

GDP Recovers From Pandemic Plunge

ECONOMY

2 GDP grew at a 6.5% annual rate in 2Q21 and regained the level last seen in February 2020, before the COVID pandemic spurred a global shutdown in economic activity. But other key indicators like employment have yet to regain their pre-pandemic levels.

Agg Gains 1.8% and Global Bonds Rally

FIXED INCOME

8 The Bloomberg Barclays US Aggregate Bond Index added 1.8%, with spread sectors outperforming treasuries. Global fixed income ex-U.S. (hedged) gained as global economies re-opened. Emerging market debt rallied in 2Q21; EM corporates fared better than sovereigns.

Demand Is Strong; Fundraising Recovers

PRIVATE CREDIT

12 Institutional investors are attracted to private credit's yield and income-generating characteristics, fueling demand. Direct lending pricing is back to pre-COVID levels, and the liquidity injected into credit markets has muted the distressed opportunity set. Fundraising has rebounded.

Strong Returns and Worries Over Future

INSTITUTIONAL INVESTORS

4 All institutional investor types saw big gains over the last year, although still trailing a 60%/40% benchmark. Corporate DB plans got a shot in the arm from the American Rescue Plan Act, including lower required contributions. Public DB plans saw huge gains in funded status.

Big Gains for ODCE; REITs Top Equities

REAL ESTATE/REAL ASSETS

10 The NCREIF ODCE Index turned in its best quarter in 10 years. Income for all sectors in the index, except Hotels, remained positive. Vacancy rates in Industrial and Multifamily continued to compress as demand stayed strong. REITs topped equities globally and in the U.S.

Thriving Amid Surging Recovery

HEDGE FUNDS/MACs

13 The median manager in the Callan Hedge Fund-of-Funds Database Group rose 2.7%, while the Callan Institutional Hedge Fund Peer Group gained 2.1%. The median managers of the Callan Multi-Asset Class (MAC) Style Groups generated positive returns, gross of fees.

Global Markets Keep Setting New Records

EQUITY

6 The S&P 500 Index continued to hit record highs in 2Q21, just as it did in 1Q. Since March 2020, the S&P is up 96.1%, with all sectors posting gains over 45%. Government stimulus and a continued "return to normal" spurred positive sentiment in global markets.

Activity Generally Rose Amid Rebound

PRIVATE EQUITY

11 Private equity fundraising and deal activity, with few exceptions, increased in 2Q21. A broad swath of new transaction records are anticipated in 2021, as "risk-on" sentiments drive frenetic M&A and IPO liquidity, and institutional investors' zeal for private equity continues.

Index Posts Fourth Straight Quarterly Gain

DEFINED CONTRIBUTION

15 The Callan DC Index™ rose 3.8% in 1Q21. The Age 45 Target Date Fund posted a 4.6% gain, attributable to its higher equity allocation. Target date funds returned as the top destination for inflows. In a reversal from 4Q20, investors transferred assets out of relatively safer asset classes.

Broad Market Quarterly Returns

U.S. Equity Russell 3000



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



U.S. Fixed Income Bloomberg Barclays Agg



Global ex-U.S. Fixed Income Bloomberg Barclays Gbl ex US



Sources: Bloomberg Barclays, FTSE Russell, MSCI

... And We're Back!

ECONOMY | Jay Kloepfer

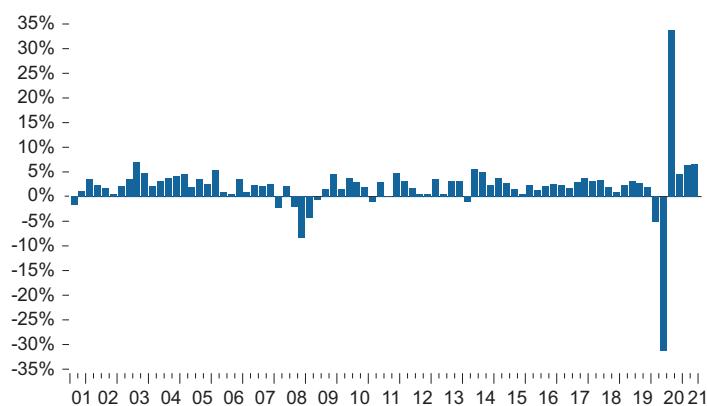
GDP grew at a 6.5% annual rate in 2Q21 and regained the level last seen in February 2020, before the COVID pandemic spurred a global shutdown in economic activity. Our focus during the pandemic has been on the *level* of economic indicators—GDP, employment, unemployment, consumer spending, imports and exports, and personal income. Traditional measures such as annualized GDP growth lost meaning around the plunge and sharp recovery that defined the shutdown and reopening experience. Reaching the previous level of real GDP is a major milestone; now, GDP growth will regain some meaning as a way to track economic progress. Other key indicators like employment have yet to regain their pre-pandemic levels. In fact, employment has been the measure that took the greatest hit and has the furthest to go before claiming full recovery. We lost over 22 million jobs in the U.S. in March and April of 2020; while we have gained 15.5 million back, that's still almost 7 million short. The lost jobs were spread across many industries, but the deepest losses and the greatest deficits left to recover are in lower-paid sectors with concentrations of hourly jobs, including hospitality and travel-related industries.

The gains in GDP in 1Q and 2Q were startling and robust, yet still a bit less than economists expected. The Federal Reserve issued a forecast of 7% growth for the year in June 2021, but the 1Q figure was revised down to 6.3%. Growth in 3Q is expected to be stronger than 2Q, but consensus expectations for the year are coming down from 7%. Restocking depleted inventories was expected to be the main driver of growth this year, along with incredibly robust spending by consumers, but supply bottlenecks led to an actual decline in private inventory investment in 2Q, particularly in retail goods. Economists now estimate that in the second half of the year, inventory building is expected to account for as much as two-thirds of GDP growth.

Supply bottlenecks are really the story of the year for many markets in the global economy, both in goods such as building materials, commodities, and auto parts (such as vital computer chips), and in labor for a number of industries, in particular

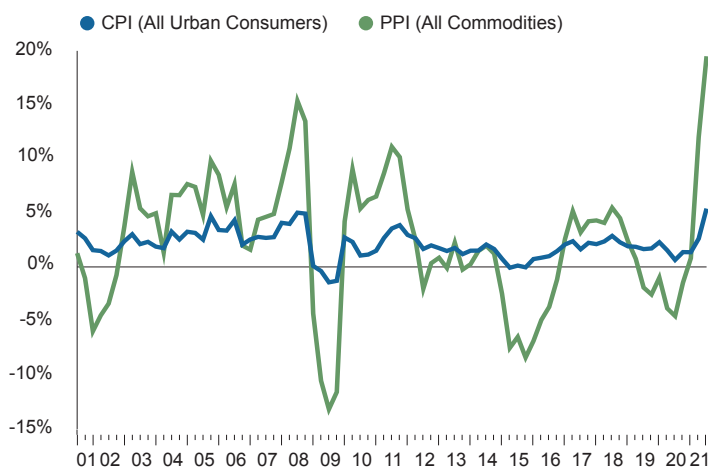
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

those originally hit hardest like hotels, restaurants, retail, and travel. The stories told by businesses unable to fill multiple open positions contrast sharply with the 7 million job deficit. So what gives? Fueling personal consumption demand has been a singular economic period where the steepest recession in terms of job losses and GDP decline in 70 years was accompanied by NO decline in total personal income. In a normal downturn, as individuals lose jobs and companies close their doors, spending sags as consumers and companies cut back. Unprecedented policy actions to support both individuals and businesses kept

incomes in aggregate from falling at all, yet shutdowns held back supply in the face of almost no decrease in demand, at least for goods like building supplies, technology, communications, and computer services.

These kinks in supply have led to a spike in headline inflation: the year-over-year Consumer Price Index came in at 5.4% in June, while the much-more-volatile Producer Price Index shot up 19.5% compared to June 2020. After complete or partial shutdowns around the globe, many industries cannot simply restart production and build supply to meet surging demand instantaneously. Producer prices had been tumbling for more than a year prior to the pandemic, and then suffered another shock with the almost-forgotten plunge in energy prices in 1Q20 as Saudi oil producers entered into a price war to establish global energy supply discipline. The price of building materials, specifically timber, became the metaphor for inflation fears, reaching the point of commentary by none other than the chairman of the Federal Reserve. As incomes were maintained and interest in home renovation soared during the pandemic, demand for lumber surged while product from lumber mills was constrained first by total shutdowns and then production processes limited by social distancing protocols. Timber prices shot up over 300% by the start of June 2021, reaching an all-time high of \$1,515 per thousand board feet. As production caught up and demand finally eased, prices have since fallen by over \$1,000 and are back at 2018 levels (but still up 200% from spring 2020). Such volatility may be extreme, but timber really may be the appropriate metaphor for transitory price increases that will work through many industries and labor markets in the U.S. and global economies throughout 2021 and into 2022.

The Long-Term View

Index	2Q21	Periods Ended 6/30/21			
		1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	8.2	44.2	17.9	14.7	9.9
S&P 500	8.5	40.8	17.6	14.8	9.8
Russell 2000	4.3	62.0	16.5	12.3	9.3
Global ex-U.S. Equity					
MSCI EAFE	5.2	32.4	10.3	5.9	5.2
MSCI ACWI ex USA	5.5	35.7	11.1	5.4	--
MSCI Emerging Markets	5.0	40.9	13.0	4.3	--
MSCI ACWI ex USA Small Cap	6.4	47.0	12.0	7.0	6.6
Fixed Income					
Bloomberg Barclays Agg	1.8	-0.3	3.0	3.4	5.1
90-Day T-Bill	0.0	0.1	1.2	0.6	2.2
Bloomberg Barclays Long G/C	6.4	-1.9	5.4	7.3	7.5
Bloomberg Barclays GI Agg ex US	0.9	4.6	1.6	1.0	3.8
Real Estate					
NCREIF Property	3.6	7.4	6.1	8.8	9.1
FTSE Nareit Equity	12.0	38.0	6.3	9.4	10.2
Alternatives					
CS Hedge Fund	3.0	16.6	5.6	4.2	7.0
Cambridge PE*	9.5	54.2	18.8	15.1	15.5
Bloomberg Commodity	13.3	45.6	2.4	-4.4	1.3
Gold Spot Price	3.3	-1.6	6.1	1.7	6.3
Inflation – CPI-U	2.6	5.4	2.4	1.9	2.2

*Data for most recent period lags by a quarter. Data as of 3/31/21.

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

Recent Quarterly Economic Indicators

	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19
Employment Cost–Total Compensation Growth	2.9%	2.6%	2.5%	2.4%	2.7%	2.8%	2.7%	2.8%
Nonfarm Business–Productivity Growth	5.4%	5.4%	-3.8%	4.2%	11.2%	-0.8%	1.6%	0.3%
GDP Growth	6.5%	6.4%	4.3%	33.4%	-31.4%	-5.0%	2.4%	2.6%
Manufacturing Capacity Utilization	75.1%	74.4%	74.0%	71.9%	64.3%	74.4%	75.4%	75.7%
Consumer Sentiment Index (1966=100)	85.6	80.2	79.8	75.6	74.0	96.4	97.2	93.8

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

Strong Returns Over Last Year and Concerns About the Path Ahead

INSTITUTIONAL INVESTORS

- Institutional investors continued to show strong gains over the past year, with double-digit returns.
- Nonprofits were again the top performers, followed closely by public defined benefit (DB) plans and Taft-Hartley plans. Corporate DB plans, likely due to their higher fixed income allocations, lagged but still gained nearly 20%.
- All but corporate DB plans topped a 60% stocks/40% bonds benchmark.
- Over longer time periods, investor returns were generally in line with that benchmark.
- But low projected returns put downward pressure on ROA assumptions. Weaker return projections may derail their expressed desire to bring in risk, spurring further interest in alternatives exposures and total fund leverage discussions.
- There is growing interest in 30-year capital markets assumptions to justify more balanced portfolios.

Corporate DB plans

- There was an uptick in corporate plan asset/liability (A/L) studies in 2Q21, continuing a surge that began in 2020.
- The American Rescue Plan Act (ARPA), a \$1.9 trillion COVID-19 stimulus bill, also provided a shot in the arm to corporate plans: they saw lower liabilities, higher funded status, and lower required contributions.

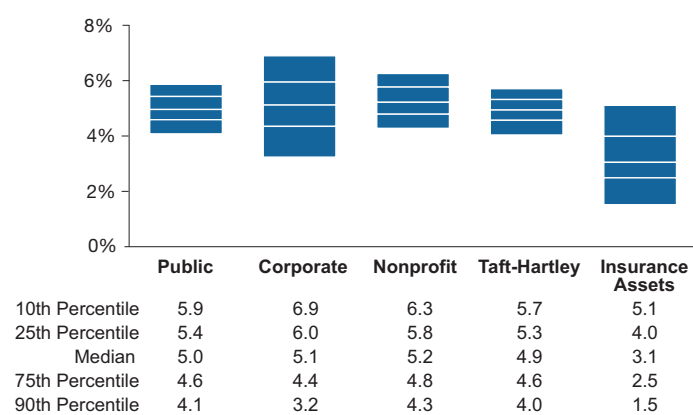
Public DB plans

- Public plans saw improvements in funded status due to strong returns at a scale not seen in decades—many experienced greater than 10% increases.

DC plans

- Defined contribution (DC) plan glidepaths are being reassessed in light of lower short-term capital markets assumptions. The long-term equilibrium did not change, but it is coming from a lower starting point.

Quarterly Returns, Callan Database Groups



Source: Callan

Callan Database Median and Index Returns* for Periods Ended 6/30/21

Database Group	Quarter	Year-to-Date	1 Year	3 Years	5 Years	10 Years
Public Database	5.0	8.6	25.8	11.0	10.7	8.6
Corporate Database	5.1	5.6	19.6	11.2	10.1	8.5
Nonprofit Database	5.2	9.1	28.1	11.6	11.2	8.5
Taft-Hartley Database	4.9	8.6	25.5	10.9	10.8	9.0
Insurance Assets Database	3.1	3.4	11.0	7.3	6.0	5.3
All Institutional Investors	5.1	8.4	25.6	11.2	10.7	8.6
Large (>\$1 billion)	5.0	8.6	25.6	11.3	10.8	8.9
Medium (\$100mm - \$1bn)	5.1	8.1	25.3	11.2	10.7	8.6
Small (<\$100 million)	5.1	8.5	25.9	11.0	10.6	8.4

*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.

- The Government Accountability Office (GAO) has been asked to review the target date fund market over concerns with risk and fee levels.

Nonprofits

- Subdued expectations for capital markets returns are challenging both the risk tolerance of nonprofits and the sustainability of established spending rates.
- Some are dissatisfied with private real assets, hedge funds, and the presence of any fixed income; significant portfolio reconstruction is on the table.
- But hedge funds and other absolute return strategies may gain a new appreciation when compared to dismal fixed income expectations as a way to diversify the growth risk with less of an expected return penalty.

All institutional investors

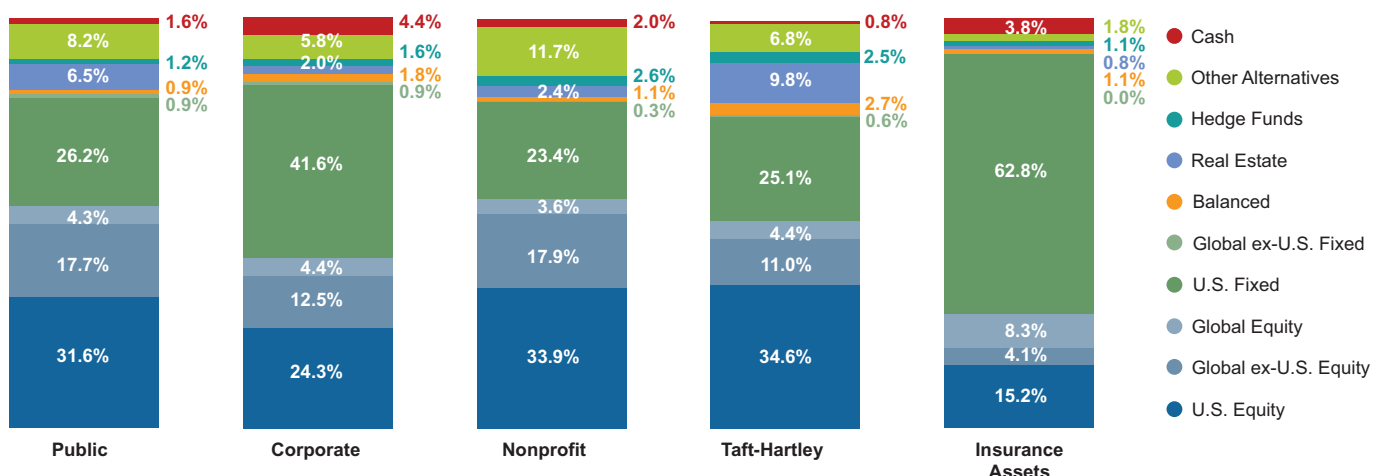
- Investors have demonstrated remarkable discipline in rebalancing between growth and value managers, and U.S. and global ex-U.S. equity.
- Fixed income structures focus on the role of the asset class—to diversify equity, to serve as a flight to quality, to provide liquidity and interest rate exposure—balanced against the desire for return in a very low-yield environment.
- Some investors are focused on creative reconstruction of “core” fixed income, away from lower-returning segments of the Bloomberg Barclays US Aggregate Bond Index.

- Real assets see renewed interest with growing concerns for inflation.
- But investors are questioning the continued inclusion of past real assets stalwarts: natural resources, energy, MLPs, and commodities.
- Will the inflation of the future come from the same sources as the global energy complex evolves? Are we hedging inflation or outperforming it?

Key issues of concern

- In addition to common concerns about low return expectations, investors have started discussions around both environmental, social, and governance (ESG) issues and diversity, equity, and inclusion (DEI).
- In a Callan poll, the majority expect to return to their offices by year-end, but a significant number are still uncertain about when that will happen.
- Other poll results:
 - **Public DB plans:** More than 50% have taken steps in regards to DEI issues.
 - **Corporate DB plans:** Many clients are evaluating how to manage improved funded status.
 - **DC plans:** A higher share of DC clients have taken ESG actions compared to any other investor type.
 - **Nonprofits:** Changes to spending policies are a notable concern in discussions with our clients.

Average Asset Allocation, Callan Database Groups



Note: charts may not sum to 100% due to rounding
Source: Callan

Equity

U.S. Equities

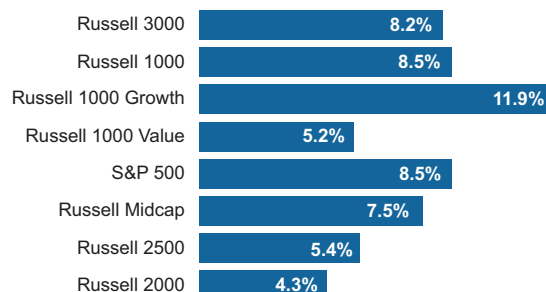
Markets keep setting all-time highs

- The S&P 500 Index continued to hit record highs in 2Q21.
- The 12-month rebound after the market low in March 2020 for the S&P 500 surpasses the 12-month GFC and Dot-Com Bubble rebounds. Since March 2020, the S&P is up 96.1%, with all sectors posting gains over 45%; Energy +140.6%.
- All sectors posted positive returns except for Utilities. 2Q21 top sectors were Technology and Energy. For the last 12 months, the two best were Financials and Industrials.

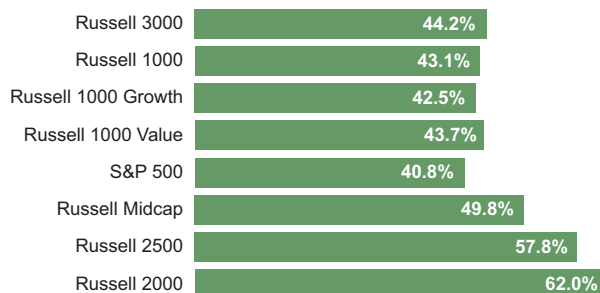
Market leadership changed in 2Q21

- Vaccine news/roll-outs provided a catalyst for market rotation into value/cyclicals in 4Q20 and 1Q21.
- In June 2021, the Fed moved up its timeline for rate hikes, prompting a shift back to growth stocks.
- Generally, growth outperformed value during the quarter as investors contemplated a “transitory” inflationary environment. The only exception was in small caps, where the Russell 2000 Growth Index underperformed the Russell 2000 Value. Continued outperformance of meme stocks helped small value.
- Larger cap stocks outperformed smaller cap stocks, reversing the recent trend of small cap outperformance.
- Starting in 2005, cumulative returns for broad large cap and small cap indices were in lock-step, until 4Q18.
- In 2Q21, Russell 1000 increased by 8.5%, ending a two-quarter streak in which small cap stocks outperformed large.

U.S. Equity: Quarterly Returns



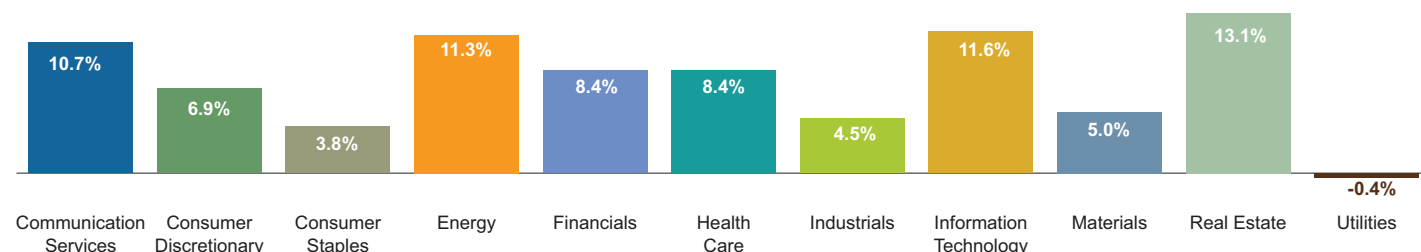
U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

- After cyclical stocks led the market for the prior two quarters, mega-cap Technology stocks outperformed in 2Q. This helped the Russell 1000 beat the Russell 2000.
- Historically, small cap stocks have outperformed in the first 12 months of market recoveries. They tend to underperform in the ensuing 12 months.

Quarterly Performance of Industry Sectors



Source: S&P Dow Jones Indices

Global Equity

Strong growth despite pockets of COVID-19 outbreaks

- Government stimulus and a continued “return to normal” spurred positive sentiment.
- Risk assets lost some steam amid concerns around the Delta variant.
- Small cap was largely in-line with large, except within emerging markets where smaller companies benefited from rebounds within industrials and basic materials.
- Despite return dispersions within regions, developed and emerging markets performed similarly over the quarter.

Market shifts away from cyclicals

- Expectations remain positive, but cooler than previous quarters, causing cyclical stocks to lag.
- Factor performance showed a preference for quality and growth, a divergence from last quarter.

U.S. dollar vs. other currencies

- The U.S. dollar was mixed versus other currencies and did not contribute meaningfully to global ex-U.S. results.

Growth vs. value

- Growth overturned value, except in emerging markets, where commodity-rich countries rallied.

Uneven global vaccination rates

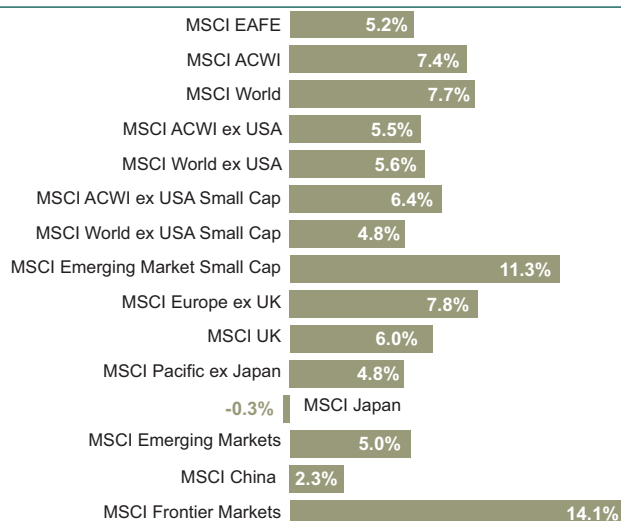
- North America and Europe are leading in vaccinations, while the rest of the world is still lagging.
- YTD equity market returns reflect higher returns from countries with high vaccination rates, and vice versa:
 - MSCI North America: +14.9%
 - MSCI Europe: +11.8%
 - MSCI EM Latam: +8.9%
 - MSCI EM Asia: +7.5%
 - MSCI China: +2.3%

Potential for re-opening trade ex-U.S.

- Historically, small cap, value, and cyclicals thrive in recoveries as manufacturing resumes and retail sales rise.
- GDP is expected to rebound as vaccination rates increase and economies continue to re-open.

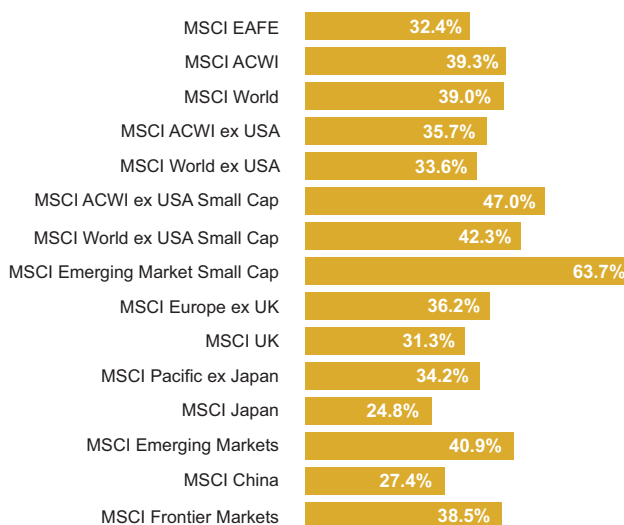
Global ex-U.S. Equity: Quarterly Returns

(U.S. Dollar)



Global ex-U.S. Equity: One-Year Returns

(U.S. Dollar)



Source: MSCI

Fixed Income

U.S. Fixed Income

U.S. Treasury yield curve flattens

- The 10-year U.S. Treasury yield closed 2Q21 at 1.45%, a decline of 29 bps from 1Q21.
- The short-end of the curve remained anchored, though a hawkish tone from the Fed's June meeting rallied rates on the long end.
- TIPS outperformed nominal U.S. Treasuries given strong relative performance in April and May.

Bloomberg Barclays Aggregate rallies

- The Bloomberg Barclays US Aggregate Bond Index added 1.8% in 2Q21, with spread sectors outperforming treasuries, but is negative over the last year.
- Demand for corporate credit remained strong, with spreads tightening 11 bps over the quarter, to 80 bps.

High yield rally continues on lowered default expectations

- High yield (HY) bonds outperformed investment grade (IG) in 2Q adjusted for duration, but underperformed IG in absolute terms.
- Leveraged loans gained 1.5% for the quarter, driven by favorable supply/demand dynamics.

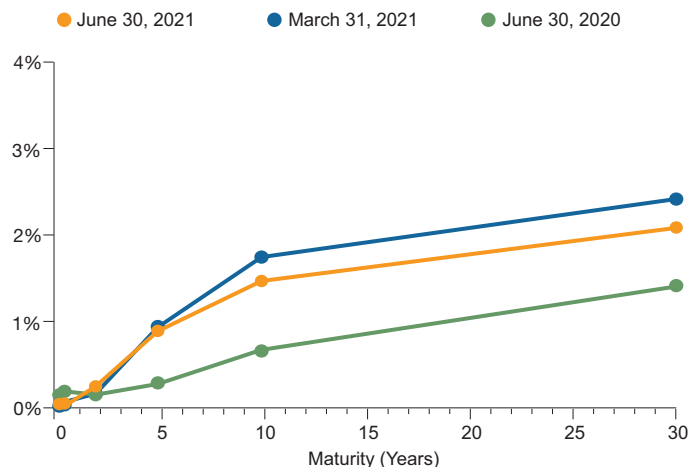
Munis outperform Treasuries as economies re-open

- Municipals topped treasuries, as municipal yields rose less than treasury yields.
- The municipal market was supported by the American Rescue Plan Act.

Tight corporate spreads and fall in default rate

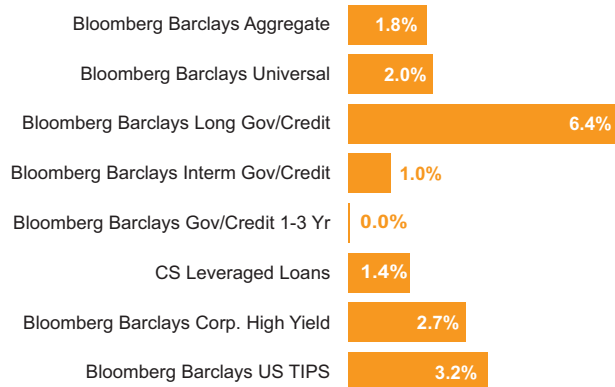
- Corporate credit spreads have not traded this tight since 1H07.
- Default rate is declining from the near-term highs reached during the pandemic. Fed's support provided issuers the opportunity to term out their existing debt and extend maturities, while accelerating growth and better-than-expected earnings were tailwinds to debt holders.

U.S. Treasury Yield Curves



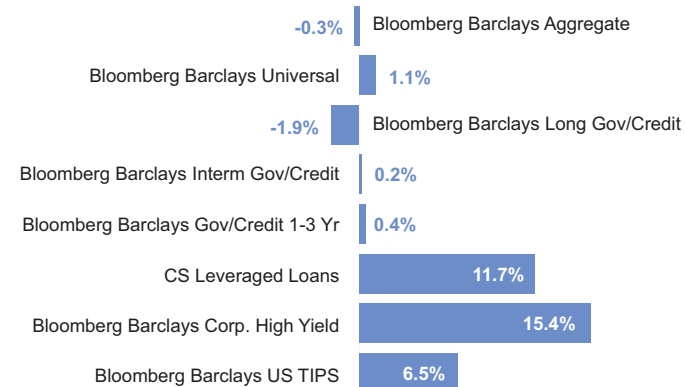
Source: Bloomberg

U.S. Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays and Credit Suisse

U.S. Fixed Income: One-Year Returns



Sources: Bloomberg Barclays and Credit Suisse

FIXED INCOME (Continued)

- 2021 marks the most modest first half of a calendar year for defaults/distressed transactions since 2011, according to JPMorgan.
- Some market participants have lowered their rolling 12-month default forecasts to a range of <1% to 2.5% for 2021.

Global Fixed Income

Global fixed income posts positive returns

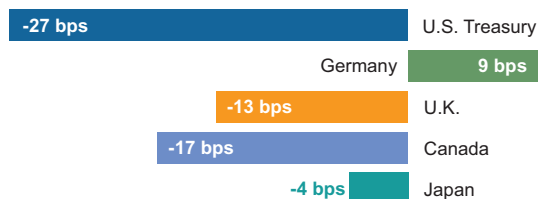
- Global fixed income ex-U.S. (hedged) gained in 2Q21 as global economies re-opened, albeit underperforming the US Aggregate.
- The U.S. dollar was mixed against developed currencies, up 0.3% versus the yen; down 1.1% vs. the euro, 1.3% vs. the Canadian dollar, and 2.0% vs. the Swiss franc.

Emerging market debt gains

- Emerging market debt rallied in 2Q21, with the JPM EMBI Global Diversified gaining 4.1% in hard currency, as falling U.S. rates spilled into emerging markets, and 3.5% in local currency. However, both remained down YTD, -0.7% and -3.4%, respectively.
- The U.S. dollar generally depreciated versus emerging currencies. Notables include -1.5% vs. Chinese yuan and -13.4% vs. Brazilian real.
- EM corporates fared better than sovereigns amid improving corporate fundamentals and global economic recovery.
- Local currency index (GBI-EM Global Diversified) slightly trailed hard currency, as real GDP growth expectations increased.

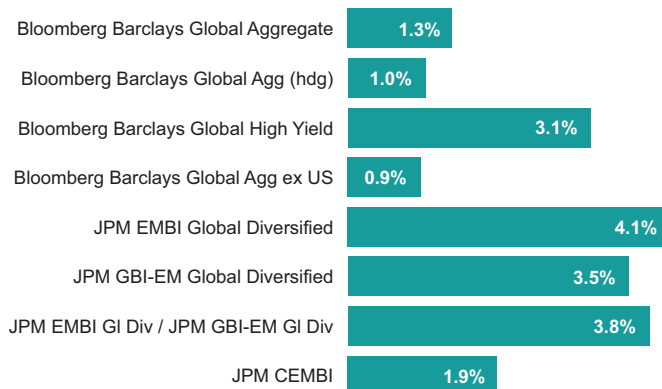
Change in 10-Year Global Government Bond Yields

1Q21 to 2Q21



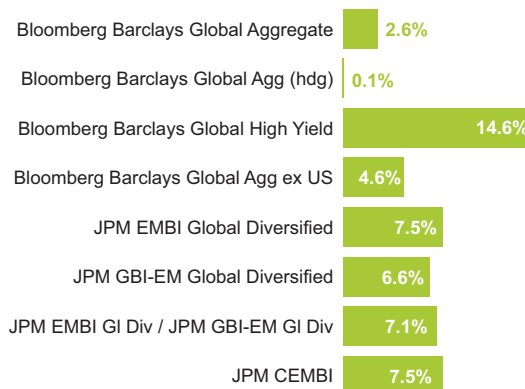
Source: Bloomberg Barclays

Global Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays and JPMorgan Chase

Global Fixed Income: One-Year Returns



Sources: Bloomberg Barclays and JPMorgan Chase

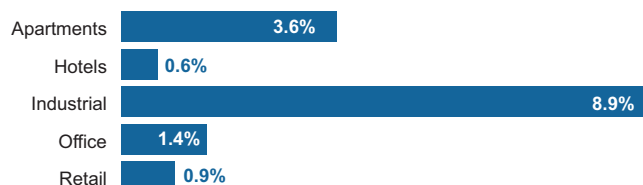
Strong Quarter for Real Estate, Both Public and Private

REAL ESTATE/REAL ASSETS | Munir Iman

Strongest return for ODCE in 10 years

- The recovery gained steam as the NCREIF ODCE Index posted its strongest quarterly return in 10 years; Industrial remains the best performer.
- Income stayed positive except in the Hotel sector.
- Niche sectors such as self-storage and life sciences continued to be accretive.
- Vacancy rates kept compressing in Industrial and Multifamily as demand stayed strong.
- Net operating income stayed negative for Office and Retail but a recovery continued.
- Tenants were poised to return to work but the Delta variant may change that.
- Pent-up demand is evident through foot traffic in retail centers.
- 2Q21 rent collections showed relatively stable income throughout the quarter in the Industrial, Apartment, and Office sectors; the Retail sector remained challenged, with regional malls impacted most heavily.
- Class A/B urban apartments were relatively strong, followed by Industrial and Office.
- Demand outpaced supply as new construction of preleased Industrial and Multifamily occurred.

Sector Quarterly Returns by Property Type



Source: NCREIF

Global REITs outpace broader equity market recovery

- Global REITs outperformed in 2Q21, gaining 9.2% compared to 7.7% for global equities (MSCI World).
- U.S. REITs rose 12.0% in 2Q21, beating the S&P 500 Index, which gained 8.5%.
- Globally, REITs are trading above NAV with the exception of those in Hong Kong, the United Kingdom, and Continental Europe.
- Ongoing volatility in REIT share prices offers opportunities to purchase mispriced securities, individual assets from REIT owners, and discounted debt.
- It also gives investors the potential to lend to companies and/or execute take-privates of public companies.

Callan Database Median and Index Returns* for Periods Ended 6/30/21

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	2.1	4.7	6.6	5.1	6.2	8.9	5.4
NFI-ODCE (value wt net)	3.7	5.7	7.1	4.6	5.6	8.6	5.3
NCREIF Property	3.6	5.4	7.4	5.5	6.1	8.8	7.0
NCREIF Farmland	0.6	1.2	2.4	3.5	4.7	9.8	10.8
NCREIF Timberland	1.7	2.5	3.1	2.1	2.7	4.7	5.1
Public Real Estate							
Global Real Estate Style	10.5	16.4	34.9	9.9	7.8	8.5	6.2
FTSE EPRA Nareit Developed	9.2	15.5	33.6	6.4	5.0	6.4	4.5
Global ex-U.S. Real Estate Style	8.3	9.5	32.1	9.0	7.8	8.3	5.8
FTSE EPRA Nareit Dev ex US	6.9	9.0	29.0	4.8	5.7	5.1	3.7
U.S. REIT Style	12.4	21.7	36.8	12.6	8.1	10.5	7.9
EPRA Nareit Equity REITs	12.0	22.0	38.0	10.1	6.3	9.4	7.1

*Returns less than one year are not annualized.

Sources: Callan, FTSE Russell, NCREIF

Record-Setting Expectations

PRIVATE EQUITY | Gary Robertson

Fundraising ► Based on preliminary data, final closes for private equity partnerships in 2Q21 totaled \$231 billion of commitments in 502 partnerships. (Unless otherwise noted, all data in this commentary come from PitchBook.) The dollar volume was flat with 1Q21, but the number of funds rose 10%. For the first half, 2021 is running 18% ahead of a year ago, with the number of funds up by 9%. We expect that the second half of 2021 will continue to be strong as general partners are rapidly deploying their current funds, and follow-on fund sizes have been increasing an average of more than 50%.

Buyouts ► New buyout transactions by count declined by 15% from 1Q21 to 2,401, but disclosed deal value increased 3% to \$127 billion. Average buyout prices rose to 13.0x EBITDA in the first half, compared to 12.7x for 2020. Average leverage multiples rose to 7.5x.

VC Investments ► New rounds of financing in venture capital companies totaled 9,353, with \$169 billion of announced value. The number of investments preliminarily fell 10% from 1Q21, but announced value rose 14%. Venture prices rose across the board during 1H21, with Series D rounds having the largest (129%) increase relative to 2020 average prices.

Funds Closed 1/1/21 to 6/30/21

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	561	108,323	24%
Growth Equity	77	44,466	10%
Buyouts	233	233,971	51%
Mezzanine Debt	8	9,496	2%
Distressed	15	18,102	4%
Energy	3	1,967	0%
Secondary and Other	49	40,311	9%
Fund-of-Funds	14	4,281	1%
Totals	960	460,917	100%

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

Exits ► There were 520 private M&A exits of private equity-backed companies, with disclosed values totaling \$110 billion. The preliminary private sale count fell 2% and the announced dollar volume dropped 24%. There were 106 private equity-backed IPOs in 2Q21 raising an aggregate \$34 billion, up 25% and 31%, respectively, from 1Q21.

Venture-backed M&A exits totaled 601 transactions with disclosed value of \$49 billion. The number of sales declined 8% from 1Q21, but announced value rose 48%. There were 167 VC-backed IPOs in 2Q21 with a combined float of \$73 billion; the count was up 7% and the issuance grew 70%.

Private Equity Performance (%) (Pooled Horizon IRRs through 3/31/21*)

Strategy	3 Months	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	16.4	81.9	32.9	23.6	19.0	14.5	9.5	28.1
Growth Equity	8.8	63.8	25.7	21.6	16.0	14.8	13.4	14.2
All Buyouts	7.3	47.0	17.9	17.8	13.8	12.5	13.2	12.8
Mezzanine	4.3	21.1	10.1	11.6	11.5	10.8	9.8	9.6
Credit Opportunities	6.2	23.1	5.2	8.3	7.7	8.9	9.8	9.3
Control Distressed	9.3	42.4	11.3	12.3	10.7	10.2	11.2	10.1
All Private Equity	9.6	55.0	21.1	18.8	14.5	12.8	12.0	13.8
S&P 500	6.2	56.4	16.8	16.3	13.9	10.0	8.5	8.9
Russell 3000	6.4	62.5	17.1	16.6	13.8	10.1	8.9	8.8

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.

Demand Stays Strong and Fundraising Ramps Up

PRIVATE CREDIT | Catherine Beard

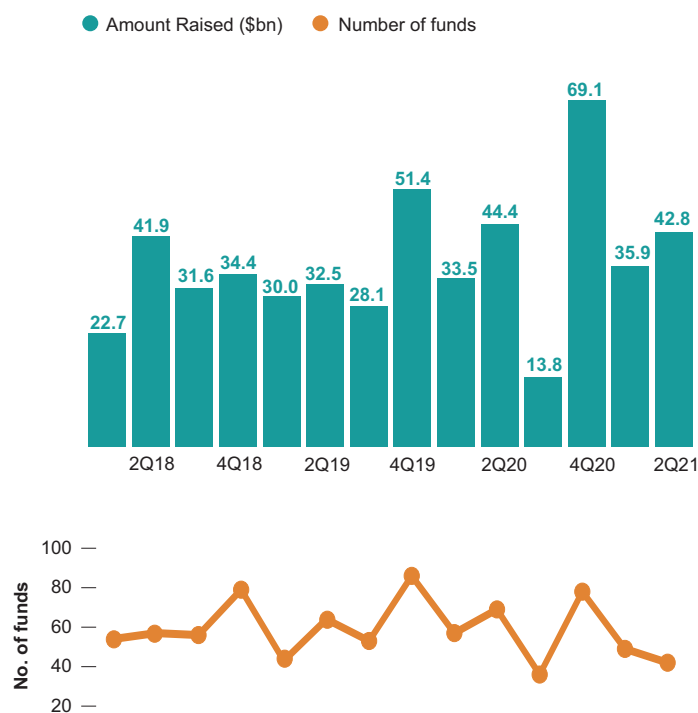
Attractive attributes

- Yield and income-generating characteristics remain compelling in a low-rate environment.
- Alpha generation can be magnified through strategies that extract a complexity premium.

Direct lending pricing back to pre-COVID levels

- Unlevered direct lending historically generated premiums of 150-200 bps over traditional high yield and leveraged loans, with downside protection.
- While pricing widened in the early stages of the COVID-19 dislocation, pricing and structures have circled back to pre-pandemic levels.
- Direct lending portfolio valuations are back to 2019 levels.

Private Credit Fundraising (\$bn)



Source: Preqin

Continued evolution of pockets of opportunity

- Areas of opportunity in private credit include those that offer diversification through differentiated collateral and/or areas of low correlation to public markets. This includes strategies such as specialty finance, asset-backed lending, and niche areas such as life science lending and AI-propelled structured credit.
- Government stimulus has driven a quick compression in leveraged loan and high yield spreads despite elevated levels of unemployment and economic uncertainty.
- While the Phase I dislocation opportunity to purchase quality paper in liquid markets has passed for the time being, longer-term Phase II and III opportunities are growing due to the deeper economic impact of the pandemic.
- An injection of significant liquidity into the credit markets has muted the corporate distressed opportunity in the U.S., but we do see managers investing in other pockets of distress that are emerging in the U.S. and abroad.

Slowdown in fundraising in late 2020 has reversed

- Private credit fundraising tapered off in 3Q20 due primarily to COVID-related market disruption.
- Fundraising significantly rebounded in 4Q20 and into the first half of 2021.
- Senior debt and mezzanine capital continue to see strong fundraising activity in 2021.
- Also seeing a ramp-up of fundraising in specialty finance, asset-backed lending, and niche areas such as venture debt
- Ares, AXA, Blackstone, Goldman Sachs, and HPS led private credit fundraising in 2020.
- Continue to see strong private credit fundraising activity from the large credit shops as well as new private credit offerings from traditional fixed income managers

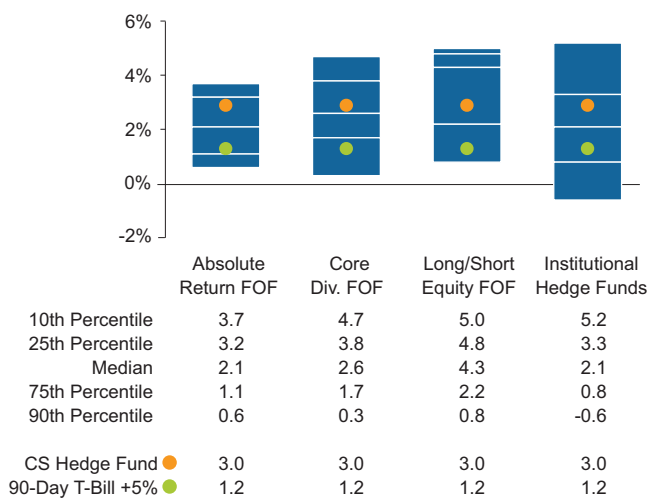
Hedge Funds Thrive Amid Surging Recovery

HEDGE FUNDS/MACs | Jim McKee

Amid the quarter's strengthening economic setting, albeit with rising inflation risks, most hedge funds benefited from healthy capital markets enabled by massive central bank liquidity. Representing a raw collection of hedge funds reporting performance without implementation costs, the Credit Suisse Hedge Fund Index (CS HFI) gained 3.0% in 2Q21. As an actual hedge fund portfolio net of all fees, the median manager in the Callan Hedge Fund-of-Funds (FOF) Peer Group advanced 2.7%.

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 added 2.1%. Within this style group of 50 managers, the average Hedged Credit fund gained the most (+4.3%), benefiting from the quarter's risk-on

Hedge Fund Style Group Returns



Sources: Callan, Credit Suisse, Federal Reserve

Callan Peer Group Median and Index Returns* for Periods Ended 6/30/21

Hedge Fund Universe	Quarter	Year-to-Date	1 Year	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	2.1	5.9	17.4	6.3	7.0	6.0
Callan Fund-of-Funds Peer Group	2.7	4.6	18.1	6.0	6.5	5.1
Callan Absolute Return FOF Style	2.1	5.9	15.4	4.5	5.1	4.6
Callan Core Diversified FOF Style	2.6	4.3	15.8	5.7	6.4	4.9
Callan Long/Short Equity FOF Style	4.3	5.9	23.7	8.9	9.6	6.5
BB GS Cross Asset Risk Premia 6% Vol Idx	1.0	1.0	1.6	1.2	1.6	4.3
Credit Suisse Hedge Fund	3.0	6.0	16.6	5.9	5.6	4.2
CS Convertible Arbitrage	1.6	4.3	14.7	6.7	5.9	4.2
CS Distressed	4.0	10.4	21.6	4.3	5.5	4.3
CS Emerging Markets	5.1	7.9	19.5	8.4	8.4	5.3
CS Equity Market Neutral	2.1	3.0	6.9	0.3	1.6	1.4
CS Event-Driven Multi	3.6	10.6	30.0	7.1	6.8	3.5
CS Fixed Income Arb	1.7	3.8	11.1	4.4	5.1	4.6
CS Global Macro	3.3	6.2	17.7	7.0	6.0	4.6
CS Long/Short Equity	2.9	5.3	16.5	6.5	7.0	5.5
CS Managed Futures	3.9	6.3	11.4	4.6	0.8	1.5
CS Multi-Strategy	2.3	4.5	13.5	4.8	5.3	5.7
CS Risk Arbitrage	3.2	5.2	21.8	8.6	6.9	4.2
HFRI Asset Wtd Composite	3.2	6.0	16.2	4.5	5.2	4.1
90-Day T-Bill + 5%	1.2	2.5	5.1	6.3	6.2	5.6

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

environment. As the weakest substyle performer, the average Hedged Rates fund edged ahead only 0.1% as it navigated twisting yield curves for sovereigns.

Within CS HFI, the best-performing strategy in 2Q was Emerging Markets (+5.1%), aided by its long-biased exposures to credit and equity. Ripe credit conditions, despite declining bankruptcy events, helped Distressed to advance 4.0%. Both Event-Driven Multi-Strategy (+3.6%) and Risk Arb (+3.2%) profited from the quarter's particularly strong corporate activity.

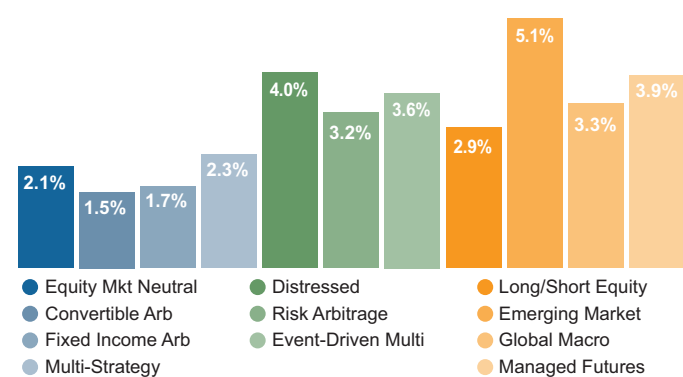
Across the Callan Hedge FOF Group, market exposures notably affected performance in 2Q. Supported by strong equity tailwinds, the median Callan Long/Short Equity FOF (+4.3%) handily beat the Callan Absolute Return FOF (+2.1%).

Measuring the quarter's performance of alternative risk premia, the Bloomberg GSAM Risk Premia Index increased 1.0% based upon a 6% volatility target. Within the underlying styles of the Index's derivative-based risk premia, Equity Trend

(+2.7%) and Commodity Trend (+1.9%) continued to profit from sustained market moves. The weakest risk premia were U.S. Equity Momentum Long/Short (-5.0%) and U.S. Equity Value Long/Short (-3.1%), reflecting the unusually challenging factor rotations within U.S. equity markets

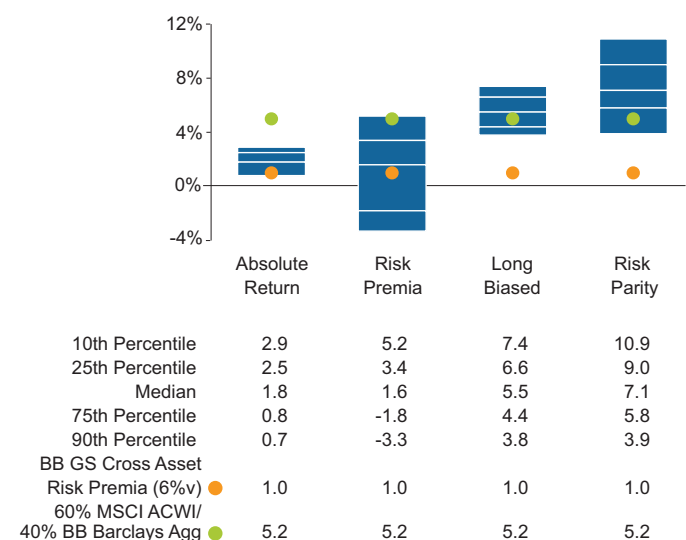
Within Callan's database of liquid alternative solutions, the median managers of the Callan Multi-Asset Class (MAC) Style Groups generated positive returns, gross of fees, consistent with their underlying risk exposures. For example, the Callan Risk Parity MAC, which typically targets an equal risk-weighted allocation to the major asset classes with leverage, jumped 7.1%. Supported by the quarter's tailwinds of positive equity, rates, and commodity markets, this MAC strategy handily beat its traditional unlevered, but equity-centric, benchmark of 60% MSCI ACWI and 40% Bloomberg Barclays US Aggregate Bond Index (+5.2%). The median Callan Risk Premia MAC rose 1.6% based on its exposures to uncorrelated style premia (such as those in the Bloomberg GSAM Index) targeting 5% to 15% portfolio volatility.

Credit Suisse Hedge Fund Strategy Returns



Source: Credit Suisse

MAC Style Group Returns



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

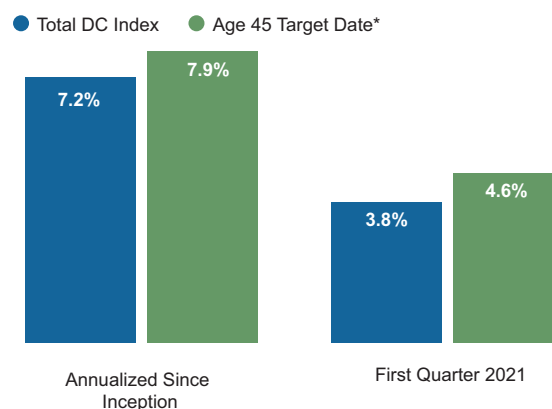
Index Posts Fourth Straight Quarterly Gain

DEFINED CONTRIBUTION | Patrick Wisdom

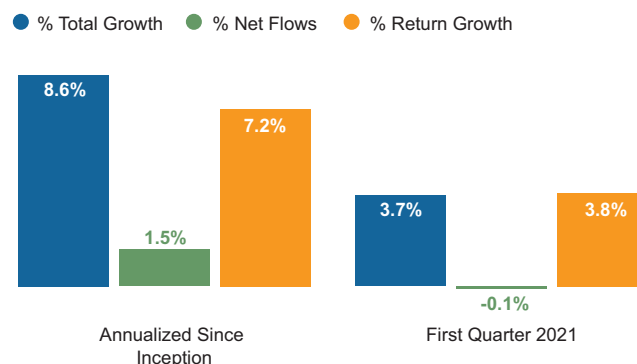
- The Callan DC Index™ rose 3.8% in 1Q21, a fourth straight quarter of gains after a 15.0% 1Q20 plunge. The increase propelled the Index's trailing one-year return to a staggering 40.7%. The Age 45 Target Date Fund (analogous to the 2040 vintage) posted a larger quarterly gain (4.6%), attributable to its higher allocation to equity.
- Balances within the DC Index rose by 3.7%, the fourth straight quarterly gain. Investment returns (3.8%) were the sole driver of the growth; quarterly net flows (-0.1%) had a small, negative effect.
- After two straight quarters in which target date funds were not the top destination for inflows, there was a return to normal in 1Q21 as the asset allocation funds received 83.0% of quarterly net inflows.
- In a reversal from 4Q20, investors transferred assets out of relatively safer asset classes. U.S. equity also saw net outflows. In contrast, global ex-U.S. equity had the second-largest net inflows.
- Turnover (i.e., net transfer activity levels within DC plans) in the DC Index increased in 1Q, rising to 0.42% from the previous quarter's 0.14%.
- The Index's allocation to equity increased to 71.1% from the previous quarter's 70.5%. The current allocation continues to sit well above the Index's historical average (68.0%).
- In a continuation from the previous quarter, U.S. large cap (26.8% total allocation) and U.S. small/mid cap (8.5%) experienced the largest percentage increases in allocation.
- Stable value (8.9% allocation) and U.S. fixed income (6.1%) saw the largest decreases in allocation.
- Despite recent headline attention about potential inflation, the prevalence of a real return/TIPS offering (35.0%) decreased by 2.1 percentage points. In contrast, the prevalence of a high yield fixed income offering (6.7%) increased by 1.5 percentage points, its highest mark since 1Q17.

The Callan DC Index is an equally weighted index tracking the cash flows and performance of over 100 plans, representing nearly \$300 billion in assets. The Index is updated quarterly and is available on Callan's website.

Investment Performance



Growth Sources



Net Cash Flow Analysis (1Q21)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	83.01%
Global ex-U.S. Equity	11.53%
Company Stock	-21.02%
U.S. Large Cap	-25.52%
Total Turnover**	0.42%

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.

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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.

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