

Callan



Foundation, Inc.

UNIVERSITY OF CENTRAL FLORIDA

March 2023

**University of Central Florida
Foundation, Inc.**

Fourth Quarter 2022 Performance
Update

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Agenda

Implementation Update and 2023 Work Plan

2022 Year in Review and Market Environment

Fourth Quarter Performance Review

Callan Long Term Capital Market Assumptions

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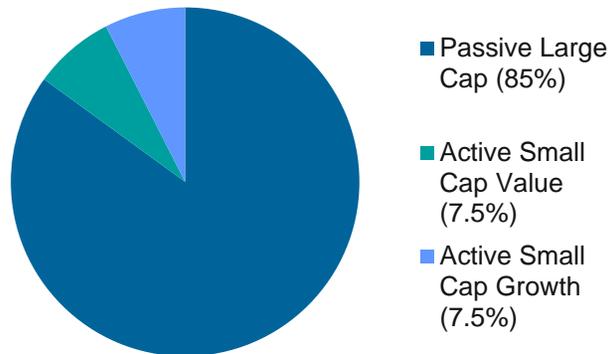
**Implementation Update and 2023 Work
Plan**

Implementation Summary – Key Changes

Public Equity Summary

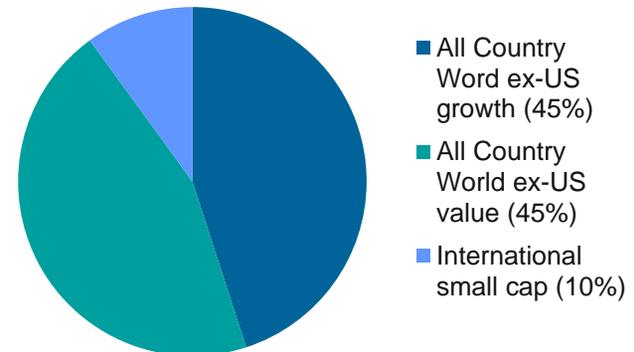
- The transition to the new manager structure was completed in June 2022 for the public market exposure within the portfolio
- The Global Equity Allocation was eliminated and currently implemented through dedicated **Domestic Equity** (30% of total portfolio) and **International Equity** (19% of total portfolio)

Domestic Equity Target



- The large cap passive exposure tracks the Russell 1000 Index (previously S&P 500) for full market exposure to large, mid, and small cap equities
- A small cap growth manager was added to compliment the portfolio's existing small cap value manager and remove the prior value bias

International Equity Target



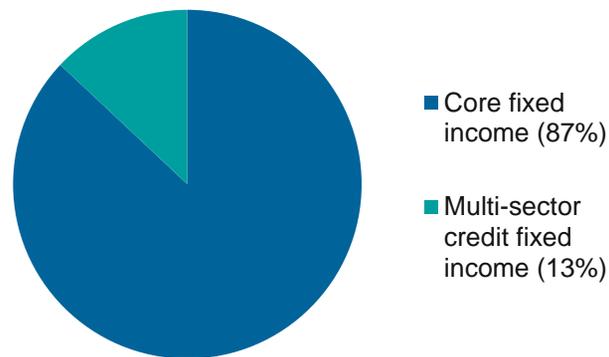
- The international equity portfolio is now 100% actively managed
- The split between developed markets and emerging markets was removed and replaced with two managers who will invest across both markets
- International small cap exposure was retained

Implementation Summary – Key Changes

Fixed Income Summary

- The transition to the new manager structure was completed in June 2022 for the public market exposure within the portfolio
- The **Fixed Income** structure (15% of total portfolio) was simplified and is now 100% actively managed

Fixed Income Target

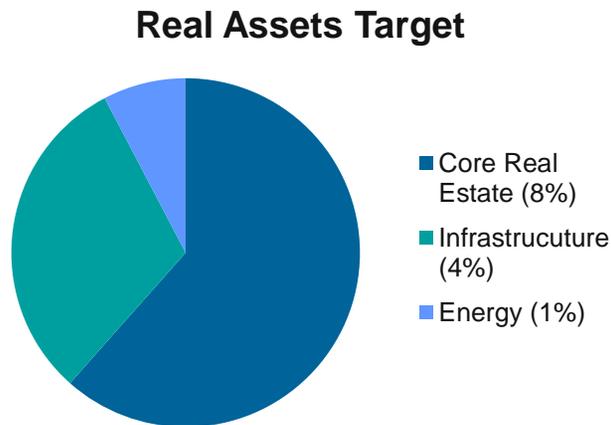


- The passive, sector-specific funds (TIPS, dedicated Treasuries), were eliminated
- Given the small overall allocation to fixed income within the total portfolio, the core plus exposure was replaced with a more conservative core mandate to act more as an “anchor” during periods of market stress
- The multi-sector credit exposure was retained, at approximately the same weight, to offer some diversification and return enhancement

Implementation Summary – Key Changes

Real Assets Summary

- The **Real Assets** structure (13% of total portfolio) will have exposure to Core Real Estate, Infrastructure, and Energy



- Target exposure to real assets is fully built out
- Core Real Estate allocated across two open-ended funds
- Infrastructure allocated to one open-ended fund
 - Manager called capital on 1/3/23 and commitment is fully funded
- The Energy exposure resulted from two existing closed-end energy funds where liquidating was not an option

Implementation Summary – Key Changes

Hedge Funds and Private Markets Summary

- The **Hedge Fund** exposure (5% of portfolio) will retain three legacy managers
 - Submitted full redemption request from one hedge fund on 9/30—proceeds to be paid out over four tranches.
 - The assets have been reallocated amongst the managers for a slightly more conservative approach
 - The overall assets will be reduced from the previously higher target to the new target of 5%

- The **Private Equity** program (12% of portfolio) will take ~1-2 years to build out to target
 - We expect to commit to around two partnerships per year, totaling \$8 million per year
 - *Committed to one new partnership in 2022; and committed \$4 million to one new partnership in 2023*
 - New commitments will compliment and diversify existing partnerships (increase weight to mid/small buyout strategies)

- The **Private Credit** program (6% of portfolio) is reasonably close to target
 - We expect to commit to one to two partnerships per year, totaling \$4-6 million per year
 - *Callan's investment committee approved a \$2 million re-up of an existing private credit manager; first capital call was 12/28/22*
 - New commitments will compliment and diversify existing partnerships

Proposed 2023 Work Plan

	1st Quarter 2023			2nd Quarter 2023			3rd Quarter 2023			4th Quarter 2023		
Strategic Planning												
Review of Capital Market Projections												
Review Investment Policy Statement												
Review 2023 / Prepare 2024 Work Plan												
Plan Implementation												
Investment Manager Fee Review												
Private Equity/Private Credit Pacing Analysis												
Private Equity/Private Credit Forward Calendar Review												
Manager Searches (as needed)												
Monitoring & Evaluation												
Attend Quarterly Investment Committee Meetings												
Present Executive Summaries												
Produce Quarterly Performance Reports												
Produce Monthly Flash Reports												
Annual Audit Documentation Support												
Manage Capital Calls for Private Funds												
Callan Internal UCFF Investment Committee Meetings												
Continuous Qualitative Review of Managers												
Research & Education (see next page)												
"Callan College"												
Regional Workshops												
National Client Conference												
Webinars, Research Papers and Publications												

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. You will learn about the importance of allocations to alternatives and how to consider integrating, evaluating, and monitoring them.

- February 15–16, 2023 – Virtual Session via Zoom

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.

- May 23–25, 2023 – Virtual Session via Zoom
- Sept 23
- **November 1-2, 2023 – In Person session – Atlanta**

Please visit our website at callan.com/events-education as we add dates to our 2023 calendar!

Mark Your Calendar

2023 National Conference

April 2–4, 2023
Scottsdale, Arizona

2023 Regional Workshops

June 27, 2023 – Denver
June 29, 2023 – San Francisco

October 24, 2023 – New York
October 26, 2023 – Chicago

Watch your email for further details and an invitation.

Webinars & Research Café Sessions

Webinar: DC Survey Results

March 23, 2023 – 9:30am (PT)

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**2022 Year in Review and Third Quarter
Market Environment**

Equity and Fixed Income Markets Down Together in 2022

Declines for both stocks and bonds for three straight quarters are extremely unusual

Global equity markets down sharply in 2022 despite rebound in 4Q

- Similar impact across all equity market segments: developed, emerging, small cap

Fixed income down with sharply higher inflation and interest rates

- Bloomberg Aggregate: -13% for the year, worst year ever for the index by a wide margin
- CPI-U: +6.5% for the year ended Dec. 2022

No place to hide in 2022; almost every asset class is down. It was the worst year for a 60/40 portfolio in decades.

- ▶ Only the third year in last 100 calendar years that stocks and bonds have both been negative on an annual basis

Inflation at highest rate in decades

Economic data show growth hit 'pause'

- ▶ GDP rose 2.9% in 4Q22, after a 3.2% rise in 3Q, a 0.6% drop in 2Q, and a 1.6% decline in 1Q.

Returns for Periods ended 12/31/22

	Quarter	Year to Date	1 Year	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	7.18	-19.21	-19.21	8.79	12.13	7.68
S&P 500	7.56	-18.11	-18.11	9.42	12.56	7.64
Russell 2000	6.23	-20.44	-20.44	4.13	9.01	7.13
Global ex-U.S. Equity						
MSCI World ex USA	16.18	-14.29	-14.29	1.79	4.59	4.65
MSCI Emerging Markets	9.70	-20.09	-20.09	-1.39	1.44	--
MSCI ACWI ex USA Small Cap	13.31	-19.97	-19.97	0.67	5.24	6.87
Fixed Income						
Bloomberg Aggregate	1.87	-13.01	-13.01	0.02	1.06	3.97
90-day T-Bill	0.84	1.46	1.46	1.26	0.76	1.91
Bloomberg Long Gov/Credit	2.61	-27.09	-27.09	-1.21	1.57	5.38
Bloomberg Global Agg ex-US	6.81	-18.70	-18.70	-3.07	-1.64	2.71
Real Estate						
NCREIF Property	-3.50	5.53	5.53	7.46	8.82	9.04
FTSE Nareit Equity	5.24	-24.37	-24.37	3.68	6.53	7.87
Alternatives						
CS Hedge Fund Index	0.92	1.06	1.06	4.25	4.24	5.81
Cambridge Private Equity*	-1.84	-3.77	-3.77	16.84	15.31	14.31
Bloomberg Commodity	2.22	16.09	16.09	6.44	-1.28	1.87
Gold Spot Price	9.22	-0.13	-0.13	6.88	0.86	7.64
Inflation - CPI-U	0.00	6.45	6.45	3.78	2.60	2.47

*Cambridge PE data through 09/30/22.

Sources: Bloomberg, Callan, Cambridge, Credit Suisse, FTSE Russell, MSCI, NCREIF, S&P Dow Jones Indices

The Callan Periodic Table of Investment Returns

Annual Returns for Key Indices Ranked in Order of Performance (2003–2022)

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Emerging Market Equity 55.82%	Real Estate 37.96%	Emerging Market Equity 34.00%	Real Estate 42.12%	Emerging Market Equity 39.38%	U.S. Fixed Income 5.24%	Emerging Market Equity 78.51%	Small Cap Equity 26.85%	U.S. Fixed Income 7.84%	Real Estate 27.73%	Small Cap Equity 38.82%	Real Estate 15.02%	Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	Cash Equivalent 1.87%	Large Cap Equity 31.49%	Small Cap Equity 19.96%	Large Cap Equity 28.71%	Cash Equivalent 1.46%
Small Cap Equity 47.25%	Emerging Market Equity 25.55%	Real Estate 15.35%	Emerging Market Equity 32.17%	Dev ex-U.S. Equity 12.44%	Glbl ex-U.S. Fixed 4.39%	High Yield 58.21%	Real Estate 19.63%	High Yield 4.98%	Emerging Market Equity 18.23%	Large Cap Equity 32.39%	Large Cap Equity 13.69%	U.S. Fixed Income 0.55%	High Yield 17.13%	Dev ex-U.S. Equity 24.21%	U.S. Fixed Income 0.01%	Small Cap Equity 25.52%	Large Cap Equity 18.40%	Real Estate 26.09%	High Yield -11.19%
Real Estate 40.69%	Dev ex-U.S. Equity 20.38%	Dev ex-U.S. Equity 14.47%	Dev ex-U.S. Equity 25.71%	Glbl ex-U.S. Fixed 11.03%	Cash Equivalent 2.06%	Real Estate 37.13%	Emerging Market Equity 18.88%	Glbl ex-U.S. Fixed 4.36%	Dev ex-U.S. Equity 16.41%	Dev ex-U.S. Equity 21.02%	U.S. Fixed Income 5.97%	Cash Equivalent 0.05%	Large Cap Equity 11.96%	Large Cap Equity 21.83%	High Yield -2.08%	Dev ex-U.S. Equity 22.49%	Emerging Market Equity 18.31%	Small Cap Equity 14.82%	U.S. Fixed Income -13.01%
Dev ex-U.S. Equity 39.42%	Small Cap Equity 18.33%	Large Cap Equity 4.91%	Small Cap Equity 18.37%	U.S. Fixed Income 6.97%	High Yield -26.16%	Dev ex-U.S. Equity 33.67%	High Yield 15.12%	Large Cap Equity 2.11%	Small Cap Equity 16.35%	High Yield 7.44%	Small Cap Equity 4.89%	Real Estate -0.79%	Emerging Market Equity 11.19%	Small Cap Equity 14.65%	Glbl ex-U.S. Fixed -2.15%	Real Estate 21.91%	Glbl ex-U.S. Fixed 10.11%	Dev ex-U.S. Equity 12.62%	Dev ex-U.S. Equity -14.29%
High Yield 28.97%	Glbl ex-U.S. Fixed 12.54%	Small Cap Equity 4.55%	Large Cap Equity 15.79%	Large Cap Equity 5.49%	Small Cap Equity -33.79%	Small Cap Equity 27.17%	Large Cap Equity 15.06%	Cash Equivalent 0.10%	Large Cap Equity 16.00%	Real Estate 3.67%	High Yield 2.45%	Dev ex-U.S. Equity -3.04%	Real Estate 4.06%	Glbl ex-U.S. Fixed 10.51%	Large Cap Equity -4.38%	Emerging Market Equity 18.44%	Dev ex-U.S. Equity 7.59%	High Yield 5.28%	Large Cap Equity -18.11%
Large Cap Equity 28.68%	High Yield 11.13%	Cash Equivalent 3.07%	High Yield 11.85%	Cash Equivalent 5.00%	Large Cap Equity -37.00%	Large Cap Equity 26.47%	Dev ex-U.S. Equity 8.95%	Small Cap Equity -4.18%	High Yield 15.81%	Cash Equivalent 0.07%	Cash Equivalent 0.03%	Small Cap Equity -4.41%	Dev ex-U.S. Equity 2.75%	Real Estate 10.36%	Real Estate -5.63%	High Yield 14.32%	U.S. Fixed Income 7.51%	Cash Equivalent 0.05%	Glbl ex-U.S. Fixed -18.70%
Glbl ex-U.S. Fixed 19.36%	Large Cap Equity 10.88%	High Yield 2.74%	Glbl ex-U.S. Fixed 8.16%	High Yield 1.87%	Dev ex-U.S. Equity -43.56%	Glbl ex-U.S. Fixed 7.53%	U.S. Fixed Income 6.54%	Real Estate -6.46%	U.S. Fixed Income 4.21%	U.S. Fixed Income -2.02%	Emerging Market Equity -2.19%	High Yield -4.47%	U.S. Fixed Income 2.65%	High Yield 7.50%	Small Cap Equity -11.01%	U.S. Fixed Income 8.72%	High Yield 7.11%	U.S. Fixed Income -1.54%	Emerging Market Equity -20.09%
U.S. Fixed Income 4.10%	U.S. Fixed Income 4.34%	U.S. Fixed Income 2.43%	Cash Equivalent 4.85%	Small Cap Equity -1.57%	Real Estate -48.21%	U.S. Fixed Income 5.93%	Glbl ex-U.S. Fixed 4.95%	Dev ex-U.S. Equity -12.21%	Glbl ex-U.S. Fixed 4.09%	Emerging Market Equity -2.60%	Glbl ex-U.S. Fixed -3.09%	Glbl ex-U.S. Fixed -6.02%	Glbl ex-U.S. Fixed 1.49%	U.S. Fixed Income 3.54%	Dev ex-U.S. Equity -14.09%	Glbl ex-U.S. Fixed 5.09%	Cash Equivalent 0.67%	Emerging Market Equity -2.54%	Small Cap Equity -20.44%
Cash Equivalent 1.15%	Cash Equivalent 1.33%	Glbl ex-U.S. Fixed -8.65%	U.S. Fixed Income 4.33%	Real Estate -7.39%	Emerging Market Equity -53.33%	Cash Equivalent 0.21%	Cash Equivalent 0.13%	Emerging Market Equity -18.42%	Cash Equivalent 0.11%	Glbl ex-U.S. Fixed -3.08%	Dev ex-U.S. Equity -4.32%	Emerging Market Equity -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Market Equity -14.57%	Cash Equivalent 2.28%	Real Estate -9.04%	Glbl ex-U.S. Fixed -7.05%	Real Estate -25.10%

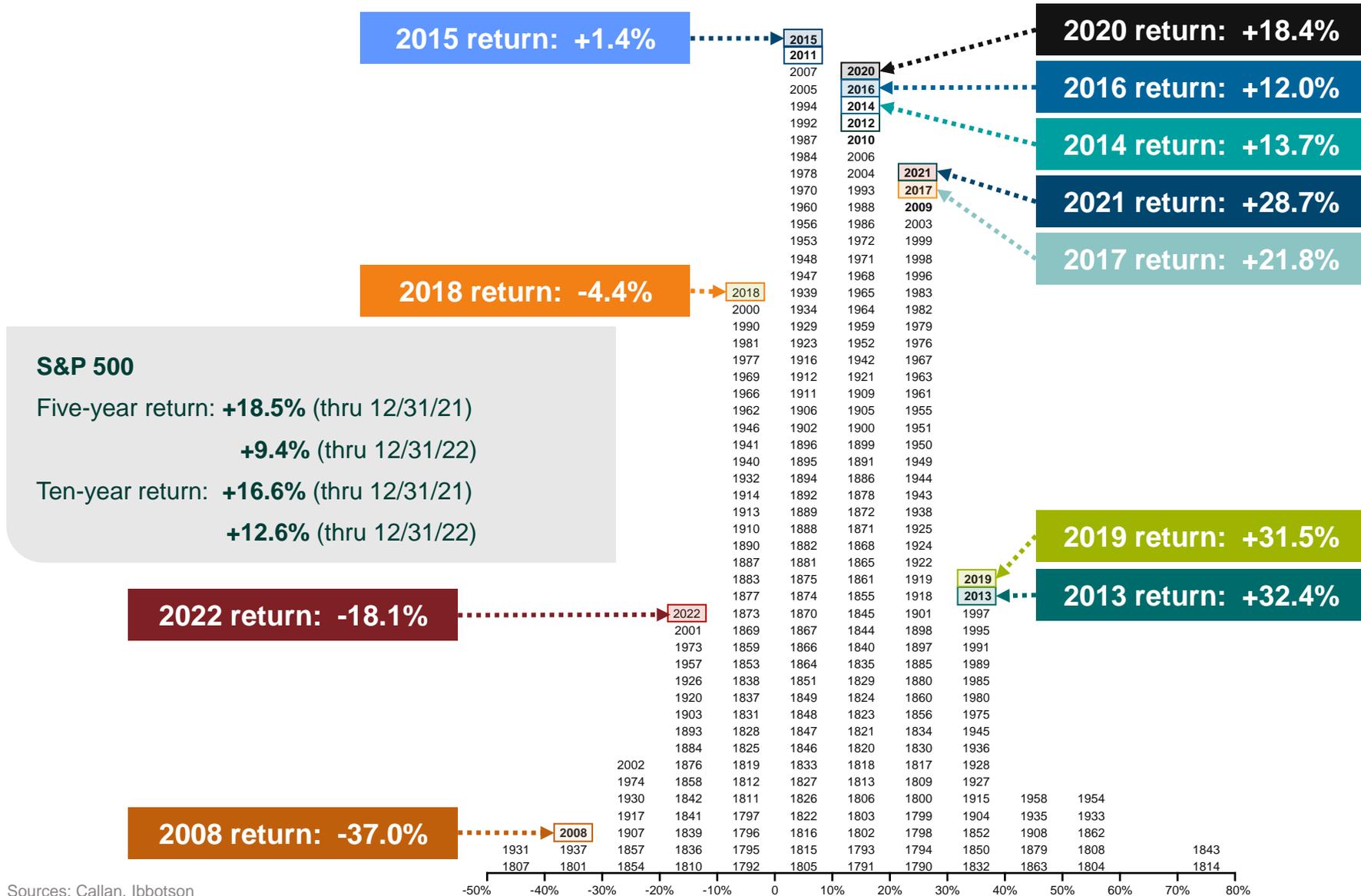
The Callan Periodic Table of Investment Returns conveys the strong **case for diversification** across asset classes (stocks vs. bonds), capitalizations (large vs. small), and equity markets (U.S. vs. global ex-U.S.). The Table highlights the uncertainty inherent in all capital markets. Rankings change every year. Also noteworthy is the difference between absolute and relative performance, as returns for the top-performing asset class span a wide range over the past 20 years.

A printable copy of The Callan Periodic Table of Investment Returns is available on our website at www.callan.com/periodic-table/.

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Stock Market Returns by Calendar Year

2022 YTD performance in perspective: History of the U.S. stock market (233 years of returns)



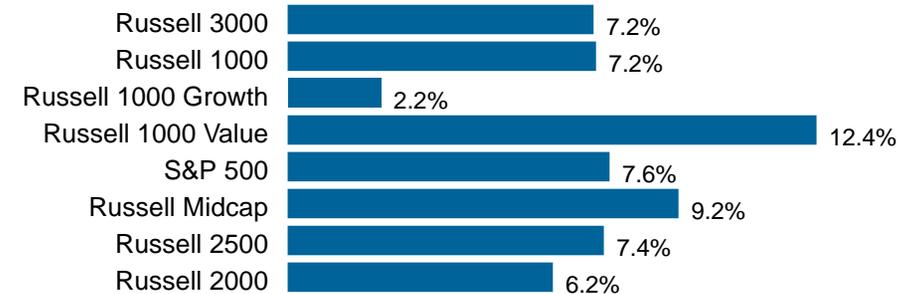
Sources: Callan, Ibbotson

U.S. Equity Performance: 4Q22

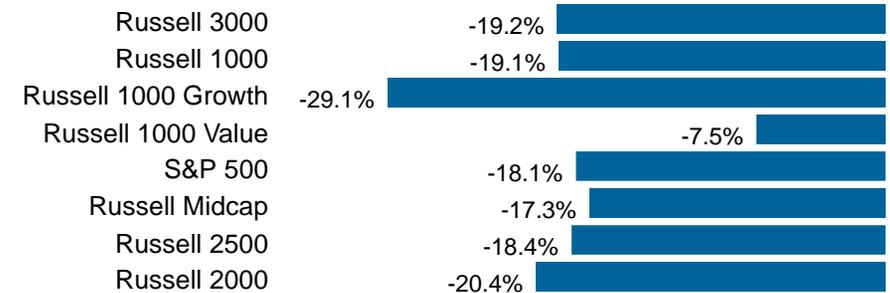
Markets retrace in December after gains in the prior two months

- ▶ The S&P 500 Index posted positive returns in both October and November but fell in December. The index was up 7.6% during 4Q22 but ended 2022 down 18.1%.
- ▶ Energy was the best-performing sector during the quarter and 2022, returning 23% and 66% respectively. Consumer Discretionary and Communication Services were the only two sectors that posted negative returns in 4Q.
- ▶ Value stocks outperformed growth across the market capitalization spectrum, and for both 4Q and the full year.
- ▶ Large cap stocks (Russell 1000) outperformed small caps (Russell 2000) last quarter and for the year.
- ▶ Continued macroeconomic concerns (e.g., inflation, potential recession, geopolitical issues) led to higher volatility and a down-year for U.S. equities.

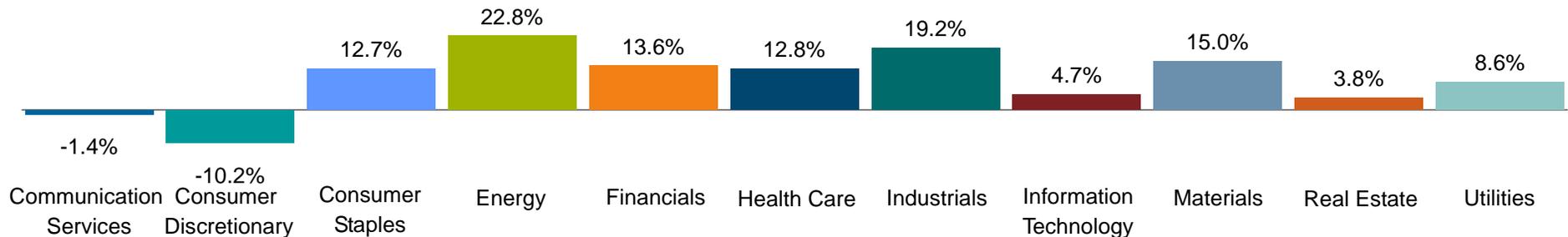
U.S. Equity Returns: Quarter Ended 12/31/22



U.S. Equity Returns: One Year Ended 12/31/22



Industry Sector Quarterly Performance (S&P 500) as of 12/31/22



Sources: FTSE Russell, S&P Dow Jones Indices

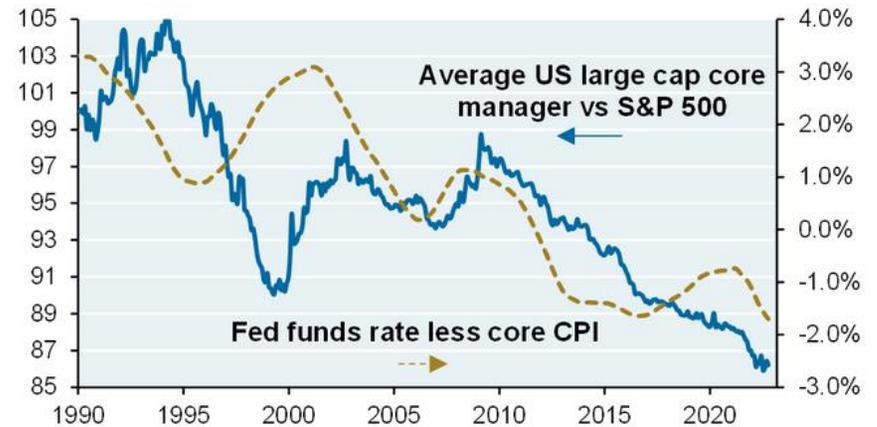
U.S. Equity Key Theme

Market environment could benefit active managers

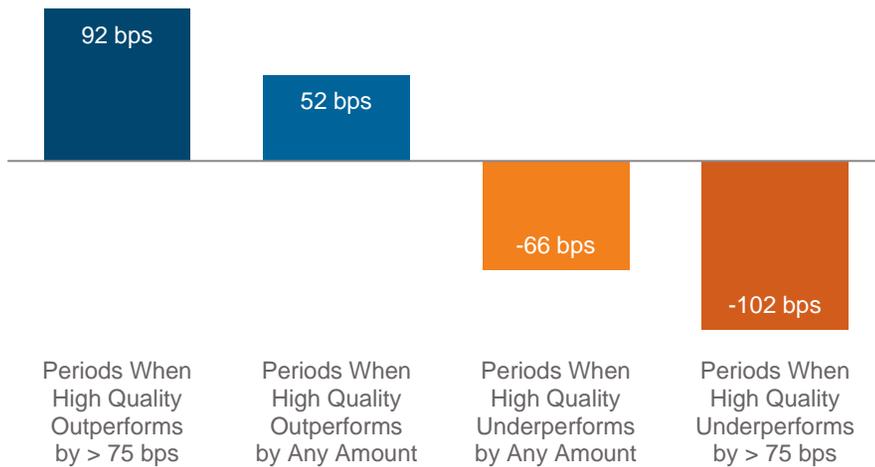
- ▶ Historically, periods of higher interest rates have coincided with better performance for active managers.
- ▶ Valuations between “high quality” and “low quality” companies were minimal in the period of quantitative easing. Lower intra-stock correlation and higher dispersion should be a tailwind for stock-pickers.
- ▶ Potential outperformance of the quality factor should favor managers who focus on attributes such as profitability.

Active Managers vs. Real Fed Fund Policy Rates

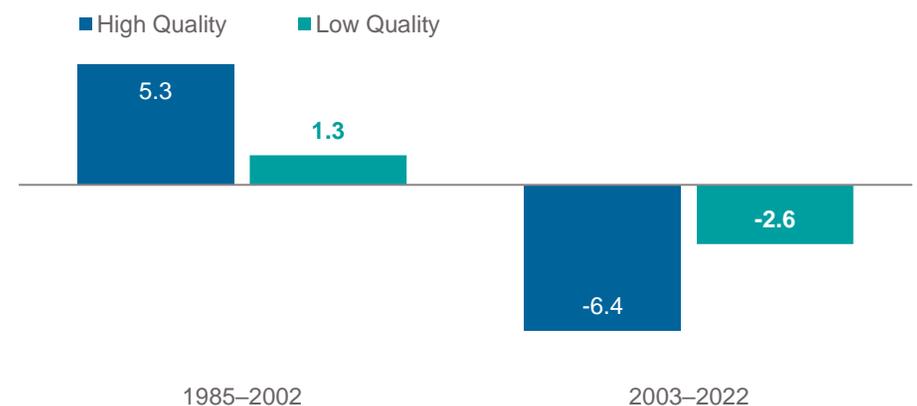
Index (100 = Jan 1990); % y/y change, 5-year average (right axis)



Average Quarterly Small Cap Core Fund Performance vs. Russell 2000



Relative Performance Between High- and Low-quality Stocks



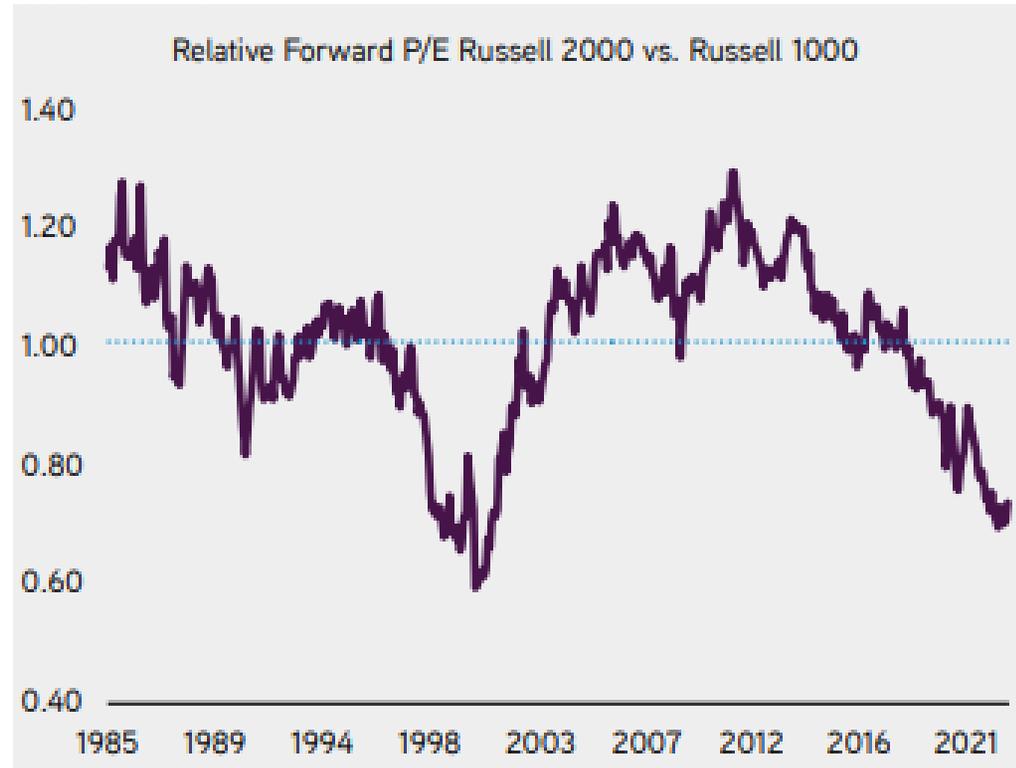
Sources: Furey, Bloomberg, JP Morgan

U.S. Equity Key Theme

Small cap valuations are attractive relative to large cap

- ▶ During 4Q22, the Russell 2000 was trading at a 30% discount to its historical P/E average.
- ▶ Relative to large caps, the Russell 2000's forward 12 months P/E is trading at the lowest level versus large-cap stocks since the Dot-Com Bubble.
- ▶ Relative to large and mid caps, small caps have looked significantly cheaper on various valuation metrics recently.

Small Cap Valuations Are Cheap vs. Large Cap
1985–October 2022



Source: Bank of America, FactSet

Global/Global ex-U.S. Equity Performance: 4Q22

Ending on a high note

4Q22 was a bright spot during a tough calendar year in global and global ex-U.S. equity markets.

Encouraging signs

- ▶ Lower-than-expected U.S. inflation data buoyed market optimism at the end of the year.
- ▶ The Fed slowed its pace of tightening with further slowing expected in 2023.
- ▶ China reversed its zero-COVID policies, prompting exuberance from investors.

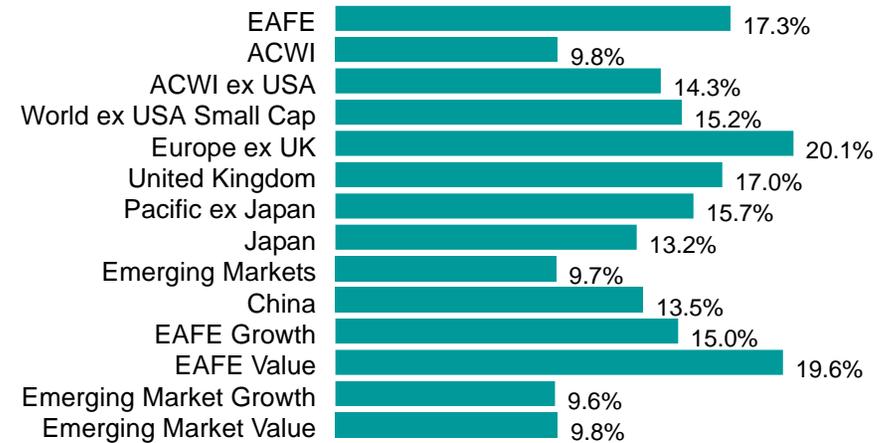
Growth vs. value

- ▶ Value outpaced growth across developed and emerging markets.
 - Economically sensitive sectors (e.g., Financials and Industrials) benefited from the anticipation of improved growth; Energy was the largest outperformer.

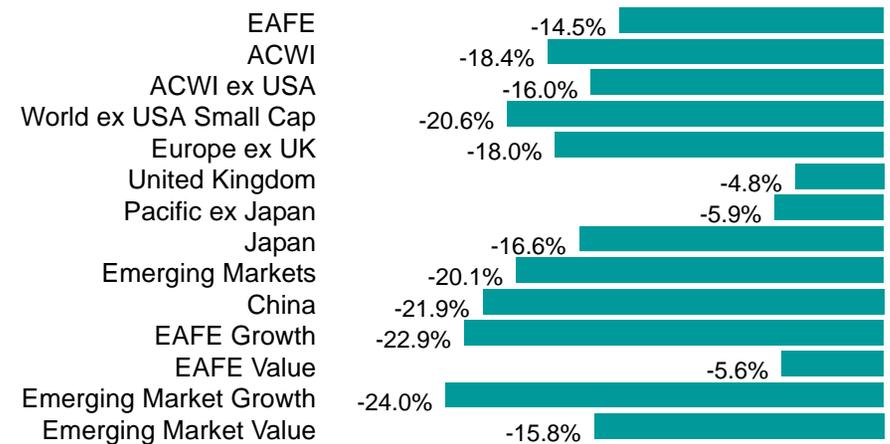
U.S. dollar vs. other currencies

- ▶ After reaching a multi-decade high, the dollar fell against all major currencies with signs of inflation easing.
 - Despite the 7.7% decline in 4Q22, the dollar still gained nearly 8% over the full year.

Global Equity Returns: Quarter Ended 12/31/22



Global Equity Returns: One Year Ended 12/31/22



Source: MSCI

U.S. Fixed Income Performance: 4Q22

Bonds were up in 4Q but 2022 results remain negative

- ▶ Aggregate: positive return driven by coupon income and spread tightening; interest rates rose modestly
- ▶ Rates were volatile intra-quarter
 - UST 10-year yield: high 4.22% on 11/7; low 3.42% on 12/7
 - Curve remained inverted at quarter-end; 10-year yield 3.88% and 2-year yield 4.41%; most since 1981
- ▶ Fed raised rates, bringing target to 4.25%-4.50%
 - Median expectation from Fed is 5.1% for year-end 2023
 - Inflation showed signs of moderating but job market remained tight with solid wage growth

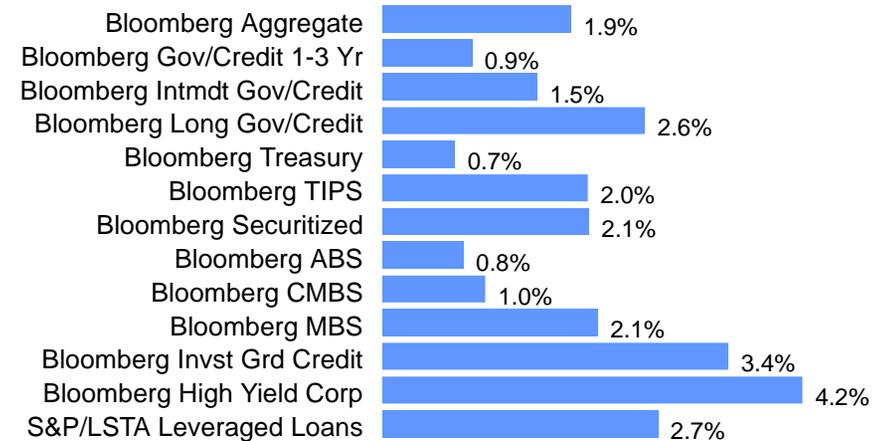
Corporates and mortgages outperformed Treasuries in 4Q but underperformed for the year

- ▶ 4Q: Corporates +289 bps excess return; RMBS +110 bps
- ▶ 2022: Corporates -125 bps excess return; RMBS -223 bps
- ▶ RMBS had worst month ever (September: -191 bps) and best month ever (November: +135 bps) in excess returns.

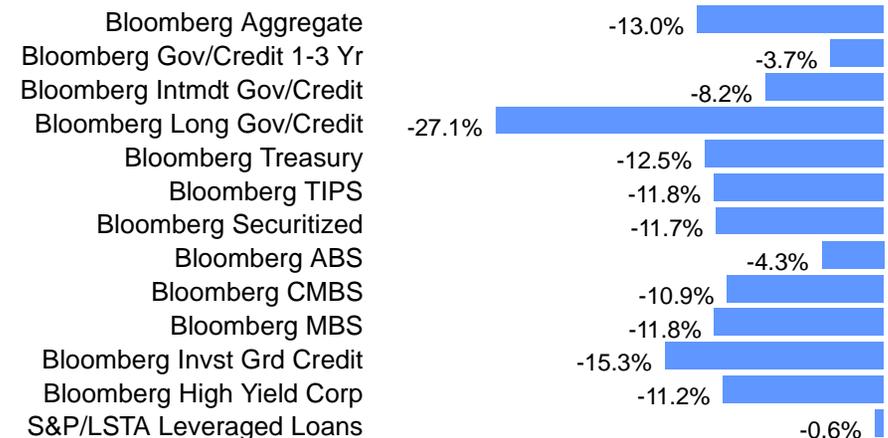
Valuations fair

- ▶ While absolute yields are higher, spreads have not widened materially and most are close to historical averages.
- ▶ An economic slowdown/recession could impact credit spreads.
- ▶ Higher yields boosting forward-looking return outlooks across sectors

U.S. Fixed Income Returns: Quarter Ended 12/31/22



U.S. Fixed Income Returns: One Year Ended 12/31/22



Sources: Bloomberg, S&P Dow Jones Indices

U.S. Private Real Estate Performance: 4Q22

Appreciation returns negative once again

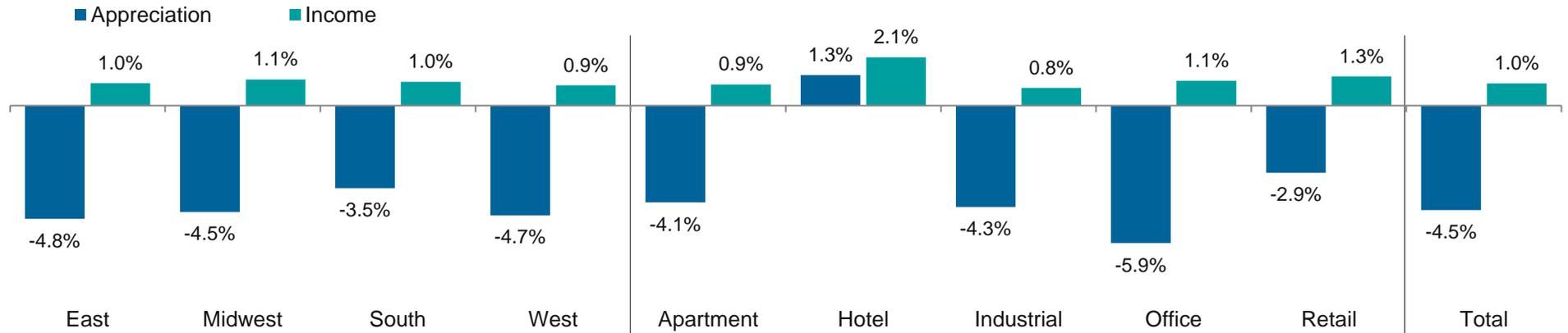
Negative appreciation in four major sectors

- ▶ Income returns were positive across sectors and regions.
- ▶ All property sectors and regions, except for Hotel, experienced negative appreciation.
- ▶ Valuations are reflective of higher interest rates, which have put upward pressure on capitalization rate and discount rate assumptions.
- ▶ Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	-5.2%	6.6%	9.0%	7.7%	9.1%
Income	0.6%	2.6%	2.9%	3.0%	3.4%
Appreciation	-5.8%	3.9%	6.0%	4.6%	5.5%
NCREIF Property Index	-3.5%	5.5%	8.1%	7.5%	8.8%
Income	1.0%	3.9%	4.1%	4.3%	4.7%
Appreciation	-4.5%	1.6%	3.8%	3.1%	4.0%

Returns are geometrically linked

NCREIF Property Index Quarterly Returns by Region and Property Type



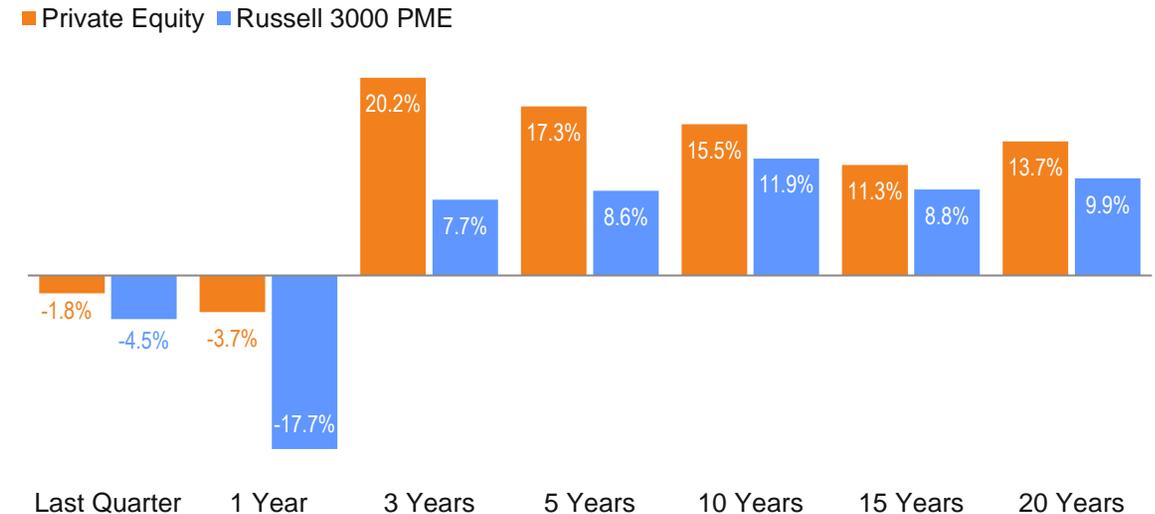
Source: NCREIF, ODCE return is net

Private Equity Performance

Smoothing effect in 3Q22 private equity returns

- ▶ As is typical for the asset class, private equity returns have experienced a smoothing effect in 2022 compared to the sharp declines seen in the public markets.
- ▶ Private equity was only down about a third as much as the public markets during 2022, on a PME basis.
- ▶ Portfolio companies are typically valued internally by the manager on a quarterly basis. Valuations are based on the operating metrics of the company, recent comparable transactions, and public market comps.
- ▶ Venture capital and growth equity experienced the sharpest declines so far this year, given their technology focus as well as post-IPO public equity holdings.

Net IRRs as of 09/30/22



Net IRRs by Strategy as of 09/30/22

Strategy	Last Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Venture Capital	-2.7%	-9.1%	28.4%	23.8%	19.4%	12.4%
Growth Equity	-1.8%	-9.4%	20.8%	18.4%	15.7%	14.3%
Buyouts	-1.9%	-1.4%	18.5%	16.1%	15.2%	14.7%
Mezzanine	0.2%	5.0%	11.8%	11.1%	11.3%	11.1%
Credit Opportunities	0.7%	3.9%	8.4%	7.2%	8.3%	9.9%
Control-Oriented Distressed	-0.2%	11.3%	19.4%	13.8%	12.7%	11.9%
Total Private Equity	-1.8%	-3.7%	20.2%	17.3%	15.5%	13.7%

Source: Refinitiv/Cambridge

Private Equity Key Themes

Investors grappling with 'denominator effect'

Denominator effect

- ▶ Due to the smoothing effect in short-term private equity performance
- ▶ Occurs when public equity allocations drop (pulling down the denominator), but PE allocations do not drop as far (the numerator)
 - Private equity now a larger percentage of a portfolio
- ▶ Investors unable to rebalance these illiquid exposures; now overallocated to private equity

Number of Unicorn Deals



The fading unicorn

- ▶ The number of unicorn deals (financing rounds valued >\$1 billion) spiked in 2021 amid a frenzy of activity within late-stage venture capital
- ▶ Many venture-backed companies looking to delay their next financing round to avoid a down round, resulting in layoffs and cost cuts across the industry
- ▶ Late-stage activity and valuations have normalized in 2022, although still elevated compared to earlier years

Median Pre-Money Valuation (\$m)
Late-Stage Venture Capital

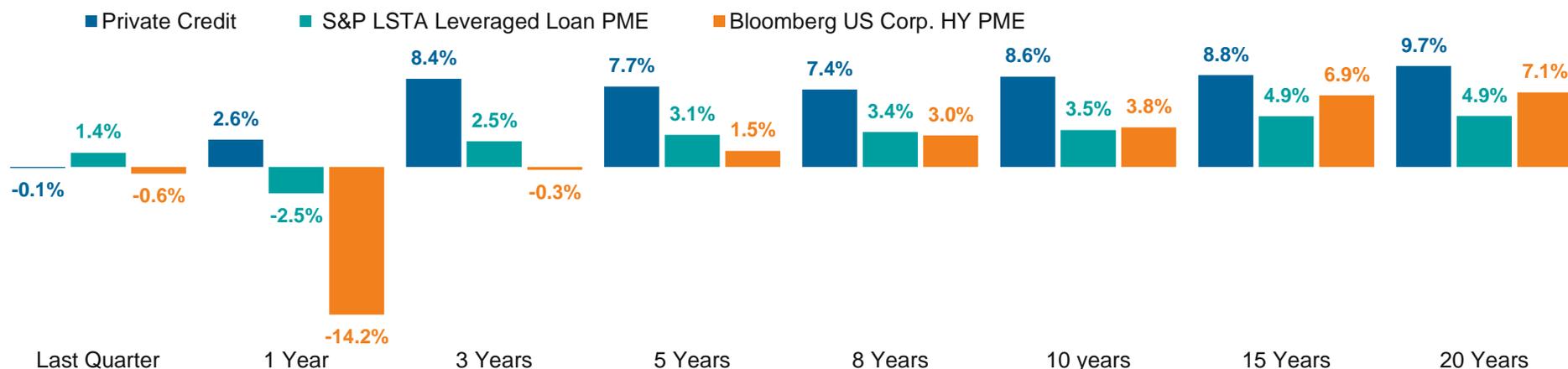


Source: PitchBook

Private Credit Market Overview

Performance over time and compared to relevant indices

Pooled Horizon Net IRRs as of 9/30/22



Pooled Horizon Net IRRs by Strategy as of 9/30/22

Strategy	Last Quarter	1 Year	3 Years	5 Years	8 Years	10 Years	15 Years	20 Years
Senior Debt	-2.4%	-3.5%	4.6%	5.1%	5.7%	5.9%	6.3%	6.1%
Mezzanine	0.2%	5.0%	11.8%	11.1%	10.8%	11.3%	10.5%	11.3%
Credit Opportunities	0.7%	3.9%	8.4%	7.2%	6.6%	8.3%	8.6%	9.7%
Total Private Credit	-0.1%	2.6%	8.4%	7.7%	7.4%	8.6%	8.8%	9.7%

► Private credit performance varies across sub-asset class and underlying return drivers. On average, the asset class has generated net IRRs of 8% to 10% for trailing periods ended Sept. 30, 2022. Higher-risk strategies performed better than lower-risk strategies.

*PME: Public market equivalent, a benchmark that applies the cash flows of the private credit funds to a public market index and then calculates an IRR.

Source: Refinitiv/Cambridge

Callan

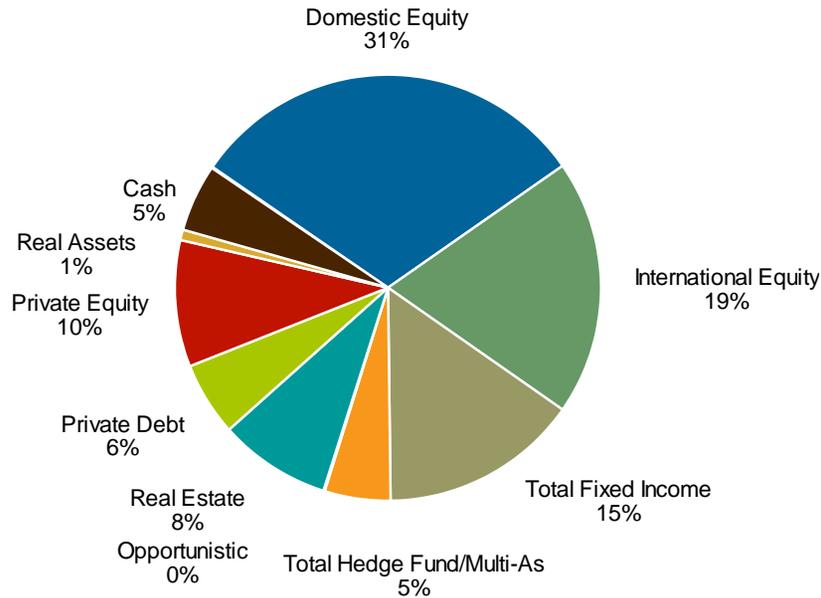
Performance Review

Endowment

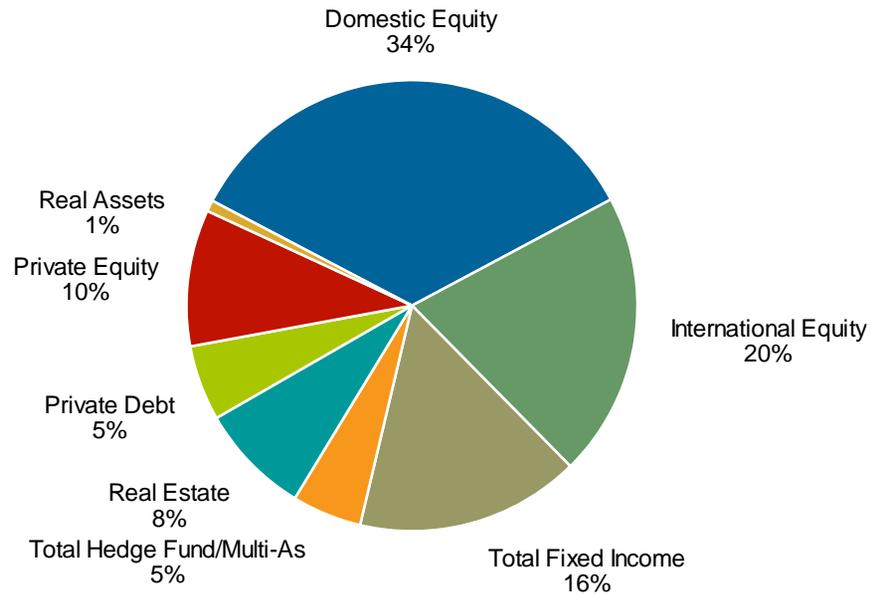
Actual vs. Target Allocation

Endowment Pool

Actual Asset Allocation



Target Asset Allocation

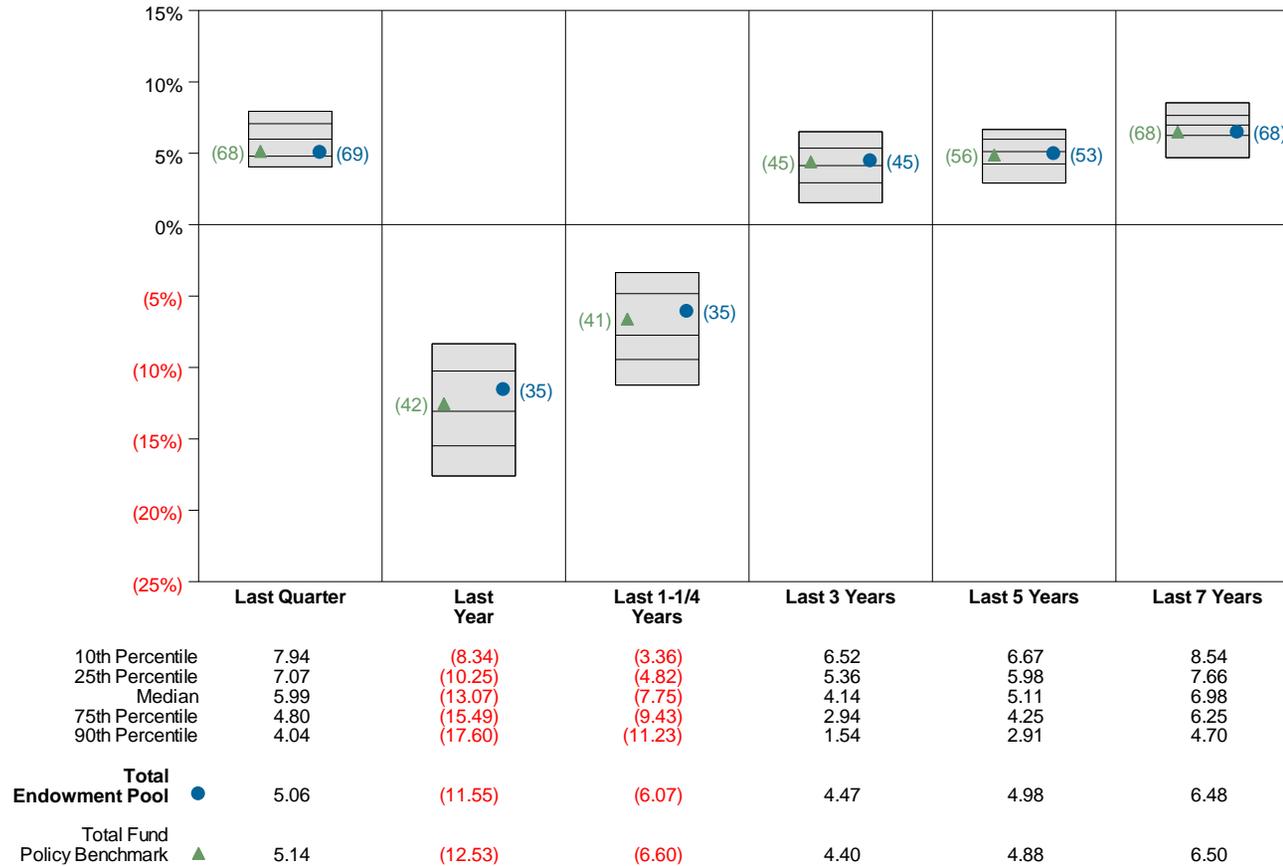


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	65,058	30.7%	34.5%	(3.8%)	(8,006)
International Equity	41,167	19.4%	20.4%	(1.0%)	(2,095)
Total Fixed Income	31,936	15.1%	16.1%	(1.1%)	(2,233)
Total Hedge Fund/Multi-As	10,689	5.0%	5.0%	0.0%	90
Opportunistic	293	0.1%	0.0%	0.1%	293
Real Estate	18,017	8.5%	8.0%	0.5%	1,059
Private Debt	11,942	5.6%	5.4%	0.2%	411
Private Equity	20,435	9.6%	9.8%	(0.1%)	(274)
Real Assets	1,602	0.8%	0.8%	(0.0%)	(73)
Cash	10,828	5.1%	0.0%	5.1%	10,828
Total	211,964	100.0%	100.0%		

Total Fund Performance

Endowment Pool

Performance vs Callan Endow/Foundation - Mid (100M-1B) (Gross)



Performance of Endowment ranks above median over one year period and is ahead of Total Fund Policy Benchmark

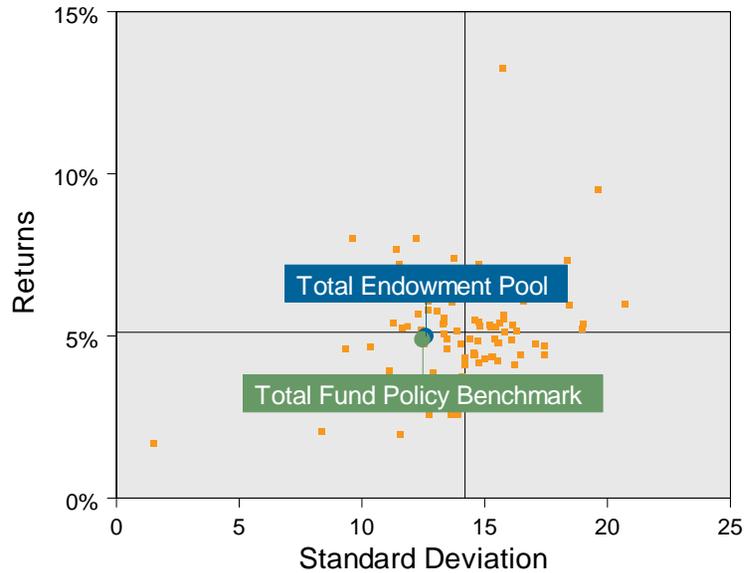
Asset allocation adjusted ranking is top decile over the last year

The Callan Endow/Foundation – Mid (100M-1B) Peer Group represents Endowments and Foundations that range in assets from \$100 million to \$1 billion. There are three sources of data for this peer group: BNY Mellon custody database, InvestorForce, and Callan clients. Between these three sources there are about 120-130 different E/F pools that are included in the group.

Total Fund Performance

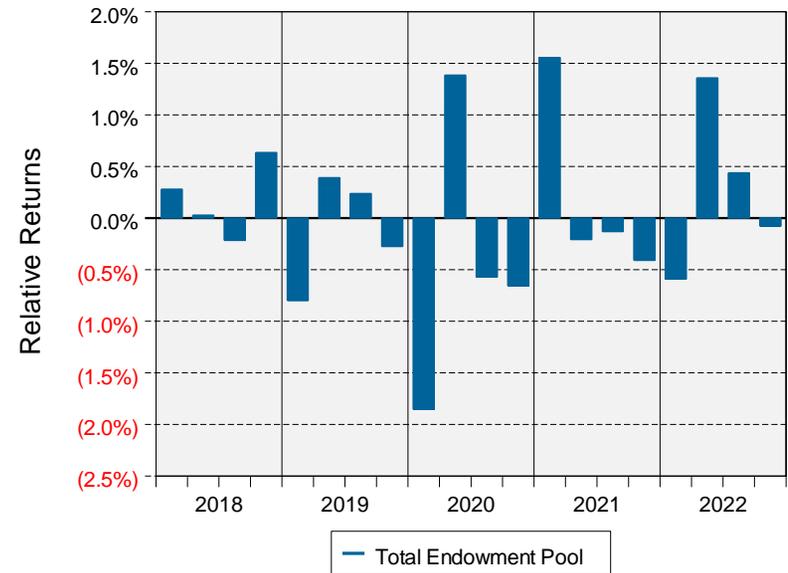
Endowment Pool

Callan Endow/Foundation - Mid (100M-1B) (Gross)
Annualized Five Year Risk vs Return



Relative to peers, the Endowment has experienced lower volatility over the 5-year period

Relative Returns vs
Total Fund Policy Benchmark

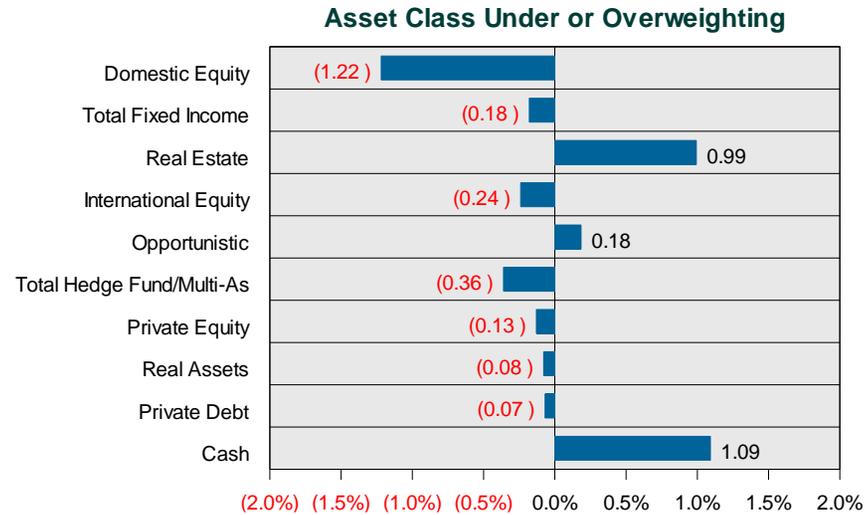


The Endowment outperformed the Total Fund Policy Benchmark in the 2nd and 3rd quarter of 2022, and underperformed in 1st and most recent quarter

The Callan Endow/Foundation – Mid (100M-1B) Peer Group represents Endowments and Foundations that range in assets from \$100 million to \$ 1 billion. There are three sources of data for this peer group: BNY Mellon custody database, InvestorForce, and Callan clients. Between these three sources there are about 120-130 different E/F pools that are included in the group.

Attribution Analysis

Endowment Pool



Relative Attribution Effects for Quarter ended December 31, 2022

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	33%	34%	7.68%	7.18%	0.16%	(0.06%)	0.10%
Total Fixed Income	16%	16%	1.99%	1.87%	0.02%	(0.05%)	(0.03%)
Real Estate	9%	8%	(4.46%)	(5.08%)	0.07%	(0.12%)	(0.06%)
International Equity	20%	20%	13.73%	14.28%	(0.12%)	(0.05%)	(0.17%)
Opportunistic	0%	0%	6.07%	6.07%	0.00%	0.00%	0.00%
Total Hedge Fund/Multi-As	5%	6%	2.48%	1.74%	0.05%	0.02%	0.07%
Private Equity	10%	10%	(2.23%)	(1.13%)	(0.11%)	(0.02%)	(0.13%)
Real Assets	1%	1%	12.29%	(5.08%)	0.15%	0.01%	0.16%
Private Debt	5%	6%	(0.35%)	(0.15%)	(0.01%)	(0.01%)	(0.02%)
Cash	1%	0%	0.91%	0.91%	0.00%	(0.02%)	(0.02%)
Total			5.06%	5.14%	0.20%	(0.28%)	(0.08%)

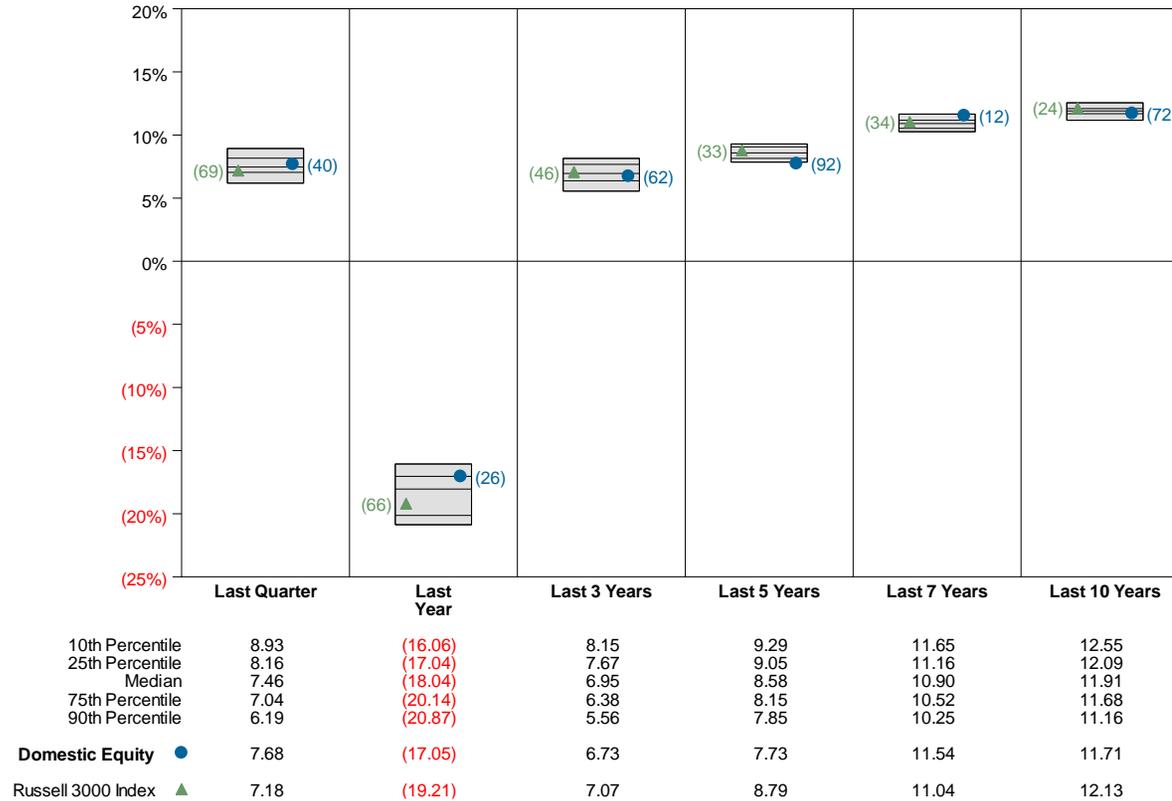
Positive relative performance in domestic equity and real assets was offset by international equity relative performance and asset allocation effects

Relative return attribution analysis approaches the Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. The excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

Domestic Equity Performance – peer comparison

Endowment Pool

Performance vs Medium Endow & Fndtn - Domestic Equity (Gross)



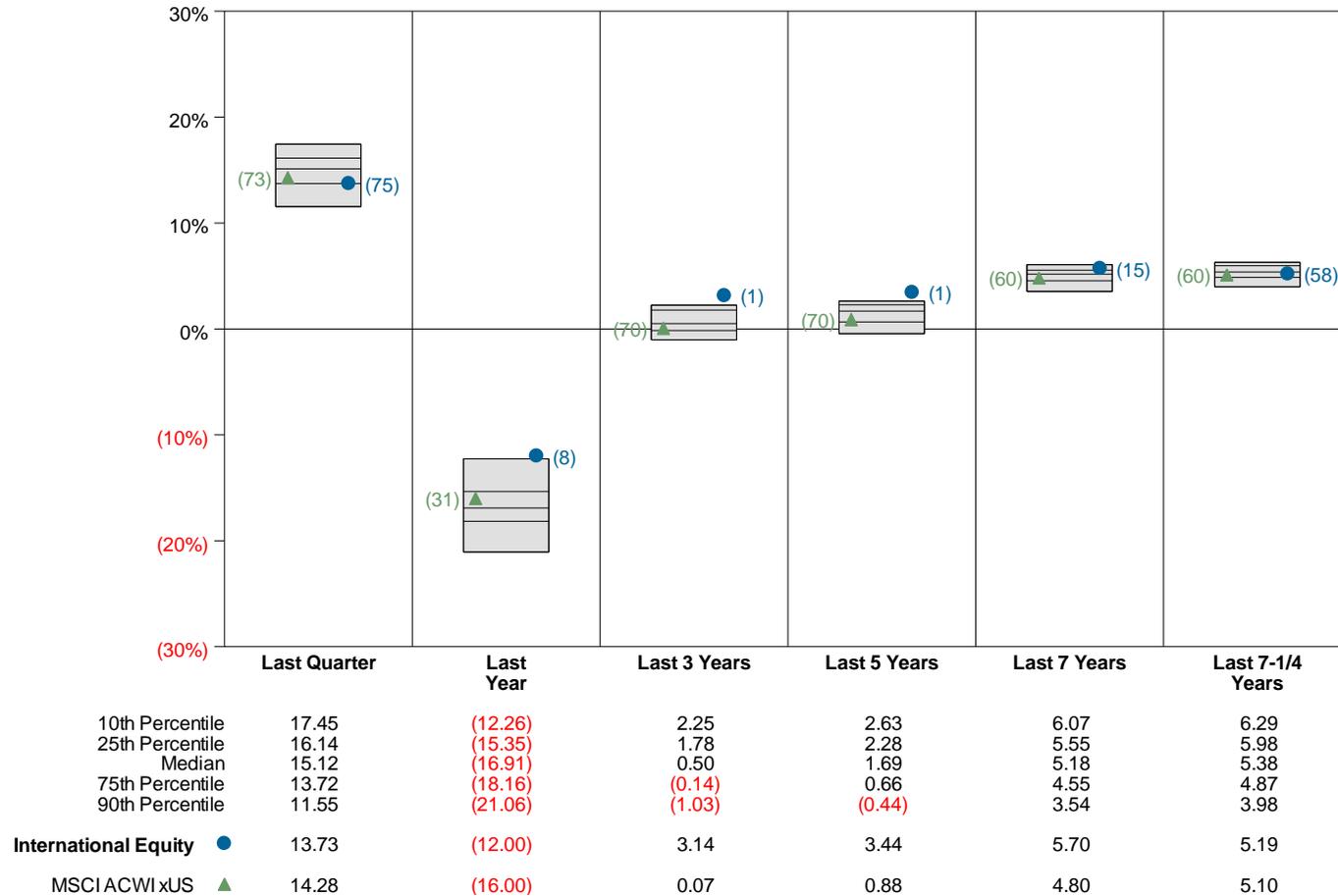
Domestic Equity outperformed relative to index and peers during the quarter, ranking above median

Strong relative performance for the year driven by strong results from DRZ

International Equity Performance – peer comparison

Endowment Pool

Performance vs Medium Endow & Fdtn International Equity (Gross)



The international equity portfolio trailed the benchmark for the quarter as quantitative manager, Acadian, trailed the benchmark.

Strong relative results for the year ranked in the top decile of peers. Longer term performance remains competitive relative to peers.

Fixed Income Performance – peer comparison

Endowment Pool

Performance vs Medium Endow & Fndtn - Domestic Fixed (Gross)



Fixed Income performance was in line the Bloomberg Aggregate index for the quarter

Performance over the last year was ahead of benchmark but below peer median

Composite Asset Class Returns

Endowment Pool

	Last Quarter	Year to Date	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
Total Equity+ MSCI ACWI	10.05% 9.76%	(17.96%) (18.36%)	3.20% 2.28%	(17.96%) (18.36%)	4.87% 4.00%	5.61% 5.23%	8.58% 8.10%	8.85% 7.98%
Domestic Equity Russell 3000 Index	7.68% 7.18%	(17.05%) (19.21%)	2.73% 2.40%	(17.05%) (19.21%)	6.73% 7.07%	7.73% 8.79%	11.54% 11.04%	11.71% 12.13%
International Equity MSCI ACWI ex US	13.73% 14.28%	(12.00%) (16.00%)	3.19% 2.96%	(12.00%) (16.00%)	3.14% 0.07%	3.44% 0.88%	5.70% 4.80%	- 3.80%
Total Fixed Income Bloomberg Aggregate	1.99% 1.87%	(11.99%) (13.01%)	(2.33%) (2.97%)	(11.99%) (13.01%)	(2.07%) (2.71%)	0.51% 0.02%	2.32% 0.89%	1.44% 1.06%
Investment Grade Fixed Income Bloomberg Aggregate	1.66% 1.87%	(12.36%) (13.01%)	(2.89%) (2.97%)	(12.36%) (13.01%)	(1.64%) (2.71%)	0.60% 0.02%	1.60% 0.89%	1.35% 1.06%
Diversified Credit Diversified Credit Benchmark**	3.98% 3.47%	(9.42%) (10.65%)	1.33% 1.09%	(9.42%) (10.65%)	0.99% (0.73%)	2.68% 1.67%	4.12% 3.38%	2.11% -

**Loomis Credit benchmark is: 50% Bloomberg Corporate Index, 25% Bloomberg US 2% High Yield Issuer Index, and 25% S&P/LSTA Leveraged Loan Index

+ Total Equity composite history includes Global Equity and Emerging Markets Equity sub-asset class composites. Individual portfolio returns in this category are not shown due to partial quarterly returns.

Composite Asset Class Returns - continued

Endowment Pool

	Last Quarter	Fiscal YTD	Year to Date	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
Total Hedge Fund/Multi-Asset***	2.48%	0.22%	1.78%	1.96%	2.94%	3.32%	3.76%
HFRI Fund of Funds Composite	1.77%	1.41%	(5.27%)	3.70%	3.02%	3.32%	3.51%
Opportunistic***	6.07%	8.28%	4.67%	12.91%	4.33%	-	-
Russell 3000 Health Care	11.42%	6.36%	(5.76%)	10.29%	11.55%	10.87%	14.71%
Total Private Markets***+	(2.14%)	(1.40%)	4.49%	11.16%	11.00%	7.67%	11.87%
Real Estate***+	(4.46%)	(4.52%)	(3.33%)	3.56%	8.89%	6.63%	-
NCREIF NFI-ODCE Eq Wt Net	(5.08%)	(4.35%)	7.56%	9.72%	8.31%	8.12%	9.46%
Real Assets***	12.29%	23.51%	38.20%	7.79%	10.53%	9.18%	2.79%
Private Debt***	(0.35%)	(2.71%)	0.73%	10.20%	9.00%	6.43%	-
Private Equity***	(2.23%)	0.03%	8.93%	18.46%	13.11%	10.68%	-
Cash	0.91%	1.33%	1.48%	0.64%	0.95%	0.76%	-
Total Endowment Pool	5.06%	0.81%	(11.55%)	4.47%	4.98%	6.48%	6.80%
Total Endowment Pool (net)	4.98%	0.64%	(11.81%)	4.16%	4.63%	6.08%	6.43%
Total Fund Policy Benchmark*^	5.14%	0.45%	(12.53%)	4.41%	4.88%	6.50%	6.56%
EF Pool ex. Master Trust Principal Fund	5.06%	0.81%	(11.55%)	4.28%	4.70%	6.14%	6.47%
EF Pool ex. Maxey Duggar	5.20%	0.84%	(11.83%)	4.50%	4.87%	6.70%	6.52%
EF Pool ex. Maxey Duggar and Private Mkt	7.59%	1.76%	(14.35%)	3.27%	4.09%	6.17%	6.27%

*Current Quarter Target: 34% Russell 3000, 19.7% MSCI ACWI ex-US, 15.5% Blmbg Aggregate, 9.1% Cambridge GI PE 2016+ lagged 3 months, 8.4% HFRI FoF Composite, 6.6% NCREIF NFI-ODCE Eq Wt Net, 5.6% Cambridge Global Credit & Distressed lagged 3 months and 1.0% NCREIF NFI-ODCE Eq Wt Net

^The Cambridge Global Private equity 2016+, Cambridge Global Real Assets & Estate and Cambridge Global Credit Benchmarks

***Market Values and returns represent most recently available information plus or minus capital calls and distributions since the last statement date. Private markets portfolios are generally lagged by a quarter.

Asset Distribution Across Composites

Endowment Pool

	December 31, 2022			Inv. Return	September 30, 2022	
	Market Value	Weight	Net New Inv.		Market Value	Weight
Total Equity	\$106,224,653	50.11%	\$(3,576,785)	\$10,200,380	\$99,601,058	49.72%
Domestic Equity	65,057,900	30.69%	(3,515,584)	4,830,677	63,742,807	31.82%
International Equity	41,166,753	19.42%	(61,201)	5,369,703	35,858,251	17.90%
Total Fixed Income	\$31,935,864	15.07%	\$(1,521,097)	\$655,338	\$32,801,623	16.37%
Investment Grade Fixed Income	26,926,202	12.70%	(1,516,366)	463,524	27,979,044	13.97%
Diversified Credit	5,009,661	2.36%	(4,731)	191,813	4,822,579	2.41%
Total Hedge Fund/Multi-Asset*	\$10,688,555	5.04%	\$(3,714,232)	\$280,511	\$14,122,276	7.05%
Opportunistic*	\$292,889	0.14%	\$(199,677)	\$28,172	\$464,394	0.23%
Total Private Markets*	\$51,994,815	24.53%	\$1,652,482	\$(1,118,652)	\$51,460,986	25.69%
Real Estate*	18,016,579	8.50%	104,460	(840,342)	18,752,461	9.36%
Private Debt*	11,941,884	5.63%	729,933	(39,684)	11,251,635	5.62%
Private Equity*	20,434,668	9.64%	1,221,062	(450,530)	19,664,136	9.82%
Real Assets*	1,601,685	0.76%	(402,974)	211,905	1,792,754	0.89%
Cash	\$10,827,705	5.11%	\$8,922,144	\$21,138	\$1,884,424	0.94%
EF Pool ex. Master Trust Principal Fund	\$202,499,797	95.53%	\$0	\$9,601,492	\$192,898,305	96.29%
EF Pool ex. Maxey Duggar	\$206,437,481	97.39%	\$1,562,835	\$10,066,886	\$194,807,760	97.24%
EF Pool ex. Maxey Duggar and Private Mkt	\$159,969,666	75.47%	\$(89,647)	\$11,185,538	\$148,873,775	74.31%
Total Endowment Pool	\$211,964,481	100.0%	\$1,562,835	\$10,066,886	\$200,334,760	100.0%

Callan

Performance Update

Non-Endowed Funds

Asset Distribution

Non-Endowed Funds

	December 31, 2022		Net New Inv.	Inv. Return	September 30, 2022	
	Market Value	Weight			Market Value	Weight
Equity						
SSgA MSCI ACWI IMI Index	17,854,613	19.30%	1,098,355	1,462,866	15,293,392	19.18%
Fixed Income						
Loomis Sayles Core Disciplined Alpha	55,835,836	60.37%	6,371,043	710,897	48,753,896	61.15%
Loomis Sayles Credit Asset Trust	8,371,143	9.05%	792,307	281,954	7,296,882	9.15%
Master Trust Principal Fund	\$9,464,684	10.23%	\$1,695,079	\$333,149	\$7,436,455	9.33%
Cash	\$965,849	1.04%	\$0	\$18,159	\$947,690	1.19%
Non-Endowed Funds Total	\$92,492,124	100.0%	\$9,956,784	\$2,807,026	\$79,728,315	100.0%

Investment returns were negative for the quarter, resulting in a loss of approximately \$3.81 million over the period.

Total Fund Performance

Non-Endowed Funds

	Last Quarter	Fiscal YTD	Year to Date	Last 3 Years
Equity				
SSgA MSCI ACWI IMI Index	9.89%	2.67%	(18.16%)	4.16%
MSCI ACWI IMI	9.84%	2.56%	(18.40%)	3.89%
Fixed Income				
Loomis Sayles Core Disciplined Alpha	1.66%	(2.89%)	-	-
Blmbg Aggregate	1.87%	(2.97%)	(13.01%)	(2.71%)
Loomis Sayles Credit Asset Trust	3.98%	1.33%	(9.43%)	1.11%
Loomis Credit Benchmark**	3.47%	1.09%	(10.65%)	(0.73%)
Master Trust Principal Fund	4.84%	1.22%	(12.22%)	4.15%
Cash	0.86%	1.33%	1.48%	0.69%
3-month Treasury Bill	0.84%	1.31%	1.46%	0.72%
Non-Endowed Funds Total	3.65%	(1.08%)	(10.83%)	0.91%
Non-Endowed Funds Policy Benchmark*	3.47%	(1.84%)	(11.82%)	(1.72%)
MSCI ACWI IMI	9.84%	2.56%	(18.40%)	3.89%
Blmbg Aggregate	1.87%	(2.97%)	(13.01%)	(2.71%)

*Current Quarter Target = 80% Blmbg Aggregate and 20% MSCI ACWI.

Callan

2023-2032 Capital Market Assumptions

2023 vs. 2022 Risk and Returns Assumptions

Summary of Callan's Long-Term Capital Markets Assumptions (2023–2032)

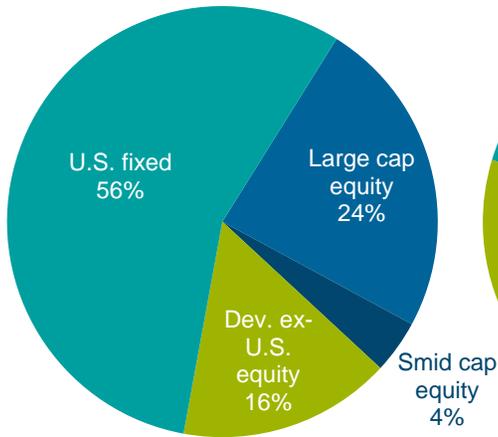
Asset Class	Index	Projected Return		Real	Projected Risk Standard Deviation	2022–2031			vs. 2022	
		1-Year Arithmetic	10-Year Geometric*			1-Year Arithmetic	10-Year Geometric*	Standard Deviation	Geometric* Delta	Std Dev Delta
Equities										
Broad U.S. Equity	Russell 3000	8.75%	7.35%	4.85%	18.05%	8.00%	6.60%	17.95%	0.75%	0.10%
Large Cap U.S. Equity	S&P 500	8.60%	7.25%	4.75%	17.75%	7.85%	6.50%	17.70%	0.75%	0.05%
Smid Cap U.S. Equity	Russell 2500	9.60%	7.45%	4.95%	22.15%	8.75%	6.70%	21.30%	0.75%	0.85%
Global ex-U.S. Equity	MSCI ACWI ex USA	9.45%	7.45%	4.95%	21.25%	8.70%	6.80%	20.70%	0.65%	0.55%
Developed ex-U.S. Equity	MSCI World ex USA	9.00%	7.25%	4.75%	20.15%	8.25%	6.50%	19.90%	0.75%	0.25%
Emerging Market Equity	MSCI Emerging Markets	10.45%	7.45%	4.95%	25.70%	9.80%	6.90%	25.15%	0.55%	0.55%
Fixed Income										
Short Duration Gov/Credit	Bloomberg 1-3 Year Gov/Credit	3.75%	3.80%	1.30%	2.30%	1.50%	1.50%	2.00%	2.30%	0.30%
Core U.S. Fixed	Bloomberg Aggregate	4.25%	4.25%	1.75%	4.10%	1.80%	1.75%	3.75%	2.50%	0.35%
Long Government	Bloomberg Long Gov	4.55%	3.70%	1.20%	13.50%	1.85%	1.10%	12.50%	2.60%	1.00%
Long Credit	Bloomberg Long Credit	5.75%	5.20%	2.70%	11.75%	2.60%	2.10%	10.50%	3.10%	1.25%
Long Government/Credit	Bloomberg Long Gov/Credit	5.25%	4.75%	2.25%	11.35%	2.30%	1.80%	10.40%	2.95%	0.95%
TIPS	Bloomberg TIPS	4.10%	4.00%	1.50%	5.30%	1.35%	1.25%	5.05%	2.75%	0.25%
High Yield	Bloomberg High Yield	6.75%	6.25%	3.75%	11.75%	4.40%	3.90%	10.75%	2.35%	1.00%
Global ex-U.S. Fixed	Bloomberg Global Agg ex US	2.70%	2.25%	-0.25%	9.80%	1.20%	0.80%	9.20%	1.45%	0.60%
Emerging Market Sov Debt	EMBI Global Diversified	6.25%	5.85%	3.35%	10.65%	4.00%	3.60%	9.50%	2.25%	1.15%
Alternatives										
Core Real Estate	NCREIF ODCE	6.60%	5.75%	3.25%	14.20%	6.60%	5.75%	14.20%	0.00%	0.00%
Private Infrastructure	MSCI GI Infra/FTSE Dev Core 50/50	7.15%	6.15%	3.65%	15.45%	7.10%	6.10%	15.45%	0.05%	0.00%
Private Equity	Cambridge Private Equity	11.95%	8.50%	6.00%	27.60%	11.45%	8.00%	27.60%	0.50%	0.00%
Private Credit	N/A	8.00%	7.00%	4.50%	15.50%	6.40%	5.50%	14.60%	1.50%	0.90%
Hedge Funds	Callan Hedge FOF Database	5.80%	5.55%	3.05%	8.45%	4.35%	4.10%	8.20%	1.45%	0.25%
Commodities	Bloomberg Commodity	5.05%	3.50%	1.00%	18.00%	4.05%	2.50%	18.00%	1.00%	0.00%
Cash Equivalents	90-Day T-Bill	2.75%	2.75%	0.25%	0.90%	1.20%	1.20%	0.90%	1.55%	0.00%
Inflation	CPI-U		2.50%		1.60%		2.25%	1.60%	0.25%	0.00%

* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

Source: Callan

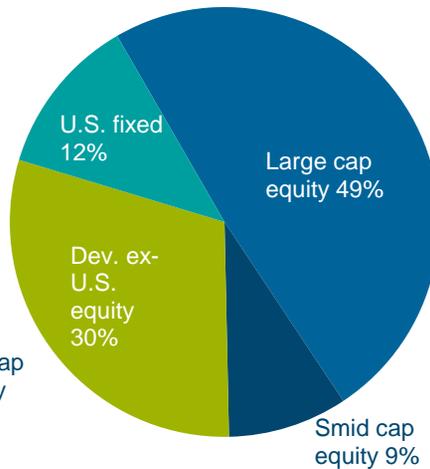
5% Expected Real Returns Over Past 30 Years

Increasing Complexity →



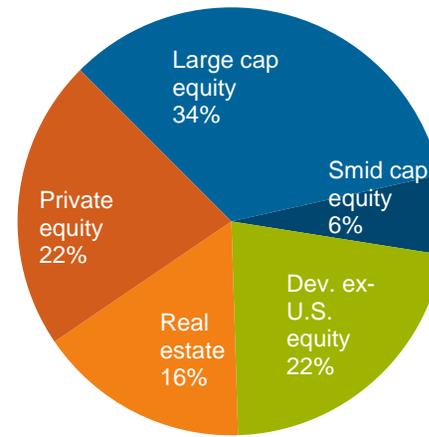
1993

Inflation: 4.00%
Real Return: 5.0%
Risk: 8.8%



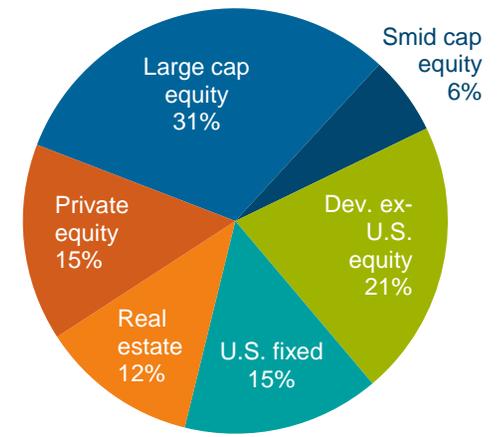
2008

Inflation: 2.75%
Real Return: 5.0%
Risk: 14.6%



2022

Inflation: 2.25%
Real Return: 5.0%
Risk: 17.8%



2023

Inflation: 2.50%
Real Return: 5.0%
Risk: 14.9%

Increasing Risk →

Despite a 4% inflation projection, an investor could have over half of the portfolio in low-risk assets (fixed income) and still earn a 5% projected real return in 1993.

15 years later, an investor would have needed 88% in public equities to achieve a 5% projected real return with 1.7x the portfolio volatility of 1993.

In 2022 an investor required 100% of the portfolio in return-seeking assets to earn a 5% projected real return at approximately 2x the volatility compared to 1993.

Today's 5% expected real return portfolio is much more reasonable than it was just a year ago, with 15% in fixed income and a correspondingly lower level of risk.

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