

# Callan

August 2019



## **Endowment Fund Investment Board**

Second Quarter 2019  
Performance Review

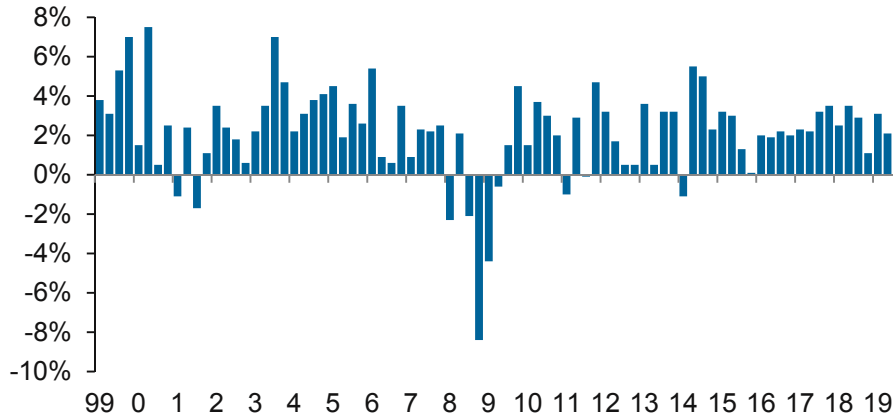
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**Paul Erlendson**  
Senior Vice President

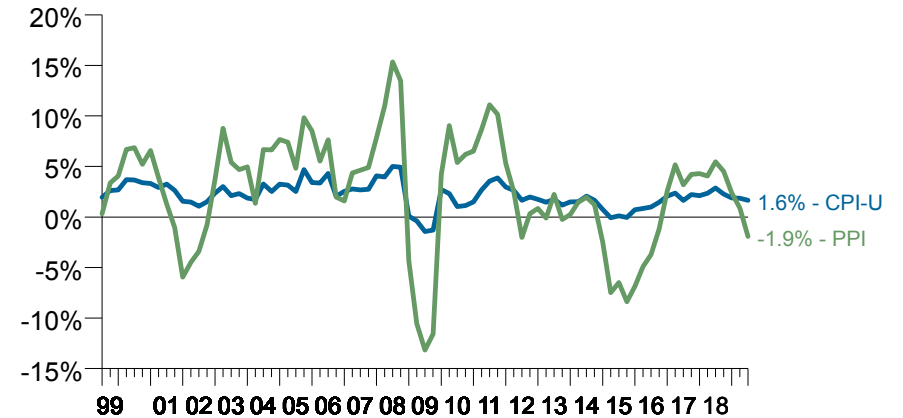
# U.S. Economy—Summary

For periods ended June 30, 2019

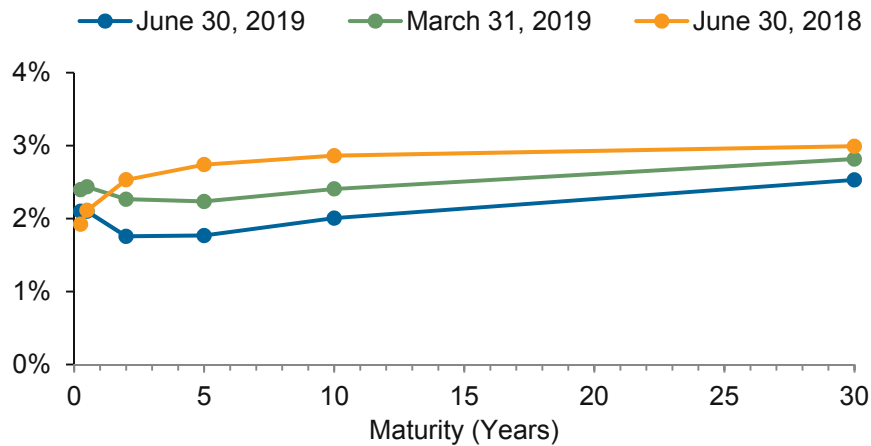
## Quarterly Real GDP Growth



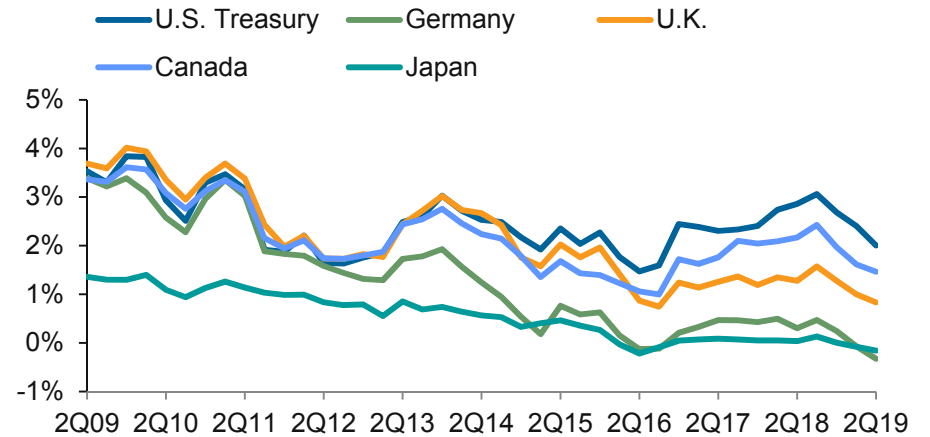
## Inflation Year-Over-Year



## U.S. Treasury Yield Curves



## 10-Year Global Government Bond Yields



Sources: Bureau of Labor Statistics, Bloomberg, Callan

# Asset Class Performance

Periodic Table of Investment Returns  
for Periods Ended June 30, 2019

Best

Worst

Last Quarter	Last 2 Quarters	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
S&P:500 4.3%	S&P:500 18.5%	S&P:500 10.4%	S&P:500 14.2%	S&P:500 10.7%	S&P:500 14.7%	Russell:2000 Index 7.8%
MSCI:EAFE 3.7%	Russell:2000 Index 17.0%	Blmbg:Aggregate 7.9%	Russell:2000 Index 12.3%	NCREIF:NFI-ODCE Val Wt Nt 8.9%	Russell:2000 Index 13.4%	MSCI:EM Gross 7.6%
Blmbg:Aggregate 3.1%	MSCI:EAFE 14.0%	NCREIF:NFI-ODCE Val Wt Nt 5.9%	MSCI:EM Gross 11.1%	Russell:2000 Index 7.1%	NCREIF:NFI-ODCE Val Wt Nt 8.9%	NCREIF:NFI-ODCE Val Wt Nt 7.4%
Russell:2000 Index 2.1%	MSCI:EM Gross 10.8%	3 Month T-Bill 2.3%	MSCI:EAFE 9.1%	Blmbg:Aggregate 2.9%	MSCI:EAFE 6.9%	S&P:500 5.9%
NCREIF:NFI-ODCE Val Wt Nt 1.2%	Blmbg:Aggregate 6.1%	MSCI:EM Gross 1.6%	NCREIF:NFI-ODCE Val Wt Nt 6.8%	MSCI:EM Gross 2.9%	MSCI:EM Gross 6.2%	Blmbg:Aggregate 4.9%
MSCI:EM Gross 0.7%	Blmbg:Commodity Price Idx 3.8%	MSCI:EAFE 1.1%	Blmbg:Aggregate 2.3%	MSCI:EAFE 2.2%	Blmbg:Aggregate 3.9%	MSCI:EAFE 4.0%
3 Month T-Bill 0.6%	NCREIF:NFI-ODCE Val Wt Nt 2.4%	Russell:2000 Index (3.3%) 3.3%	3 Month T-Bill 1.4%	3 Month T-Bill 0.9%	3 Month T-Bill 0.5%	3 Month T-Bill 1.9%
Blmbg:Commodity Price Idx (1.8%) 1.8%	3 Month T-Bill 1.2%	Blmbg:Commodity Price Idx (8.9%) 8.9%	Blmbg:Commodity Price Idx (3.6%) 3.6%	Blmbg:Commodity Price Idx (10.0%) 10.0%	Blmbg:Commodity Price Idx (4.2%) 4.2%	Blmbg:Commodity Price Idx (0.2%) 0.2%

# Q2 Rebound Continues, Global Stock Markets Surge Through First Half of 2019

## New record for the S&P 500 reached in Q2 2019

- 4.3% gain in Q2, on top of strongest first quarter (13.7%) since 2009

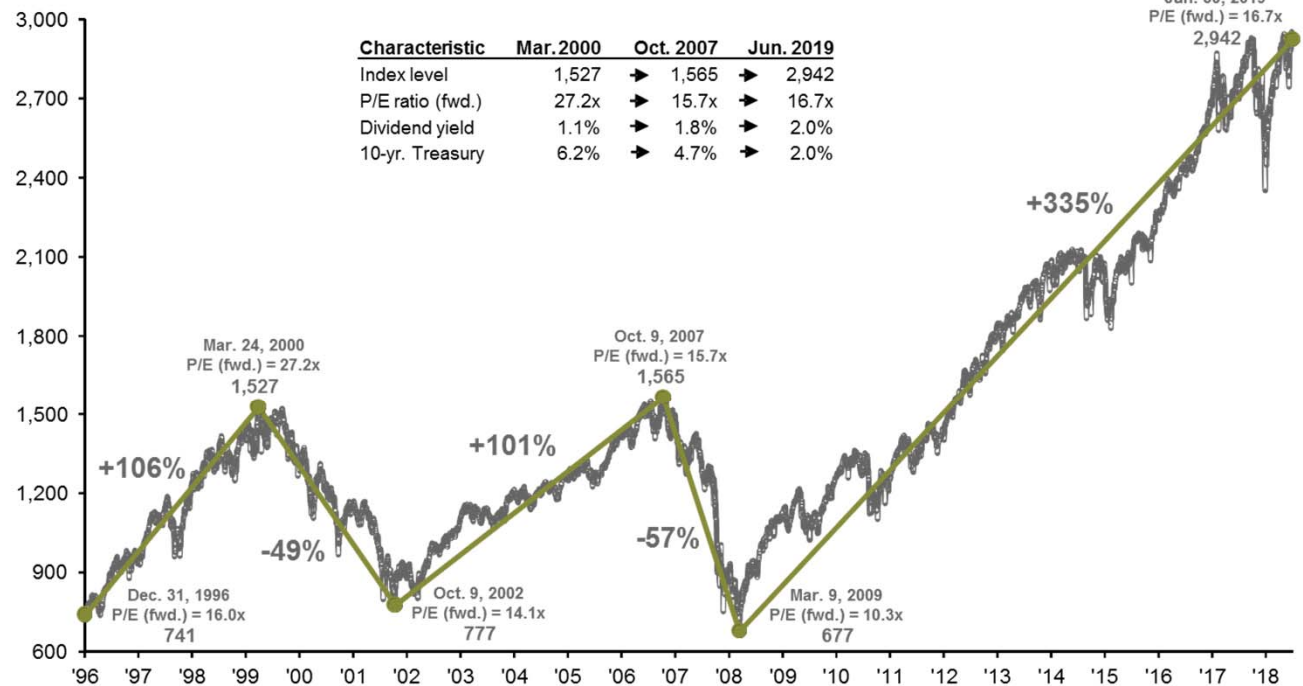
## Forward valuation rose back to 17.1 in Q2, above its 25-year average (16.2)

- Still nowhere near the peak set in 2000

## Yield on 10-year Treasury fell back to the level of the dividend yield on stocks

- Prior to GFC, Treasury yield typically exceeded that of the stock dividend; two yields were very close for eight years following GFC.
- Gap began to widen with Fed tightening in 2017, but narrowed again in Q2 with reversal of Fed policy.
- Vastly different relationship between stock and bond yields in 2000 and 2007

S&P 500 Price Index



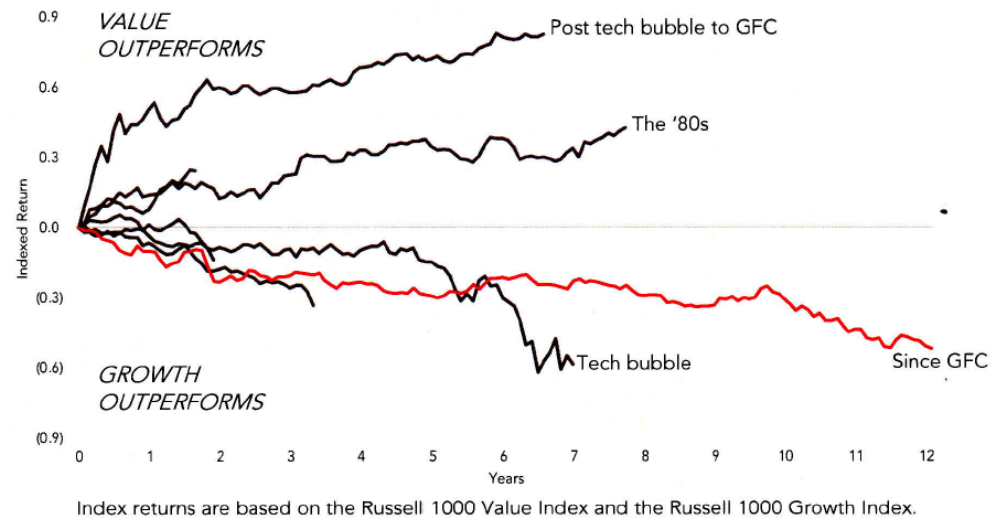
Source: Compustat, FactSet, Federal Reserve, Standard & Poor's, J.P. Morgan Asset Management. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price to earnings ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns. Guide to the Markets – U.S. Data are as of June 30, 2019.

Source: J.P. Morgan Asset Management.

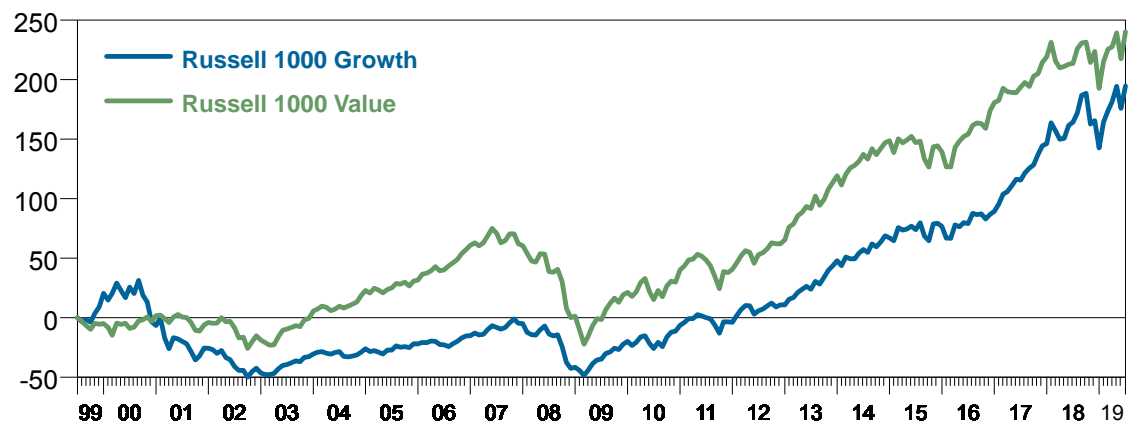
# Growth Outpaced Value for Quarter, Continues to Widen Return Gap

- Growth outperformed value across all market caps, extending duration of growth outperformance since the GFC.
- While growth has outperformed value in recent time periods, value beats growth over the trailing 20-year period.
- Why the divergence? Speculation that low interest rates (and by proxy, discount rates) make growth stocks more attractive at higher valuations compared to similar value stocks, which typically are trading at discount.
- Investors are more inclined to buy growth in a slow growth environment.

**Value/Growth Cycle Duration  
1978 – 2019**



**Cumulative Returns for Russell 1000 Style Indices: 20 Years**

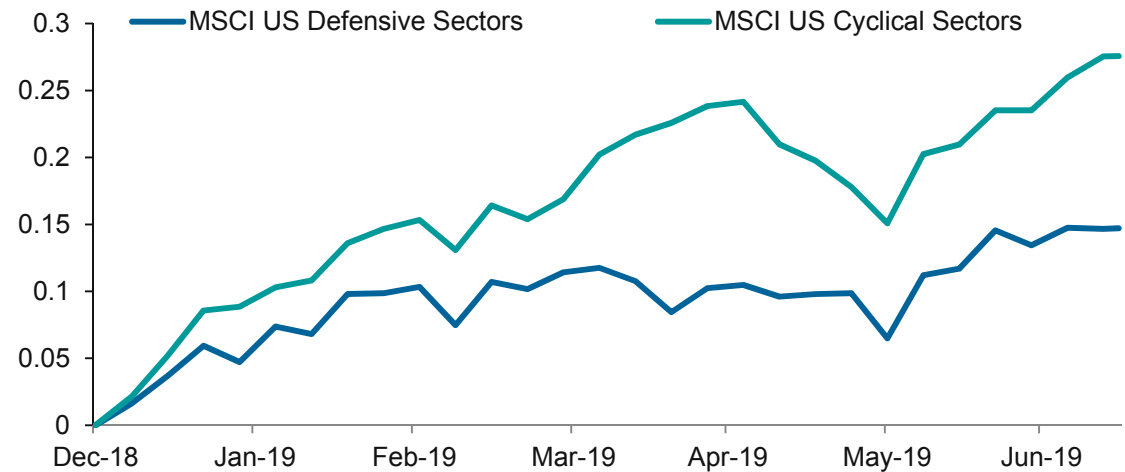


Source: Callan, AJO Partners

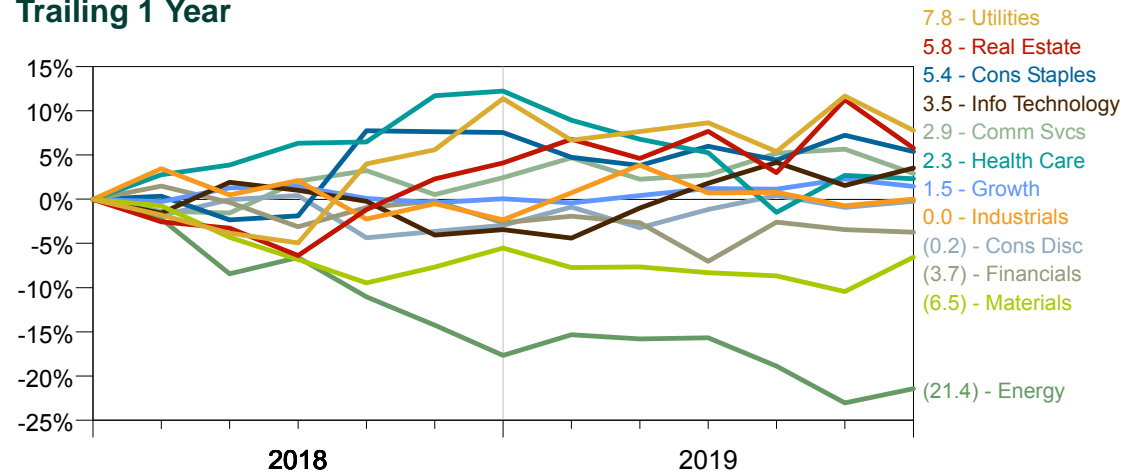
# Cyclicals Outpace Defensive Sectors

- In 2018, investor skepticism over the longevity of the bull market and economic cycle lifted defensive and lower-beta sectors.
- In the second quarter of 2019, risk appetite returned and cyclically exposed sectors outperformed more defensive assets.
- Over the trailing year, however, defensive sectors (Real Estate, Utilities, Staples) continue to outperform cyclicals (Industrials, Materials, Energy).

**Cyclical vs. Defensive Performance**



**Cumulative Relative Returns Sector vs. S&P 500 Trailing 1 Year**



Sources: MSCI, Standard & Poor's

# U.S. Equity Performance: Reaching for Record Highs

## Markets rebounded, continue to march upward

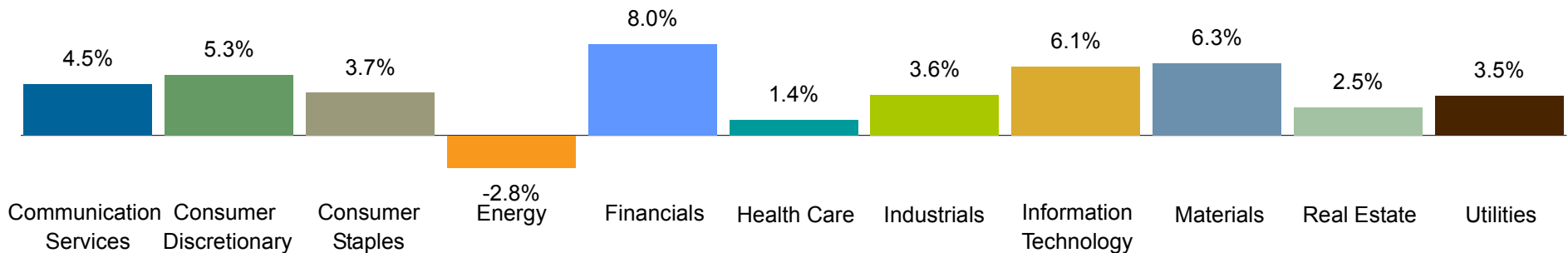
- U.S. equity markets neared record highs as market participants anticipated another round of Fed easing.
- Cyclical outperformed while Financials was the best-performing sector; Energy was the only sector to experience negative returns over the quarter.
- Trade rhetoric weighed on U.S. stocks in May followed by a rebound.
- Given the increase in risk appetite, defensive sectors including Utilities underperformed.

## Growth outpaced value

- Growth continued to outpace value.
- Increasingly dovish Fed a headwind for the valuation sensitive stocks.

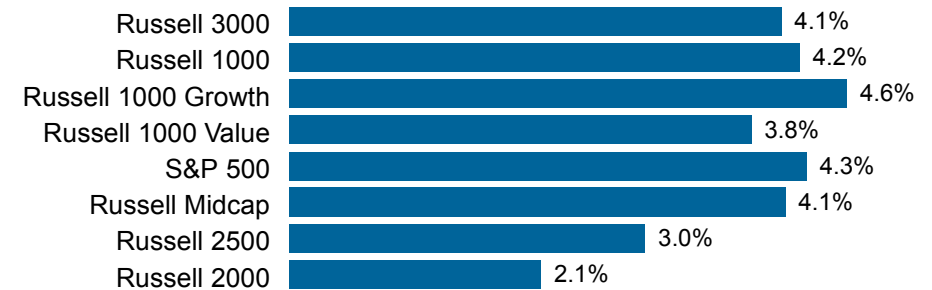
## Small cap stocks lagged large caps

## Economic Sector Quarterly Performance (S&P 500)

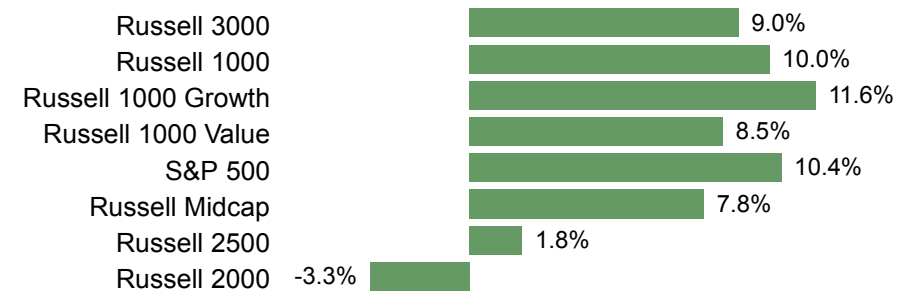


Sources: FTSE Russell, Standard & Poor's

## U.S. Equity: Quarterly Returns



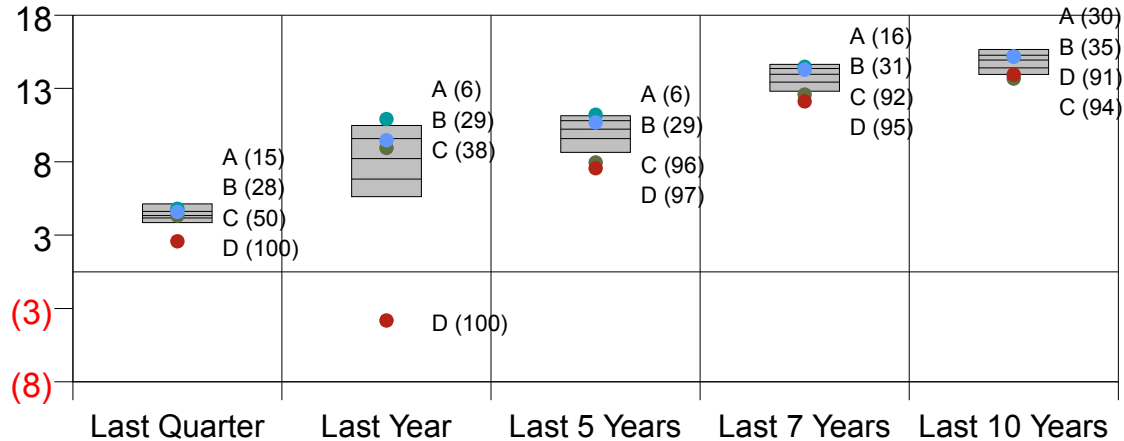
## U.S. Equity: One-Year Returns



# Public Fund Domestic Equity Performance

## Capitalization Impact

Domestic Equity Returns  
for Periods Ended June 30, 2019  
Group: Callan Public Fund Sponsor Database



	Last Quarter	Last Year	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	4.64	9.99	10.64	14.15	15.16
25th Percentile	4.13	9.09	10.32	13.87	14.78
Median	3.84	7.73	9.73	13.48	14.45
75th Percentile	3.68	6.32	9.09	12.94	13.91
90th Percentile	3.37	5.14	8.15	12.31	13.47

	A	B	C	D	
S&P:500	4.30	10.42	10.71	13.98	14.70
Russell:3000 Index	4.10	8.98	10.19	13.79	14.67
Russell:1000 Value	3.84	8.46	7.46	12.09	13.19
Russell:2000 Index	2.10	(3.31)	7.06	11.63	13.45

- Median Public Fund total domestic equity return is 7.73% for the year ending June 30.
- The smaller the capitalization bias, the poorer the overall domestic equity performance for the year.
- Over a 10 year horizon, large cap still outperforms but not by the magnitude experienced over shorter time periods.



# Non-U.S. Equity Performance

## Positive global equity returns despite muted sentiment

- U.S./China tariff fatigue and Brexit uncertainty continued
- European markets strong on declining bond yields
- Yen/euro strengthened vs. the dollar on negative interest rate policies; British pound weakened on growing no-deal Brexit concerns
- Cyclical returns, benefitting from declining U.S. interest rates (non-U.S./U.S. cyclicals highly correlated)
- Factor performance favored growth, specifically quality and profitability reflecting investors' cautious sentiment

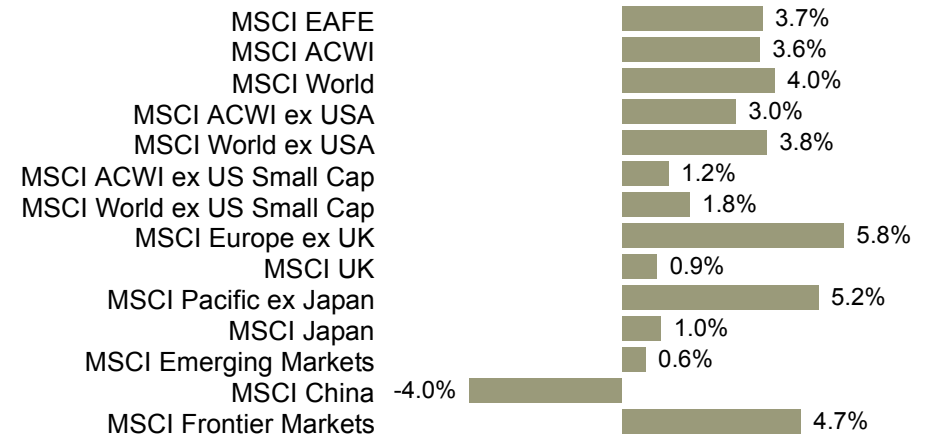
## China reversal hurt emerging market results

- China (-4.02%) faltered on renewed tariff concerns

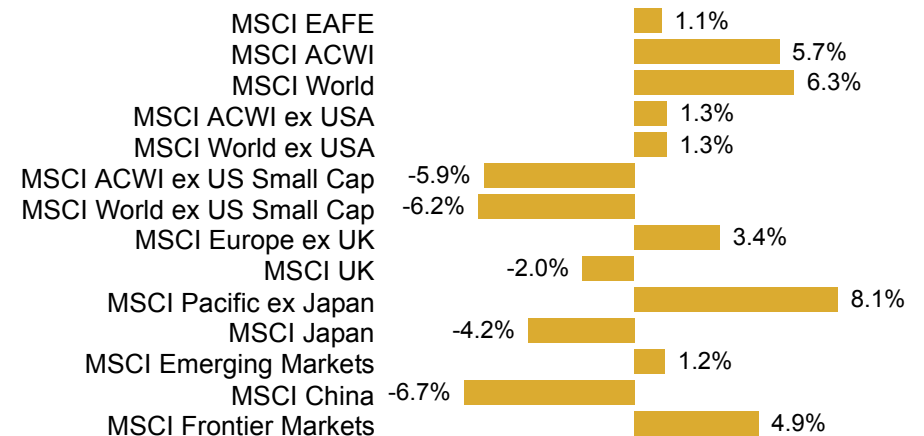
## Non-U.S. small cap lagged large cap

- Investors favored lower earnings risk

## Global Equity: Quarterly Returns



## Global Equity: Annual Returns

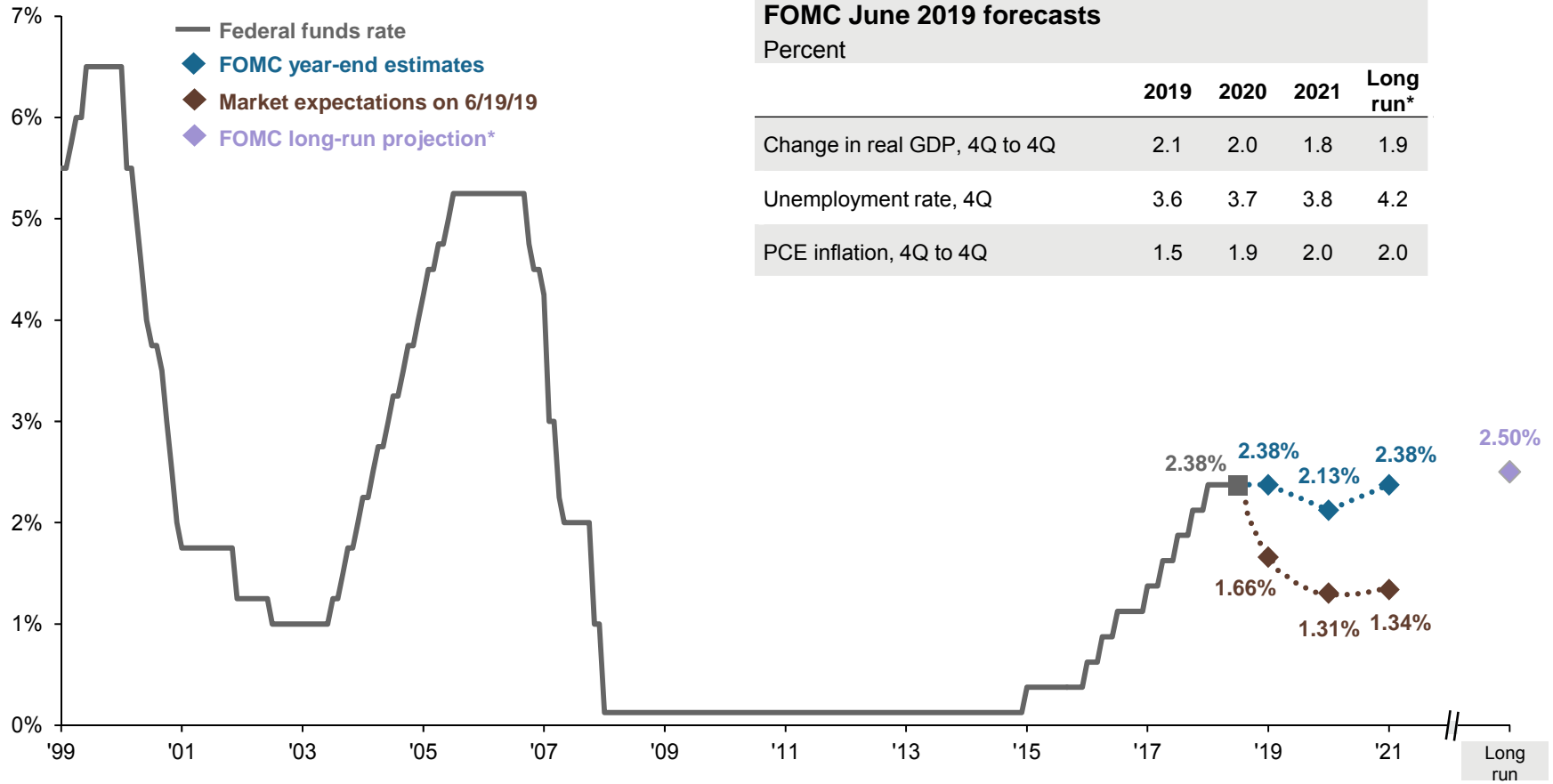


Source: MSCI

# The Fed and Interest Rates

## Federal funds rate expectations

FOMC and market expectations for the federal funds rate



## FOMC June 2019 forecasts

Percent

	2019	2020	2021	Long run*
Change in real GDP, 4Q to 4Q	2.1	2.0	1.8	1.9
Unemployment rate, 4Q	3.6	3.7	3.8	4.2
PCE inflation, 4Q to 4Q	1.5	1.9	2.0	2.0

Source: JP Morgan Guide to the Markets as of June 30, 2019

# U.S. Fixed Income Performance

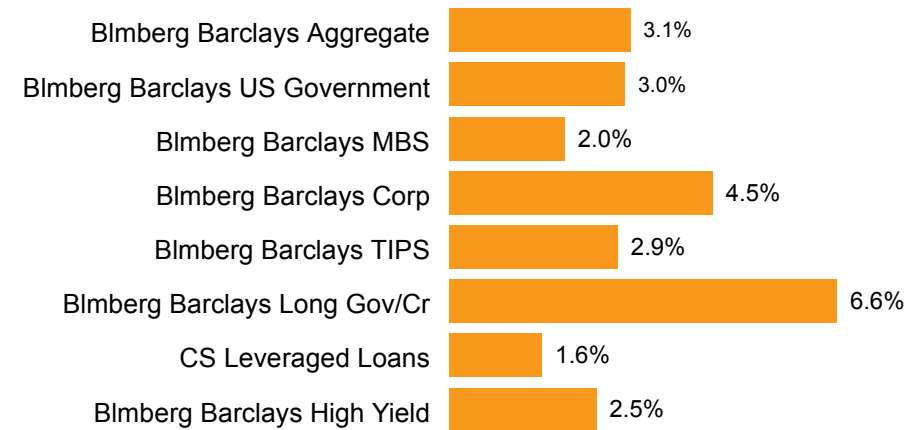
## Bonds rally on dovish Fed comments

- Fed policy and comments to “sustain the expansion” caused risk assets and U.S. Treasuries to rally.
- Treasuries rose +3.01% as yield curve shifted lower across maturities given expectations for Fed to ease.
- The overall shape of the yield curve did not materially change during the quarter.
- High yield corporates posted positive results but underperformed investment grade corporates, primarily due to the longer duration of the investment grade sector.

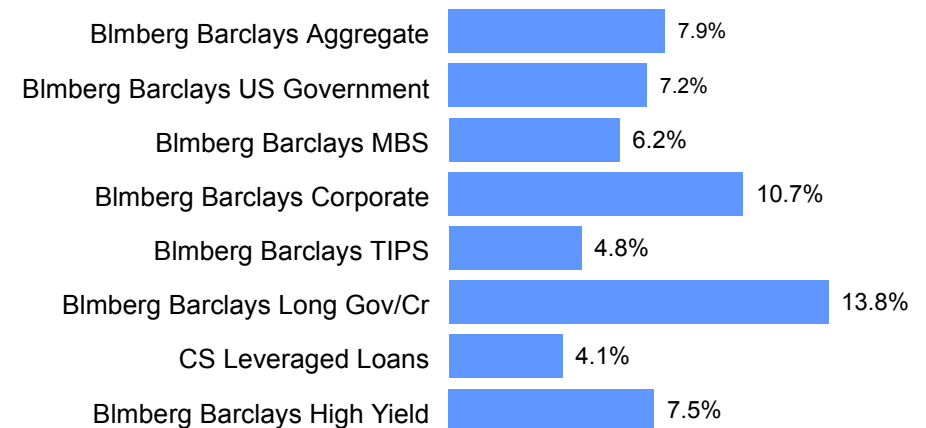
## Bank Loans participated but to lesser degree

- Bank loans participated in rally, but lagged IG and HY corporates as interest rates declined.
- Bank loans have less sensitivity to interest rates, but may have a spread duration profile similar to that of high yield bonds.
- Retail outflows remain unabated as the Fed’s dovish tone dampened enthusiasm for floating rate assets.

## U.S. Fixed Income: Quarterly Returns



## U.S. Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays, Credit Suisse

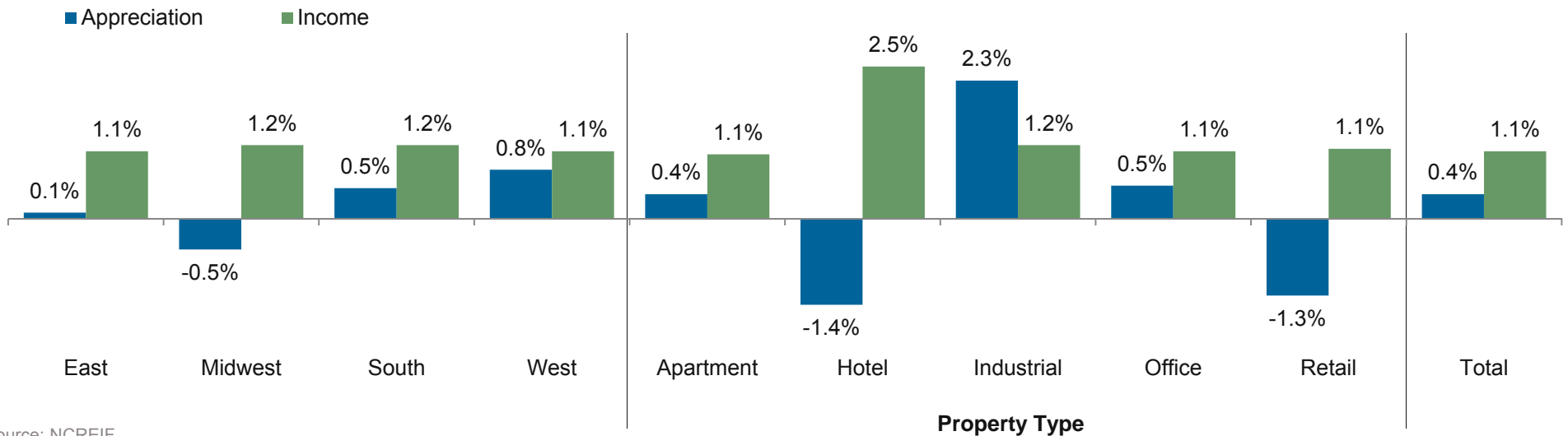
# U.S. Real Estate

## Returns continue to moderate

- U.S. core real estate returns continue to be driven by income, with limited appreciation this late in the cycle.
- Appreciation coming from net operating income (NOI) growth rather than further cap rate compression
- Industrial real estate continues to demonstrate the strongest performance.
- Retail sector showing signs of depreciation
- Defensive posturing becoming more prevalent

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
NCREIF ODCE	0.8%	5.5%	6.6%	8.8%	9.5%
Appreciation	0.0%	2.2%	3.2%	5.1%	5.6%
Income	0.8%	3.3%	3.4%	3.5%	3.7%
NCREIF Property Index	1.5%	6.5%	6.9%	8.8%	9.4%
Appreciation	0.4%	1.9%	2.2%	3.9%	4.3%
Income	1.1%	4.5%	4.6%	4.8%	5.0%

## NCREIF Property Index Returns by Region and Property Type



Source: NCREIF

Callan

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**Fund Specific Review**

## Endowments – Asset Allocation

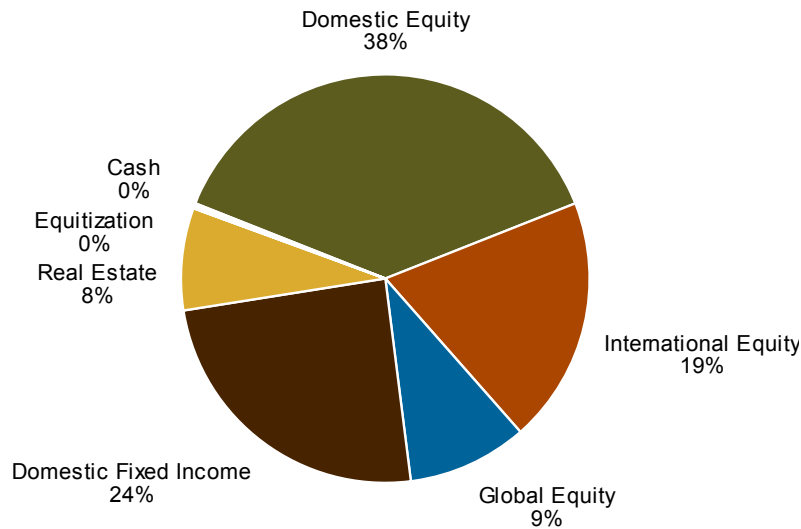
	June 30, 2019			March 31, 2019		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Total Equity</b>	<b>\$1,643,340,679</b>	<b>66.94%</b>	<b>\$(25,013,348)</b>	<b>\$76,410,316</b>	<b>\$1,591,943,711</b>	<b>67.60%</b>
<b>Domestic Equity</b>	<b>\$932,773,495</b>	<b>38.00%</b>	<b>\$(25,000,000)</b>	<b>\$38,858,052</b>	<b>\$918,915,442</b>	<b>39.02%</b>
<b>Large Cap</b>	<b>\$632,650,865</b>	<b>25.77%</b>	<b>\$(20,000,000)</b>	<b>\$23,111,829</b>	<b>\$629,539,036</b>	<b>26.73%</b>
NTGI S&P 500 SMA	276,086,378	11.25%	(10,000,000)	11,523,419	274,562,960	11.66%
LSV Asset Mgmt	115,711,496	4.71%	0	2,976,153	112,735,343	4.79%
Boston Partners	116,516,851	4.75%	0	3,503,003	113,013,848	4.80%
Sands Capital	124,336,140	5.06%	(10,000,000)	5,109,254	129,226,886	5.49%
<b>Mid Cap</b>	<b>\$195,895,300</b>	<b>7.98%</b>	<b>\$(5,000,000)</b>	<b>\$13,666,770</b>	<b>\$187,228,529</b>	<b>7.95%</b>
Sycamore Capital	95,526,902	3.89%	93,795,026	1,731,876	-	-
Systematic Financial	-0	(0.00%)	(93,795,026)	3,707,162	90,087,864	3.83%
Times Square	100,368,398	4.09%	(5,000,000)	8,227,733	97,140,665	4.13%
<b>Small Cap</b>	<b>\$104,227,330</b>	<b>4.25%</b>	<b>\$0</b>	<b>\$2,079,453</b>	<b>\$102,147,877</b>	<b>4.34%</b>
Barrow, Hanley	49,198,862	2.00%	0	1,099,053	48,099,808	2.04%
Eagle Asset Management	55,028,468	2.24%	0	980,400	54,048,068	2.30%
<b>International Equity</b>	<b>\$477,700,734</b>	<b>19.46%</b>	<b>\$(14,289)</b>	<b>\$26,094,492</b>	<b>\$451,620,531</b>	<b>19.18%</b>
Allianz	156,367	0.01%	(11,598)	3,377	164,588	0.01%
Schroder QEP Intl Value	213,830,247	8.71%	12,006,800	3,594,469	198,228,978	8.42%
SSgA MSCI EAFE	367,397	0.01%	(6,800)	(5,530)	379,727	0.02%
Vanguard	44,731,753	1.82%	(2,691)	1,415,371	43,319,073	1.84%
WCM	218,614,970	8.91%	(12,000,000)	21,086,805	209,528,164	8.90%
<b>Global Equity</b>	<b>\$232,866,451</b>	<b>9.49%</b>	<b>\$941</b>	<b>\$11,457,772</b>	<b>\$221,407,737</b>	<b>9.40%</b>
Aberdeen	228,331	0.01%	941	3,897	223,493	0.01%
Fiera	118,723,590	4.84%	0	6,949,227	111,774,363	4.75%
Wellington	113,845,556	4.64%	0	4,503,423	109,342,133	4.64%
Lazard	68,974	0.00%	0	1,225	67,749	0.00%
<b>Domestic Fixed Income</b>	<b>\$600,439,327</b>	<b>24.46%</b>	<b>\$25,000,000</b>	<b>\$17,946,935</b>	<b>\$557,492,392</b>	<b>23.67%</b>
DoubleLine	129,457,575	5.27%	0	4,070,510	125,387,066	5.32%
State Street Global Advisors	341,291,569	13.90%	25,000,000	10,097,680	306,193,889	13.00%
Western	129,690,182	5.28%	0	3,778,745	125,911,437	5.35%
<b>Real Estate</b>	<b>\$199,653,048</b>	<b>8.13%</b>	<b>\$0</b>	<b>\$2,900,605</b>	<b>\$196,752,444</b>	<b>8.36%</b>
RREEF America REIT II	100,647,179	4.10%	0	1,591,803	99,055,376	4.21%
UBS Trumbull Property	99,005,869	4.03%	0	1,308,802	97,697,068	4.15%
<b>Equitization</b>	<b>\$3,272,781</b>	<b>0.13%</b>	<b>\$0</b>	<b>\$1,431,177</b>	<b>\$1,841,605</b>	<b>0.08%</b>
<b>Cash</b>	<b>\$8,129,374</b>	<b>0.33%</b>	<b>\$1,282,532</b>	<b>\$58,339</b>	<b>\$6,788,503</b>	<b>0.29%</b>
<b>Total Plan ex Equitization</b>	<b>\$2,451,562,429</b>	<b>99.87%</b>	<b>\$1,269,184</b>	<b>\$97,316,195</b>	<b>\$2,352,977,050</b>	<b>99.92%</b>
<b>Total Plan</b>	<b>\$2,454,835,210</b>	<b>100.0%</b>	<b>\$1,269,184</b>	<b>\$98,747,371</b>	<b>\$2,354,818,655</b>	<b>100.0%</b>

**+\$100.0 million**

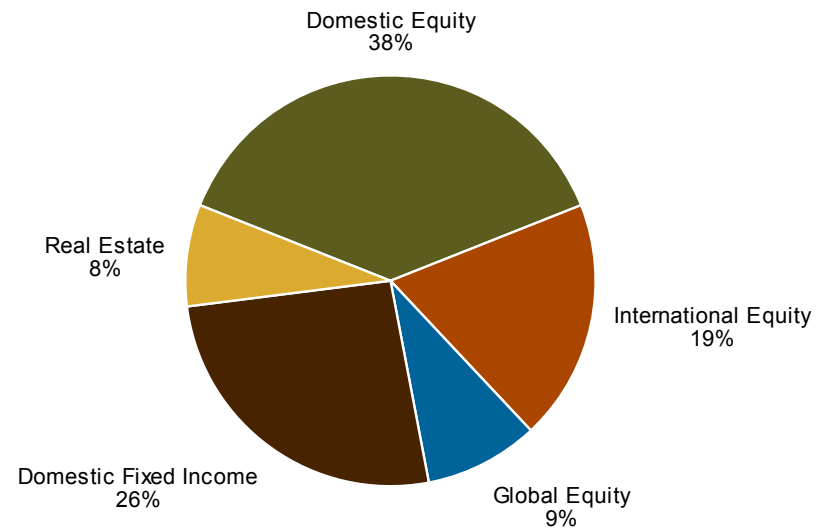
# Endowments – Asset Allocation

June 30, 2019

**Actual Asset Allocation**



**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	932,773	38.0%	38.0%	(0.0%)	(64)
International Equity	477,701	19.5%	19.0%	0.5%	11,282
Global Equity	232,866	9.5%	9.0%	0.5%	11,931
Domestic Fixed Income	600,439	24.5%	26.0%	(1.5%)	(37,818)
Real Estate	199,653	8.1%	8.0%	0.1%	3,266
Equitization	3,273	0.1%	0.0%	0.1%	3,273
Cash	8,129	0.3%	0.0%	0.3%	8,129
<b>Total</b>	<b>2,454,835</b>	<b>100.0%</b>	<b>100.0%</b>		

# Endowments – Total Fund Performance

June 30, 2019

## Performance vs Callan Public Fund Sponsor Database (Gross)



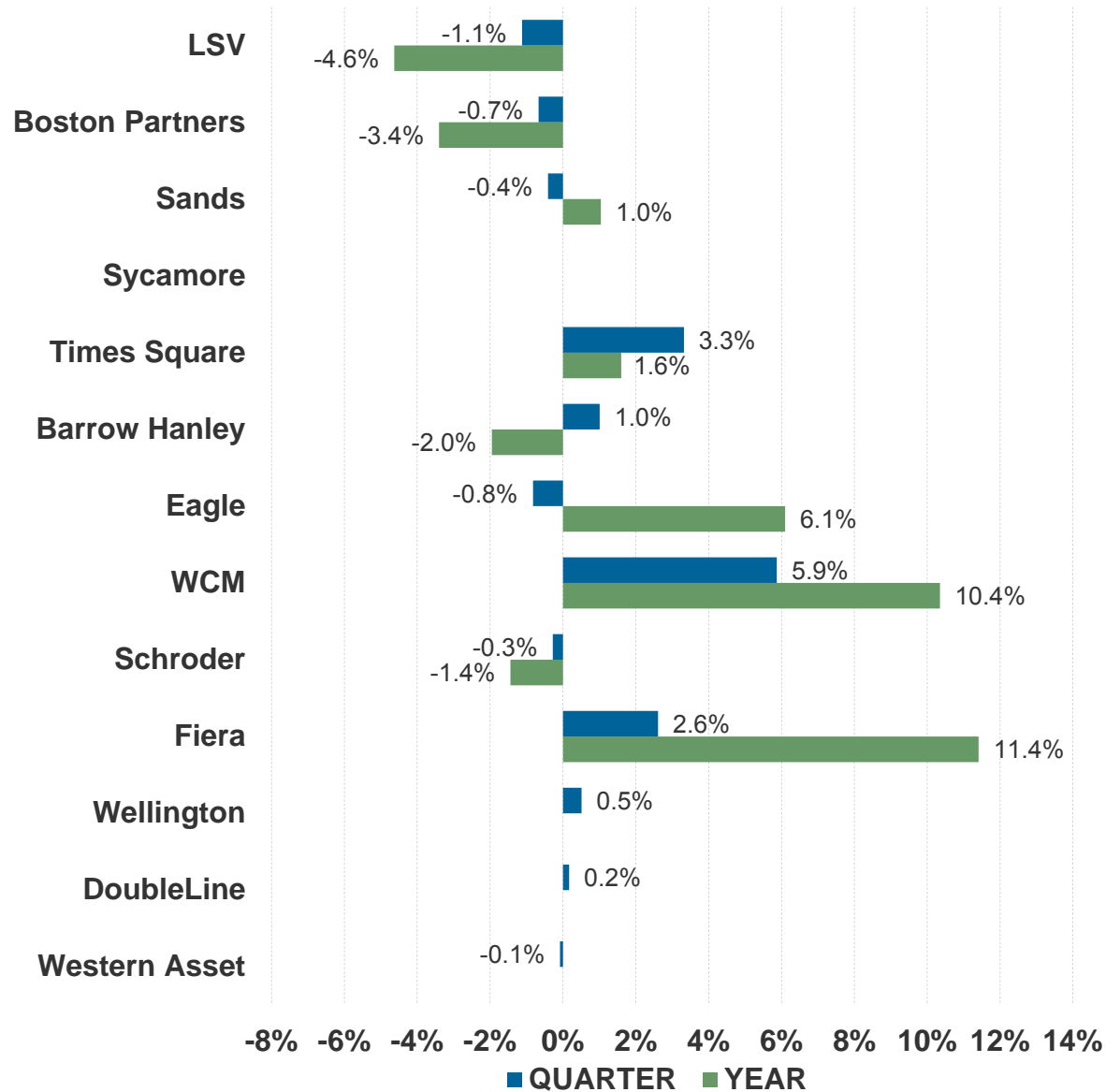
10th Percentile	3.79	7.67	10.33	7.09	9.52	10.42	7.56	
25th Percentile	3.51	6.85	9.57	6.50	8.90	9.85	7.26	
Median	3.27	6.19	8.91	5.96	8.11	9.20	6.74	
75th Percentile	2.98	5.41	8.21	5.44	7.44	8.34	6.34	
90th Percentile	2.74	4.66	7.44	4.72	6.79	7.60	5.94	
Total Plan	● A	4.23	7.60	10.12	6.56	9.32	10.52	7.82
Secondary Benchmark	■ B	3.43	6.76	9.31	6.14	8.67	9.80	7.24
Total Plan Target	▲	3.48	7.21	9.45	6.40	8.90	9.86	6.88

- For the quarter, outperformed the target by 75 basis points, ranking 1<sup>st</sup> percentile.
- For the fiscal year, the Fund gained 7.6%.
- Fund ranked 11<sup>th</sup> and 8<sup>th</sup> percentile against the Public Fund and Endowment/Foundation databases respectively for the fiscal year.



# Dashboard – All Managers

## % Deviation from Benchmark



## Quarter:

Below Benchmark:

- LSV
- Boston Partners
- Sands
- Barrow Hanley
- Eagle
- Schroder
- Western Asset

## Year:

Below Benchmark:

- LSV
- Boston Partners
- Barrow Hanley
- Schroder

\*Notes: WCM is compared to the MSCI ACWI ex-U.S. Growth Index. Schroder is compared to the MSCI ACWI ex-U.S. Value Index. Sycamore does not yet have a full quarter of performance history in the Endowment Fund. Wellington, DoubleLine, and Western Asset do not yet have a full year of performance history in the Endowment Fund.

# Endowments – U.S. Equity Manager Performance

June 30, 2019

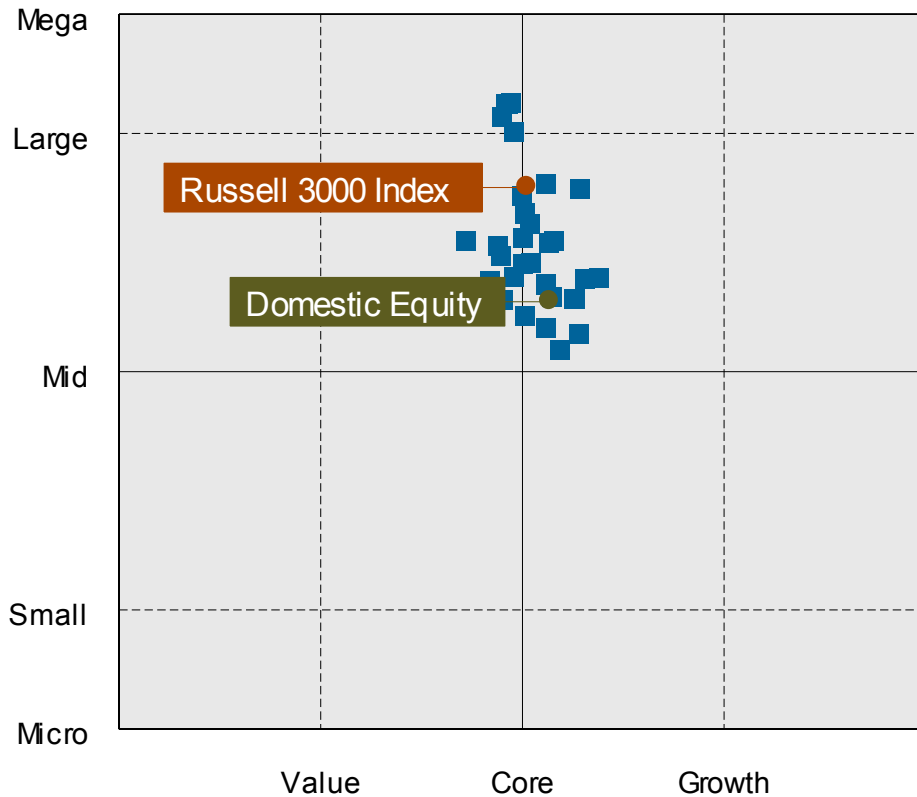
		Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	
<b>+0.3%</b>	Domestic Equity	Russell 3000	4.35%	7.61%	14.88%	9.90%	15.46%
			4.10%	8.98%	14.02%	10.19%	14.67%
<b>-0.5%</b>	Large Cap	Russell 1000	3.76%	8.63%	15.05%	10.34%	15.45%
			4.25%	10.02%	14.15%	10.45%	14.77%
	Large Cap Core	NTGI S&P 500 SMA	4.26%	10.36%	14.17%	10.70%	-
		S&P 500	4.30%	10.42%	14.19%	10.71%	14.70%
	Large Cap Value	LSV Asset Management	2.94%	4.47%	11.72%	7.70%	14.06%
		Boston Partners	2.72%	3.83%	11.47%	7.69%	13.97%
		Russell 1000 Value	3.17%	5.06%	11.96%	7.69%	-
	Large Cap Growth	Russell 1000 Growth	3.84%	8.46%	10.19%	7.46%	13.19%
		Sands Capital	4.23%	12.60%	22.80%	14.63%	18.52%
		Russell 1000 Growth	4.64%	11.56%	18.07%	13.39%	16.28%
<b>+3.4%</b>	Mid Cap	Russell MidCap Index	7.48%	9.21%	14.39%	8.75%	14.65%
		Russell MidCap Value Idx	4.13%	7.83%	12.16%	8.63%	15.16%
		Times Square	3.19%	3.68%	8.95%	6.72%	14.56%
		Russell MidCap Growth Idx	8.72%	15.54%	16.90%	11.34%	15.90%
	Small Cap	Russell 2000	5.40%	13.94%	16.49%	11.10%	16.02%
		Russell 2000	2.15%	(1.26%)	14.48%	9.06%	16.83%
		Barrow, Hanley	2.10%	(3.31%)	12.30%	7.06%	13.45%
		Russell 2000 Value	2.39%	(8.19%)	11.28%	6.54%	16.38%
		Eagle Asset Management	1.38%	(6.24%)	9.81%	5.39%	12.40%
<b>+0.1%</b>		Russell 2000 Growth	1.93%	5.61%	17.48%	11.48%	16.76%
			2.75%	(0.49%)	14.69%	8.63%	14.41%

- Outperformance for the quarter came primarily from mid cap and to a lesser extent, small cap.
- For the fiscal year, mid and small cap equity outperformed their benchmarks while large cap lagged.

# U.S. Equity Style Map

(\$932.8 Million; 38.0% of the Portfolio)

Style Map vs Pub Pln- Dom Equity Holdings as of June 30, 2019



- U.S. Equity composite exhibits a modest growth and smaller capitalization bias.
- Index performance for quarter: large cap led mid and small cap.
- Russell 1000 was the strongest market segment for the last year.

Returns  
for Periods Ended June 30, 2019

	Last Quarter	Last 2 Quarters	Last Year	Last 5 Years	Last 10 Years
Russell:1000 Index	4.2	18.8	10.0	10.5	14.8
Russell:Midcap Index	4.1	21.3	7.8	8.6	15.2
Russell:2000 Index	2.1	17.0	(3.3)	7.1	13.4

# Endowments – International, Fixed Income & RE Performance

June 30, 2019

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>International Equity</b>	<b>5.78%</b>	<b>5.81%</b>	<b>10.96%</b>	<b>4.00%</b>	<b>7.12%</b>
International Equity Target (1)	2.98%	1.29%	9.39%	2.16%	6.54%
MSCI ACWI x US (Net)	2.98%	1.29%	9.39%	2.16%	6.54%
Vanguard	3.27%	-	-	-	-
MSCI EAFE - Net	3.68%	1.08%	9.11%	2.25%	6.90%
WCM	10.42%	13.38%	15.18%	10.25%	-
MSCI ACWI ex US Growth	4.55%	3.03%	10.21%	4.38%	7.98%
Schroder	1.58%	(0.88%)	-	-	-
MSCI ACWI ex US Value	1.86%	0.56%	9.58%	0.87%	6.02%
<b>Global Equity</b>	<b>5.17%</b>	<b>9.76%</b>	<b>10.86%</b>	<b>4.99%</b>	<b>-</b>
Fiera	6.22%	17.15%	-	-	-
Wellington	4.12%	-	-	-	-
MSCI ACWI - Net	3.61%	5.74%	11.62%	6.16%	10.15%
<b>Domestic Fixed Income</b>	<b>3.08%</b>	<b>7.90%</b>	<b>2.42%</b>	<b>2.87%</b>	<b>3.88%</b>
State Street Global Advisors	3.07%	7.50%	2.30%	2.80%	-
SSGA Benchmark (2)	3.02%	7.42%	2.28%	2.77%	3.84%
DoubleLine	3.25%	-	-	-	-
Western	3.00%	-	-	-	-
Blmbg Aggregate	3.08%	7.87%	2.31%	2.95%	3.90%
85% Agg/ 15% TIPS	3.05%	7.41%	2.28%	2.77%	3.84%
<b>Real Estate</b>	<b>1.47%</b>	<b>6.78%</b>	<b>6.64%</b>	<b>-</b>	<b>-</b>
RREEF America REIT II	1.61%	6.67%	7.49%	-	-
NCREIF ODCE Value Wt Lag	1.42%	7.52%	7.97%	-	-
UBS Trumbull Property Income	1.34%	6.97%	-	-	-
Hybrid Debt Index Lag	0.90%	4.71%	4.47%	5.64%	5.08%
<b>Cash</b>	<b>0.58%</b>	<b>2.16%</b>	<b>1.23%</b>	<b>0.76%</b>	<b>0.63%</b>
3-month Treasury Bill	0.64%	2.31%	1.38%	0.87%	0.49%
<b>Total Plan ex Equitization</b>	<b>4.18%</b>	<b>7.57%</b>	<b>10.06%</b>	<b>6.42%</b>	<b>10.33%</b>
<b>Total Plan</b>	<b>4.23%</b>	<b>7.60%</b>	<b>10.12%</b>	<b>6.56%</b>	<b>10.52%</b>
Total Plan Target	3.48%	7.21%	9.45%	6.40%	9.86%
Secondary Benchmark	3.43%	6.76%	9.31%	6.14%	9.80%
CPI All Urban Consumers	0.76%	1.65%	2.05%	1.45%	1.73%

- International equity outperformed the target for the quarter and fiscal year.
- Global equity topped the benchmark for the quarter and year.
- Fixed income led the 85% Agg / 15% TIPS benchmark over both the quarter and year.
  - The new active core plus managers have one full quarter of performance
- Real estate lagged the ODCE index over the fiscal year.

\*Current Quarter Target = 38.0% Russell 3000 Index, 26.0% Blmbg Aggregate, 19.0% MSCI ACWI ex US (Net), 9.0% MSCI ACWI (Net), and 8.0% NCREIF NFI-ODCE Val Wt Gr lagged 3 months.

\*\*Secondary Benchmark = 26.2% Russell 1000 Index, 22.0% Blmbg Aggregate, 19% MSCI ACWI ex US (Net), 9% MSCI ACWI (Net), 7.6% Russell MidCap Index, 8.0% NCREIF NFI-ODCE Val Wt Gr lagged 3 months, 4.2% Russell 2000 Index, and 4.0% Blmbg US TIPS.

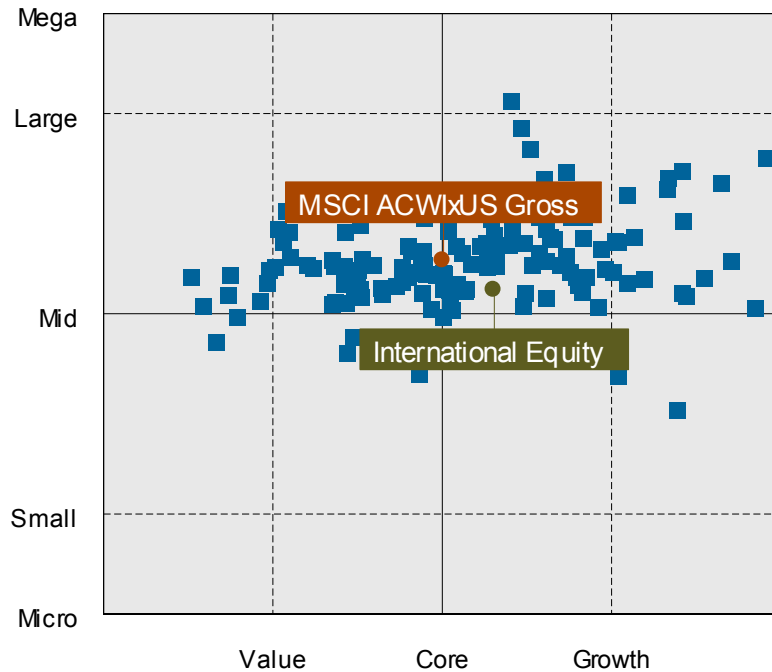
(1) International Equity Target = 100% MSCI ACWI x US (net). Prior to 6/30/2008 = 100% MSCI EAFE

(2) SSGA Benchmark = 73% Agg/ 27% TIPS. Prior to 12/31/18 = 85% Agg/ 15% TIPS

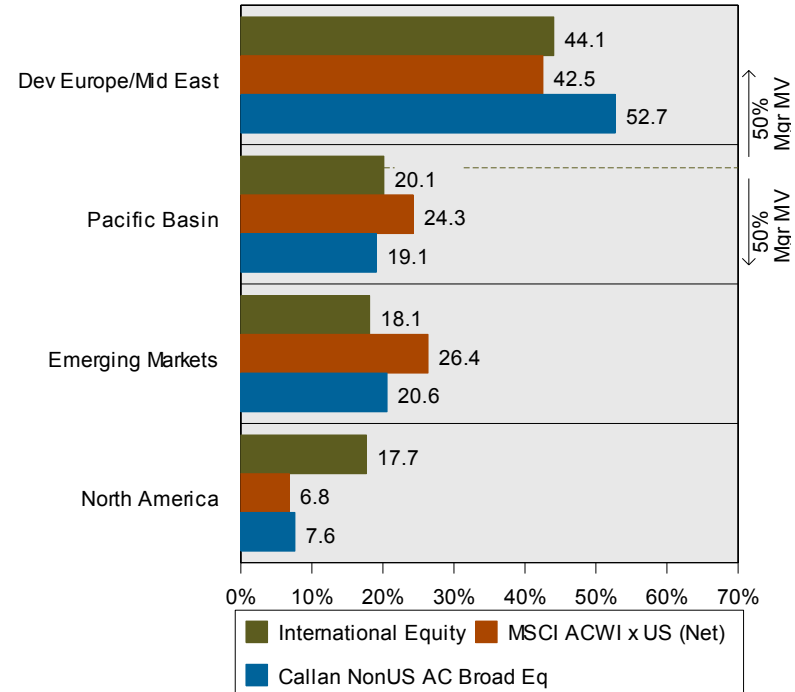
# International Equity

(\$477.7 Million; 19.5% of the Portfolio)

Style Map vs Callan NonUS Eq Holdings as of June 30, 2019



Regional Allocation June 30, 2019



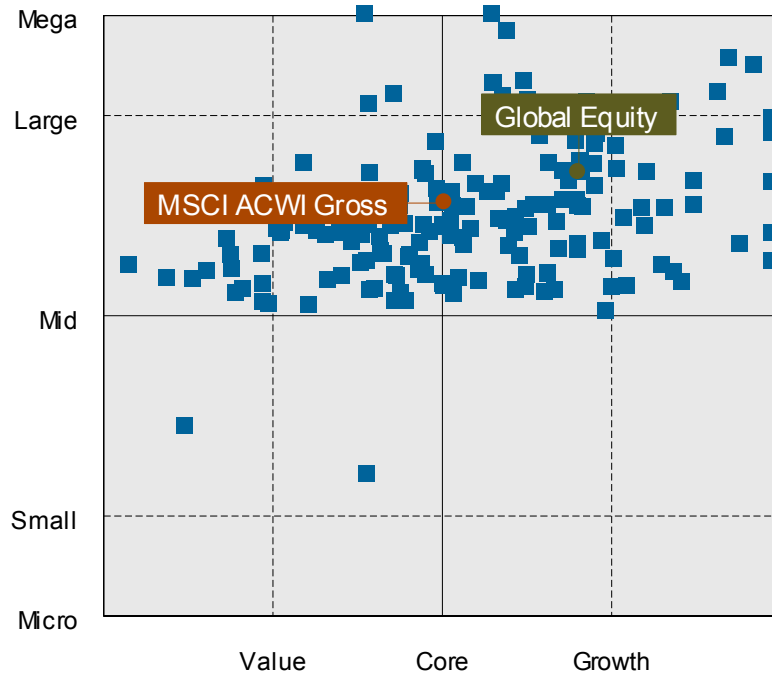
- International composite exhibits a growth bias relative to the Index.
- Portfolio's regional exposure is tilted toward Developed Europe/Middle East and away from Emerging Markets (WCM).

Note: Even though the securities trade on a U.S. exchange, WCM's historical allocation to U.S. holdings have been reassigned to the country of domicile.

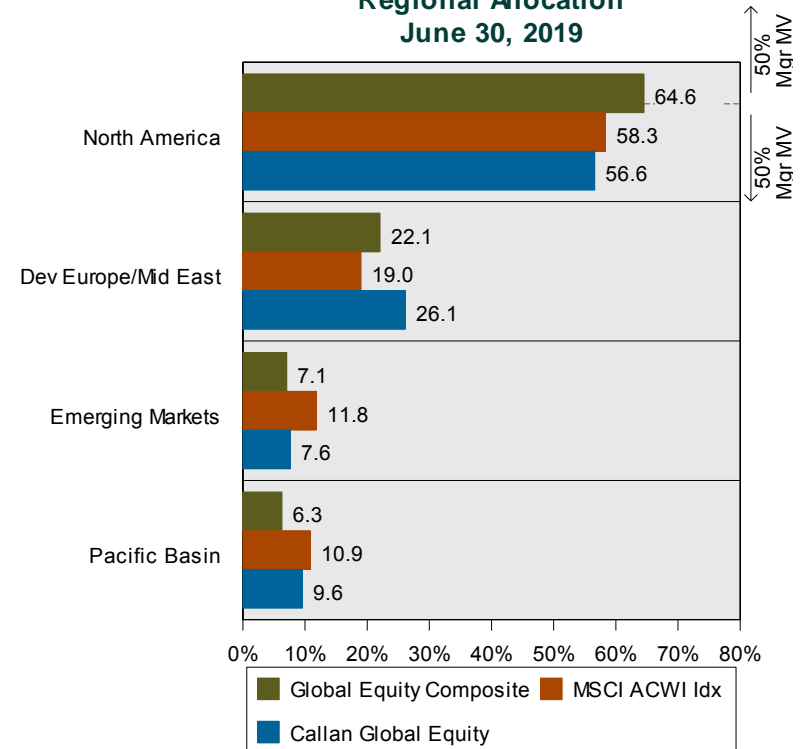
# Global Equity

(\$232.9 Million; 9.5% of the Portfolio)

Style Map vs Callan Global Equity Holdings as of June 30, 2019



Regional Allocation June 30, 2019



- Global composite exhibits a growth bias relative to the Index.
- These characteristics now reflect Wellington replacing Aberdeen.

## SIF – Asset Allocation

	June 30, 2019			March 31, 2019		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Total Equity</b>	<b>\$111,069,375</b>	<b>13.33%</b>	<b>\$1,328</b>	<b>\$4,383,576</b>	<b>\$106,684,471</b>	<b>13.16%</b>
<b>Domestic Equity</b>	<b>\$77,479,810</b>	<b>9.30%</b>	<b>\$1,342</b>	<b>\$3,445,228</b>	<b>\$74,033,241</b>	<b>9.13%</b>
<b>Large Cap</b>	<b>\$53,843,694</b>	<b>6.46%</b>	<b>\$1,342</b>	<b>\$2,210,220</b>	<b>\$51,632,132</b>	<b>6.37%</b>
NTGI S&P 500	53,843,694	6.46%	1,342	2,210,220	51,632,132	6.37%
<b>Mid Cap</b>	<b>\$15,562,803</b>	<b>1.87%</b>	<b>\$0</b>	<b>\$1,067,918</b>	<b>\$14,494,885</b>	<b>1.79%</b>
Systematic Financial	0	0.00%	(6,987,321)	276,103	6,711,218	0.83%
Sycamore Capital	7,114,648	0.85%	6,987,321	127,326	-	-
Times Square	8,448,155	1.01%	0	664,488	7,783,667	0.96%
<b>Small Cap</b>	<b>\$8,073,314</b>	<b>0.97%</b>	<b>\$0</b>	<b>\$167,090</b>	<b>\$7,906,223</b>	<b>0.98%</b>
Barrow, Hanley	3,904,092	0.47%	0	89,626	3,814,466	0.47%
Eagle Asset Management	4,169,222	0.50%	0	77,465	4,091,757	0.50%
<b>International Equity</b>	<b>\$33,589,565</b>	<b>4.03%</b>	<b>\$(14)</b>	<b>\$938,348</b>	<b>\$32,651,231</b>	<b>4.03%</b>
Vanguard FTSE ex-US	33,589,565	4.03%	(14)	938,348	32,651,231	4.03%
<b>Domestic Fixed Income</b>	<b>\$721,922,243</b>	<b>86.67%</b>	<b>\$0</b>	<b>\$17,844,431</b>	<b>\$704,077,812</b>	<b>86.84%</b>
NTGI Blended Fixed Income	649,692,439	77.99%	0	15,826,556	633,865,882	78.18%
NTGI TIPS	72,229,804	8.67%	0	2,017,874	70,211,929	8.66%
<b>Cash</b>	<b>\$1,006</b>	<b>0.00%</b>	<b>\$(1,328)</b>	<b>\$6</b>	<b>\$2,328</b>	<b>0.00%</b>
<b>Total Plan</b>	<b>\$832,992,624</b>	<b>100.0%</b>	<b>\$0</b>	<b>\$22,228,013</b>	<b>\$810,764,611</b>	<b>100.0%</b>

**+\$22.2 Million**

# SIF – Manager Performance

June 30, 2019

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Total Equity</b>	<b>4.11%</b>	<b>6.62%</b>	<b>12.68%</b>	<b>8.07%</b>	<b>12.92%</b>
<b>Domestic Equity</b>	<b>4.65%</b>	<b>8.85%</b>	<b>14.24%</b>	<b>10.08%</b>	<b>14.82%</b>
Russell 3000	4.10%	8.98%	14.02%	10.19%	14.67%
<b>Large Cap</b>	<b>4.28%</b>	<b>10.37%</b>	<b>14.14%</b>	<b>10.69%</b>	<b>14.60%</b>
Russell 1000	4.25%	10.02%	14.15%	10.45%	14.77%
NTGI S&P 500	4.28%	10.37%	14.14%	10.69%	14.60%
S&P 500	4.30%	10.42%	14.19%	10.71%	14.70%
<b>Mid Cap</b>	<b>7.37%</b>	<b>8.99%</b>	<b>14.25%</b>	<b>8.68%</b>	<b>14.58%</b>
Russell Mid Cap	4.13%	7.83%	12.16%	8.63%	15.16%
Russell MidCap Value	3.19%	3.68%	8.95%	6.72%	14.56%
Times Square	8.54%	15.05%	16.64%	11.20%	15.84%
Russell MidCap Growth	5.40%	13.94%	16.49%	11.10%	16.02%
<b>Small Cap</b>	<b>2.11%</b>	<b>(1.08%)</b>	<b>14.55%</b>	<b>9.09%</b>	<b>16.64%</b>
Russell 2000	2.10%	(3.31%)	12.30%	7.06%	13.45%
Barrow, Hanley	2.35%	(8.25%)	11.21%	6.49%	16.15%
Russell 2000 Value	1.38%	(6.24%)	9.81%	5.39%	12.40%
Eagle Asset Management	1.89%	5.41%	17.43%	11.45%	16.66%
Russell 2000 Growth	2.75%	(0.49%)	14.69%	8.63%	14.41%
<b>International Equity</b>	<b>2.87%</b>	<b>1.40%</b>	<b>9.18%</b>	<b>2.44%</b>	<b>6.75%</b>
Vanguard FTSE ex-US	2.87%	1.40%	9.18%	2.44%	6.75%
MSCI ACWI x US (Net)	2.98%	1.29%	9.39%	2.16%	6.54%
<b>Domestic Fixed Income</b>	<b>2.53%</b>	<b>6.43%</b>	<b>1.96%</b>	<b>2.34%</b>	<b>3.21%</b>
Domestic Fixed Income Target**	2.56%	6.46%	1.98%	2.29%	3.11%
NTGI Blended Fixed Income	2.50%	6.61%	1.94%	2.40%	3.15%
Blended Benchmark	2.53%	6.65%	1.97%	2.35%	3.05%
NTGI TIPS	2.87%	4.87%	2.10%	1.78%	3.68%
Blmbg US TIPS	2.86%	4.84%	2.08%	1.76%	3.64%
<b>Total Plan</b>	<b>2.74%</b>	<b>6.46%</b>	<b>3.36%</b>	<b>3.11%</b>	<b>4.47%</b>
Total Plan Target	2.78%	6.68%	3.39%	3.07%	4.36%
CPI All Urban Consumers	0.76%	1.65%	2.05%	1.45%	1.73%

## For the Quarter:

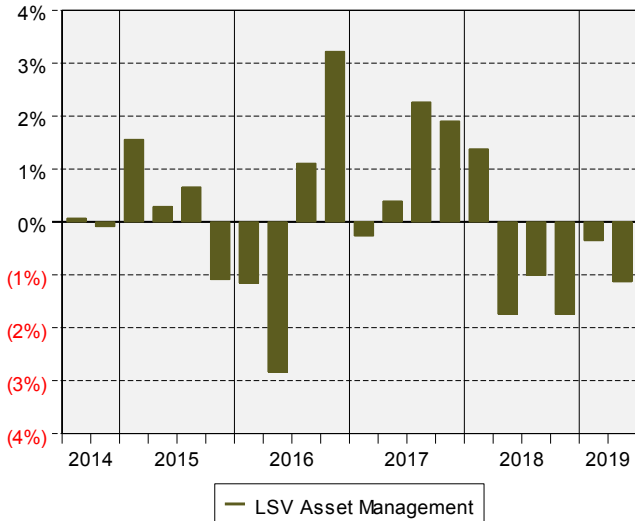
- Equities added to total plan performance, returning 4.1% (13.3% of portfolio).
- Blended Fixed Income posted a gain as falling rates provided a tailwind to performance.
- The Total Plan underperformed the Target by four basis points for the quarter and 22 basis points for the year.
- Total Plan is ahead of Target and CPI over the five- and ten-year time periods.

\*\* Domestic fixed income target = 35% Blmbg Int Gov/Credit, 35% Blmbg Agg, 20% Blmbg Treasury 1-3 Yr, 10% Blmbg US TIPS.



# LSV – Large Cap Value (\$115.7 Million; 4.7%)

Relative Return vs Russell 1000 Value Index



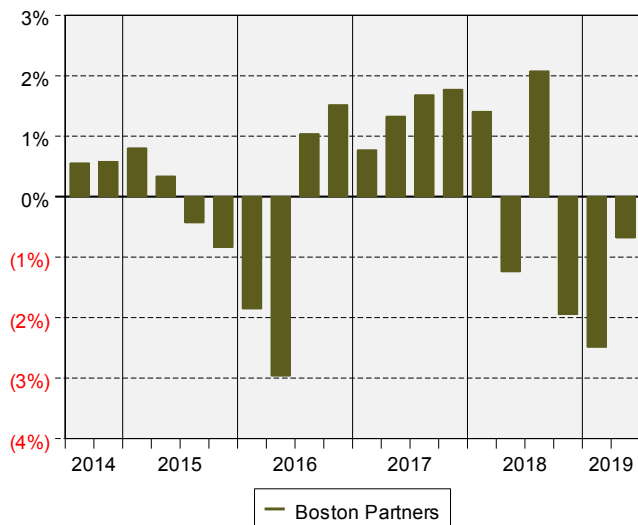
Attribution Effects by Sector vs. Russell 1000 Value Index  
One Quarter Ended June 30, 2019

Sector	Manager Eff Weight	Index Eff Weight	Manager Return	Index Return	Sector Concentration	Security Selection	Asset Allocation
Communication Services	5.73%	6.85%	5.32%	5.96%	(0.04)%	(0.03)%	-
Consumer Discretionary	9.14%	5.33%	(1.17)%	3.59%	(0.02)%	(0.44)%	-
Consumer Staples	5.64%	7.88%	(2.39)%	2.52%	0.03%	(0.29)%	-
Energy	7.30%	9.34%	(0.60)%	(3.65)%	0.15%	0.21%	-
Financials	25.76%	22.49%	8.54%	7.68%	0.10%	0.21%	-
Health Care	10.69%	15.01%	0.62%	2.88%	0.04%	(0.25)%	-
Industrials	10.89%	7.91%	4.30%	6.64%	0.10%	(0.25)%	-
Information Technology	14.40%	9.78%	0.48%	3.17%	(0.03)%	(0.43)%	-
Materials	5.41%	3.75%	(1.05)%	4.43%	0.08%	(0.35)%	-
Real Estate	2.42%	5.16%	1.09%	1.04%	0.07%	0.00%	-
Utilities	2.62%	6.50%	1.34%	3.43%	0.00%	(0.06)%	-
Non Equity	0.93%	0.00%	-	-	-	-	(0.02)%
Total	-	-	2.72%	3.84%	0.49%	(1.68)%	(0.02)%

- After trailing the Russell 1000 Value Index for five straight quarters, LSV underperformed the benchmark by 463 basis points for the fiscal year (3.8% vs. 8.5%).
- In the most recent quarter, LSV trailed the index by 112 basis points (2.7% vs. 3.8%).
- The portfolio's deep value positioning detracted as stocks which are cheap on measures such as earnings-to-price or book-to-price underperformed the more expensive stocks within the value index.

## Boston Partners – Large Cap Value (\$116.5 Million; 4.8%)

Relative Return vs Russell 1000 Value Index



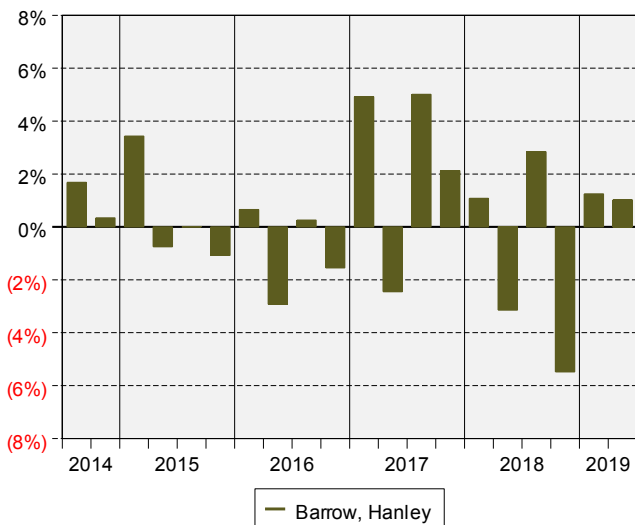
Attribution Effects by Sector vs. Russell 1000 Value Index  
One Quarter Ended June 30, 2019

Sector	Manager Eff Weight	Index Eff Weight	Manager Return	Index Return	Sector Concentration	Security Selection	Asset Allocation
Communication Services	9.56%	6.85%	0.95%	5.96%	0.05%	(0.50)%	-
Consumer Discretionary	5.94%	5.33%	1.54%	3.59%	(0.01)%	(0.13)%	-
Consumer Staples	5.29%	7.88%	7.05%	2.52%	0.03%	0.24%	-
Energy	10.02%	9.34%	(2.88)%	(3.65)%	(0.03)%	0.08%	-
Financials	23.25%	22.49%	8.67%	7.68%	0.03%	0.23%	-
Health Care	16.89%	15.01%	2.48%	2.88%	0.02%	(0.13)%	-
Industrials	11.63%	7.91%	3.31%	6.64%	0.10%	(0.38)%	-
Information Technology	8.54%	9.78%	0.82%	3.17%	0.00%	(0.19)%	-
Materials	6.04%	3.75%	2.04%	4.43%	0.02%	(0.17)%	-
Real Estate	2.17%	5.16%	(3.38)%	1.04%	0.08%	(0.10)%	-
Utilities	0.67%	6.50%	8.85%	3.43%	0.02%	0.04%	-
Non Equity	2.57%	0.00%	-	-	-	-	(0.06)%
Total	-	-	3.17%	3.84%	0.31%	(0.99)%	(0.06)%

- After trailing the Russell 1000 Value Index for three straight quarters, Boston Partners underperformed the benchmark by 340 basis points for the fiscal year (5.1% vs. 8.5%).
- In the most recent quarter, Boston Partners trailed the index by 67 basis points (3.2% vs. 3.8%).
- Underperformance in the current quarter was driven by stock selection, primarily in Communication Services, Industrials, and Information Technology.

## Barrow Hanley – Small Cap Value (\$49.2 Million; 2.0%)

Relative Return vs Russell 2000 Value Index



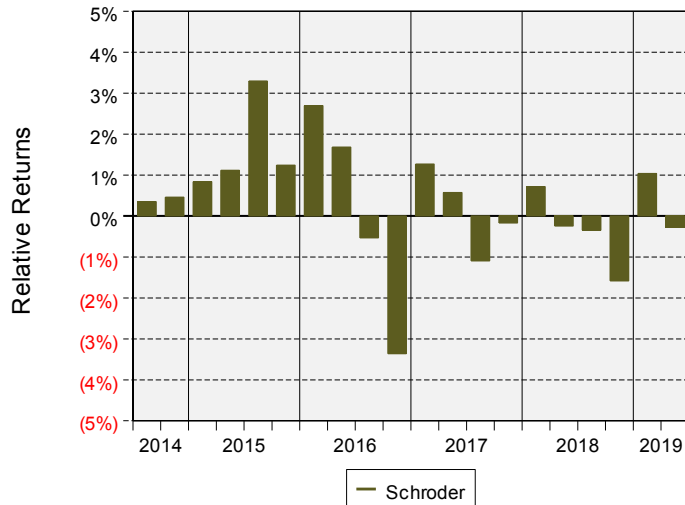
Attribution Effects by Sector vs. Russell 2000 Value Index  
One Quarter Ended December 31, 2018

Sector	Manager Eff Weight	Index Eff Weight	Manager Return	Index Return	Sector Concentration	Security Selection	Asset Allocation
Communication Services	0.00%	3.10%	0.00%	(18.87)%	(0.00)%	0.00%	-
Consumer Discretionary	5.46%	9.58%	(30.27)%	(18.99)%	0.06%	(0.57)%	-
Consumer Staples	4.75%	2.62%	(16.52)%	(14.23)%	0.07%	(0.11)%	-
Energy	2.28%	6.86%	(45.86)%	(42.00)%	1.11%	(0.09)%	-
Financials	16.11%	28.82%	(25.16)%	(15.73)%	(0.38)%	(1.47)%	-
Health Care	4.67%	4.81%	(32.83)%	(29.50)%	0.01%	(0.18)%	-
Industrials	30.28%	11.83%	(22.72)%	(19.72)%	(0.21)%	(0.96)%	-
Information Technology	26.12%	10.33%	(18.11)%	(14.76)%	0.62%	(0.83)%	-
Materials	10.34%	4.26%	(37.85)%	(27.12)%	(0.58)%	(1.21)%	-
Real Estate	0.00%	11.38%	0.00%	(15.10)%	(0.41)%	0.00%	-
Utilities	0.00%	6.42%	0.00%	(2.23)%	(1.00)%	0.00%	-
Non Equity	3.09%	0.00%	-	-	-	-	0.64%
Total	-	-	(24.15)%	(18.67)%	(0.69)%	(5.42)%	0.64%

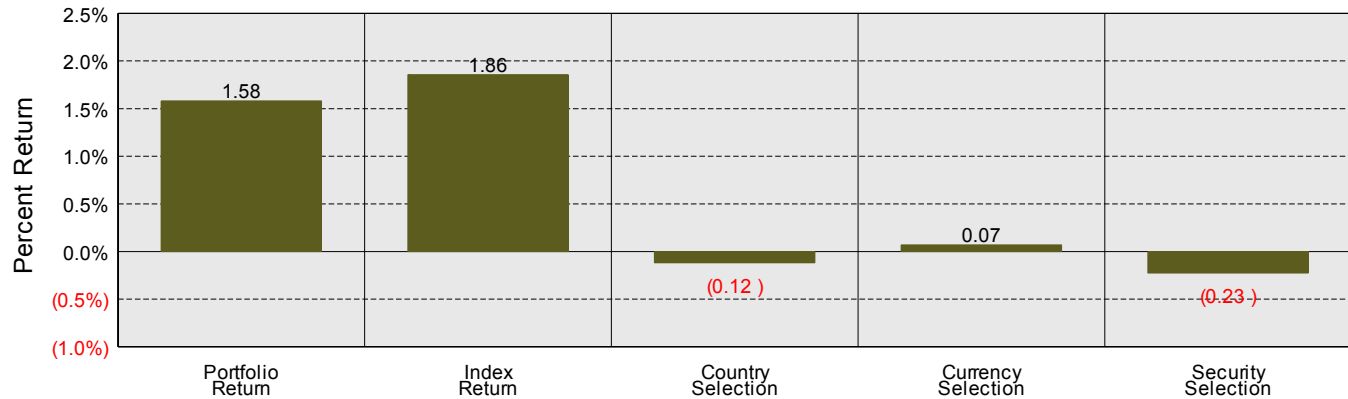
- Despite outperforming the Russell 2000 Value Index in three of the last four quarters, Barrow Hanley underperformed the benchmark by 195 basis points for the fiscal year (-8.2% vs. -6.2%).
- Barrow Hanley trailed the Russell 2000 Value Index by 548 basis points (-24.2% vs. -18.7%) in the quarter ending December 31, 2018, and the following commentary pertains to that quarter.
- As the small cap value market fell sharply through the quarter, there was both strong demand for defensive positions and heavy selling of anything connected to rising trade tensions or perceived excessive levels of debt.
  - In this environment, the strategy's long-standing avoidance of defensive sectors such as Utilities, Real Estate, and Communications Services, resulted in a combined 1.40% penalty to relative performance.
- Five holdings in particular (Ferroglobe, Texas Capital Bancshares, Colfax Corp, Invacare, and Callon Petroleum) were dragged down by association with tariffs and leverage.

## Schroder – Non-U.S. Value (\$213.8 Million; 8.7%)

Relative Return vs MSCI ACWIxUS Val Gross



Attribution Factors for Quarter Ended June 30, 2019



- After trailing the MSCI ACWI ex US Value benchmark in three of the last four quarters, Schroder underperformed the benchmark by 144 basis points for the fiscal year (-0.9% vs. 0.6%).
- In the most recent quarter, Schroder trailed the index by 28 basis points (1.6% vs. 1.9%).
- Underperformance in the current quarter was driven by both stock selection and country selection. In both cases, exposure to trade concerns impacted Schroder's holdings relative to the benchmark.

# Endowments Compliance Report

Ending June 30, 2019

<b>Asset Allocation</b>			
<b>Category</b>	<b>Range</b>	<b>Target</b>	<b>Actual</b>
Equities	63%-69%	66.0%	66.9%
Domestic	33%-43%	38.0%	38.0%
Large cap	21%-31%	26.2%	25.8%
Mid cap	4%-12%	7.6%	8.0%
Small cap	3%-7%	4.2%	4.3%
International	15%-23%	19.0%	19.5%
Global	5-13%	9.0%	9.5%
Fixed Income	23%-29%	26.0%	24.5%
Real Estate	4%-12%	8.0%	8.1%
Cash and Equivalents	0%-5%	0.0%	0.3%

<b>Rebalancing</b>		
Applied when appropriate	Yes	

<b>Performance</b>		
Managers remain in specified style	Yes	
Active managers above median/indices for 3-years	No	See 1 below

Note 1: Eagle is below median but above benchmark. Sycamore, Schroder, Fiera, Wellington, DoubleLine and Western have less than 3 years performance history.

# SIF Compliance Report

Ending June 30, 2019

<b>Asset Allocation</b>			
<b>Category</b>	<b>Range</b>	<b>Target</b>	<b>Actual</b>
Equities		13.0%	13.3%
Domestic	7%-11%	9.0%	9.3%
Large cap		6.3%	6.5%
Mid cap		1.8%	1.9%
Small cap		0.9%	1.0%
International	2%-6%	4.0%	4.0%
Fixed Income	80%-90%	87.0%	86.7%
Blended Fixed Income		78.4%	78.0%
TIPS		8.6%	8.7%
Cash and Equivalents	0%-3%	0.0%	0.0%

<b>Rebalancing</b>		
Applied when appropriate	Yes	

<b>Performance</b>		
Managers remain in specified style	Yes	
Active managers above median/indices for 3-years	No	See 1 below

Note 1: Times Square is at median but above benchmark. Eagle is below median but above benchmark. Sycamore has less than 3 years of performance history.

Callan

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**Appendix**

# Published Research Highlights from 2Q19

## The Cobbler's Shoes: How Asset Managers Run Their Own 401(k) Plans

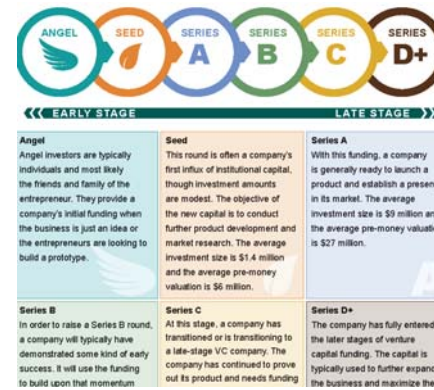


## Callan's Periodic Table Explained

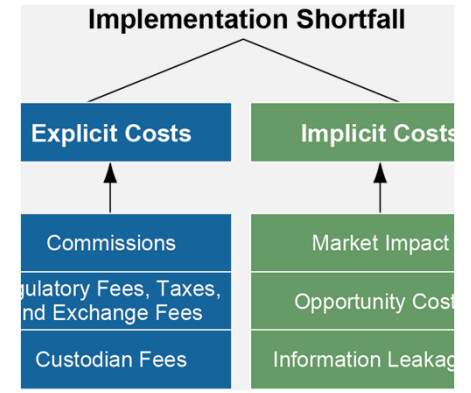
2013	2014	2015	2016	2017	2018
Small Cap Equity	Real Estate	Large Cap Equity	Small Cap Equity	Emerging Market Equity	Cash Equivalent
31.02%	1.38%	21.31%	37.28%	1.87%	
Non-U.S. Fixed Income	U.S. Fixed Income	High Yield	Non-U.S. Equity	U.S. Fixed Income	
32.44%	0.55%	17.13%	24.21%	0.01%	
Non-brs. Equity	Cash Equivalent	Large Cap Equity	Large Cap Equity	High Yield	
21.02%	5.97%	11.96%	21.83%	-2.08%	
High Yield	Real Estate	Emerging Market Equity	Small Cap Equity	Non-U.S. Fixed Income	
7.44%	4.89%	11.19%	14.65%	-2.15%	

**Explainer Video**

## How to Distinguish Between Growth Equity and Late-Stage VC



## Two Questions to Help DC Plans Save on Litigation Costs



## Recent Blog Posts

**How STRIPS Can Help Corporate DB Plans**  
Sweta Vaidya

**A Primer on Interval Funds**  
Kristin Bradbury and David Welsch

**Legislative Fixes for the Student Debt Tsunami**  
Jana Steele

**Additional Reading**

- Private Equity Trends quarterly newsletter
- Active vs. Passive quarterly charts
- Capital Market Review quarterly newsletter
- Monthly Updates to the Periodic Table
- Market Pulse Flipbook quarterly markets update



# Callan Institute Events

## Upcoming Conferences, Workshops, and Webinars

### “Callan College” on Alternative Investments

October 29-30, 2019 in Chicago

#### Dive into Alternatives!

Alternative investments like private equity, hedge funds, and real estate can play a key role in any portfolio. In this one-and-a-half-day session, learn about the importance of allocations to alternatives, and how to consider integrating, evaluating, and monitoring them.

#### 3 Reasons You Should Attend

- 1 Enhance** your knowledge to maximize your plan’s long term returns
- 2 Learn** about new opportunities for greater diversification
- 3 Prepare** your plan’s portfolio for market ups and downs

*“This is a great opportunity for investors of all types to get a thorough introduction to alternative investments and meet the Callan team.”*

— Pete Keliuotis, Executive Vice President



### Upcoming Webinar

ESG

**Webinars:** On-Demand now available at <https://www.callan.com/ondemandwebinar/>

### Regional Workshops

Denver, October 22, 2019

Chicago, October 24, 2019

### 40<sup>th</sup> National Conference

January 27–29, 2020

The Palace Hotel

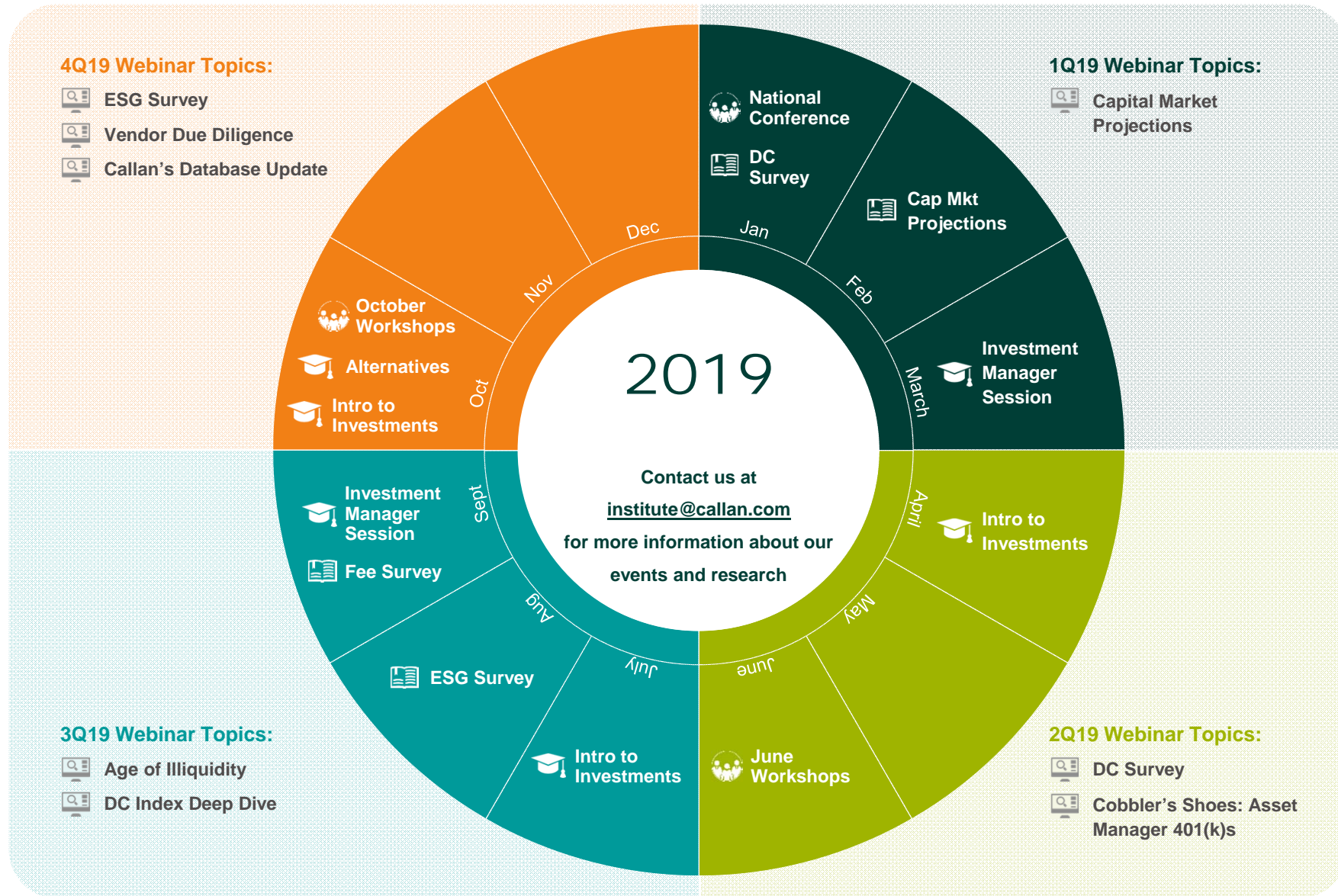
San Francisco, CA

### “Callan College” Introduction to Investments

Atlanta, October 8–9, 2019

Chicago, October 29-30, 2019

# 2019 Content Calendar



- "Callan College"
- Conference/Workshop
- Publication
- Webinar