

Stunning Growth but Clouds Loom Ahead

ECONOMY

2 A year ago, a recession was on all forecasters' radar. Now ... not so much. GDP stunned with a 4.9% 3Q23 gain, after strong reports in 1Q and 2Q. This despite a number of headwinds, such as war, inflation, and rate hikes. And there are more shocks in store.

Aggregate on Track For Third Annual Fall

FIXED INCOME

8 The Bloomberg Aggregate fell in 3Q, with the rise in yields continuing to detract from performance. U.S. Treasuries continued to climb, with the 10-year ending the quarter at 4.6%. Developed markets sold off as long-term inflation moved higher. Emerging markets also fell.

Returns Easily Exceed Leveraged Loans

PRIVATE CREDIT

12 Private credit has generated a net IRR of 11.8% over the three years ending 2Q23, easily exceeding leveraged loans. And continued 3Q23 rate rises across the yield curve have made private credit even more attractive than in the past for many institutional investors.

Lagging Bond Gains Hinder Performance

INSTITUTIONAL INVESTORS

4 While equity gains helped, low fixed income returns left all major investor types lagging a 60% stocks/40% bonds benchmark over the last year ending 3Q23. Most investor types matched or nearly equaled the gains of the 60%/40% benchmark over the last 20 years.

Private RE, REITs Both Show Drops in Quarter

REAL ESTATE/REAL ASSETS

10 The NCREIF Property Index, a measure of U.S. institutional real estate assets, fell 1.4% during 3Q23. The NCREIF Open-End Diversified Core Equity (ODCE) Index dropped 1.9%. REITs, both in the U.S. and globally, also fell and underperformed equities.

Most Strategies Slightly Higher

HEDGE FUNDS/MACs

13 Geopolitics and an elevated rate environment helped set a backdrop for strong alpha generation for hedge funds. Managers continue to see high dispersion between winners and losers in the stock market, which will favor stock selection and alpha generation over beta returns.

All Indices Decline During Tough Quarter

EQUITY

6 All U.S. equity indices posted negative returns in 3Q, and only 2 of the 11 S&P 500 sectors were up. The Russell 2000 Value Index led the pack in a tough quarter. Global markets retreated amid fears of a worldwide recession driven by higher interest rates and slowing growth.

Focus on Exits as Activity Dipped

PRIVATE EQUITY

11 Private equity activity measures generally dipped in 3Q23 compared to the previous quarter, except for some increases in exit measures. While continued volatility is expected to hamper volumes, GPs are keenly focused on providing liquidity.

2Q23 Finishes With Third Straight Gain

DEFINED CONTRIBUTION

15 The Callan DC Index™ gained again in 2Q23, while balances also rose again. While target date funds, as is typical, saw the largest increase in net flows, stable value saw big outflows for the third straight quarter, while money market saw small net inflows.

Broad Market Quarterly Returns

U.S. Equity
Russell 3000



-3.3%

Global ex-U.S. Equity
MSCI ACWI ex USA



-3.8%

U.S. Fixed Income
Bloomberg Agg



-3.2%

Global ex-U.S. Fixed Income
Bloomberg Global Agg ex US



-4.0%

Sources: Bloomberg, FTSE Russell, MSCI

Stunning Growth as Clouds Loom

ECONOMY | Jay Kloepper

A year ago, no one saw this coming. Recession was on everyone's radar for 2023, and the only disagreement was the quarter in which it would show up. Then the U.S. economy generated 2.2% GDP growth in 1Q and another 2.1% in 2Q. The strong job market continued to add new jobs, inflation came down from the 9% spike last summer, and wage growth boosted consumer incomes and spending. Now 3Q GDP has clocked a stunning 4.9% gain, mocking all those who try to predict economic growth (including us). This despite the Federal Reserve's rate hikes, the war in Ukraine, elevated inflation, and geopolitical uncertainty. How are we defying economic gravity?

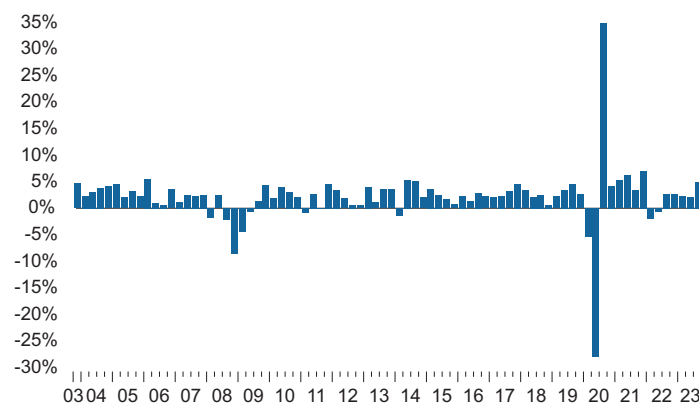
The robust 3Q economic report is the result of strong retail sales, industrial production, and investment in inventory. Retail sales came in much stronger than expected, driven by demand for building materials, recreational goods, and vehicles, as well as core goods such as food and household items. Growth in total consumption expenditures has been broad-based and spread across both goods and services, and it accounted for more than half of GDP growth in 3Q. This surge in spending suggests that many U.S. consumers feel financially secure and are spending freely in a tight labor market.

Headline inflation fell from 9% (year-over-year) in June 2022 to 3% in June 2023, a remarkable reduction. The decline likely reflected both the un-knotting of global supply chains following the pandemic, and the efforts of the Federal Reserve and central banks around the globe to contain inflation with higher interest rates. The lower rates also reflected a denominator effect, perhaps twice, in which the sharp rise in 2022 came off an abnormally low base for prices set during the lockdown in 2020 and 2021, and price increases were measured during the first half of 2023 against the now-higher prices set in 2022. However, headline inflation (including food and energy) edged back up in each of the last three months.

Labor markets are tight. The U.S. economy added 336,000 new jobs in September and has created an average of 260,000 per month this year. (For reference, a monthly rate of 200,000 suggests continuing growth in the economy.) The unemployment rate

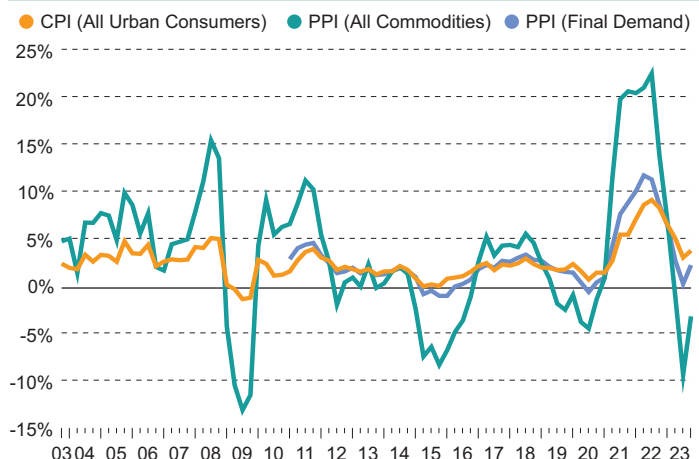
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

remains below 4%, coming in at 3.8% in September. Finally, the Job Openings and Labor Turnover Survey (JOLTS) reported that the U.S. economy had 9.6 million job openings at the end of August, and 6.4 million unemployed people, so a ratio of unemployed people to job openings of just 0.7.

The current strong GDP growth suggests we may not see an easing in tight labor markets for some time. Hence, the prospect for continued inflationary pressure from the labor market is high. Average hourly earnings have grown between 4.0% and 5.0% (annual rate) during the first three quarters of 2023, meaning real wages finally turned positive starting in May, and this real growth carried through

September (wage growth is exceeding inflation). Inflation has come down significantly from its 2022 peak, but getting down to the Fed's stated goal of 2% will take more time, and some discomfort.

The housing market is in a conundrum. Housing starts have fallen in response to substantially higher mortgage rates, but not as much as might be expected. After plummeting earlier in the year, single-family starts rose 3.2% in September, while multi-family starts surged 17.6%. The single-family housing market is historically tight—and tightening. Inventory of homes for sale declined for the eighth straight month in August to 857,000, a record low. Low inventory has driven home prices up, and with mortgage rates at 7.5%, buying a home is increasingly unaffordable. As a result, sales of existing homes have collapsed.

If we thought clouds loomed at the start of 2023, there are more now. Interest rates are higher still and financial conditions are tight. Geopolitical uncertainty has certainly not abated (the conflict in the Middle East began in the fourth quarter and is not reflected in 3Q data). Another shutdown of the U.S. government is lurking. The full impact of higher interest rates is working through the real estate market, the cost of capital, the cost of home ownership, and the cost of debt to government, business, and consumers. The UAW strike began in mid-September, and the impact will likely show up in 4Q. The bond market has been calling for a recession since May 2022, with an inverted yield curve, and the curve has only become more inverted over the past year.

Expectations that the Fed would be done with rate hikes and would soon revert to rate easing have been continually thwarted by the strength in the job market, in industrial activity, in exports and by strong consumption expenditures. Financial conditions tightened toward the end of 3Q as investors pushed up yields on the long end

The Long-Term View

Index	3Q23	Periods Ended 9/30/23			
		1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	-3.3	20.5	9.1	11.3	8.1
S&P 500	-3.3	21.6	9.9	11.9	7.9
Russell 2000	-5.1	8.9	2.4	6.6	8.0
Global ex-U.S. Equity					
MSCI EAFE	-4.1	25.6	3.2	3.8	4.8
MSCI ACWI ex USA	-3.8	20.4	2.6	3.3	--
MSCI Emerging Markets	-2.9	11.7	0.6	2.1	--
MSCI ACWI ex USA Small Cap	-1.7	19.0	2.6	4.3	7.4
Fixed Income					
Bloomberg Agg	-3.2	0.6	0.1	1.1	3.6
90-Day T-Bill	1.3	4.5	1.7	1.1	1.9
Bloomberg Long G/C	-9.4	-2.9	-1.2	1.9	4.7
Bloomberg GI Agg ex US	-4.0	3.4	-3.1	-1.7	2.0
Real Estate					
NCREIF Property	-1.4	-8.4	5.3	7.4	8.3
FTSE Nareit Equity	-7.1	3.0	2.8	6.0	8.5
Alternatives					
CS Hedge Fund	0.5	6.3	5.0	4.5	6.5
Cambridge PE*	1.6	2.7	15.4	14.9	13.7
Bloomberg Commodity	4.7	-1.3	6.1	-0.7	2.4
Gold Spot Price	-3.3	11.6	9.3	3.5	7.6
Inflation – CPI-U	0.9	3.7	4.0	2.8	2.6

*Data for most recent period lags. Data as of 2Q23.

Sources: Bloomberg, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

of the Treasury curve. This tightening may less reflect a change in expectations for short-term monetary policy than investors' lower demand for term risk, as banks lower allocations to Treasuries. Investor sentiment also may indicate concern about our Congress. That the U.S. economy continues to thrive through such crosswinds has been both remarkable and baffling.

Recent Quarterly Economic Indicators

	3Q23	2Q23	1Q23	4Q22	3Q22	2Q22
Employment Cost: Total Compensation Growth	4.3%	4.5%	4.8%	5.1%	5.0%	5.1%
Nonfarm Business: Productivity Growth	4.7%	3.6%	-0.8%	1.6%	0.4%	-3.6%
GDP Growth	4.9%	2.1%	2.2%	2.6%	2.7%	-0.6%
Manufacturing Capacity Utilization	77.8%	78.0%	78.2%	78.5%	79.4%	79.6%
Consumer Sentiment Index (1966=100)	69.6	62.3	64.6	58.8	56.1	57.8

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

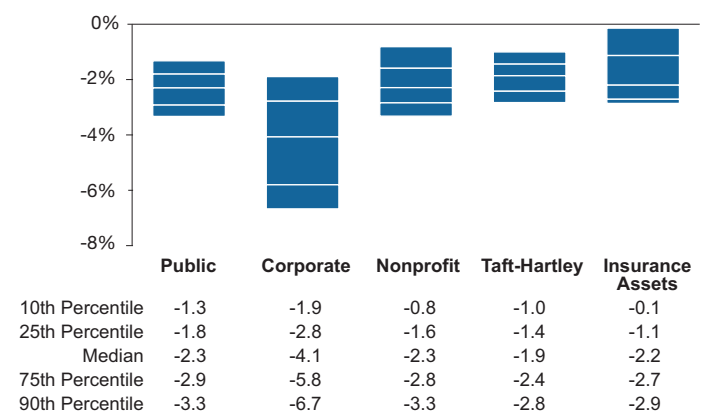
Weak Bond Gains Hinder Performance in Last Year

INSTITUTIONAL INVESTORS

- A big jump in equities over the year ending 3Q23 helped institutional investors' returns over that period, but weak fixed income performance left them trailing a composite index of 60% S&P 500/40% Bloomberg US Aggregate Bond Index.
- Corporate defined benefit (DB) plans, with their higher allocations to fixed income than most other investor types, fared worst among major investor types. Nonprofits slightly topped public DB plans.
- But the returns so far this year have helped make up for double-digit losses for calendar year 2022 for all investor types, and all major indices.
- Despite low gains for bonds over 20 years, most investor types nearly matched the gains of the 60%/40% composite, powered by strong gains from broad U.S. equities.
- Key issues for institutional investors now include:
 - *Inflation*: Its fall eases some concerns for institutional investors, but the Fed remains on its mission to combat it
 - *Stocks*: Equity markets through 3Q23 continue to meet or outpace long-term expectations.
 - *Bonds*: The Bloomberg Aggregate faces its third straight year of losses.

- *Asset-Allocation*: Equity studies revisit active management while fixed income structures focus on the role of the asset class as it becomes more attractive.
- *Alternatives*: Interest varies widely by investor type.

Quarterly Returns, Callan Database Groups (9/30/23)



Source: Callan

Callan Database Median and Index Returns* for Periods Ended 9/30/23

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	-2.3	11.1	5.3	5.5	6.7	7.2
Corporate Database	-4.1	6.9	-0.3	3.2	5.2	6.6
Nonprofit Database	-2.3	11.5	5.2	5.2	6.2	7.1
Taft-Hartley Database	-1.9	9.8	5.4	5.4	6.8	6.9
Insurance Assets Database	-2.2	5.4	0.7	2.7	3.5	4.7
All Institutional Investors	-2.4	10.3	4.5	5.0	6.2	6.9
Large (>\$1 billion)	-2.1	9.4	5.5	5.6	6.7	7.2
Medium (\$100mm - \$1bn)	-2.5	10.3	4.7	5.0	6.3	7.0
Small (<\$100 million)	-2.6	11.0	4.2	4.7	5.9	6.6
60% S&P 500/40% Bloomberg Agg	-3.3	12.9	4.0	6.4	7.8	7.3

*Returns less than one year are not annualized.

Source: Callan. Callan's database includes the following groups: public defined benefit (DB) plans, corporate DB plans, nonprofits, insurance assets, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

Public DB Plans

- The average or median discount rate, according to the most recent NASRA survey, is 7.00%, which is now attainable without taking undue risk.
- For plans that measure at 6/30, the effect of investing in alternatives is measurable. Alternatives helped investors for FYE 2022 but are causing lags (when compared to non-alternatives investors) for FYE 2023.

Corporate DB Plans

- Liabilities decreased slightly, reflecting a small increase in discount rates. Plans that were fully hedged experienced minimal funded status volatility over the quarter.
- Closed plans' liabilities continue to shorten from aging participants. We are seeing more and more interest in intermediate fixed income.

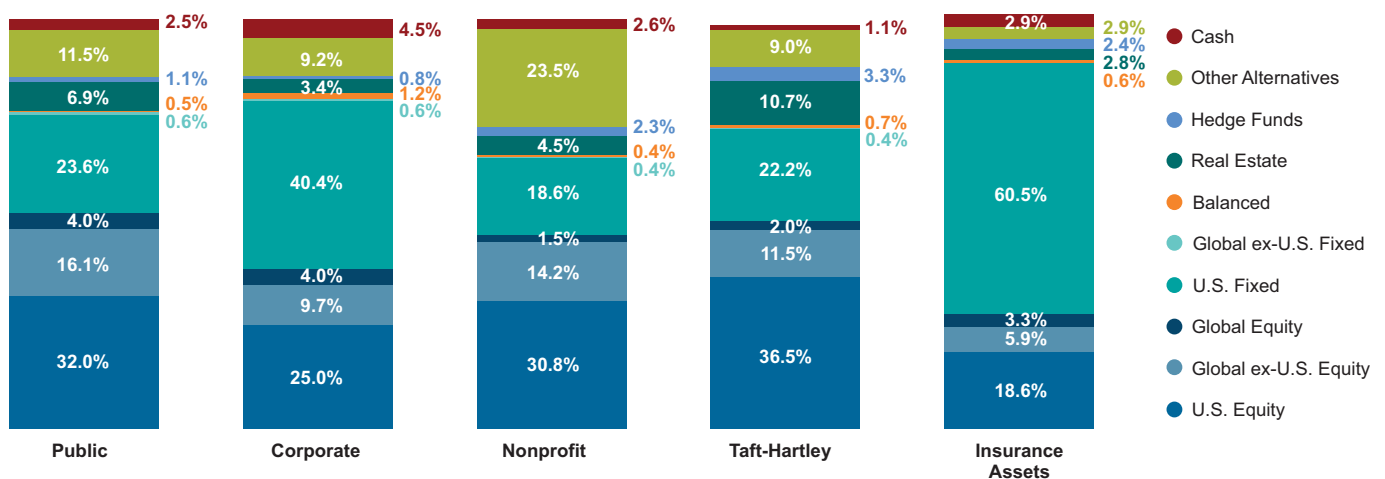
Nonprofits

- Interest in private credit remains strong. Inflation concerns continue to affect real returns. Finally, with fixed income yields approaching 5%, should allocations to fixed income be revisited?

Defined Contribution Plans

- Plan sponsors, recordkeepers, and payroll providers are actively engaging on what and how to implement SECURE 2.0; significant regulatory guidance is anticipated over the next two years.
- The IRS released guidance delaying the implementation of mandatory Roth catch-up contributions, based on income, until 2026.
 - An age 50 catch-up contribution must be Roth for those that earned more than \$145,000 the previous year.
 - To comply, those plans that don't offer Roth will need to add Roth as a plan feature; OR
 - Plans not able to track the previous year's earnings and feed to the recordkeeper will need to eliminate all age 50 catch-up contributions.
- Guidance also resolved a drafting error in SECURE 2.0 that had accidentally removed a provision that authorized any age-50 catch-up contributions.

Average Asset Allocation, Callan Database Groups



Note: Charts may not sum to 100% due to rounding. Other alternatives include but is not limited to: diversified multi-asset, private credit, private equity, and real assets.
Source: Callan

Equity

U.S. Equities

Tough quarter for all indices

- All U.S. equity indices posted negative absolute returns during 3Q23.
- The Russell 2000 Value Index led the pack during the quarter, which was a reversal of the previous two quarters when the Russell 1000 Growth Index led.
- Only 2 of the 11 S&P 500 Index sectors gained in 3Q; Energy was up 12% and Communication Services rose 3%.
- On a YTD basis, six sectors generated positive returns, with Information Technology, Communication Services, and Consumer Discretionary substantially leading the group.

Active management remains challenging for large cap

- Index concentration stayed notable within the Russell 1000 Growth Index; the top 10 issuers comprised 51% of the index and the top 5 issuers comprised 40% of the index.
- YTD, 97% of the S&P 500's return has been driven by the 10 largest weighted stocks.

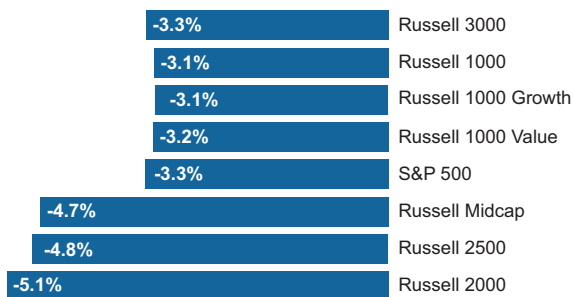
- The “Magnificent 7” has buoyed large cap index returns and has outperformed the broader market significantly. YTD, the Magnificent 7 alone is up 83%.
- No exposures or significant underweights to top benchmark names have been disadvantageous to absolute and relative performance for managers’ portfolios.

Compelling small cap valuations

- Small cap valuations, on both an absolute and relative (to large cap valuations) basis, continue to look compelling and may point to an attractive entry point for investors.
- What continues to pressure the asset class is the rhetoric around interest rates; as investors anticipate a higher-for-longer interest rate environment, there are concerns about small cap companies’ ability to repay and re-finance debt.
- If inflation data continues to improve in 2023, the small cap market could be positioned for a boost to performance.

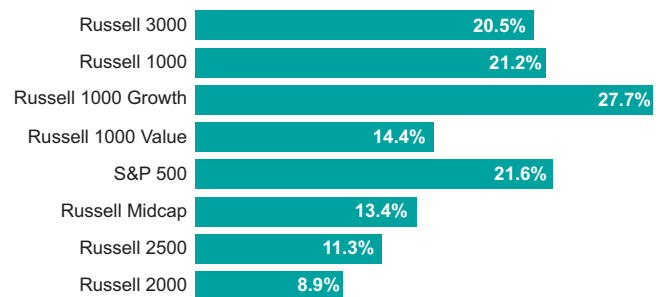
U.S. Equity: Quarterly Returns

(9/30/23)



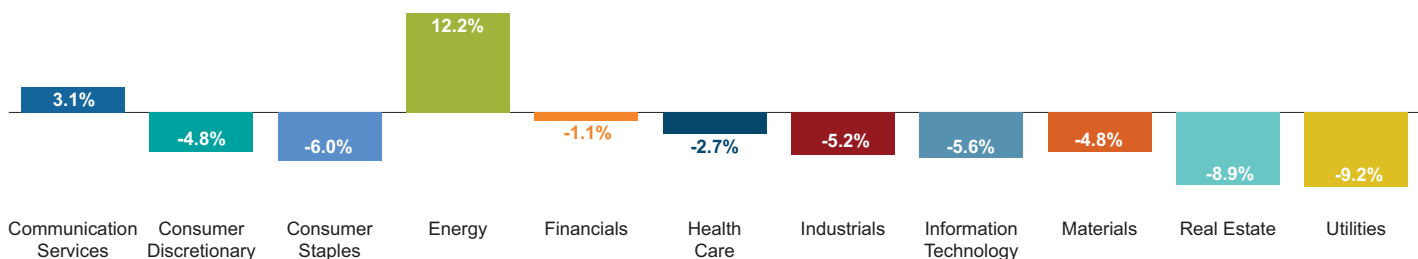
U.S. Equity: One-Year Returns

(9/30/23)



Sources: FTSE Russell and S&P Dow Jones Indices

Quarterly Performance of Industry Sectors (9/30/23)



Source: S&P Dow Jones Indices

Global Equity

Most global markets were in the red for 3Q23.

Narrow market with India and Japan leading

- Global markets retreated in 3Q23 amid fears of a global recession driven by higher interest rates and slowing growth in regions outside the U.S.
- Emerging markets outperformed developed markets, buoyed by good results from India, whose economy grew nearly 8% on the heels of supportive infrastructure spending.
- Japan was strong again in local currency as it continues to benefit from post-COVID exuberance, easy monetary policy, and a new economic stimulus plan.

Value outpaces growth

- With energy as a strong outperformer on the heels of oil price increases, value outpaced growth by a wide margin in global ex-U.S. markets.

Strong U.S. dollar a headwind

- The stronger U.S. dollar, which gained 3% over the quarter, was a notable headwind for the period.

Market dispersion is low

- Global markets have seen a prolonged period of low dispersion, excluding the 2016-2018 challenges with Brexit and oil price volatility. The global markets have seen high correlations for most of the last 10 years.
- This was in conjunction with a period of universally tight monetary policies, which helped mitigate any volatility.
- With increased dispersion of central bank actions, we expect there to be fewer co-movements across countries, a period that may benefit active management.

China: Danger or opportunity

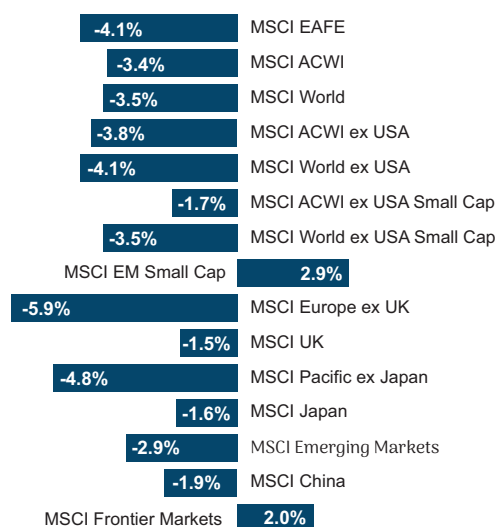
Merits

- Long-term growth potential:* China has the second-largest GDP and the world's largest population of consumers.
- Compelling valuation:* Forward earnings yield is at a decade high.

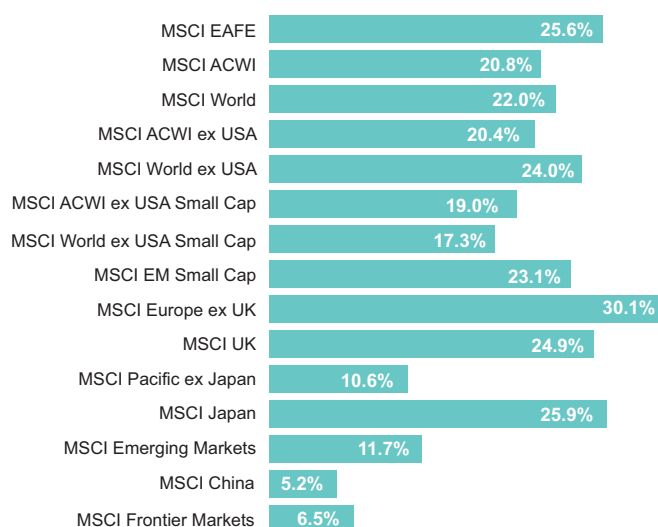
Considerations

- Downside risk:* Chinese federal debt has continued to grow aggressively and may become unsustainable.
- Political risk:* China is run by an authoritarian regime that may act against investors.
- Old before rich:* China currently has 2.26 workers for every retiree—the U.S. has 2.8.

Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 9/30/23)



Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 9/30/23)



Source: MSCI

Fixed Income

U.S. Fixed Income

U.S. fixed income fell for a second straight quarter

- The Bloomberg Aggregate Index is on track for a third calendar year of negative returns, with the rise in yields continuing to detract from performance.

U.S. Treasury 10-year yield climbed roughly 80 bps

- 10-year ended the quarter at 4.6%, its highest level since '07.
- The yield curve's inversion narrowed as it bear-steepened with long-term rates rising more than short-term rates.

TIPS outperformed nominal Treasuries

- 10-year break-even spreads widened over 10 bps.
- Fed policy rate held to 5.25%-5.50%
- The updated dot plot suggested an additional rate hike may be in the cards before year-end.

Lower-quality credit continued to outperform

- High yield spreads were flat, but the sector was buoyed by strong performance in July.
- IG corporate spreads tightened slightly and remain close to their 10-year average.
- Agency MBS underperformed other securitized sectors as interest rate volatility weighed on the sector.

Municipal Bonds

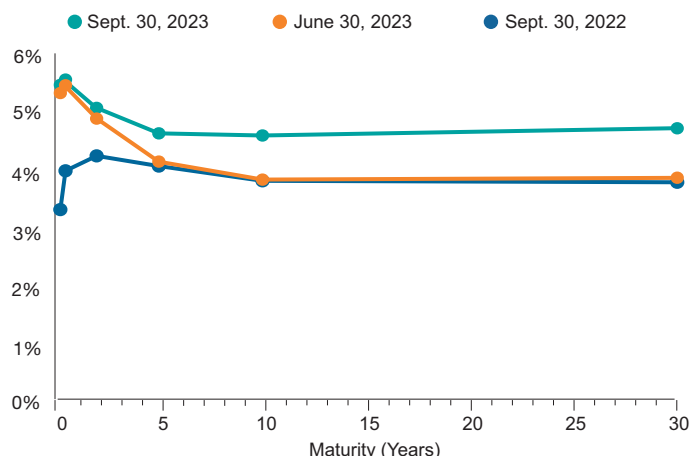
Bloomberg Aggregate down sharply in 3Q

- Corporate excess return: +84 bps; YTD +237 bps
- Mortgage excess return: -85 bps; YTD -58 bps
- High yield corporates excess return: +102 bps; YTD +516 bps
- Taxable equivalent yield is 7.3%

U.S. Treasury yield curve remains inverted

- 106 bps as of 6/30; 44 bps as of 9/30
- 2-year UST: 5.03%; 10-year UST: 4.59%
- Long rates rose more than short rates in a bear-steepening

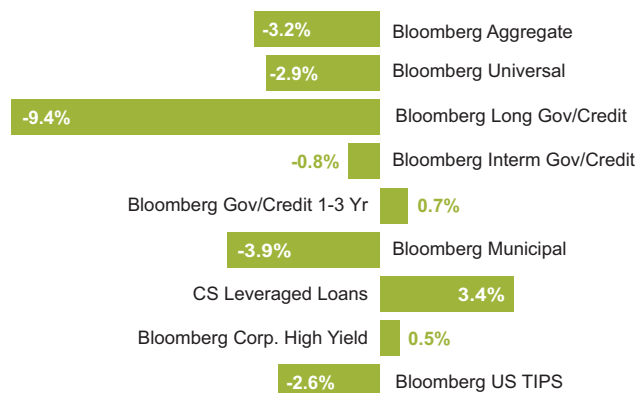
U.S. Treasury Yield Curves



Source: Bloomberg

U.S. Fixed Income: Quarterly Returns

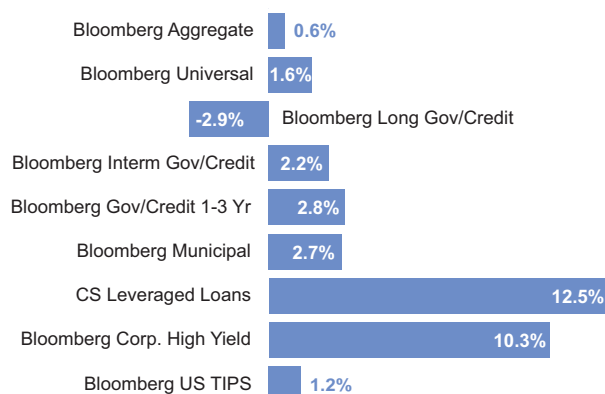
(9/30/23)



Sources: Bloomberg and Credit Suisse

U.S. Fixed Income: One-Year Returns

(9/30/23)



Fed Funds rate expectations

- “Higher for longer” theme prevails.
- Median expectation from Fed is 5.5% for year-end 2023.
- Market expectations are similar at 5.4%, up sharply from market expectations at the end of 1Q for cuts.

Valuations

- Credit spreads close to historical averages
- Mortgage spreads widened on interest rate volatility and slowing prepayments.

Global Fixed Income

Down on both a hedged and unhedged basis

- Developed market rates sold off as long-term inflation and rate expectations in the U.S. moved higher.
- The ECB continued to tighten monetary policy in September, bringing rates to the highest level since launching the euro.

U.S. dollar strength detracted from unhedged returns

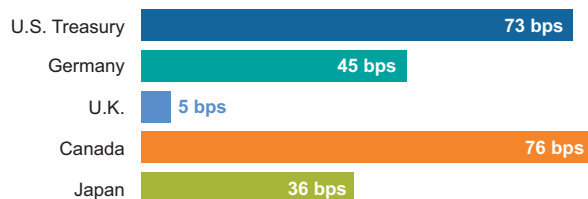
- U.S. dollar gained over 3% versus a basket of developed market currencies.

Emerging market debt indices also negative

- EM yield curves steepened; central banks in Latin America and Eastern Europe have begun monetary easing.
- Heightened geopolitical risk, war, commodity price volatility, and an economic slowdown in China remain significant headwinds to the sector.

Change in 10-Year Global Government Bond Yields

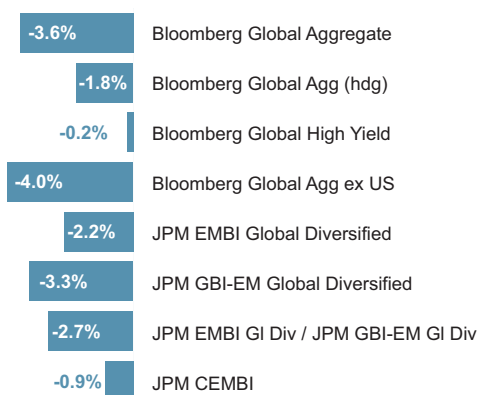
2Q23 to 3Q23



Source: Bloomberg

Global Fixed Income: Quarterly Returns

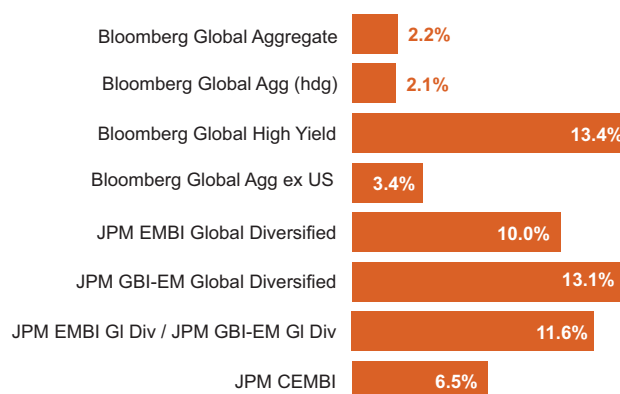
(9/30/23)



Sources: Bloomberg and JPMorgan Chase

Global Fixed Income: One-Year Returns

(9/30/23)



Sources: Bloomberg and JPMorgan Chase

Private Real Estate Falls While REITs Lag Equities

REAL ESTATE/REAL ASSETS | Munir Iman and Aaron Quach

Private valuations reflect higher interest rates

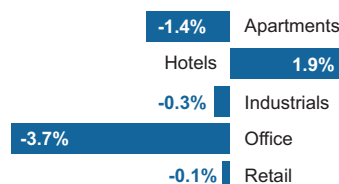
- The NCREIF Property Index, a measure of U.S. institutional real estate assets, fell 1.4% during 3Q23. The income return was 1.1% while the appreciation return was –2.4%.
- Hotels, which represent a small portion of the index, led property sector performance with a gain of 1.9%. Office finished last with a loss of 3.7%.
- Regionally, the South led with a loss of 0.5%, while the West was the worst performer with a drop of 1.8%.
- Income returns were positive across sectors and regions.
- All property sectors and regions experienced negative appreciation.
- The NCREIF Open-End Diversified Core Equity (ODCE) Index, representing equity ownership positions in U.S. core real estate, fell 2.1% during 3Q.

REITs lag equities, globally and in the U.S.

- U.S. REITs fell 7.1% in 3Q23, in contrast with the S&P 500 Index, which declined 3.3%.
- The underperformance in the U.S. was driven by the resilient U.S. economy, but a stronger-than-expected economy spelled trouble for rate-sensitive stocks as real rates continued to rise and the yield curve steepened.
- Global REITs underperformed in 3Q23, falling 5.9% compared to a 3.5% decline for global equities (MSCI World).

Sector Quarterly Returns by Property Type

(9/30/23)



Source: NCREIF

- REITs are now trading at a discount to NAV (-16%) and offer relative value given the recent selloff.
- Historically, global REITS have traded at a -5% discount to NAV.
- The FTSE EPRA Nareit Developed Asia Index (USD) fell 4.3% during the quarter.
- The FTSE EPRA Nareit Developed Europe Index (USD) increased by 1.2% during the quarter. German real estate stocks stood out as the top performers, benefiting from the European Central Bank's perceived shift to a more accommodative monetary policy stance, potentially marking the end of its rate-hiking cycle.
- Conversely, U.K. self-storage stocks underperformed due to reduced demand from businesses and the ongoing housing market sluggishness.

Callan Database Median and Index Returns* for Periods Ended 9/30/23

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	-0.6	-7.9	-12.3	6.5	5.3	7.7	4.6
NFI-ODCE (value-weighted, net)	-2.1	-8.1	-12.9	6.2	4.7	7.2	4.7
NCREIF Property	-1.4	-5.1	-8.4	6.0	5.3	7.4	6.0
NCREIF Farmland	-0.3	2.6	5.8	7.2	6.1	8.0	9.8
NCREIF Timberland	1.4	4.9	10.0	9.2	5.9	5.9	4.6
Public Real Estate							
Global Real Estate Style	-5.4	-2.8	3.7	1.6	1.4	4.4	5.6
FTSE EPRA Nareit Developed	-5.9	-4.9	1.6	0.6	-1.2	2.0	3.6
Global ex-U.S. Real Estate Style	-3.5	-4.2	4.9	-3.9	-1.5	2.8	3.8
FTSE EPRA Nareit Dev ex US	-3.0	-7.5	2.1	-4.8	-4.2	-0.5	2.5
U.S. REIT Style	-7.4	-2.1	2.6	5.0	4.3	6.9	7.0
FTSE EPRA Nareit Equity REITs	-7.1	-2.1	3.0	5.8	2.8	6.0	5.9

*Returns less than one year are not annualized. Sources: Callan, FTSE Russell, NCREIF

Focus on Exits

PRIVATE EQUITY | Gary Robertson

While private equity fundraising and investment measures in 3Q23 fell from 2Q, exits were a bright spot with dollar volume increases for buyout and venture M&A and buyout IPO volumes. The number of venture IPOs increased as well.

Fundraising ► Based on preliminary data, private equity partnerships holding final closes in 3Q totaled \$171 billion, with 435 new partnerships formed (unless otherwise noted, all data are from PitchBook). The dollar volume fell 13% from 2Q23, and the number of funds holding final closes declined 19%. So far, capital raised is running only 22% behind YTD 2022, but the number of funds trails by 42%.

Buyouts ► New buyout transactions and dollar volume fell moderately. Funds closed 2,398 company investments with \$123 billion of disclosed deal value, a 16% decrease in count and an 8% drop in dollar value from 2Q23.

VC Investments ► New financing rounds in venture capital companies totaled 8,977, with \$82 billion of announced value. The number of investments was down 21% from the prior quarter, but the announced value fell only 1%.

Exits ► There were 507 private M&A exits of private equity-backed companies (excluding venture capital), with disclosed values totaling \$123 billion. Exits fell 7% from the prior quarter

but announced dollar volume increased 23%. There were 43 private equity-backed IPOs in 3Q raising \$12 billion, the count fell by 2 IPOs but dollar volume leapt 50%.

Venture-backed M&A exits totaled 489 with disclosed value of \$27 billion. The number of sales declined 10% but announced dollar volume jumped 93%. There were 102 VC-backed IPOs (up 19% from 2Q) but the combined float fell to \$10 billion.

Returns ► With the significant 3Q rally in public equity markets, private equity trailed for the quarter and last 12 months. Private equity posted a third consecutive quarterly gain after the large retreat across most of 2022. Continued capital markets volatility is expected, and private equity should provide a beneficial dampening effect.

Funds Closed 1/1/23 to 9/30/23

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	930	121,173	22%
Growth Equity	91	63,798	12%
Buyouts	319	239,538	43%
Mezzanine Debt	16	35,010	6%
Distressed/Special Credit	20	21,575	4%
Energy	6	3,008	1%
Secondary and Other	74	65,295	12%
Fund-of-funds	16	3,005	1%
Totals	1,472	552,402	100%

Source: PitchBook (Figures may not total due to rounding.)

Private Equity Performance (%) (Pooled Horizon IRRs through 6/30/23*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	-0.74	-9.26	20.20	18.89	18.21	13.19	12.58	19.11
Growth Equity	1.31	-0.33	17.20	15.61	15.04	12.78	14.14	14.25
All Buyouts	2.57	8.12	21.06	15.67	15.30	11.22	14.80	12.72
Mezzanine	3.17	10.75	15.01	11.14	11.17	10.49	11.29	9.92
Credit Opportunities	1.39	7.37	11.93	7.11	7.63	9.12	9.42	9.46
Control Distressed	1.17	4.88	22.37	13.61	11.99	10.75	11.69	11.40
All Private Equity	1.59	2.72	19.68	15.58	15.03	11.59	13.74	13.25
S&P 500	8.74	19.59	14.60	12.31	12.86	10.88	10.04	7.61
Russell 3000	8.39	18.95	13.89	11.39	12.34	10.61	10.05	7.72

Note: Private equity returns are net of fees. Sources: Refinitiv/Cambridge and S&P Dow Jones Indices

*Most recent data available at time of publication

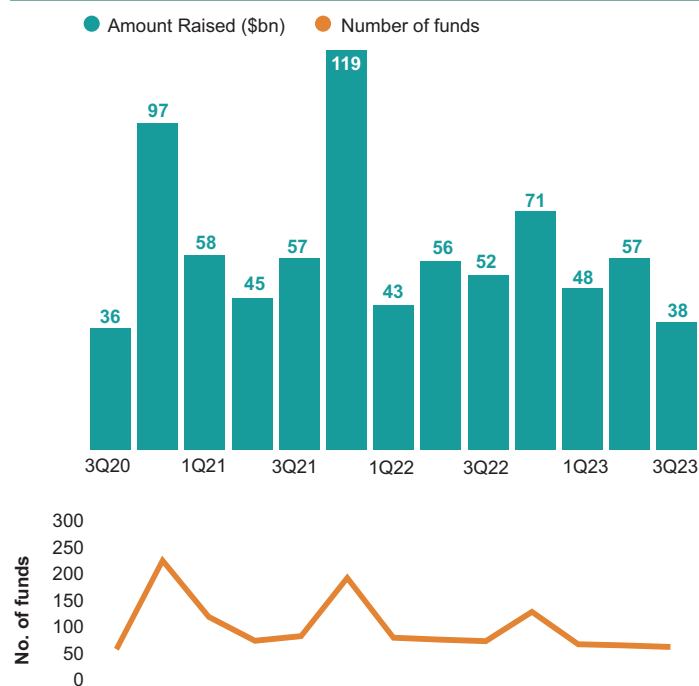
Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of the *Capital Markets Review* and other Callan publications.

Returns Exceed Those of Leveraged Loans

PRIVATE CREDIT | Catherine Beard

- Private credit performance varies across sub-asset class and underlying return drivers.
- Over the past three years, the asset class has generated a net IRR of 11.8%, outperforming leveraged loans as of June 30, 2023.
- It has also outperformed over longer time periods, with a net IRR of 9.5% over the last 20 years, compared to 5.3% for leveraged loans and 7.2% for corporate high yield.
- Higher-risk strategies have performed better than lower-risk strategies.
- Private credit remained in high demand across Callan's investor base, and a number of large pensions are looking to increase their existing private credit allocations from 2%–3% to 5%–10%.
- While we always work to build out diversified client portfolios, we think there is particularly interesting relative value in upper middle market sponsor-backed lending, asset-based lending, and opportunistic/special situations.
- Callan is seeing an uptick in stress for some individual names in direct lending portfolios due, in many cases, to a combination of input cost inflation and increased interest expense burden.
- Continued 3Q23 rate rises across the yield curve have made private credit even more attractive than in the past.
- Traditional lenders have not reentered the market in a meaningful way, allowing private credit to expand its opportunity set into larger companies, which are better credits but where loans still command high rates.
- With slight increases in default rates and rating agencies predicting further increases, both opportunistic (flexible) credit

Private Credit Fundraising (\$bn)



Source: Preqin

funds and dedicated distressed credit funds are seeing more investor interest.

- To foster ease of limited partner access and ongoing administration, more private credit general partners are launching evergreen structures and other legal structures.
- Based on the success of traditional private credit, more niche and targeted strategies are being launched such as legal assets, leasing, various royalties (pharma, music), and asset-backed industry-specific funds (shipping, energy).
- Finally, we are seeing a wave of consolidation across private credit asset managers as entities look to build out diversified product offerings and scale their businesses.

Private Credit Performance (%) (Pooled Horizon IRRs through 6/30/23*)

Strategy	Quarter	1 Year	3 Years	5 Years	8 Years	10 Years	15 Years	20 Years
Senior Debt	1.9	8.6	8.0	6.3	6.9	6.8	7.0	N/A
Mezzanine	3.2	10.7	15.0	11.1	11.2	11.2	10.7	10.6
Credit Opportunities	1.4	7.4	11.9	7.1	7.4	7.6	9.2	8.9
Total Private Credit	1.9	8.4	11.8	7.9	8.2	8.3	9.2	9.0

Source: Refinitiv/Cambridge

*Most recent data available at time of publication

Most Strategies End Quarter Slightly Higher

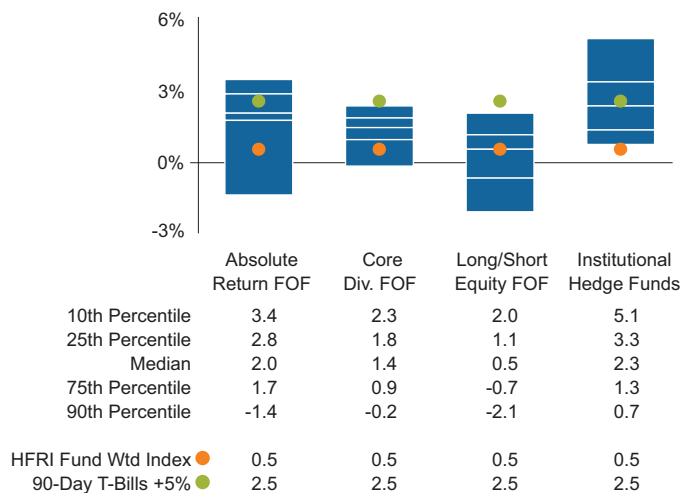
HEDGE FUNDS/MACs | Joe McGuane

Equity markets retreated during 3Q23, as investors came to terms with the fact that central banks were likely to keep rates higher for longer. Inflationary pressures persisted and long-term government bonds sold off with the U.S. 10-year Treasury yield reaching a 16-year high, while crude oil prices surged amid Russia and OPEC supply cuts.

The S&P 500 detracted (-3%) with small-cap, growth, and technology stocks leading declines, as the realization of a longer period of tighter policy sank in and eroded the case for lofty valuations. European, emerging market, and Asian equity markets posted negative results for the quarter. Credit indices generated mixed returns, as U.S. high yield and leveraged loan indices ended the quarter flat to positive, while investment grade credit posted negative returns.

Hedge Fund Style Group Returns

(9/30/23)



Sources: Callan, Credit Suisse, Federal Reserve

Callan Peer Group Median and Index Returns* for Periods Ended 9/30/23

Hedge Fund Universe	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	2.3	5.7	6.0	7.1	6.2	5.8
Callan Fund-of-Funds Peer Group	1.3	4.1	5.9	5.2	4.2	4.3
Callan Absolute Return FOF Style	2.0	3.2	4.9	6.4	4.5	4.4
Callan Core Diversified FOF Style	1.4	4.1	5.9	5.2	4.1	4.0
Callan Long/Short Equity FOF Style	0.5	4.7	7.8	2.3	3.9	4.0
HFRI Fund-Weighted Index	0.5	3.9	6.3	6.7	5.0	4.5
HFRI Fixed Convertible Arbitrage	0.5	3.3	6.7	5.6	5.5	4.8
HFRI Distressed/Restructuring	1.2	3.5	4.3	8.2	4.5	4.1
HFRI Emerging Markets	-1.0	3.5	8.3	2.4	3.1	3.0
HFRI Equity Market Neutral	1.3	2.7	3.5	4.1	2.2	2.9
HFRI Event-Driven	2.4	4.9	8.2	7.8	4.6	4.5
HFRI Relative Value	1.5	4.1	5.6	5.4	3.6	4.0
HFRI Macro	1.4	0.6	-0.7	7.4	5.3	3.4
HFRI Equity Hedge	-1.0	4.7	9.1	6.5	5.2	5.1
HFRI Multi-Strategy	2.7	4.9	6.5	4.6	2.7	2.8
HFRI Merger Arbitrage	4.4	1.5	4.0	8.1	5.4	4.4
90-Day T-Bill + 5%	2.5	7.3	9.5	6.7	6.7	6.1

*Net of fees. Sources: Callan, Credit Suisse, Hedge Fund Research

Hedge funds ended 3Q slightly higher, as equity markets sold off during the quarter when the excitement around technology names expected to benefit from the prospects of generative AI subsided and the view of elevated rates trimmed those lofty valuations. Equity hedge strategies ended the quarter negative, as sector-focused managers in health care, technology, and real estate struggled during the final month of the quarter. Event-driven strategies ended the quarter on a positive note, as a number of strategic deals either closed or received regulatory approval. Macro managers had a solid quarter, as they profited from rising sovereign bond yields and steeper yield curves.

Serving as a proxy for large, broadly diversified hedge funds with low-beta exposure to equity markets, the median Callan Institutional Hedge Fund Peer Group rose 2.3%. Within this style group of 50 peers, the average hedge credit manager gained 4.0%, as lower-rated credits outperformed higher-rated peers later in the quarter. The median Callan institutional hedged rates manager rose 2.4%, largely driven by relative value bond trades in the U.S., given opportunities across the yield curve. Meanwhile, the average hedged equity manager added 1.0%, as managers were able to profit off the dispersion across small cap and growth names.

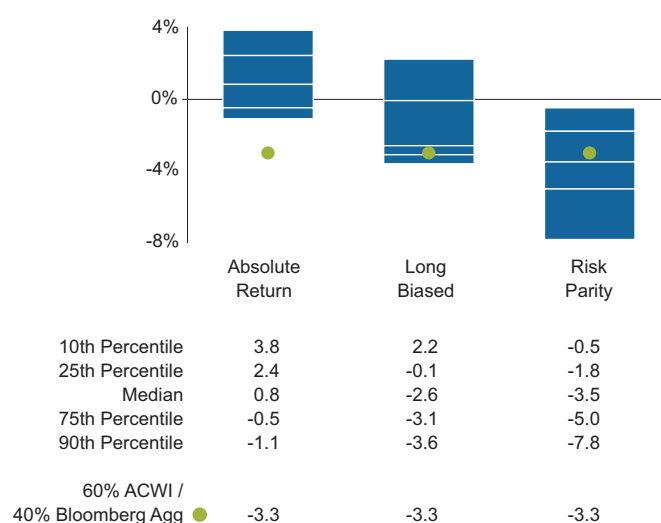
Within the HFRI indices, one of the best-performing strategy last quarter was the event-driven index (2.4%), as a number of strategic deals received regulatory approval. Relative value strategies ended up 1.5%, as fixed income trading drove gains. Macro strategies finished up 1.4%, as gains came from short positions in U.S., Japanese, and European rates, and short positions in U.S. equities.

Across the Callan Hedge Fund-of-Funds (FOF) Database, the median Callan Long-Short Equity FOF ended 0.5% higher, as generalist managers offset specialists during the quarter. Meanwhile, the median Callan Core Diverse FOF ended 1.4% higher, as macro and event-driven managers drove performance. Callan Absolute Return FOF ended 2.0% higher, as macro managers drove performance.

Within Callan's database of liquid alternative solutions, the Callan MAC Absolute Return peer group rose 0.8%, as commodities and currencies drove performance. The Callan MAC Risk Parity peer group fell 3.5%, as equities and fixed income moved lower during the quarter. The Callan MAC Long Biased peer group fell 2.6%, as equity investors dumped stocks after realizing interest rates were likely to be higher for longer.

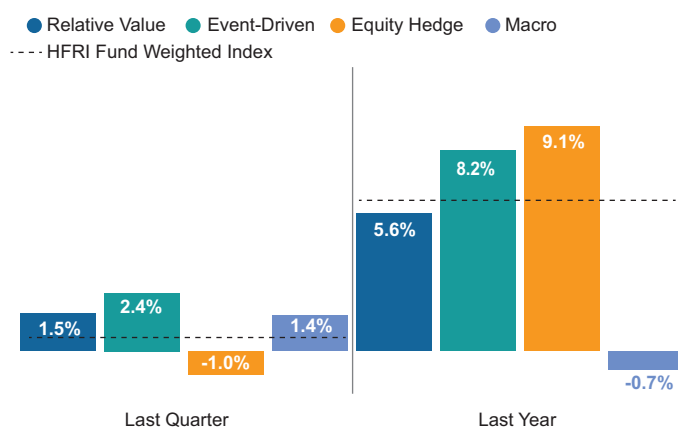
MAC Style Group Returns

(9/30/23)



HFRI Hedge Fund-Weighted Strategy Returns

(9/30/23)



Source: HFRI

Sources: Bloomberg, Callan, Eurekahedge, S&P Dow Jones Indices

Index Finishes 2Q23 with Third Straight Gain

DEFINED CONTRIBUTION | **Scotty Lee**

Performance: DC Index Gains 4.7%

- The Callan DC Index™ rose 4.7% in 2Q23, which brought the Index's trailing one-year gain to 11.7%. The Age 45 Target Date Fund (analogous to the 2040 vintage) had a slightly lower quarterly return (4.0%).

Growth Sources: Balances Grow Again

- Balances within the DC Index rose by 4.3% after a 5.3% increase in the previous quarter. Investment gains (4.7%) were the sole driver of the gain, while net flows (-0.4%) had a negligible effect.

Turnover: Material Fall in Net Transfers

- Turnover (i.e., net transfer activity levels within DC plans) in the DC Index decreased materially to 0.33% from the previous quarter's measure of 0.70%, which marked the Index's highest level since 2020.

Net Cash Flow Analysis: Stable Value Declines Sharply

- Target date funds (TDFs) got 67.4% of quarterly net flows.
- Stable value (-39.9%) saw relatively large outflows for the third consecutive quarter, while money market (6.1%) experienced small net inflows.

Equity Allocation: Exposure Rises Slightly

- The Index's overall allocation to equity (71.8%) rose from the previous quarter's level (70.8%), primarily driven by gains in equity markets. The current equity allocation continues to sit above the Index's historical average (68.4%).

Asset Allocation: Large Cap Gains

- U.S. large cap (26.4%) and target date funds (33.8%) were among the asset classes with the largest percentage increases in allocation.

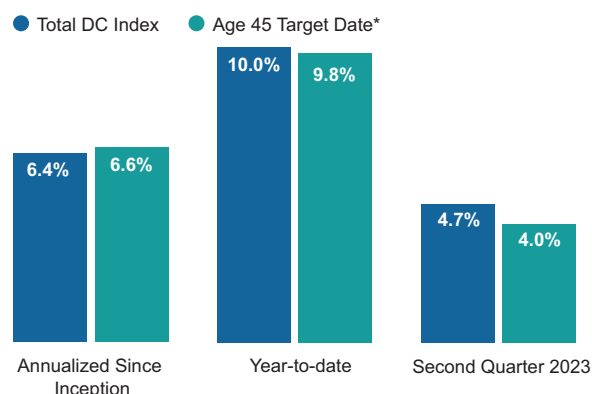
Prevalence of Asset Class: Company Stock Rises

- The prevalence of company stock (21.8%) rose by 3.8 percentage points. Other notable movements included a 1.5 percentage point decrease in the prevalence of a brokerage window offering (39.9%) as well as a 1.5 percentage point decrease in the prevalence of stable value (71.4%).

Underlying fund performance, asset allocation, and cash flows of more than 100 large defined contribution plans representing approximately \$400 billion in assets are tracked in the Callan DC Index.

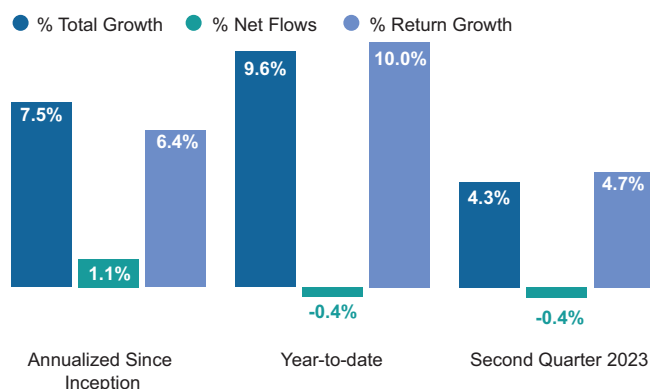
Investment Performance

(6/30/23)



Growth Sources

(6/30/23)



Net Cash Flow Analysis (2Q23)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	67.4%
U.S. Fixed Income	11.8%
U.S. Large Cap	-27.6%
Stable Value	-39.9%
Total Turnover**	0.3%

Data provided here is the most recent available at time of publication.

Source: Callan DC Index

Note: DC Index inception date is January 2006.

* The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.

** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

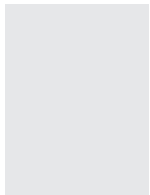
Contributors



Catherine Beard, CFA, an investment consultant in Callan's Alternatives Consulting group, focuses on private credit and diversifying strategies.



Joe McGuane, CFA, leads Callan's hedge fund research, working with clients and consultants to implement diversifying assets portfolios.



Nicholas Conant, CFA, CAIA, is an investment consultant in Callan's Global Manager Research group, responsible for research and analysis of non-U.S. equity managers.



Aaron Quach is an assistant vice president in Callan's Real Assets Consulting group, supporting senior members of the group with the evaluation of managers.



Munir Iman works in Callan's Real Assets Consulting group, collecting information on real assets products and tracking new real estate fund offerings.



Roxanne J. Quinn is an analyst in Callan's Alternatives Consulting group. She joined the group in 2022 to support the private equity, private credit, and hedge fund teams.



Jay Kloepper is director of the Capital Markets Research group, helping Callan's institutional investor clients with strategic planning and providing custom research.



Gary Robertson in the Private Equity Consulting group is responsible for alternative investments consulting services at Callan.



Scotty Lee is a senior analyst and associate consultant on Callan's Defined Contribution (DC) Consulting team, based in the San Francisco headquarters.



Nicole Wubbena is a U.S. equity investment consultant in Callan's Global Manager Research group. Nicole identifies emerging themes within the asset class.



Lauren Mathias, CFA, is an investment consultant in Callan's Global Manager Research group, responsible for research and analysis of global ex-U.S. equity investment managers.

The *Capital Markets Review* is a quarterly macroeconomic indicator newsletter that provides thoughtful insights on the economy and recent performance in the equity, fixed income, alternatives, real estate, and other capital markets.

If you have any questions or comments, please email institute@callan.com.

Editor – Stephen R. Trousdale

Performance Data – Alpay Soyoguz, CFA; Matt Loster; Fionnuala Wright

Designer – Nicole Silva

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Corporate Headquarters

600 Montgomery Street
Suite 800
San Francisco, CA 94111
415.974.5060

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