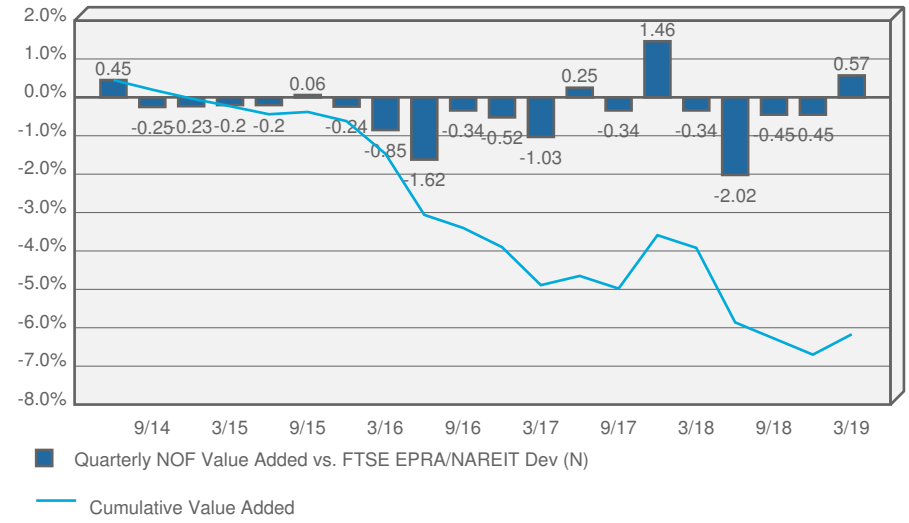
CBRE Clarion

March 31, 2019

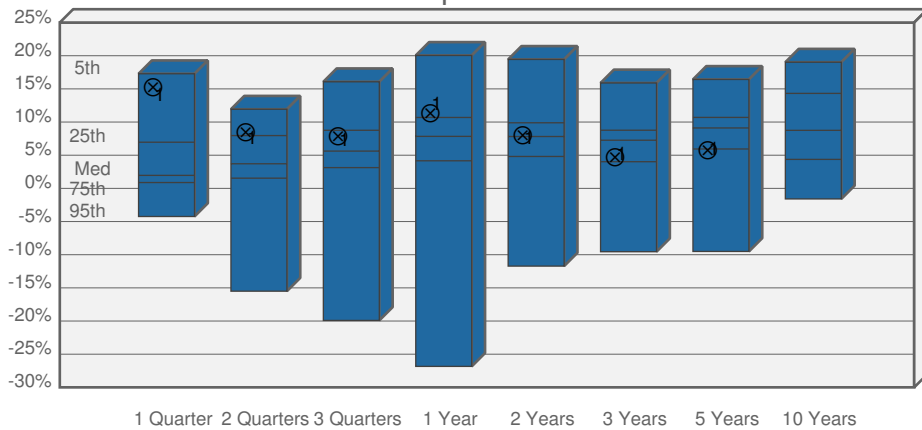
Cumulative Skill Analysis vs Benchmark



Value-Added Analysis vs Benchmark

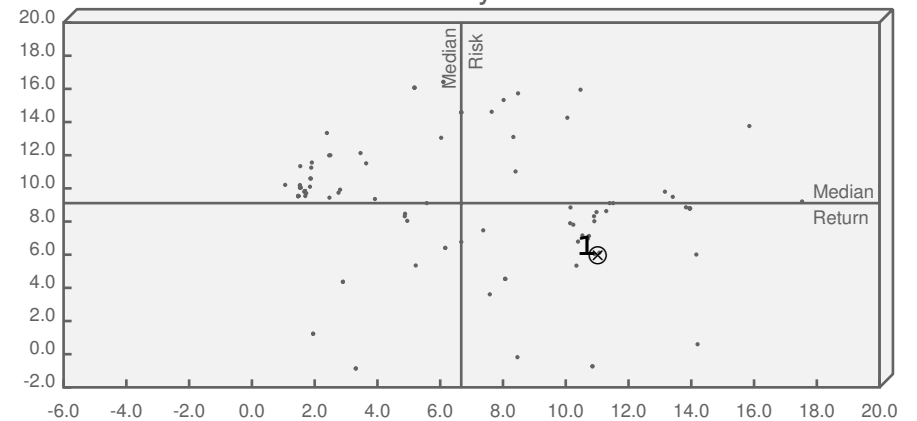


Performance Comparison vs Peer Universe*



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	5 Years	10 Years
⊗ CBRE Clarion	15.36 (11)	8.49 (20)	7.88 (27)	11.43 (24)	8.16 (37)	4.74 (69)	5.86 (76)	
1 FTSE EPRA/NAREIT Dev (N)	4.59 (15)	8.07 (24)	7.75 (27)	13.27 (21)	8.13 (40)	5.68 (67)	6.42 (70)	
Median	1.96	3.71	5.62	7.84	7.82	7.26	9.11	8.75
Number of Funds	185	184	183	181	178	168	153	87

Five Year Risk/Return Analysis vs Peer Universe*



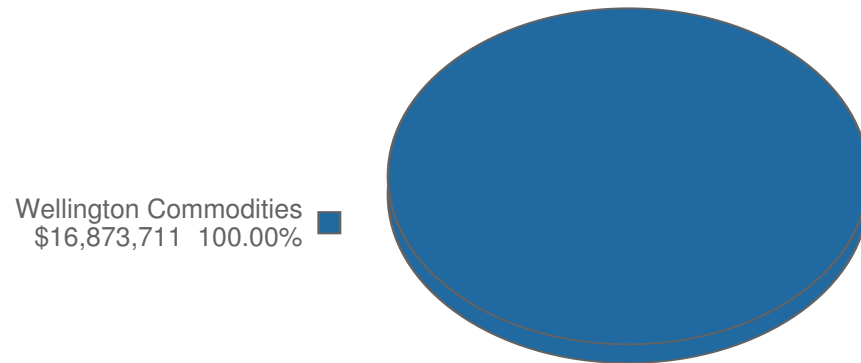
Description	Legend	Gross Fee Ret		Standard Deviation	
		Value	Rank	Value	Rank
CBRE Clarion	⊗	5.86	76	11.16	24
FTSE EPRA/NAREIT Dev (N)	1	6.42	70	10.84	28
Median		9.11		6.67	

*Wilcop Total Returns of Real Estate Portfolios Universe - Gross of Fees



COMMODITIES

Wilshire Consulting
MANAGER ALLOCATION
Commodities Composite
As of March 31, 2019



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

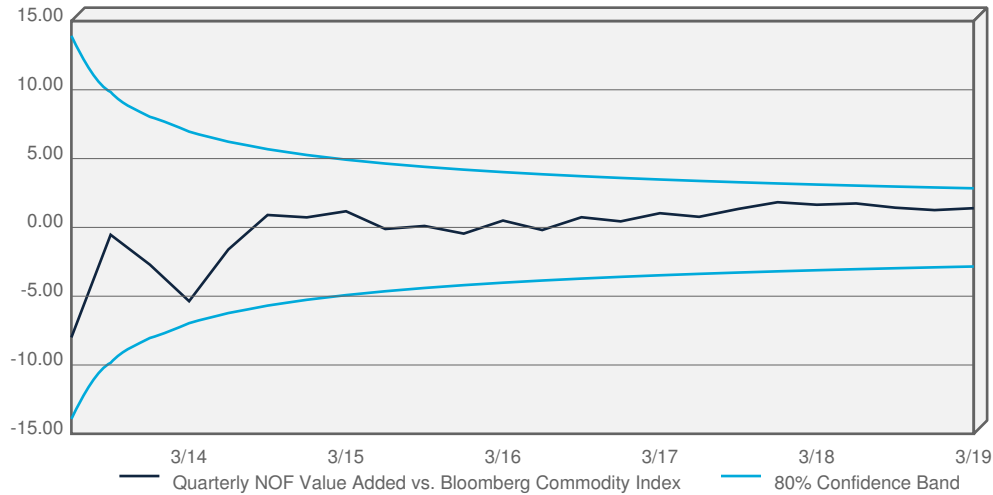
	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
Wellington Commodities									
Net of Fee Return	7.54	7.54	-5.11	4.58	-6.36			3/31/13	-6.53
Bloomberg Commodity Index	6.32	6.32	-5.25	2.22	-8.92			3/31/13	-7.81
Value Added	1.21	1.21	0.14	2.36	2.55			3/31/13	1.29
Commodities Composite									
Net of Fee Return	7.54	7.54	-5.11	4.58	-6.36			3/31/13	-6.53
Bloomberg Commodity Index	6.32	6.32	-5.25	2.22	-8.92			3/31/13	-7.81
Value Added	1.21	1.21	0.14	2.36	2.55			3/31/13	1.29

INVESTMENT MANAGER ANALYSIS

Wellington Commodities

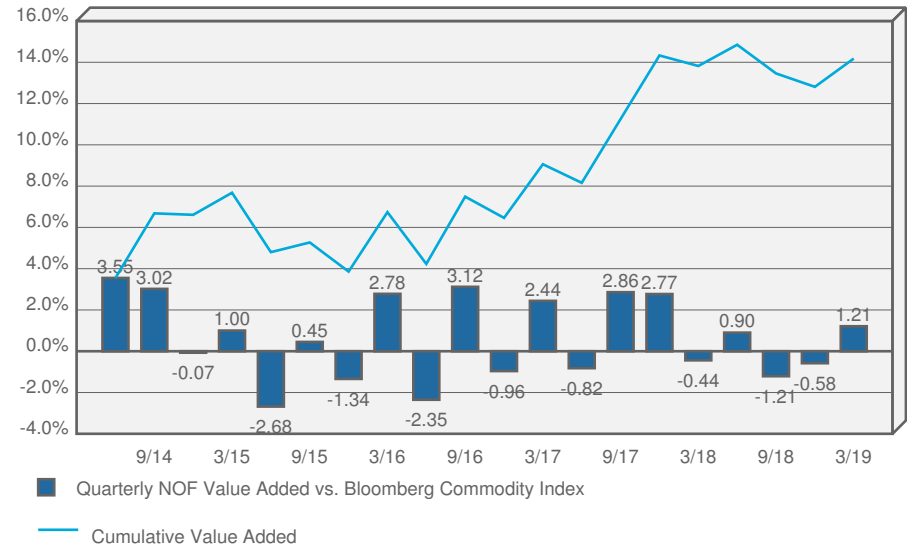
March 31, 2019

Cumulative Skill Analysis vs Benchmark



Excess Return:	1.40	Information Ratio:	0.33
Excess Risk:	4.23	T-Stat:	0.81

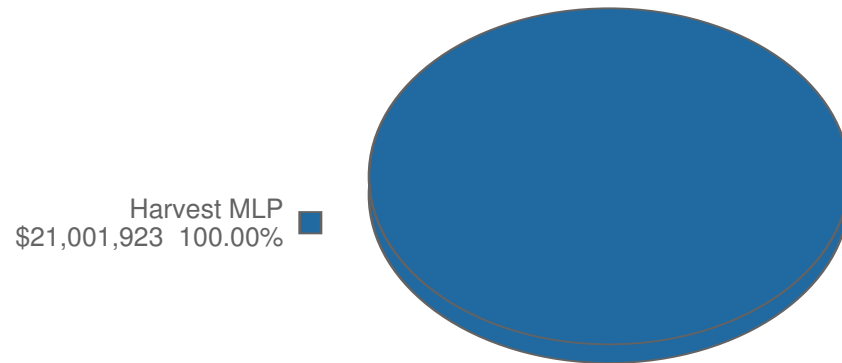
Value-Added Analysis vs Benchmark





MLP

Wilshire Consulting
MANAGER ALLOCATION
MLP Composite
As of March 31, 2019



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

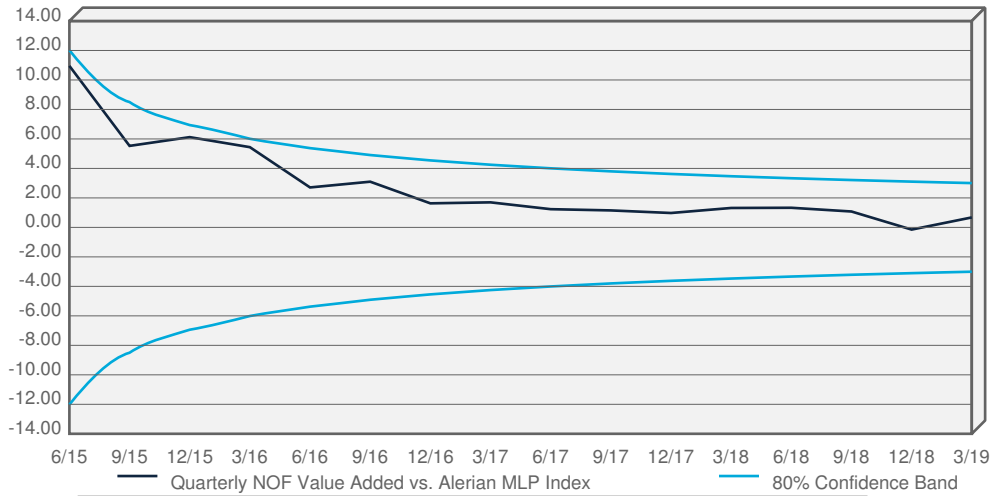
	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
Harvest MLP									
Net of Fee Return	20.69	20.69	15.08	7.60				3/31/15	-4.70
Alerian MLP Index	16.82	16.82	16.51	8.53				3/31/15	-5.34
Value Added	3.87	3.87	-1.42	-0.94				3/31/15	0.64
MLP Composite									
Net of Fee Return	20.69	20.69	15.08	7.60				3/31/15	-4.70
Alerian MLP Index	16.82	16.82	16.51	8.53				3/31/15	-5.34
Value Added	3.87	3.87	-1.42	-0.94				3/31/15	0.64

INVESTMENT MANAGER ANALYSIS

Harvest MLP

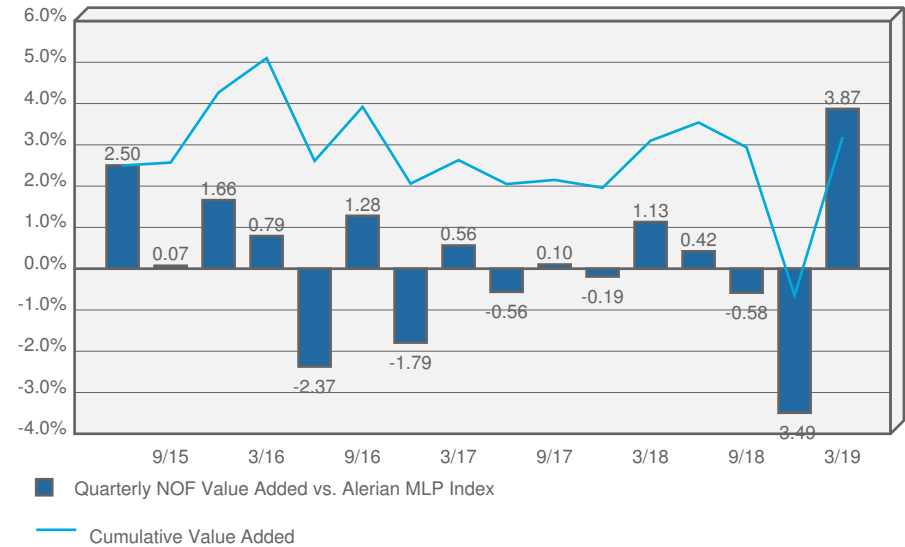
March 31, 2019

Cumulative Skill Analysis vs Benchmark



Excess Return:	0.68	Information Ratio:	0.19
Excess Risk:	3.65	T-Stat:	0.37

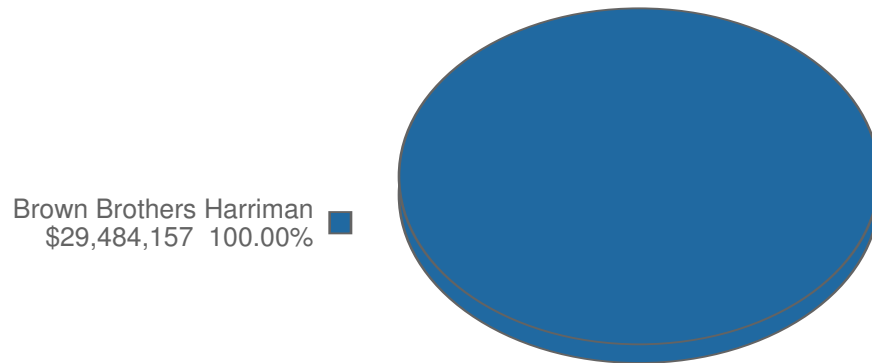
Value-Added Analysis vs Benchmark





TIPS

Wilshire Consulting
MANAGER ALLOCATION
TIPS Composite
As of March 31, 2019



PERFORMANCE COMPARISON

Trailing Returns

Periods Ended March 31, 2019

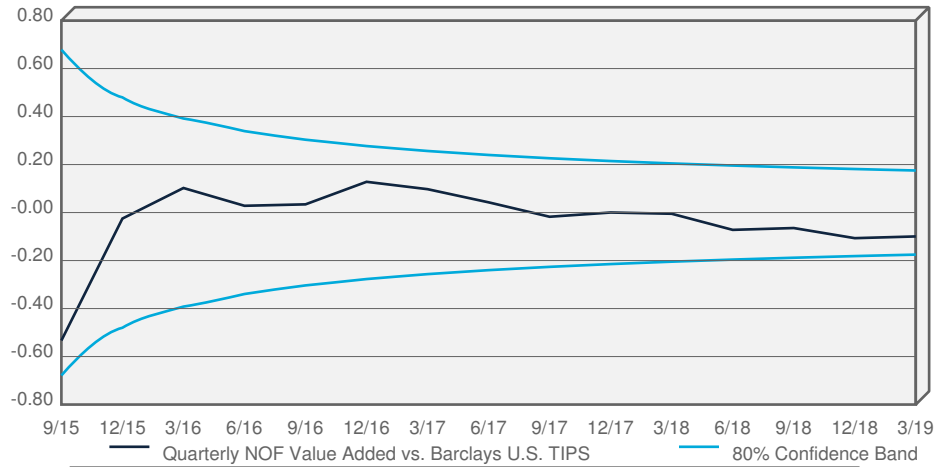
	1 Qtr	YTD	1 Year	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Incept Date	Incept Ret
Brown Brothers Harriman									
Net of Fee Return	3.19	3.19	2.33	1.55				6/30/15	1.95
Barclays U.S. TIPS	3.19	3.19	2.70	1.70				6/30/15	2.05
Value Added	0.00	0.00	-0.37	-0.15				6/30/15	-0.10
TIPS Composite									
Net of Fee Return	3.19	3.19	2.33	1.55				6/30/15	1.95
Barclays U.S. TIPS	3.19	3.19	2.70	1.70				6/30/15	2.05
Value Added	0.00	0.00	-0.37	-0.15				6/30/15	-0.10

INVESTMENT MANAGER ANALYSIS

Brown Brothers Harriman

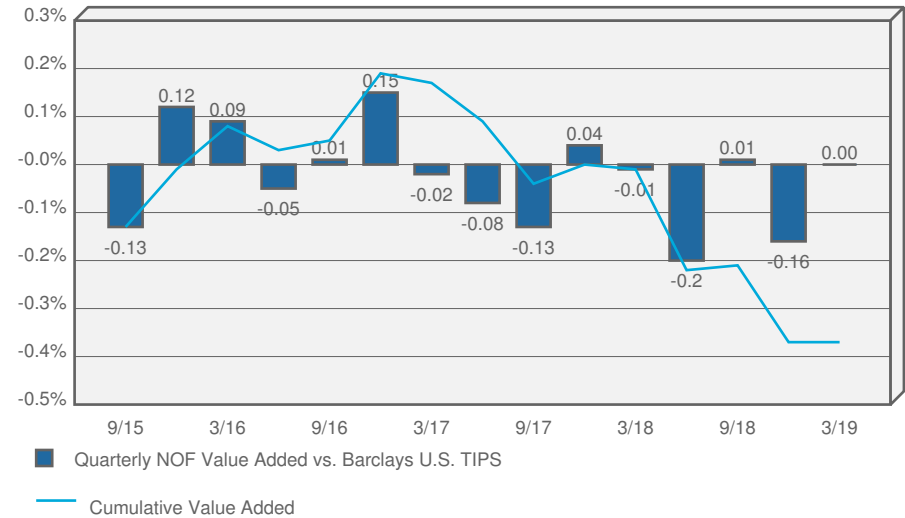
March 31, 2019

Cumulative Skill Analysis vs Benchmark

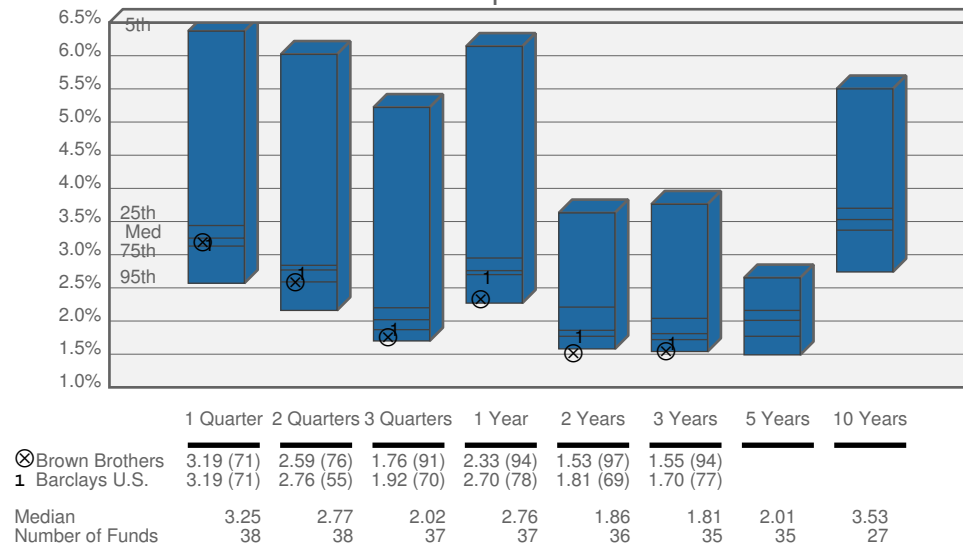


Excess Return:	-0.10	Information Ratio:	-0.48
Excess Risk:	0.21	T-Stat:	-0.84

Value-Added Analysis vs Benchmark



Performance Comparison vs Peer Universe*



*Compass Total Returns of Active TIPS Portfolios Universe - Gross of Fees