

Callan

August 17, 2022



**Endowment Fund Investment
Board**

Second Quarter 2022
Performance Review

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Callan

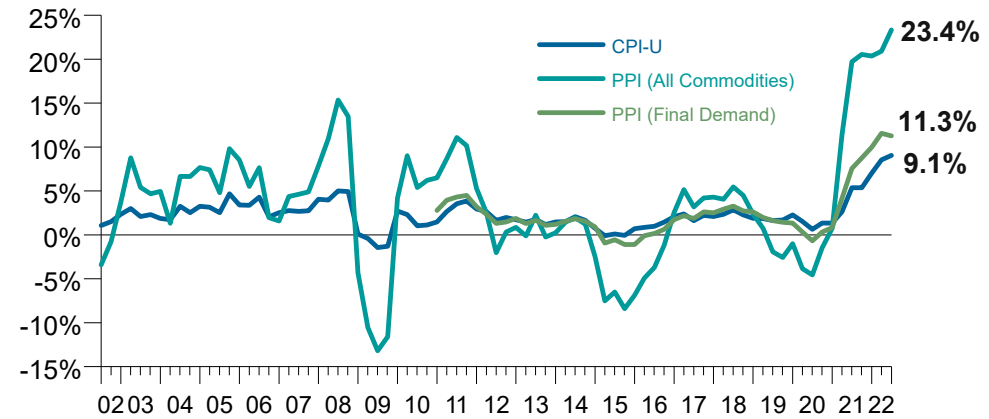
Global Economic Update

U.S. Economy—Summary

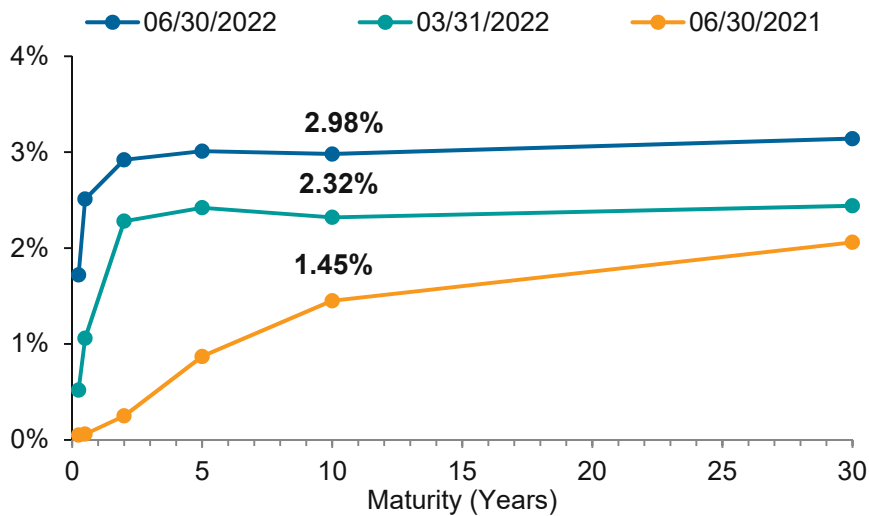
Second Quarter 2022

- The advance estimate shows real GDP fell -0.9% during the second quarter, following a -1.6% contraction in the first quarter.
- Inflation remains elevated in 2022. The CPI climbed 9.1% year-over-year as of June.
- The Federal Reserve made consecutive 0.75% rate hikes on July 27th and June 15th (the target range is now 2.25 – 2.50%), with more rate hikes planned in 2022.
- The labor market remains a source of strength with unemployment remaining at 3.6% in June.

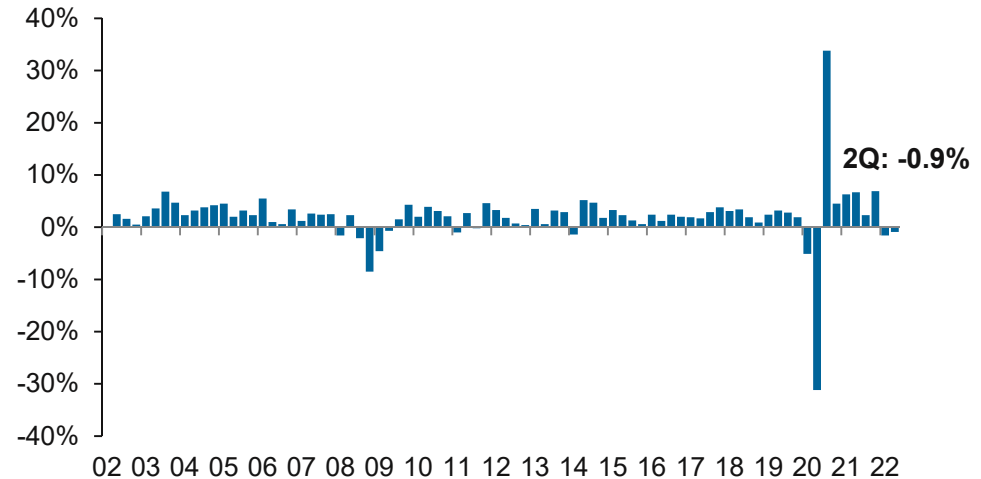
Inflation Year-Over-Year



U.S. Treasury Yield Curves



Quarterly Real GDP Growth



Sources: Bloomberg, Bureau of Labor Statistics, Callan. GDP reflective of 2Q22.

Contributors to Recent Inflation: Primary Categories

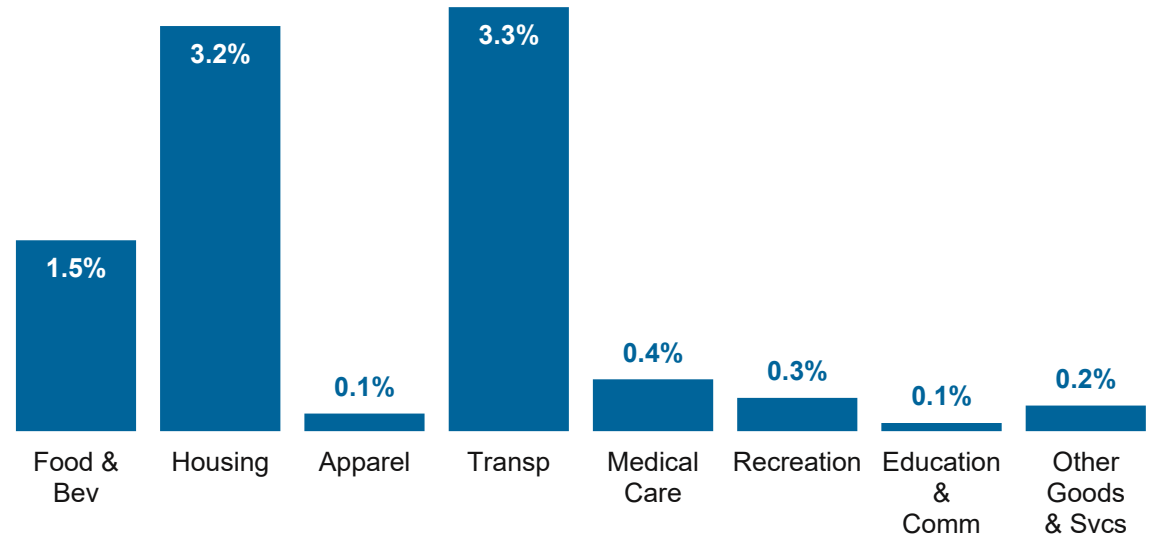
Transportation, including new and used cars, parts, and gasoline, continues to experience high inflation.

- Year-over-year prints are almost two times higher than any other category.
- With a meaningful 18% weight in the index*, transportation also has the highest weighted contribution to headline CPI.

Housing and food and beverage have also been significant contributors to headline CPI.

- Inflation within these categories is rising while transportation inflation appears to have leveled off.

Contribution to June 2022 YOY Inflation



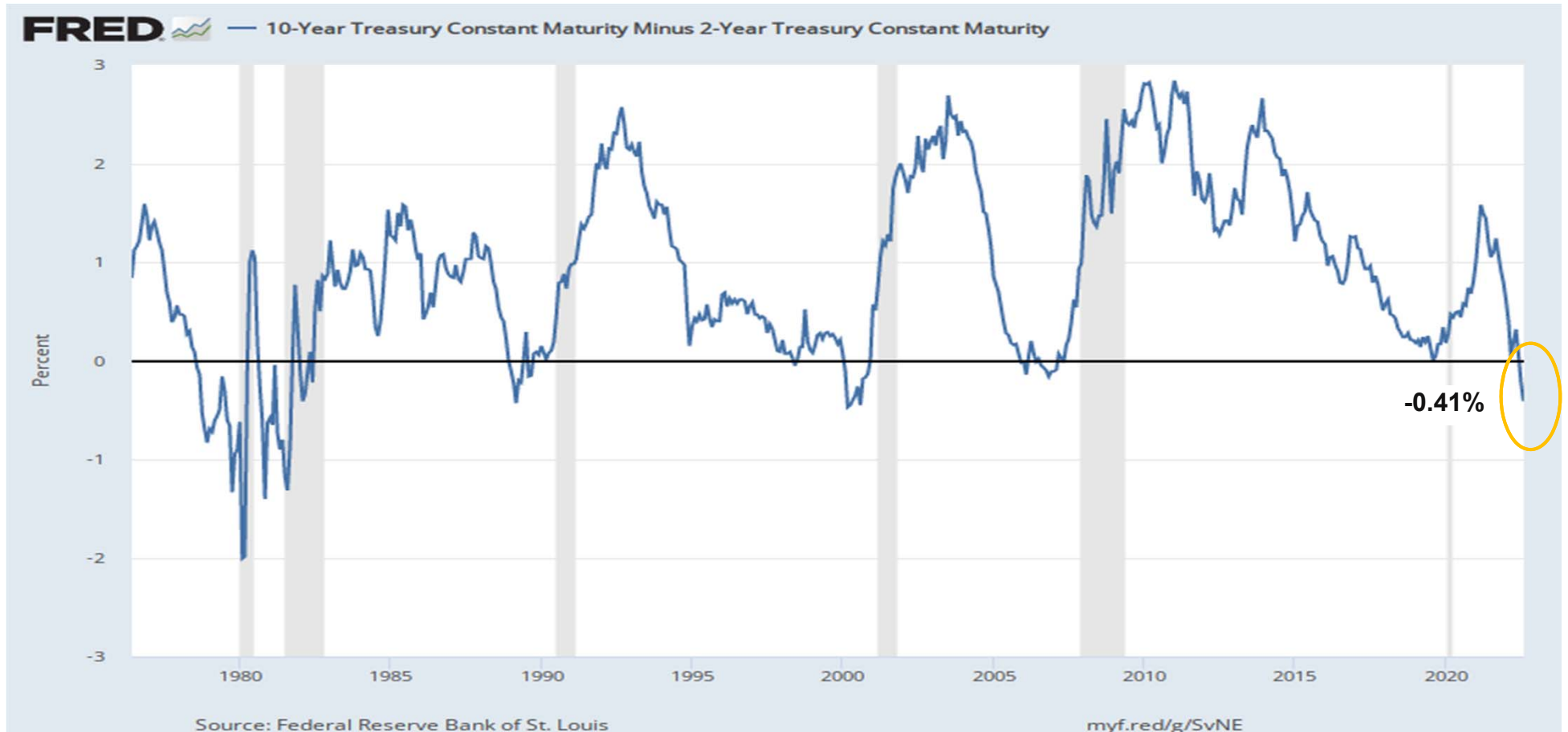
Primary Category	Primary Category Weight	Year-over-Year Change											
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
All Items	100.0%	5.4%	5.3%	5.4%	6.2%	6.8%	7.0%	7.5%	7.9%	8.5%	8.3%	8.6%	9.1%
Food & Bev	14.3%	3.4%	3.7%	4.5%	5.1%	5.8%	6.0%	6.7%	7.6%	8.5%	9.0%	9.7%	10.0%
Housing	42.4%	3.4%	3.5%	3.9%	4.5%	4.8%	5.1%	5.7%	5.9%	6.4%	6.5%	6.9%	7.3%
Apparel	2.5%	4.2%	4.2%	3.4%	4.3%	5.0%	5.8%	5.3%	6.6%	6.8%	5.4%	5.0%	5.2%
Transportation	18.2%	19.4%	17.8%	16.6%	18.7%	21.1%	21.1%	20.8%	21.1%	22.6%	19.9%	19.4%	19.7%
Medical Care	8.5%	0.3%	0.4%	0.4%	1.3%	1.7%	2.2%	2.5%	2.4%	2.9%	3.2%	3.7%	4.5%
Recreation	5.1%	3.5%	3.4%	3.5%	3.9%	3.2%	3.3%	4.7%	5.0%	4.8%	4.3%	4.5%	4.6%
Education & Communication	6.4%	1.1%	1.2%	1.7%	1.8%	1.7%	1.6%	1.6%	1.6%	1.5%	1.0%	0.8%	0.8%
Other Goods & Svcs	2.7%	2.9%	3.5%	3.4%	4.2%	4.4%	4.5%	4.9%	5.6%	5.5%	5.7%	6.3%	6.7%

*Category weights received a revision for 2022. The Transportation weight is up from 15% to 18% with this revision.

Source: U.S. Bureau of Labor Statistics

What is the bond market saying about the probability of recession?

2-Year vs. 10-Year Treasury Spread (As of August 5, 2022)



- The 2-Year to 10-Year Treasury spread went negative two days in April and was negative for most of July
- A negative spread indicates a yield curve inversion – it does not necessarily forecast a recession, but most recessions were preceded by a yield curve inversion.

Source: Federal Reserve Bank of St. Louis

Recession Watch

Common definition of recession: two consecutive quarters of decline in GDP

- Actual definition: The National Bureau of Economic Research (NBER) Business Cycle Dating Committee defines a recession as “a significant decline in economic activity that is spread across the economy and that lasts more than a few months.”
- The Committee considers duration, depth and dispersion of economic slowdown.

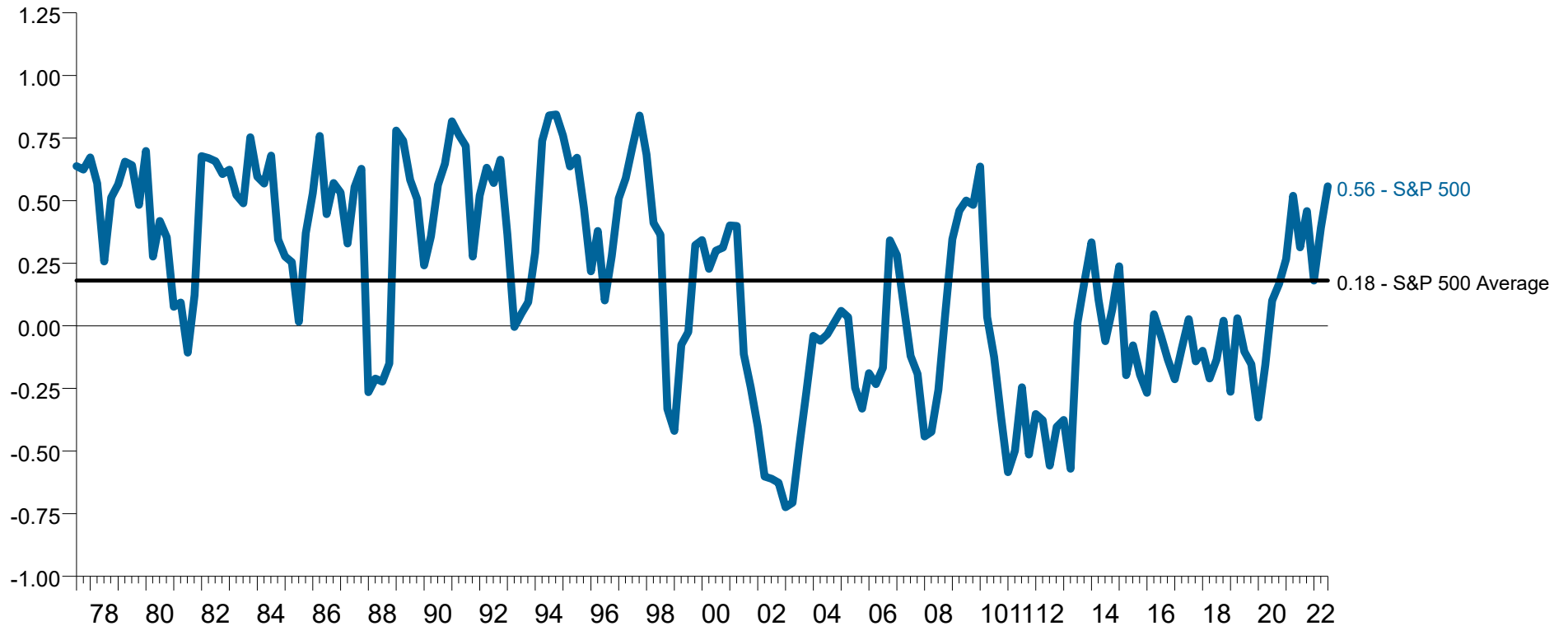
Indicators to watch:

- GDP declined in 1Q and 2Q22.
- Housing market is weakening with higher mortgage rates.
- Job market remains strong, with substantial job creation year to date; job listings remain larger than the number of seekers.
 - Initial unemployment claims are creeping up: a leading indicator.
- Purchasing Manager’s Index (PMI) is showing initial signs of recession in the Business Activity and Output indexes; PMI is also a leading indicator.
- Exports have weakened with slowing growth overseas, geopolitical uncertainty, and a strong dollar.
- Inflation remains historically high, sapping purchasing power and eroding confidence.
- Federal Reserve is committed to raising interest rates to combat inflation; median Fed Funds projection is 3.4% by end of 2022.
- Fed’s resolve may be tested if economy slows sharply in the second half of the year.

Did Diversification Fail in 2022?

Stocks and bonds down together in 1Q and 2Q

Rolling 12 Month Correlation of S&P 500 to Bloomberg Aggregate for 45 Years Ended June 30, 2022



Are we seeing a return to a regime of higher correlation between stocks and bonds, potentially lessening the diversification benefit of bonds to stocks?

Source: Callan

Callan Periodic Table of Investment Returns

Annual Returns						Cumulative Returns					
2016	2017	2018	2019	2020	2021	15 Years	10 Years	5 Years	3 Years	1 Year	Last Qtr.
Small Cap Equity	Emerging Market Equity	U.S. Fixed Income	Large Cap Equity	Small Cap Equity	Large Cap Equity	Large Cap Equity	Large Cap Equity	Large Cap Equity	Large Cap Equity	U.S. Fixed Income	U.S. Fixed Income
21.31%	37.28%	0.01%	31.49%	19.96%	28.71%	8.54%	12.96%	11.31%	10.60%	-10.29%	-4.69%
High Yield	Dev ex-U.S. Equity	High Yield	Small Cap Equity	Large Cap Equity	Real Estate	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Large Cap Equity	High Yield
17.13%	24.21%	-2.08%	25.52%	18.40%	27.21%	6.33%	9.35%	5.17%	4.21%	-10.62%	-9.83%
Large Cap Equity	Large Cap Equity	Global ex-U.S. Fixed Income	Real Estate	Emerging Market Equity	Small Cap Equity	High Yield	Real Estate	Real Estate	Dev ex-U.S. Equity	Real Estate	Global ex-U.S. Fixed Income
11.96%	21.83%	-2.15%	23.06%	18.31%	14.82%	5.78%	5.59%	2.89%	1.70%	-12.75%	-11.01%
Emerging Market Equity	Small Cap Equity	Large Cap Equity	Dev ex-U.S. Equity	Global ex-U.S. Fixed Income	Dev ex-U.S. Equity	U.S. Fixed Income	Dev ex-U.S. Equity	Dev ex-U.S. Equity	Emerging Market Equity	High Yield	Emerging Market Equity
11.19%	14.65%	-4.38%	22.49%	10.11%	12.62%	3.26%	5.37%	2.66%	0.57%	-12.81%	-11.45%
Real Estate	Real Estate	Real Estate	Emerging Market Equity	Dev ex-U.S. Equity	High Yield	Real Estate	High Yield	Emerging Market Equity	High Yield	Dev ex-U.S. Equity	Dev ex-U.S. Equity
4.99%	11.42%	-4.74%	18.44%	7.59%	5.28%	2.81%	4.47%	2.18%	0.21%	-16.76%	-14.66%
Dev ex-U.S. Equity	Global ex-U.S. Fixed Income	Small Cap Equity	High Yield	U.S. Fixed Income	U.S. Fixed Income	Emerging Market Equity	Emerging Market Equity	High Yield	Real Estate	Global ex-U.S. Fixed Income	Large Cap Equity
2.75%	10.51%	-11.01%	14.32%	7.51%	-1.54%	2.00%	3.07%	2.10%	-0.18%	-18.78%	-16.10%
U.S. Fixed Income	High Yield	Dev ex-U.S. Equity	U.S. Fixed Income	High Yield	Emerging Market Equity	Dev ex-U.S. Equity	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Small Cap Equity	Small Cap Equity
2.65%	7.50%	-14.09%	8.72%	7.11%	-2.54%	1.55%	1.54%	0.88%	-0.93%	-25.20%	-17.20%
Global ex-U.S. Fixed Income	U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	Real Estate	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Emerging Market Equity	Real Estate
1.49%	3.54%	-14.57%	5.09%	-8.18%	-7.05%	1.42%	-1.06%	-1.75%	-5.07%	-25.28%	-17.23%

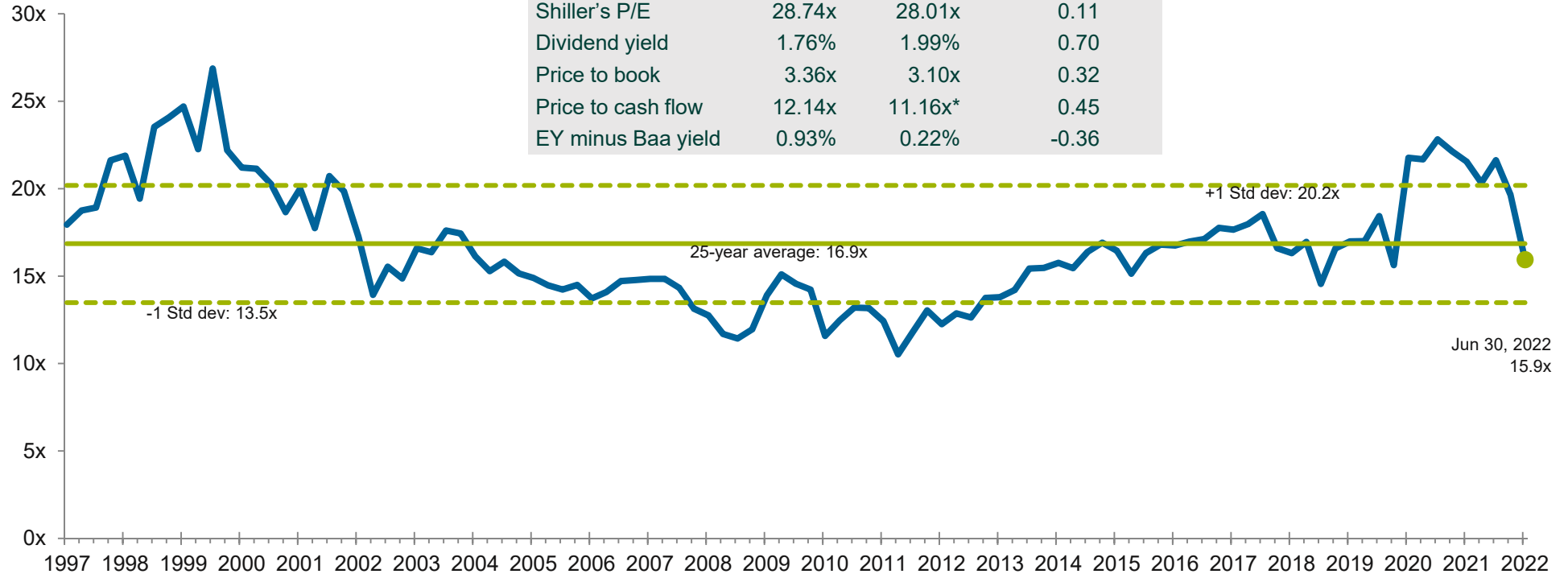
Sources: ● Bloomberg U.S. Aggregate Bond ● Bloomberg Corp High Yield ● Bloomberg Global Aggregate ex U.S.
 ● FTSE EPRA Nareit Developed ● MSCI World ex USA ● MSCI Emerging Markets ● Russell 2000 ● S&P 500

U.S. Equity Market: Valuation Metrics

U.S. large cap stocks

Valuation Measure	Latest	25-year Average	Std Dev Over- / Under-valued
Forward P/E	15.94x	16.85x	-0.27
Shiller's P/E	28.74x	28.01x	0.11
Dividend yield	1.76%	1.99%	0.70
Price to book	3.36x	3.10x	0.32
Price to cash flow	12.14x	11.16x*	0.45
EY minus Baa yield	0.93%	0.22%	-0.36

S&P 500 Index: Forward P/E Ratio



- All valuation measures except P/E are now within +/- one standard deviation of 25-year averages.
- Forward P/E has fallen below the long-term average, but earnings will drop further if we enter a recession, suggesting more pain for stock prices.
- Earnings for the coming quarters will provide additional clarity on valuations.

Sources: FactSet, FRB, Robert Shiller, S&P Dow Jones Indices, Thomson Reuters, J.P. Morgan Asset Management

Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since March 1997 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are \$233. Average P/E and standard deviations are calculated using 25 years of history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. *P/CF is a 20-year average due to cash flow availability.

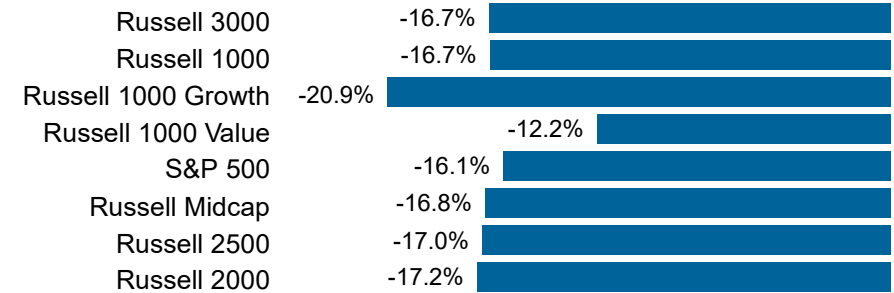
Guide to the Markets – U.S. Data are as of June 30, 2022.

U.S. Equity Performance: 2Q22

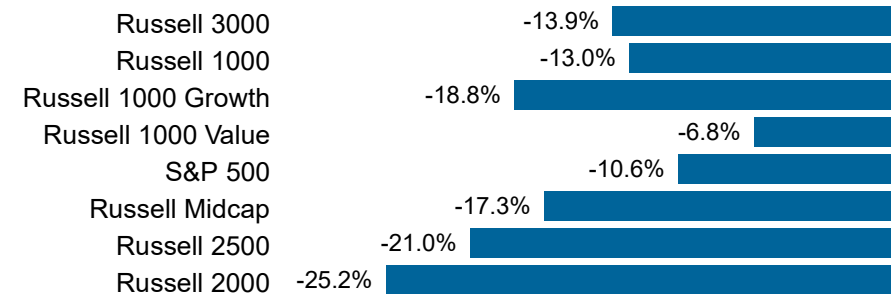
Worst first half since 1970

- The S&P 500 dropped by 16.1% in 2Q22; all major U.S. indices across styles and market cap ranges were negative in the quarter.
- All sectors posted negative returns over the quarter. Energy continues to be the best-performing sector, and it is the only sector that has posted positive returns YTD 2022.
- Large cap stocks nominally outpaced smaller cap stocks in the quarter. The performance spread between the Russell 1000 and the Russell 2000 Index was around 50 basis points.
- Value stocks have outperformed growth stocks across the market capitalization spectrum.
- Consumer Discretionary (-26%), Communication Services (-21%), and Information Technology (-20%) were the worst-performing sectors.
- Rising interest rates and inflation along with geopolitical headlines all contributed to a volatile and risk-averse environment.

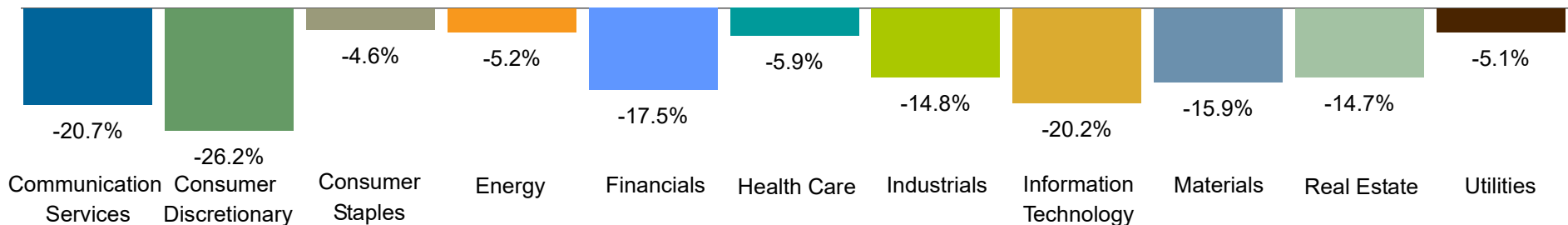
U.S. Equity: Quarterly Returns



U.S. Equity: One-Year Returns



Industry Sector Quarterly Performance (S&P 500)



Sources: FTSE Russell, S&P Dow Jones Indices

Global/Global ex-U.S. Equity Performance: 2Q22

Fears of recession

- The war in Ukraine pushed an already fragile supply chain, energy demand/supply imbalances, and inflationary environment into fears of a recession.
- Slowing global growth and recession risk became clearer toward quarter-end, leading investors toward higher-quality and lower-volatility areas of the market to offer protection.

Wide divergence in country returns

- Optimism that the worst is behind China's COVID-19 lockdown buoyed the country to the only positive return in the quarter.
- Meanwhile Japan suffered from a weak yen, slowing growth, and continued supply chain disruptions.

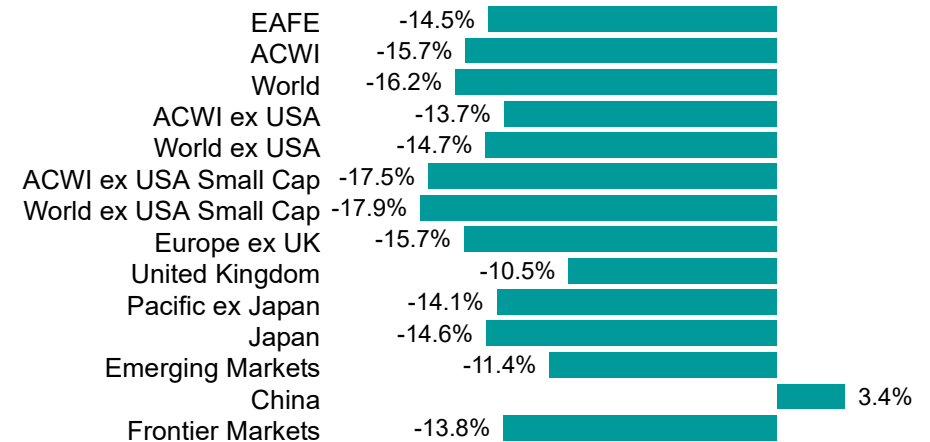
Growth vs. value

- Value continues to outperform growth as most monetary policies focus on tightening.
 - Energy was the only sector with positive year-to-date results.
- Information Technology had the worst sector return as interest rate increases dampened long duration growth attractiveness.

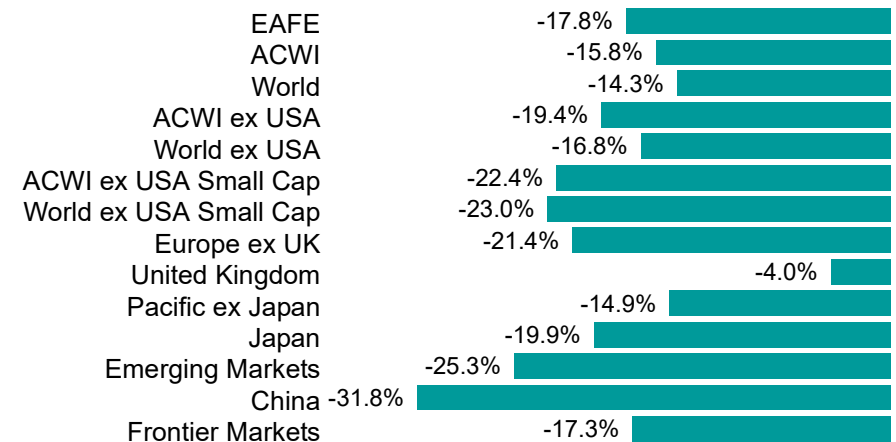
U.S. dollar vs. other currencies

- The U.S. dollar strengthened further against other major currencies given its global dominance and perceived safety.

Global Equity: Quarterly Returns



Global Equity: One-Year Returns



Source: MSCI

U.S. Fixed Income Performance: 2Q22

Bonds hit hard as rates rose sharply (again)

- Worst six-month return for Bloomberg US Aggregate in history
- Yield curve flirted with inversion but 2-year/10-year yield spread was slightly positive at quarter-end.
- Fed raised rates by 75 bps, the largest increase since 1994, with further hikes expected.
 - Market pricing reflects Fed Funds rate of 3.4% at year-end.

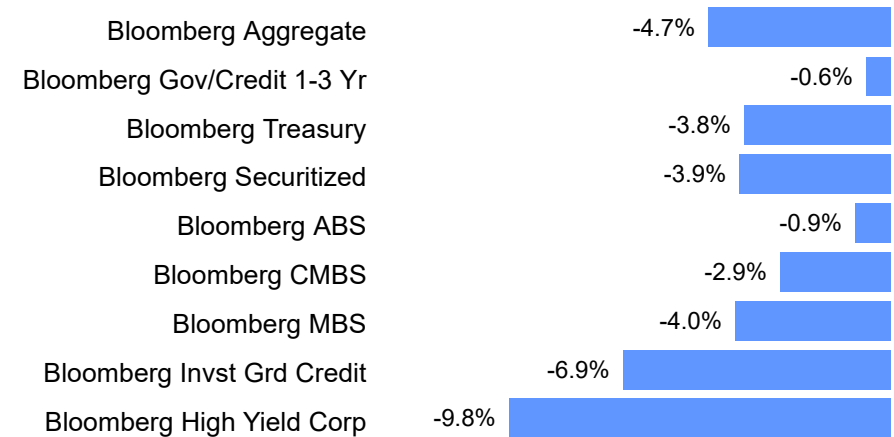
Spread sectors underperformed

- Investment grade corporates underperformed like-duration U.S. Treasuries by 205 bps, RMBS by 98 bps.
- High yield underperformed as spreads widened; excess return vs. U.S. Treasuries was -792 bps.

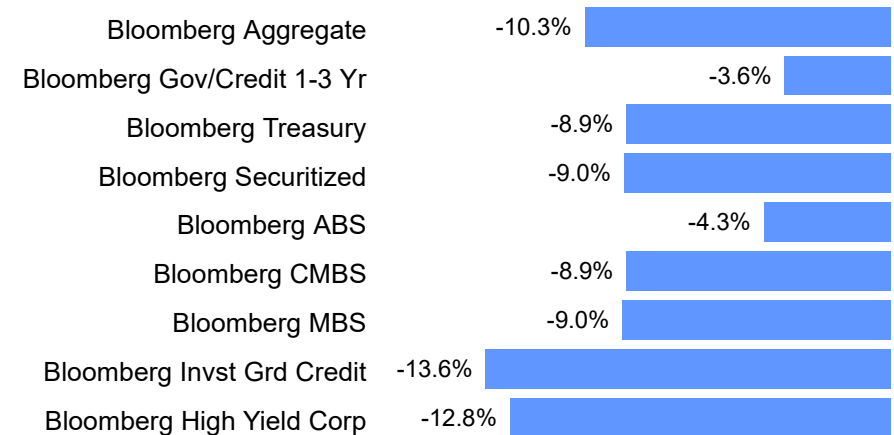
Securitized sectors continue to hang in

- Agency RMBS spreads widened in response to increased rate volatility.
- ABS spreads tightened, led by credit cards.

U.S. Fixed Income: Quarterly Returns



U.S. Fixed Income: One-Year Returns

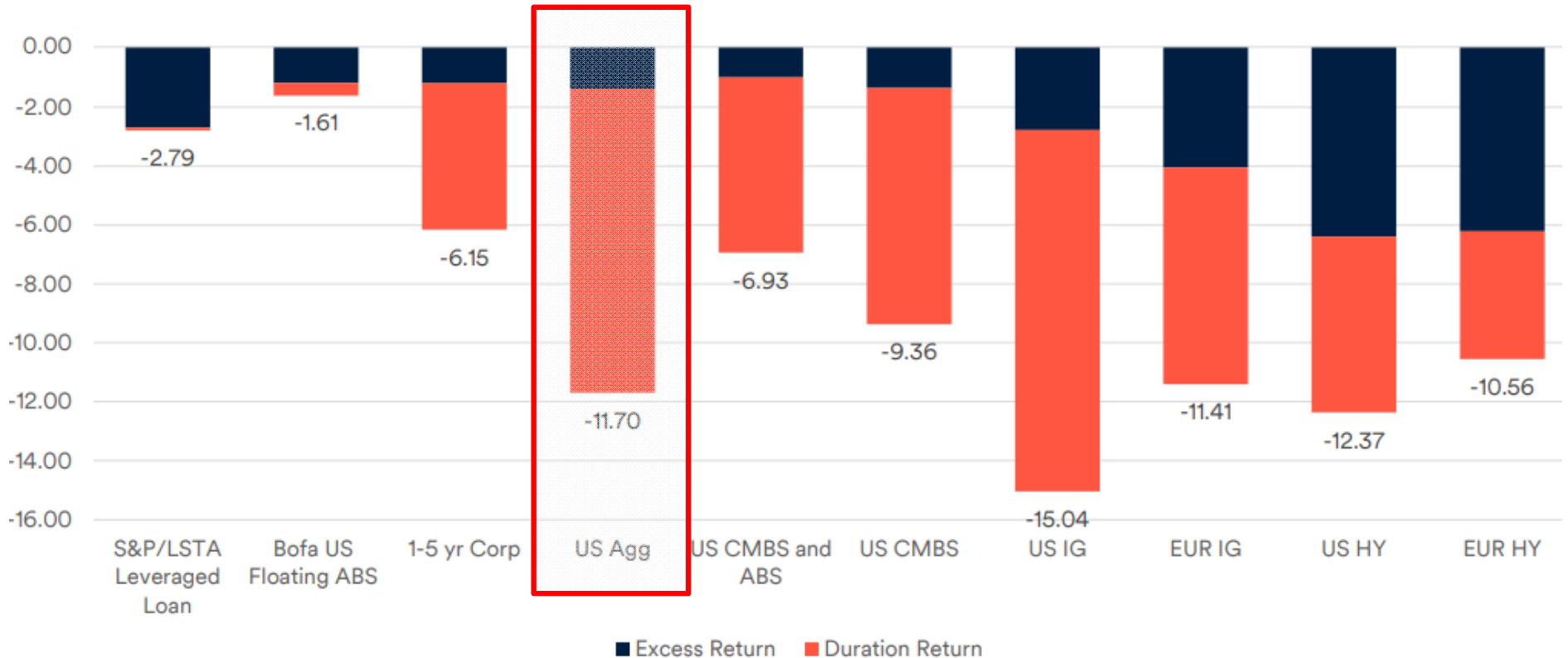


Sources: Bloomberg, S&P Dow Jones Indices

Fixed Income Overview

Fixed income returns have been predominately driven by rates

YTD Returns (as of 6/15/2022)



Interest rates significantly increased

- First-half returns worst since inflation of 1970s
- Global phenomenon driven by recent inflationary pressure
- All fixed income asset classes have been negatively impacted.
- Developed market duration becoming more compelling after broad repricing

Source: Schroders

U.S. Private Real Estate Performance: 2Q22

Positive returns across sectors

Another strong quarter for real estate

- Income returns were positive across sectors.
- Valuations are reflective of strong fundamentals in Industrial and Apartment and continued uncertainty despite a modest recovery in Office and Retail.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios, and increased borrowing costs are impacting values.
- Niche sectors such as self-storage and life sciences continued to be accretive.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	4.5%	28.3%	11.7%	9.6%	10.2%
Income	0.6%	2.9%	3.0%	3.1%	3.5%
Appreciation	3.9%	25.0%	8.4%	6.3%	6.5%
NCREIF Property Index	3.2%	21.5%	10.2%	8.9%	9.7%
Income	1.0%	4.1%	4.2%	4.4%	4.8%
Appreciation	2.3%	16.9%	5.8%	4.4%	4.7%

Returns are geometrically linked

NCREIF Property Index Quarterly Returns by Region and Property Type

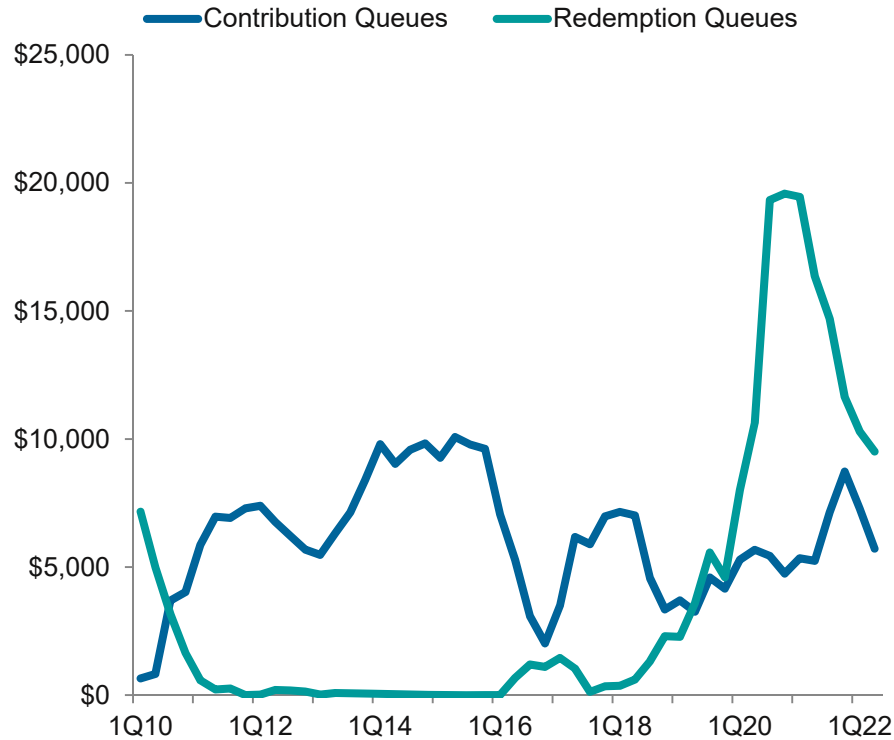


Source: NCREIF, ODCE return is net

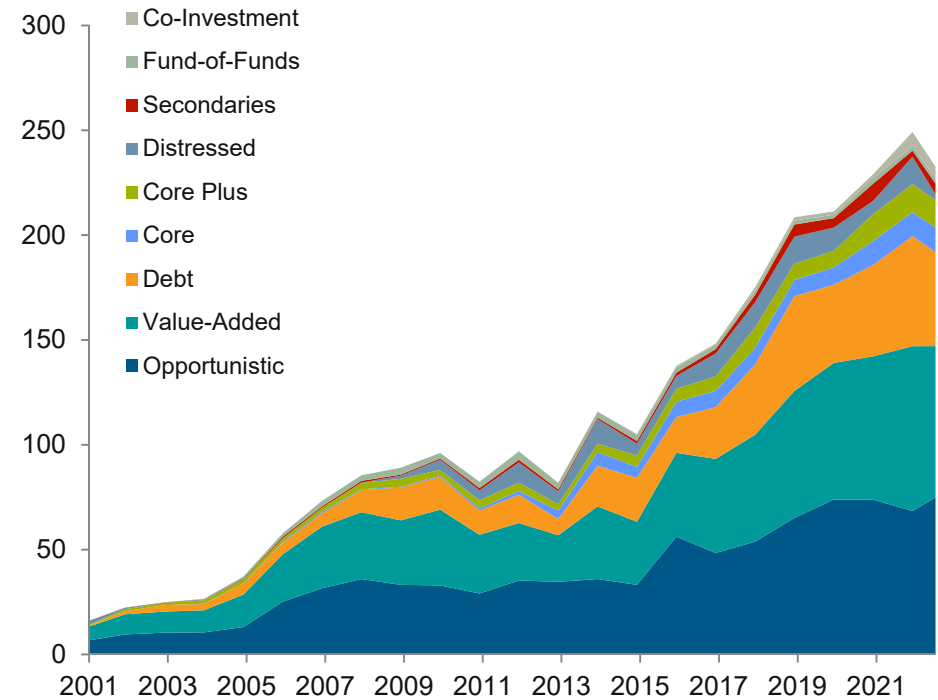
U.S. Private Real Estate Market Trends

Dry powder exceeds \$200 billion

Core Fund Contribution/Redemption Queues (\$mm)*



Dry Powder for CRE Investment in North America (\$bn)



- Net core activity has decreased in back-to-back quarters. Investors are rebalancing due to the denominator effect.
- >\$200 billion of capital waiting to be deployed in North America
- Majority of dry powder capital in opportunistic, value-add, and debt funds

Sources: AEW, NCREIF, Prequin
*Queue data as of 1Q22

July 2022 Market Update

Returns (%) for Periods Ending July 31, 2022

	July 2022	Year to Date
Russell:1000 Index	9.3	(13.6)
Russell:Midcap Index	9.9	(13.8)
Russell:2000 Index	10.4	(15.4)
MSCI:ACWI ex US	3.4	(15.6)
MSCI:ACWI	7.0	(14.6)
Blmbg:Agg Idx	2.4	(8.2)
Blmbg:HY Corp	5.9	(9.1)

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Fund Specific Review

Endowments – Asset Allocation

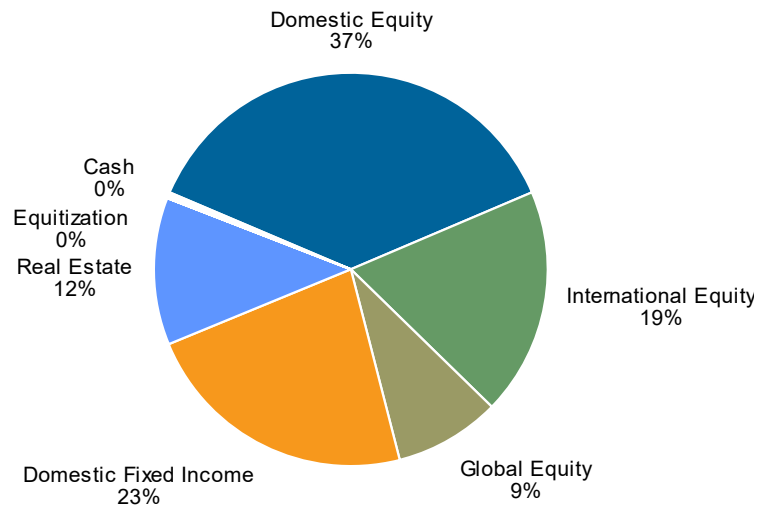
	June 30, 2022				March 31, 2022	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Equity	\$1,851,812,193	64.57%	\$67,982,785	\$(349,697,130)	\$2,133,526,538	66.27%
Domestic Equity	\$1,066,552,095	37.19%	\$18,000,000	\$(211,037,079)	\$1,259,589,174	39.12%
Large Cap	\$728,503,703	25.40%	\$22,000,000	\$(153,365,435)	\$859,869,138	26.71%
Large Cap Core Composite	\$308,225,983	10.75%	\$(5,000,000)	\$(59,429,063)	\$372,655,046	11.57%
NTGI S&P 500 SMA	308,225,983	10.75%	(5,000,000)	(59,429,063)	372,655,046	11.57%
Large Cap Value Composite	\$285,679,426	9.96%	\$0	\$(35,796,667)	\$321,476,093	9.99%
LSV Asset Mgmt	146,270,554	5.10%	0	(18,659,102)	164,929,656	5.12%
Boston Partners	139,408,872	4.86%	0	(17,137,565)	156,546,437	4.86%
Large Cap Growth Composite	\$134,598,294	4.69%	\$27,000,000	\$(58,139,706)	\$165,737,999	5.15%
Sands Capital	134,598,294	4.69%	27,000,000	(58,139,706)	165,737,999	5.15%
Mid Cap	\$225,823,070	7.87%	\$0	\$(36,454,914)	\$262,277,984	8.15%
Sycamore Capital	119,539,494	4.17%	0	(14,786,200)	134,325,694	4.17%
Times Square	106,283,575	3.71%	0	(21,668,715)	127,952,290	3.97%
Small Cap	\$112,225,322	3.91%	\$(4,000,000)	\$(21,216,730)	\$137,442,052	4.27%
Barrow, Hanley	55,123,723	1.92%	(10,000,000)	(10,083,599)	75,207,322	2.34%
Eagle Asset Management	57,101,599	1.99%	6,000,000	(11,133,131)	62,234,730	1.93%
International Equity	\$535,345,491	18.67%	\$37,987,742	\$(93,251,630)	\$590,609,379	18.34%
Allianz	2,785	0.00%	0	(178)	2,963	0.00%
Schroder QEP Intl Value	225,602,105	7.87%	0	(31,531,710)	257,133,815	7.99%
SSgA MSCI EAFE	13,593	0.00%	(12,010)	(1,590)	27,194	0.00%
Vanguard	82,075,450	2.86%	31,999,752	(13,048,409)	63,124,108	1.96%
WCM	227,651,557	7.94%	6,000,000	(48,669,743)	270,321,300	8.40%
Global Equity	\$249,914,607	8.71%	\$11,995,043	\$(45,408,421)	\$283,327,984	8.80%
Aberdeen	6,826	0.00%	(4,174)	(438)	11,438	0.00%
Fiera	124,497,209	4.34%	6,000,000	(19,127,586)	137,624,795	4.27%
Wellington	125,410,474	4.37%	6,000,000	(26,280,413)	145,690,886	4.53%
Lazard	99	0.00%	(783)	16	865	0.00%
Domestic Fixed Income	\$654,305,943	22.81%	\$(45,000,000)	\$(42,144,587)	\$741,450,529	23.03%
DoubleLine	188,194,262	6.56%	0	(11,659,341)	199,853,603	6.21%
State Street Global Advisors	280,211,122	9.77%	(45,000,000)	(17,759,827)	342,970,949	10.65%
Western	185,900,559	6.48%	0	(12,725,418)	198,625,977	6.17%
Real Estate	\$347,393,295	12.11%	\$2,971,857	\$16,745,134	\$327,676,305	10.18%
CBRE	110,006,663	3.84%	69,999,242	6,663	40,000,758	1.24%
RREEF America REIT II	190,623,549	6.65%	6,286,107	10,415,732	173,921,710	5.40%
UBS Trumbull Property	46,763,083	1.63%	(73,313,492)	6,322,739	113,753,836	3.53%
Equitization	\$912,360	0.03%	\$1,000,000	\$(691,212)	\$603,573	0.02%
Cash	\$13,508,004	0.47%	\$(2,752,368)	\$7,406	\$16,252,966	0.50%
Total Plan ex Equitization	\$2,867,019,436	99.97%	\$23,202,274	\$(375,089,176)	\$3,218,906,338	99.98%
Total Fund	\$2,867,931,796	100.0%	\$24,202,274	\$(375,780,389)	\$3,219,509,911	100.0%

-\$352 Million

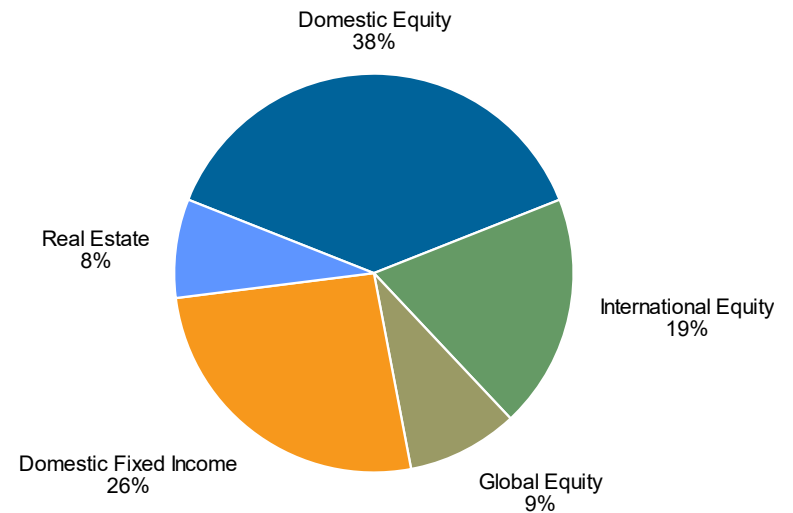
Endowments – Asset Allocation

June 30, 2022

Actual Asset Allocation



Target Asset Allocation

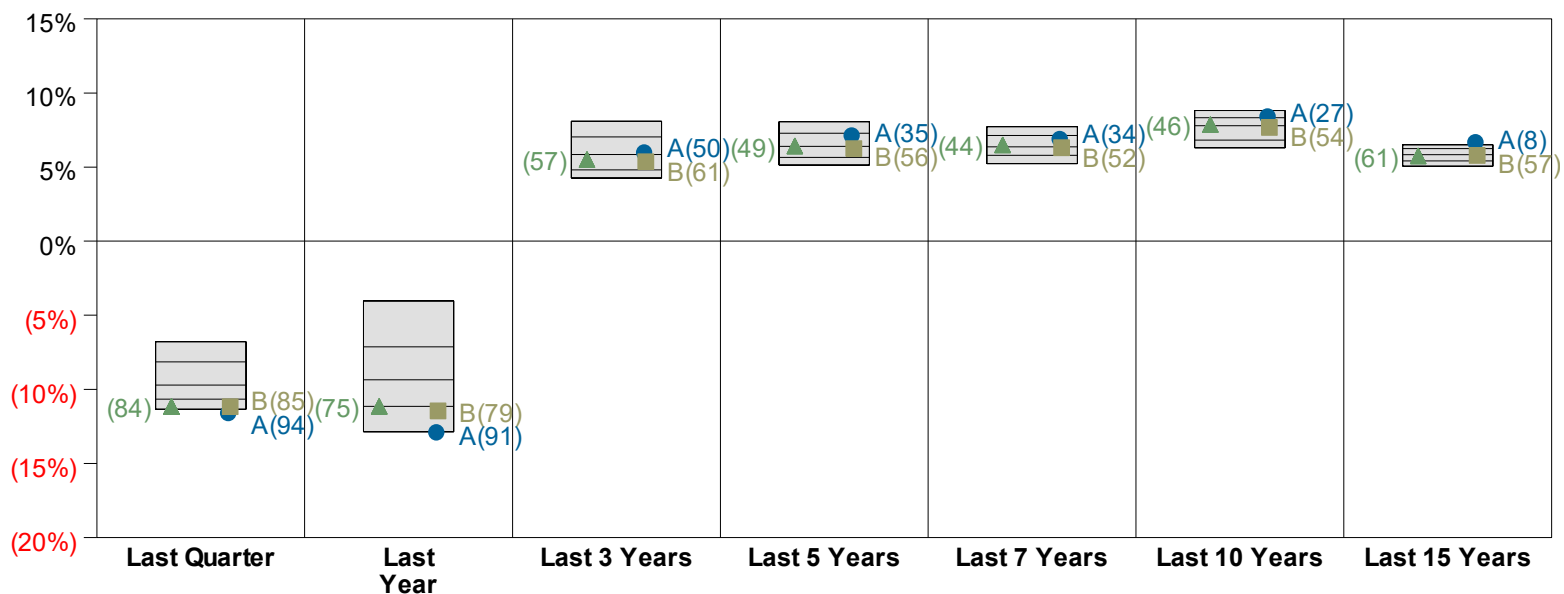


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	1,066,552	37.2%	38.0%	(0.8%)	(23,262)
International Equity	535,345	18.7%	19.0%	(0.3%)	(9,562)
Global Equity	249,915	8.7%	9.0%	(0.3%)	(8,199)
Domestic Fixed Income	654,306	22.8%	26.0%	(3.2%)	(91,356)
Real Estate	347,393	12.1%	8.0%	4.1%	117,959
Equitization	912	0.0%	0.0%	0.0%	912
Cash	13,508	0.5%	0.0%	0.5%	13,508
Total	2,867,932	100.0%	100.0%		

Endowments – Total Fund Performance

June 30, 2022

Performance vs Callan Public Fund Sponsor Database (Gross)



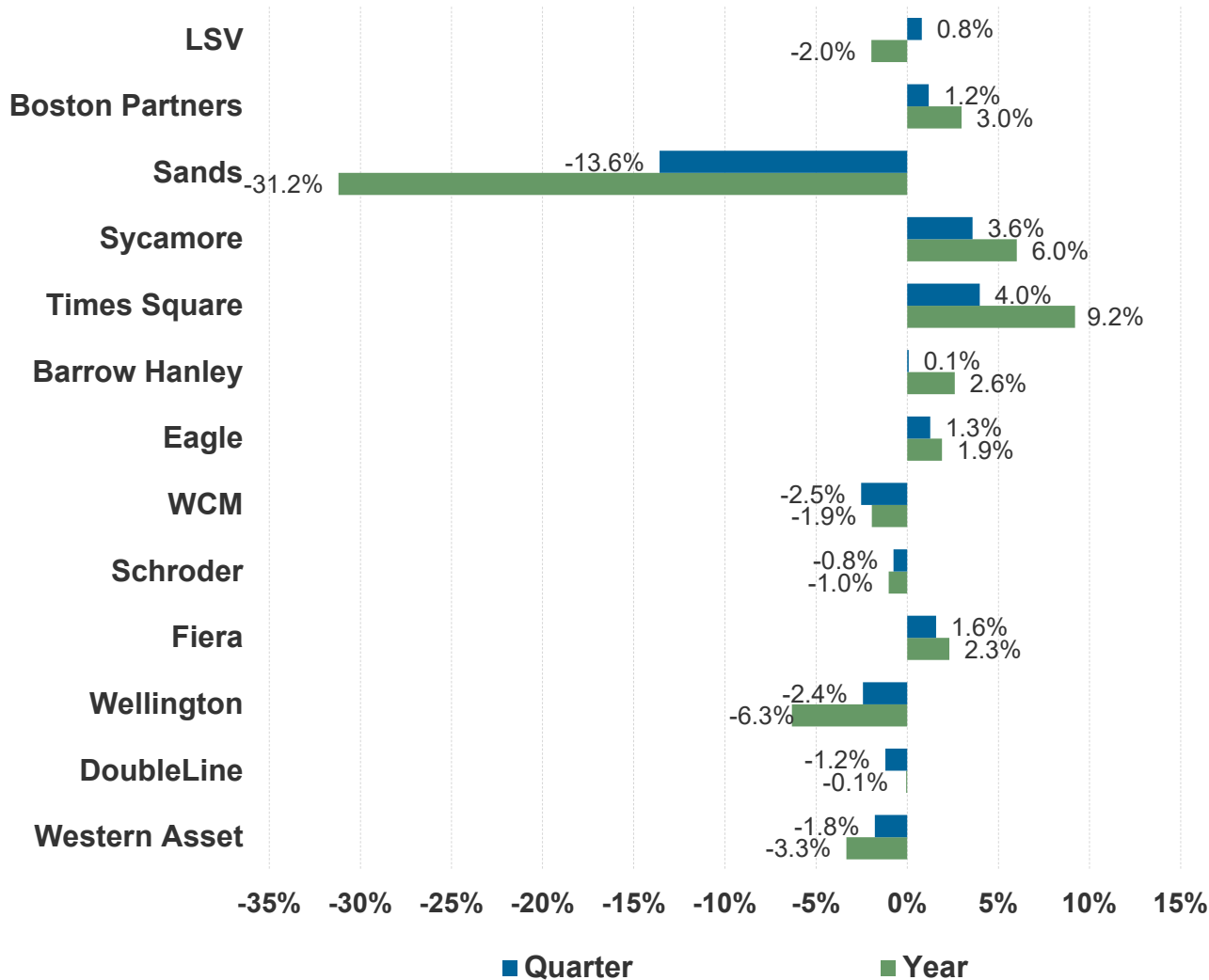
10th Percentile	(6.78)	(4.04)	8.09	8.06	7.72	8.82	6.51
25th Percentile	(8.15)	(7.13)	7.03	7.28	7.14	8.32	6.25
Median	(9.71)	(9.35)	5.85	6.40	6.37	7.79	5.84
75th Percentile	(10.66)	(11.14)	4.81	5.65	5.79	6.81	5.42
90th Percentile	(11.34)	(12.87)	4.26	5.13	5.23	6.29	5.06
Total Plan Secondary Benchmark	● B (11.17)	(11.46)	5.37	6.25	6.31	7.67	5.78
Total Plan Target	● A (11.73)	(13.04)	5.86	7.01	6.77	8.27	6.54
Total Plan Target	▲ (11.15)	(11.15)	5.51	6.43	6.49	7.87	5.75

- For the quarter, the Endowment underperformed the target by 0.6%, ranking 94th percentile (79th percentile against Endowment/Foundation Database).
- For the fiscal year, the Fund returned -13.0% (91st percentile), 1.9% behind the target benchmark.

Endowments Dashboard

As of June 30, 2022

% Deviation from Benchmark (Net)



Quarter:

Below Benchmark:

- Western Asset
- DoubleLine
- Wellington
- Schroder
- WCM
- Sands

Year:

Below Benchmark:

- Western Asset
- DoubleLine
- Wellington
- Schroder
- WCM
- Sands
- LSV

Performance is listed net of investment management fees

Endowments – U.S. Equity Manager Performance

June 30, 2022

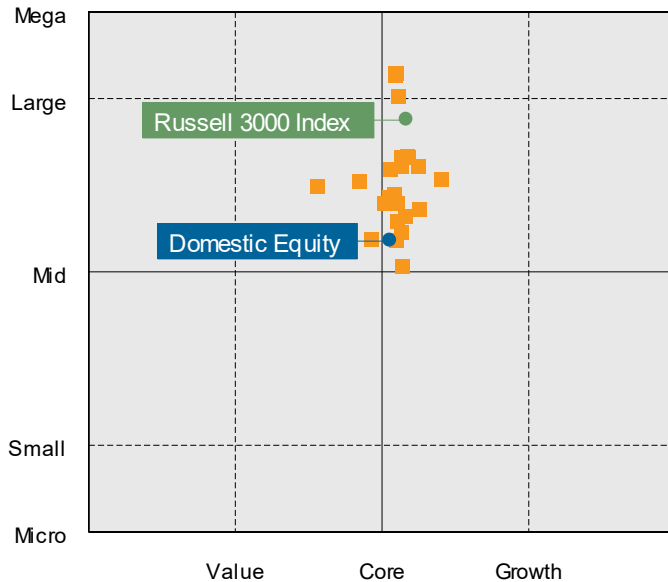
		Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	
-0.1%	Domestic Equity	(16.81%)	(17.09%)	8.89%	10.24%	12.48%	
		Russell 3000	(16.70%)	(13.87%)	9.77%	10.60%	12.57%
-1.1%	Large Cap	(17.80%)	(17.83%)	8.32%	10.01%	12.44%	
		Russell 1000	(16.67%)	(13.04%)	10.17%	11.00%	12.82%
	Large Cap Core	(16.23%)	(10.75%)	10.45%	11.22%	12.90%	
	NTGI S&P 500 SMA	(16.23%)	(10.75%)	10.45%	11.22%	-	
	S&P 500	(16.10%)	(10.62%)	10.60%	11.31%	12.96%	
	Large Cap Value	(11.14%)	(5.95%)	8.70%	8.22%	11.75%	
	LSV Asset Management	(11.31%)	(8.42%)	7.23%	7.23%	11.63%	
	Boston Partners	(10.95%)	(3.48%)	10.09%	9.16%	11.85%	
	Russell 1000 Value	(12.21%)	(6.82%)	6.87%	7.17%	10.50%	
	Large Cap Growth	(34.44%)	(49.70%)	(0.46%)	8.40%	11.53%	
	Sands Capital	(34.44%)	(49.70%)	(0.46%)	8.40%	11.59%	
	Russell 1000 Growth	(20.92%)	(18.77%)	12.58%	14.29%	14.80%	
+3.1%	Mid Cap	(13.90%)	(11.96%)	10.90%	11.63%	12.63%	
		Russell MidCap Index	(16.85%)	(17.30%)	6.59%	7.96%	11.29%
		Sycamore Capital	(11.01%)	(3.60%)	12.24%	-	-
		Russell MidCap Value Idx	(14.68%)	(10.00%)	6.70%	6.27%	10.62%
		Times Square	(16.93%)	(19.79%)	9.03%	12.08%	13.38%
	Russell MidCap Growth Idx	(21.07%)	(29.57%)	4.25%	8.88%	11.50%	
+1.0%	Small Cap	(16.17%)	(21.97%)	8.04%	8.63%	12.22%	
		Russell 2000	(17.20%)	(25.20%)	4.21%	5.17%	9.35%
		Barrow, Hanley	(15.07%)	(13.17%)	11.58%	8.66%	12.59%
		Russell 2000 Value	(15.28%)	(16.28%)	6.18%	4.89%	9.05%
		Eagle Asset Management	(17.85%)	(31.04%)	3.81%	7.97%	11.43%
	Russell 2000 Growth	(19.25%)	(33.43%)	1.40%	4.80%	9.30%	

- Growth dramatically underperformed value and large caps underperformed small.
- Sands Capital was the primary detractor from relative performance.

U.S. Equity Style Map

(\$1.1 Billion; 37.2% of the Portfolio)

Style Map vs Pub Pln- Dom Equity Holdings as of June 30, 2022



- U.S. Equity composite exhibits a smaller capitalization bias. Primarily resulting from an overweight to mid cap.
- Index performance for year: large cap outperformed small caps.
- Mid and small cap bias detracted for the year, but was beneficial in 2Q

Returns for Periods Ended June 30, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:1000 Index	(16.7)	(13.0)	10.2	11.0	12.8
Russell:Midcap Index	(16.8)	(17.3)	6.6	8.0	11.3
Russell:2000 Index	(17.2)	(25.2)	4.2	5.2	9.4

Endowments – International, Fixed Income & RE Performance

June 30, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
International Equity	(15.06%)	(19.91%)	4.80%	5.87%	6.85%
International Equity Target (1)	(13.73%)	(19.42%)	1.35%	2.50%	4.83%
MSCI ACWI x US (Net)	(13.73%)	(19.42%)	1.35%	2.50%	4.83%
Vanguard	(14.29%)	(18.35%)	2.02%	-	-
MSCI EAFE - Net	(14.51%)	(17.77%)	1.07%	2.20%	5.40%
WCM	(17.97%)	(26.97%)	6.68%	9.45%	-
MSCI ACWI ex US Growth	(15.59%)	(25.59%)	1.92%	3.77%	6.07%
Schroder	(12.26%)	(12.63%)	3.32%	-	-
MSCI ACWI ex US Value	(11.65%)	(12.14%)	1.17%	1.85%	4.36%
Global Equity	(15.99%)	(17.22%)	7.26%	8.07%	8.02%
Fiera	(13.92%)	(12.82%)	9.30%	-	-
Wellington	(17.95%)	(21.57%)	5.19%	-	-
MSCI ACWI - Net	(15.66%)	(15.75%)	6.21%	7.00%	8.76%
Domestic Fixed Income	(5.42%)	(10.10%)	(0.63%)	1.15%	1.53%
Fixed Income Target (2)	(4.69%)	(9.33%)	(0.27%)	1.27%	1.60%
State Street Global Advisors	(4.69%)	(8.57%)	0.10%	1.52%	1.71%
SSGA Benchmark (3)	(4.69%)	(8.55%)	0.27%	1.60%	1.76%
DoubleLine	(5.83%)	(10.13%)	(1.45%)	-	-
Western	(6.41%)	(13.37%)	(1.36%)	-	-
Bimbg Aggregate	(4.69%)	(10.29%)	(0.93%)	0.88%	1.54%
Real Estate	6.24%	23.75%	9.97%	8.78%	-
RREEF America REIT II	5.99%	26.08%	10.78%	9.45%	-
NCREIF ODCE Value Wt Lag	7.37%	28.47%	11.29%	9.88%	-
UBS Trumbull Property Income	12.31%	27.04%	10.81%	9.08%	-
Hybrid Debt Index Lag	3.99%	14.34%	5.25%	5.02%	5.59%
Cash	0.12%	0.17%	0.55%	0.99%	0.56%
3-month Treasury Bill	0.10%	0.17%	0.63%	1.11%	0.64%
Total Plan ex Equitization	(11.72%)	(12.99%)	6.00%	7.09%	8.24%
Total Plan	(11.73%)	(13.04%)	5.86%	7.01%	8.27%
Total Plan Target	(11.15%)	(11.15%)	5.51%	6.43%	7.87%
Secondary Benchmark	(11.17%)	(11.46%)	5.37%	6.25%	7.67%
CPI All Urban Consumers	3.06%	9.06%	4.98%	3.88%	2.59%

- The international equity composite declined 15.1% for the quarter.
- In global equity, Fiera outperformed the MSCI ACWI, while Wellington underperformed.
- Fixed income lagged the target by 0.7% for the quarter.
- Real estate returned 23.8% during the fiscal year (lagged a quarter).

* Current Quarter Target = 38% Russell 3000, 26.0% Blmbg Aggregate, 19% MSCI ACWI x US (Net), 9% 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 x US (Net), 9% MSCI All Count Wld-Net, 7.6% Russell Mid Cap Index, 4.2% Russell 2000 Index, 4.0% Blmbg TIPS and 8.0% NCREIF NFI-ODCE Val Wt Gr lagged 3 Months.

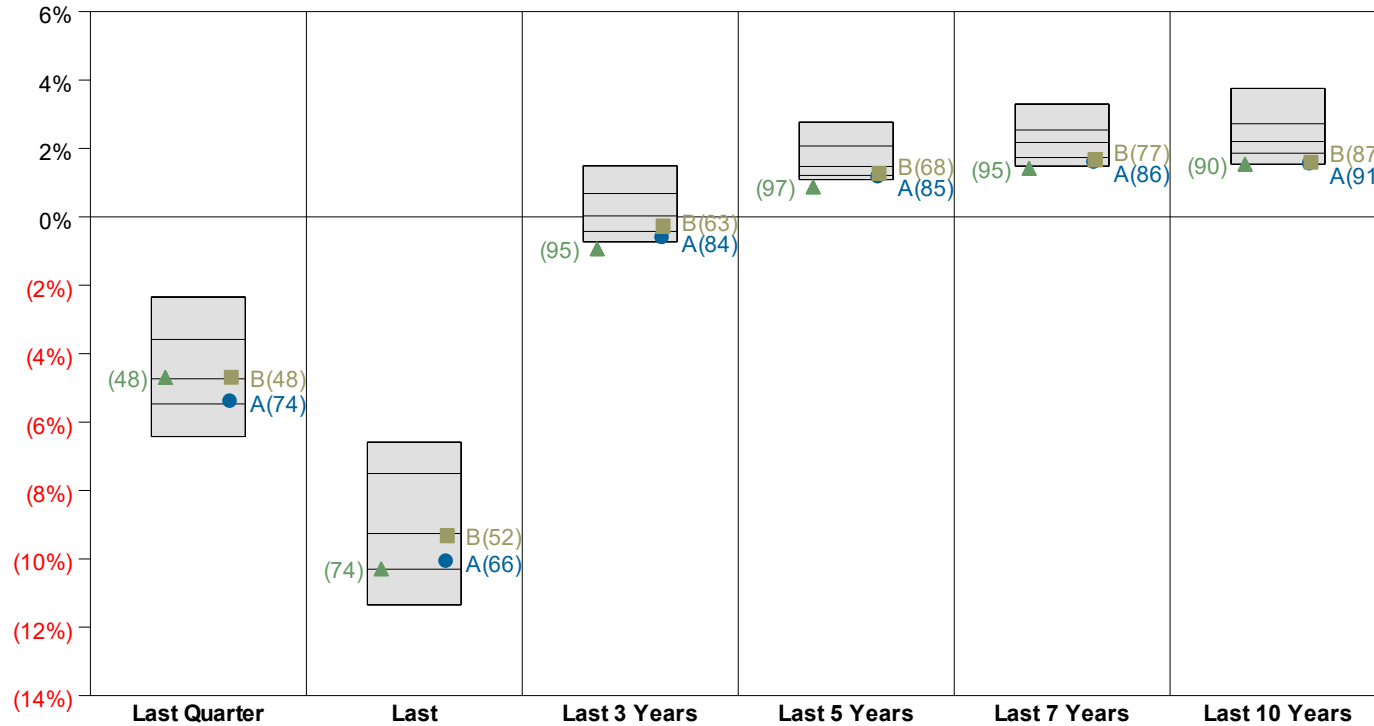
(1) International Equity Target = 100% MSCI ACWI x US (net). Prior to 6/30/2008 = 100% MSCI EAFE

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

Fixed Income Performance and Ranking

June 30, 2022

Performance vs Public Fund - Domestic Fixed (Gross)



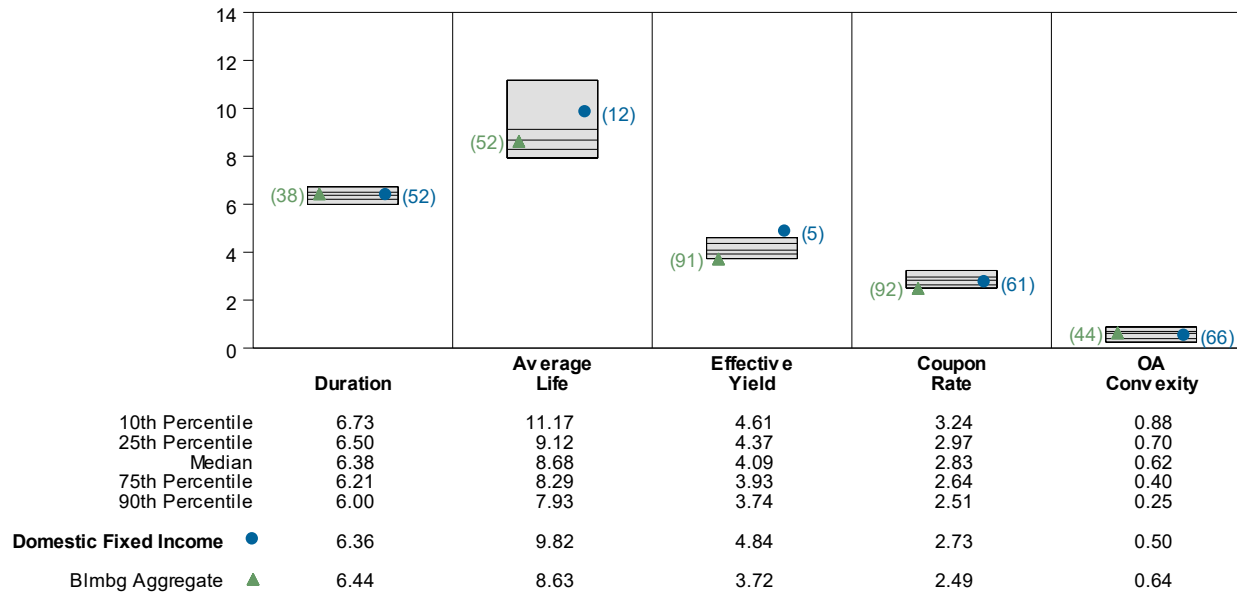
10th Percentile	(2.34)	(6.59)	1.49	2.77	3.30	3.76
25th Percentile	(3.58)	(7.51)	0.68	2.07	2.54	2.72
Median	(4.73)	(9.26)	0.03	1.47	2.17	2.20
75th Percentile	(5.47)	(10.30)	(0.43)	1.21	1.73	1.86
90th Percentile	(6.42)	(11.35)	(0.73)	1.09	1.48	1.54
Domestic Fixed Income	● A (5.42)	(10.10)	(0.63)	1.15	1.57	1.53
Fixed Income Target	■ B (4.69)	(9.33)	(0.27)	1.27	1.67	1.60
Blmbg Aggregate	▲ (4.69)	(10.29)	(0.93)	0.88	1.42	1.54

- DoubleLine and Western both trailed the benchmark in the second quarter.

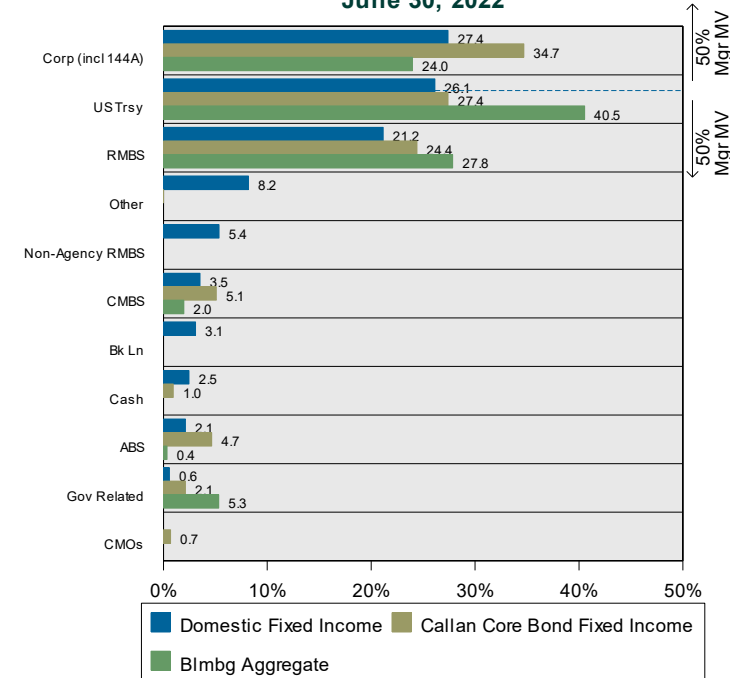
Fixed Income

(\$654.3 Million; 22.8% of the Portfolio)

Fixed Income Portfolio Characteristics
Rankings Against Callan Core Bond Fixed Income
as of June 30, 2022



Sector Allocation
June 30, 2022

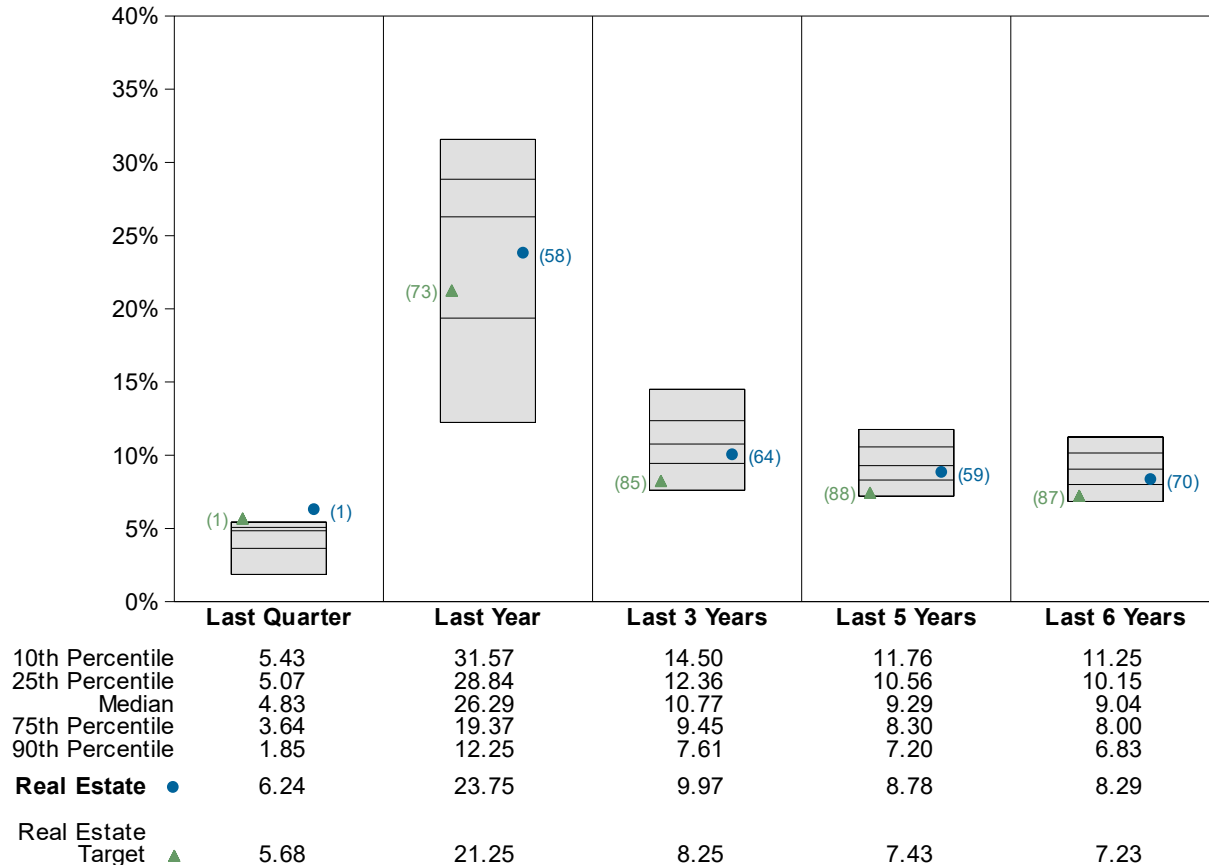


- Composite duration is in line with the benchmark, while the effective yield is higher (Western, overweight credit).
- DoubleLine was short duration relative to the Aggregate Index, while Western was overweight in the second quarter.
- Composite is underweight US Treasuries and Agency RMBS and overweight Credit and non-Agency RMBS.

Real Estate Performance and Ranking (Returns Lagged One Quarter)

June 30, 2022

Performance vs Callan Open End Core Cmmingled Real Est

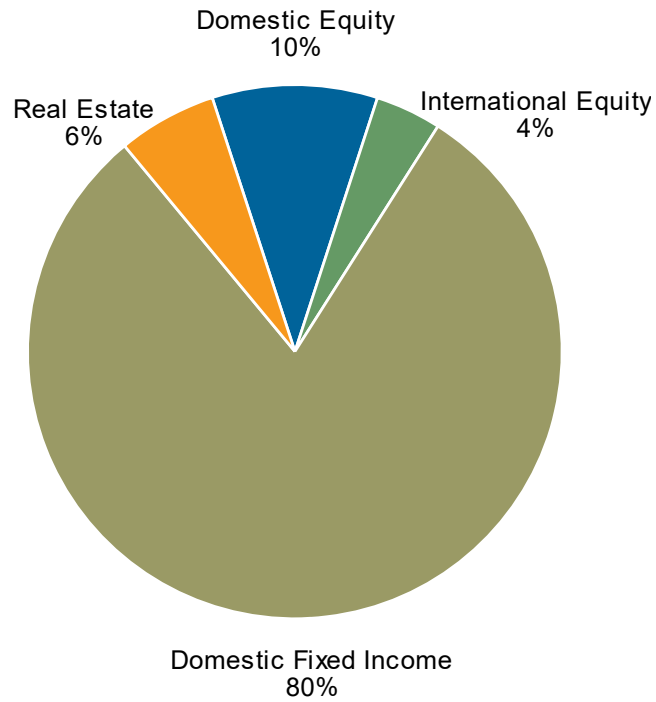


- There are three funds in the Real Estate Portfolio: UBS Trumbull Property Income, RREEF America II and CBRE.
- The RREEF America Fund is overweight Industrial and Retail and underweight Office and Multi-Family.
- During the first quarter, CBRE was funded with \$40 million. An additional \$70 million was added in the second quarter. Redemptions are ongoing from the UBS Trumbull Property Income Fund.

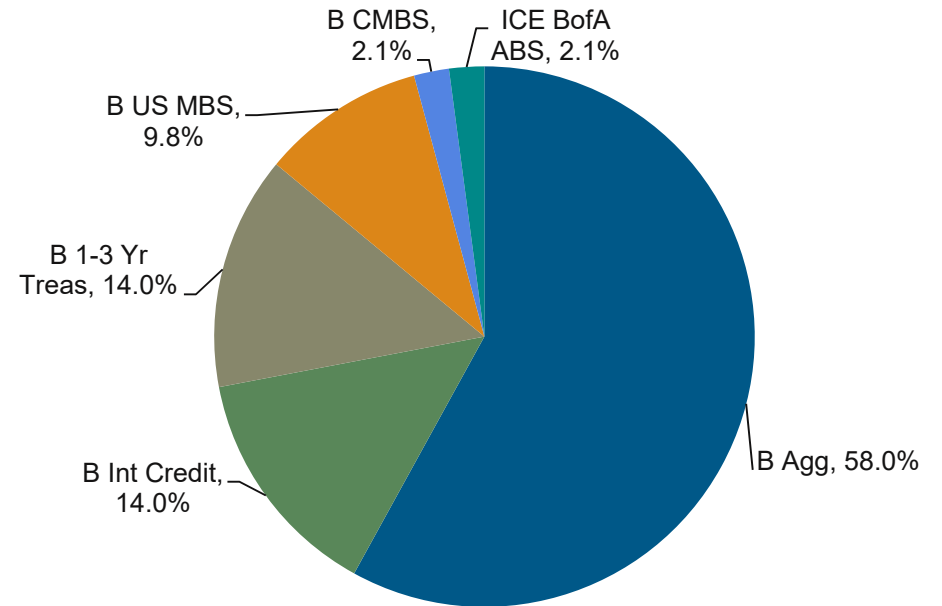
SIF Asset Allocation

As of June 30, 2022

Target Asset Allocation



Fixed Income Composition



SIF – Asset Allocation

	June 30, 2022				March 31, 2022	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Equity	\$118,170,232	13.16%	\$3,808,522	\$(20,645,591)	\$135,007,302	14.29%
Domestic Equity	\$84,086,816	9.37%	\$1,408,523	\$(15,950,965)	\$98,629,257	10.44%
Large Cap	\$84,086,816	9.37%	\$1,408,523	\$(15,950,965)	\$98,629,257	10.44%
NTGI S&P 500	84,086,816	9.37%	1,408,523	(15,950,965)	98,629,257	10.44%
International Equity	\$34,083,417	3.80%	\$2,399,998	\$(4,694,626)	\$36,378,045	3.85%
Vanguard FTSE ex-US	34,083,417	3.80%	2,399,998	(4,694,626)	36,378,045	3.85%
Domestic Fixed Income	\$735,775,853	81.96%	\$3,253,381	\$(29,345,816)	\$761,868,288	80.61%
DoubleLine	105,841,710	11.79%	0	(3,915,037)	109,756,747	11.61%
IR&M	124,380,372	13.85%	3,000,000	(5,880,966)	127,261,338	13.47%
NTGI Fixed Income Fund	287,199,362	31.99%	251,381	(14,489,423)	301,437,404	31.90%
NTGI BC US 1-3 YR Treas	112,957,240	12.58%	2,000	(540,100)	113,495,340	12.01%
Western	105,397,169	11.74%	0	(4,520,289)	109,917,458	11.63%
Real Estate Composite	\$43,789,895	4.88%	\$(7,058,522)	\$2,635,894	\$48,212,523	5.10%
RREEF America REIT II	43,789,895	4.88%	(7,058,522)	2,635,894	48,212,523	5.10%
Cash	\$2,443	0.00%	\$444	\$96	\$1,903	0.00%
Total Fund	\$897,738,424	100.0%	\$3,825	\$(47,355,416)	\$945,090,015	100.0%

- \$47.4 M

SIF Performance

June 30, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Total Equity	(15.08%)	(12.92%)	7.67%	8.46%	10.65%
Domestic Equity	(16.06%)	(10.59%)	10.04%	10.86%	12.61%
Domestic Equity Target**	(16.10%)	(10.62%)	10.36%	10.95%	12.75%
Large Cap	(16.06%)	(10.59%)	10.57%	11.27%	12.88%
NTGI S&P 500	(16.06%)	(10.59%)	10.57%	11.27%	12.88%
S&P 500	(16.10%)	(10.62%)	10.60%	11.31%	12.96%
International Equity	(12.48%)	(18.70%)	2.04%	2.85%	5.19%
Vanguard FTSE ex-US	(12.48%)	(18.70%)	2.04%	2.85%	5.19%
MSCI ACWI x US (Net)	(13.73%)	(19.42%)	1.35%	2.50%	4.83%
Domestic Fixed Income	(3.84%)	(8.95%)	(0.70%)	0.82%	1.18%
Domestic Fixed Income Target***	(3.81%)	(8.94%)	(0.68%)	0.82%	1.19%
DoubleLine	(3.57%)	(8.70%)	-	-	-
Custom Securitized Index****	(3.56%)	(8.59%)	-	-	-
IR&M	(4.60%)	(10.68%)	-	-	-
BB Aggregate	(4.69%)	(10.29%)	(0.93%)	0.88%	1.54%
NTGI Fixed Income Fund*****	(4.77%)	(10.28%)	(1.64%)	0.22%	0.95%
NTGI Custom Benchmark*****	(4.69%)	(10.29%)	(1.48%)	0.32%	1.01%
NTGI US 1-3 YR Treasury	(0.48%)	(3.08%)	-	-	-
BB Treas 1-3 Yr	(0.52%)	(3.51%)	0.18%	0.90%	0.77%
Western Asset	(4.11%)	(9.38%)	-	-	-
BB Intermediate Credit	(3.63%)	(8.96%)	(0.14%)	1.43%	2.21%
Real Estate	5.47%	-	-	-	-
RREEF America REIT II	5.47%	-	-	-	-
NCREIF ODCE Value Wt Lag	7.37%	28.47%	11.29%	9.88%	-
Total Plan	(5.01%)	(8.69%)	0.92%	2.15%	2.59%
Total Plan Target*	(4.84%)	(8.09%)	1.11%	2.28%	2.62%
CPI All Urban Consumers	3.06%	9.06%	4.98%	3.88%	2.59%

- Total Equities fell 15.1% in the second quarter and were down 12.9% in the fiscal year
 - US Equities fell 16.1% in 2Q and 10.6% in the fiscal year
 - International equities lost 12.5% during the quarter and 18.7% over the trailing year.
- Fixed Income was down for the quarter and over the trailing year.
 - Best performing segment over both periods was US 1-3 year Treasury.
- Real estate was the only bright spot in the portfolio with a gain of 5.5% for the quarter.
- The Total Plan returned -5.0% and -8.7% for the quarter and year, respectively.

See footnotes on page 32.

Endowments Compliance Report

For Period Ending June 30, 2022

Asset Allocation			
Category	Range	Target	Actual
Equities	61.0% - 71.0%	66.0%	64.6%
Domestic	33.0% - 43.0%	38.0%	37.2%
Large cap	22.2% - 30.2%	30.2%	25.4%
Mid cap	4.6% - 10.6%	7.6%	7.9%
Small cap	2.2% - 6.2%	4.2%	3.9%
International	15.0% - 23.0%	19.0%	18.7%
Global	6.0% - 12.0%	9.0%	8.7%
Fixed Income	23.0% - 29.0%	26.0%	22.8%
Real Estate	6.0% - 10.0%	8.0%	12.1%
Cash and Equivalents	0.0% - 5.0%	0.0%	0.5%

Rebalancing

Applied when appropriate Yes

Performance

Managers remain in specified style Yes

Active managers above median/indices for 3-years No See Note 1 below

Note 1: Sycamore has less than 3 years performance history.

Over the trailing three-year period, LSV, Western Asset, DoubleLine, Wellington, and Sands are below benchmark and median. Eagle is below median.

SIF Compliance Report

For Period Ending June 30, 2022

Asset Allocation				
Category	Range	Target	Actual	
Domestic	9.5% - 10.5%	10.0%	9.4%	
International	3.5% - 4.5%	4.0%	3.8%	
Fixed Income*	77.0% - 89.0%	80.0%	82.0%	
Real Assets*	0.0% - 8.0%	6.0%	4.9%	
Cash and Equivalents	0.0% - 2.0%	0.0%	0.0%	

Rebalancing

Applied when appropriate Yes

Performance

Managers remain in specified style Yes

Active managers above median/indices for 3-years N/A See Note 1 below

Note 1: Active equity strategies were terminated in 3Q20 and active fixed income managers were hired. Real Estate was added in 4Q21. Therefore, no active strategies have 3 years of performance to assess.

*Some of the assets slated for Real Assets (Real Estate) are currently being held in fixed income.

SIF Benchmarks as of June 30, 2022

*Total Plan Target= 46.52% BB Aggregate, 11.16% BB Intermediate Credit, 11.16% BB 1-3 Treasury, 11.16% Custom Securitized Index, 10.00% S&P 500, 6.00% NCREIF NFI-ODCE Val Wt Gr Lagged 3 Months, 4.00% MSCI ACWI ex US. Prior to 12/31/21 = 50.00% BB Aggregate, 12.00% BB Intermediate Credit, 12.00% BB 1-3 Treasury, 12.00% Custom Securitized Index, 10.00% S&P 500, 4.00% MSCI ACWI ex US. Prior to 9/30/20 = 30.50% BB Int Gov/ Credit, 30.50% BB Aggregate, 17.40% BB 1-3 Treasury, 9.00% Russell 3000, 8.70% BB US TIPS and 4.00% MSCI ACWI ex US.

**Domestic Equity Target = 100.00% S&P 500. Prior to 9/30/20 = 100.00% Russell 3000

***Domestic Fixed Income Target = 58.15% BB Aggregate, 13.95% BB Intermediate Credit, 13.95% BB 1-3 Treasury, 13.95% Securitized Index. Prior to 9/30/20 = 35.00% BB Int Gov/ Credit, 35.00% BB Aggregate, 20.00% BB 1-3 and 10.00% BB US TIPS.

****Custom Securitized Index = 70.00% BB US MBS, 15.00% BB CMBS IG and 15.00% ICE BofA ABS Index.

*****The current mandate for the NTGI Fixed Income Fund and Benchmark is 100.00% BB Aggregate. Prior to 9/30/20 = 39.00% BB Int Gov/ Credit, 39.00% BB Aggregate and 22.00% BB 1-3 Treasury.

Callan

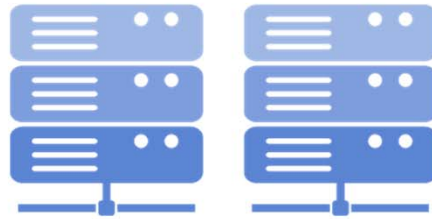
Callan Updates

Published Research Highlights from 2Q22

Research Café: ESG Interview Series



Investing in Data Centers: The Real Assets of the Digital Age



Webinar: Pension Risk Transfer



Do Active Fixed Income Managers Add Value With Sector Rotation?



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Nathan Wong

SEC Proposes Rule to Enhance ESG Disclosures for Investments

Kristin Bradbury

Additional Reading

Alternatives Focus quarterly newsletter

Active vs. Passive quarterly charts

Capital Markets Review quarterly newsletter

Monthly Updates to the Periodic Table

Market Pulse Flipbook quarterly markets update

Real Estate Indicators market outlook

Callan Institute Events

Upcoming conferences, workshops, and webinars

Callan College

Intro to Alternatives

This course is for institutional investors, including trustees and staff members of public plans, corporate plans, and nonprofits. This session familiarizes trustees and staff with alternative investments like private equity, hedge funds, and real estate and how they can play a key role in any portfolio. In our “Callan College” on Alternatives, you will learn about the importance of allocations to alternatives, and how to consider integrating, evaluating, and monitoring them.

Join our next **VIRTUAL session via Zoom** (2 sessions, 3 hours each):
August 24-25, 2022

Intro to Investments—Learn the Fundamentals

This course is for institutional investors, including trustees and staff members of public plans, corporate plans, and nonprofits. This session familiarizes trustees and staff with basic investment theory, terminology, and practices.

Join our next **VIRTUAL session via Zoom** (3 sessions, 2–3 hours each):
September 20–22, 2022

Mark Your Calendar

2022 October Regional Workshops

October 18, 2022
Denver

October 20, 2022
San Francisco

Callan Institute’s 2023 National Conference

April 2-4, 2023
Scottsdale, Arizona

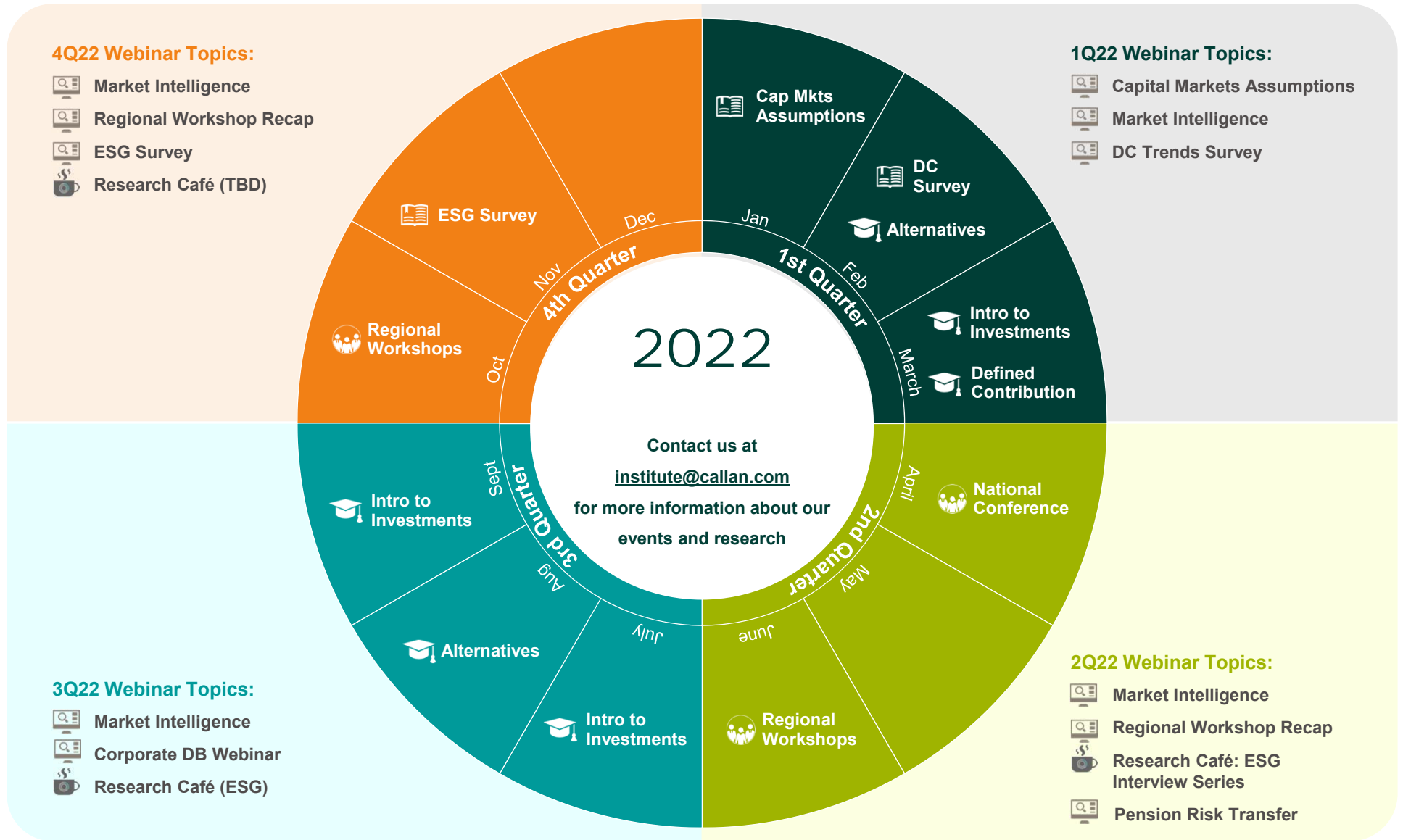
Watch your email for further details and an invitation.

Webinars & Research Café Sessions

Market Intelligence

October 14, 2022 – 9:30am (PT)

Content Calendar—Callan Institute



Callan College

Conference/Workshop

Publication

Webinar

Research Café

Callan Updates

Firm updates by the numbers, as of June 30, 2022

Total Associates: ~200

Ownership

- 100% employees
- 67% of employees are equity owners
- 55% of shareholders identify as women or minority

Key Hires

- Craig Chaikin, CFA, SVP, Denver Consulting
- Emily Hylton, SVP, Atlanta Consulting
- Christina Mays, VP, Real Assets Consulting
- Nicole Wubben, SVP, Global Manager Research

Total General and Investment Consultants: more than 55

Total Specialty and Research Consultants: more than 80

Total CFA/CAIA/FRMs: more than 55

Total Institutional Investor Clients: more than 475

Assets Under Advisement: more than \$4 trillion

“Callan has been offering alternatives investment consulting services for more than 30 years. The demand for our services is greater than ever as institutional investors increase their allocations to alternative investments. As a result, we’ve been expanding our already robust research resources and capabilities to support them.” — Pete Keliuotis, EVP, Callan’s Alternatives Consulting Group

