Callan Institute

First Quarter 2021

Capital Markets Review

The U.S. Economy: Open for Business

ECONOMY

2 PAGE

U.S. GDP notched a solid 6.4% gain in 1Q21, and the U.S. economy may be on track for a truly eye-opening expansion. Initial projections are pointing to growth rates of 9% or even higher for 2Q. At that rate, GDP is now likely to return to its pre-pandemic peak by midyear.

Sharp Gains After Steep Plunge in 1Q20

INSTITUTIONAL INVESTORS

4 PAGE

All institutional investor types saw robust gains for the four quarters ending 1Q21. And all but corporate DB plans exceeded a 60% stocks/40% bonds benchmark. Investors are elated following an incredible year, but that is tempered by sobering expectations for the capital markets.

Another Rebound Around the World

EQUITY

6 PAGE

The S&P 500 Index hit record highs in 1Q21, and since the prior peak (February 2020) it is up over 19.6%. Global markets responded positively to the rollout of the COVID-19 vaccine; small cap outperformed large on continued economic optimism.

U.S., Global Bonds Fall as Rates Head Up

FIXED INCOME

8 PAGE

The 10-year U.S. Treasury yield closed 1Q21 at 1.74%, up 81 bps from 4Q20. The Bloomberg Barclays US Aggregate Bond Index fell 3.4%. Global fixed income dropped as developed market rates rose and the U.S. dollar strengthened.

Signs of Stability Amid Virus Challenges

REAL ESTATE/REAL ASSETS

10 PAGE

The Hotel and Retail sectors face continued headwinds. The outlook for the Office sector is uncertain while Industrial remains the best performer. Net operating income for private real estate declined. Global REITs and U.S. REITs outpaced equities in the quarter.

Market Is Riding a Wave of Momentum

PRIVATE EQUITY

11 PAGE

The strong start to 1Q21 was fueled by stimulus, optimism, and positive investor sentiment. Preliminary numbers show that fundraising and exits (particularly IPOs) were generally up, but new investments declined slightly from the prior quarter.

Continued Interest as Yields Remain Low

PRIVATE CREDIT

12 PAGE

Private credit remains attractive in a low-yield environment. Spreads for high yield and leveraged loans have snapped back. Fundraising slowed down in 2020 due to the pandemic; senior debt and mezzanine capital represented the bulk of the capital that was raised.

Damn the Margin Calls, Full Risk Ahead

HEDGE FUNDS/MACs

13 PAGE

The Credit Suisse Hedge Fund Index gained 2.9% in 1Q21. The median fund in the Callan Hedge Fund-of-Funds Database earned 2.1%; over the last year, the median rebounded 27.1%. The average Callan Institutional Hedge Fund manager earned 4.1%, net of fees.

Third Straight Quarterly Gain

DEFINED CONTRIBUTION

15 PAGE

The Callan DC Index™ gained 11.2% in 4Q20, slightly below the increase of the Age 45 Target Date Fund (+13.4%) but the third straight quarter of gains for both. Investors expressed an appetite for relatively safer asset classes, based on net flows in plans.

Broad Market Quarterly Returns

U.S. Equity
Russell 3000

6.3%

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

3.5%

U.S. Fixed Income
Bloomberg Barclays Agg

-3.4%

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

-5.3%

Sources: Bloomberg Barclays, FTSE Russell, MSCI

Now Open for Business

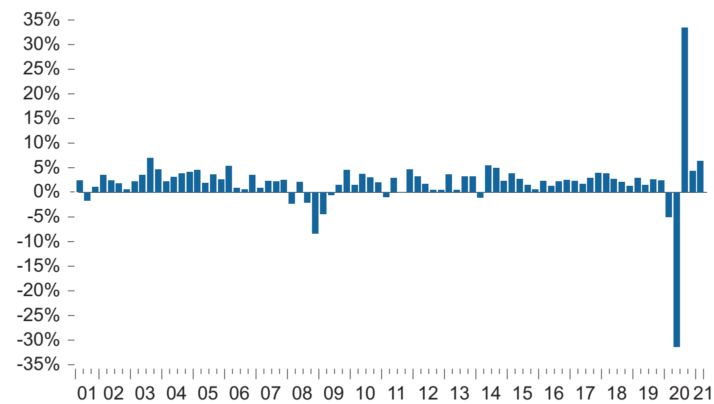
ECONOMY | Jay Kloepfer

U.S. GDP notched a solid 6.4% gain in 1Q21. The U.S. economy may be on track for a truly eye-opening expansion, with initial projections from high-frequency GDP trackers such as GDPNow pointing to growth rates of 9% or even higher for 2Q. At that rate, GDP is likely to return to its pre-pandemic peak by midyear. For context, after the Global Financial Crisis (2008-09), it took 3½ years before real GDP reclaimed its pre-recession highs. At the start of the pandemic, the level of real GDP dropped more than 10% from March to June 2020. But the recovery in the second half of the year meant annual GDP growth measured -3.5% compared to 2019, although that is still the worst annual loss in 75 years. The steep decline and the rapid recovery surrounding the pandemic have been unprecedented.

The robust 1Q21 result reflects the grand reopening enabled by the expansion of vaccinations against COVID-19 and improvements in containing the spread of the virus in the United States. After a faltering start to the vaccination roll-out, supplies and distribution methods began catching up to demand as the quarter came to a close. Expectations that a majority of American adults will be vaccinated by the end of June have fueled sustained optimism by consumers and a move toward a full economic reopening by all businesses, particularly those most affected by the pandemic: travel, hospitality, passenger transportation. As the country moves toward the reopening of places of work and the retreat from work-from-home orders, expect a surge in demand for business and personal services as well. This reopening will not be without hitches, as supply chains have been seriously impacted around the globe, and the mismatch of the supply of labor and demand to fill jobs may take the rest of the year (or longer) to be sorted out.

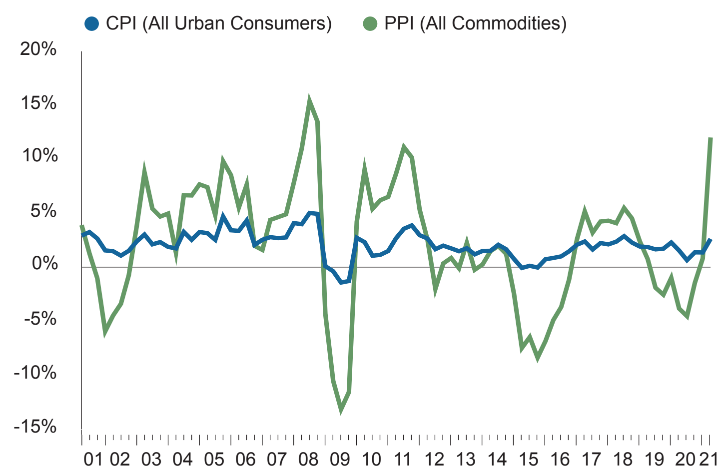
Around the globe, the move toward reopening has been far less even and sustained, as the rollout and availability of the vaccine has been much less robust than in the U.S. Spikes in COVID infection rates in India, Brazil, Canada, and many European countries constrain both business and consumer confidence, and health care systems are under even greater stress in India and Brazil than at any time since the start of the global pandemic. The lagging distribution of vaccines to many countries may hinder their reopening and recovery well into 2022, as well as travel into and out of these regions.

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

The biggest hole to fill in the U.S. economy is in the job market. We lost over 22 million jobs in March and April last year, and recovered just 13 million by the end of the year. After a weak January, however, key metrics of the U.S. job market have perked up substantially. Monthly job creation climbed to 558,000 in February and 780,000 in March, for a total of 1.5 million new jobs in the first quarter. The unemployment rate fell to 6.0% in March and is expected to continue moving down toward 5%, while the number of initial unemployment claims, which has remained stubbornly high at more than triple the "normal" rate of 200,000 per week, fell below 600,000 at the start of April, as the pace of job formation has picked up.

Massive fiscal stimulus is clearly the major contributor to rapid growth in 2021, fueling consumer optimism alongside the vaccine and the reopening of state and local economies. The U.S. Treasury reported that $339 billion in stimulus payments were distributed in March, which boosted personal income by a stunning 21%. Personal consumption expenditures drove GDP growth, rising by 10.7% in the quarter, along with surges in investment in housing, equipment, and intellectual property. Pent-up demand and stimulus payments spurred spending on durable goods (motor vehicles), nondurable goods (led by food and beverages), and services (led by food services and accommodations). In addition to the stimulus, federal government spending jumped to cover administration of the Paycheck Protection Program as well as purchases of the vaccines for distribution to the public.

Amid the general optimism in the U.S., one concern has emerged: inflation. As the hitches in supply and demand for goods, services, and labor are worked out, CPI rose 2.6% and the producer price index jumped 12% in the quarter. However, investors should be cautious when interpreting annual comparisons to temporarily depressed prices at the start of the pandemic. For instance, both of these price indices reflect a sharp recovery in energy prices, which fell through the floor last year.

The Long-Term View

		Periods Ended 3/31/21			
Index	**1Q21**	**1 Yr**	**5 Yrs**	**10 Yrs**	**25 Yrs**
U.S. Equity					
Russell 3000	6.3	62.5	16.6	13.8	9.7
S&P 500	6.2	56.4	16.3	13.9	9.6
Russell 2000	12.7	94.8	16.4	11.7	9.4
Global ex-U.S. Equity					
MSCI EAFE	3.5	44.6	8.8	5.5	5.0
MSCI ACWI ex USA	3.5	49.4	9.8	4.9	--
MSCI Emerging Markets	2.3	58.4	12.1	3.7	--
MSCI ACWI ex USA Small Cap	5.5	69.8	10.4	6.3	6.5
Fixed Income					
Bloomberg Barclays Agg	-3.4	0.7	3.1	3.4	5.1
90-Day T-Bill	0.0	0.1	1.2	0.6	2.2
Bloomberg Barclays Long G/C	-10.4	-2.1	5.5	7	7.2
Bloomberg Barclays Gl Agg ex US	-5.3	7.2	2.1	1.3	3.8
Real Estate					
NCREIF Property	1.7	2.6	5.8	8.8	9.1
FTSE Nareit Equity	8.9	37.8	5.3	8.6	9.9
Alternatives					
CS Hedge Fund	2.9	20.2	5.1	3.9	7.2
Cambridge PE*	10.5	18.1	13.9	13.9	14.1
Bloomberg Commodity	6.9	35	2.3	-6.3	1.0
Gold Spot Price	-9.5	7.5	6.8	1.8	6.0
Inflation – CPI-U	1.7	2.6	2.2	1.7	2.1

*Data for most recent period lags by a quarter. Data as of 9/30/20.
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

	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19
Employment Cost–Total Compensation Growth	2.6%	2.5%	2.4%	2.7%	2.8%	2.7%	2.8%	2.7%
Nonfarm Business–Productivity Growth	5.4%	-3.8%	4.2%	11.2%	-0.8%	1.6%	0.3%	2.0%
GDP Growth	6.4%	4.3%	33.4%	-31.4%	-5.0%	2.4%	2.6%	1.5%
Manufacturing Capacity Utilization	73.4%	73.1%	70.9%	63.2%	73.9%	75.0%	75.4%	75.5%
Consumer Sentiment Index (1966=100)	80.2	79.8	75.6	74.0	96.4	97.2	93.8	98.4

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

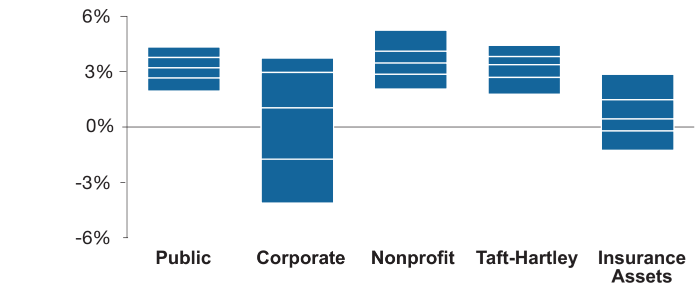
Returns Up Sharply Over One Year, and Most Types Top Benchmark

INSTITUTIONAL INVESTORS

Performance

- Most institutional investor types saw robust gains for the four quarters ending 1Q21.
- All but corporate DB plans and insurance assets comfortably exceeded a 60% stocks/40% bonds benchmark.
- Nonprofits saw the highest increases for the trailing one year, and the gains were strong enough to boost their returns over the trailing three and five years and make them the top performers.
- Over the trailing 20 years, public DB plans have performed the best but most investor types saw returns on par with the 60%/40% benchmark.
- Institutional investors are evaluating the path forward in terms of strategic allocations and portfolio re-assessment. Following an exceptionally strong year for stocks, plan sponsors are re-evaluating how to generate returns in a low-yield environment with lowered capital markets assumptions.
- Inflation is becoming a concern, with questions about whether to adjust portfolios to address it, and whether it is a short-term issue or longer-term problem.
- There is renewed worry about the likelihood of another market drawdown, given the incredible market recovery since last March and the heady valuations relative to historical averages.

Quarterly Returns, Callan Database Groups



	Public	Corporate	Nonprofit	Taft-Hartley	Insurance Assets
10th Percentile	4.3	3.7	5.3	4.4	2.9
25th Percentile	3.8	3.0	4.1	3.8	1.5
Median	3.2	1.0	3.5	3.4	0.4
75th Percentile	2.7	-1.7	2.9	2.7	-0.2
90th Percentile	2.0	-4.1	2.1	1.8	-1.3

Source: Callan

- Investors are having sharper-edged conversations about what to do regarding:
  - Fixed income exposure, and what can serve as an equity diversifier equal to bonds with the return of zero interest rates
  - De-risking and the new yield environment
- Investors have demonstrated discipline in rebalancing between growth and value managers, and U.S. and global ex-U.S. equity.

Callan Database Median and Index Returns* for Periods Ended 3/31/21

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years
Public Database	**3.2**	**32.3**	**9.4**	**10.0**	**8.2**	**6.9**
Corporate Database	**1.0**	**27.9**	**9.7**	**9.8**	**8.1**	**7.0**
Nonprofit Database	**3.5**	**37.0**	**9.8**	**10.3**	**8.0**	**7.0**
Taft-Hartley Database	**3.4**	**33.0**	**9.6**	**10.1**	**8.5**	**6.8**
Insurance Assets Database	**0.4**	**15.8**	**6.4**	**5.7**	**5.2**	**5.4**
All Institutional Investors	**3.1**	**33.2**	**9.6**	**10.1**	**8.2**	**7.0**
Large (>$1 billion)	**3.2**	**31.1**	**9.8**	**10.1**	**8.5**	**7.1**
Medium ($100mm - $1bn)	**3.0**	**33.1**	**9.7**	**10.1**	**8.2**	**6.9**
Small (<$100 million)	**3.2**	**34.8**	**9.5**	**9.9**	**8.0**	**6.8**

*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.

– Fixed income structures focus on its role—to diversify equity, to serve as a flight to quality and as a source of liquidity, and to provide interest rate exposure—balanced against the desire for return in a very low-yield environment.
  - Creative reconstruction of "core" fixed income away from lower-returning segments of the Aggregate, using private credit, securitized debt, high yield bonds, bank loans, private placements, global fixed income, and TIPS
– Real assets see renewed interest with growing concern for inflation.
  - Investors are questioning the continued inclusion of past real assets stalwarts: natural resources, energy, MLPs, and commodities.
  - They are focused on what truly diversifies the growth and risk-mitigating assets.

Defined Benefit Plans

– Funded status is a top concern for public and corporate DB plans.
– For public DB plans, liquidity needs and drawdown risks are another concern.
– Lower capital markets assumptions challenge expectations for funding and solvency.
– The plunge in rates did not derail the commitment to de-risking, but glidepaths are being reset for those farther from full funding. Duration paid off, but moves to STRIPS for extra duration are now in question. Funded status for corporate DB plans farther down their LDI glidepaths did just fine in 2020.
– There has been an increase in global equity focus for corporate plans.

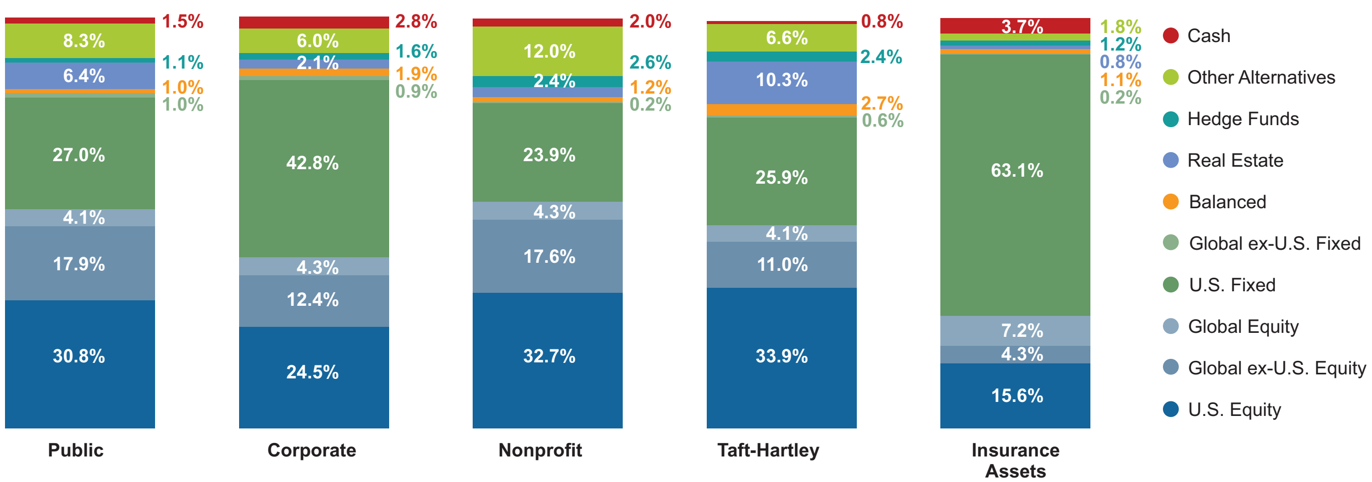
Defined Contribution Plans

– Fees remain the top issue for DC plan sponsors, although there is a renewed focus on investment structures.
– 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. The impact on replacement ratios is small, and there are modest changes if any.
– Recordkeeper consolidation activity picked up in 4Q20. This will likely point to an increase in recordkeeper searches in the near term.

Nonprofits

– The focus is on meeting return targets.
– Subdued expectations for capital markets returns are a challenge for the sustainability of established spending rates.
– Nonprofits increased ESG activity, with a number starting to ask due diligence questions of investment managers.

Average Asset Allocation, Callan Database Groups



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

Equity

U.S. Equities

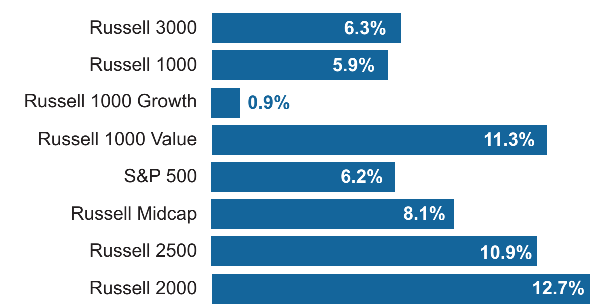
Markets continue setting all-time highs

- The S&P 500 Index hit record highs in 1Q21, gaining 6.2%.
- Since the prior peak (February 2020) the S&P is up over 19.6%, with only Energy (-4.7%) and Utilities (-4.9%) declining from peak-to-peak.
- Since the March 2020 market low, the S&P is up over 80.7%, with all sectors posting gains over 40%; Energy +116.2%
- 1Q21 top sectors were Energy and Financials, while Industrials and Consumer Staples underperformed.
- "Re-opening" industries (airlines, retail REITs, hospitality) outperformed while "work from home" industries (online retail, home improvement) lagged.

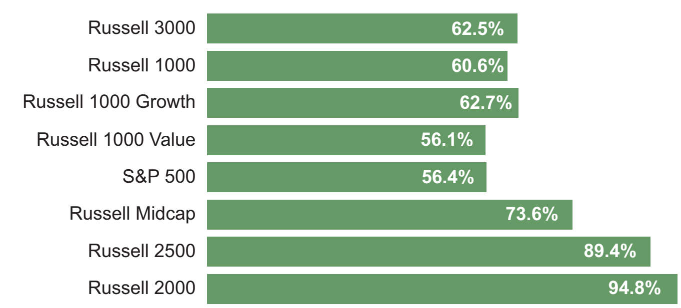
Value and small cap trends continue through 1Q21

- Value outperformed growth across the market cap spectrum.
- Small caps outperformed large.
- Small value was the top-performing asset class for the quarter (+21.2%) and from the March 2020 low (+127.7%).
- Russell 2000 gained 12.7%, extending the rally from 4Q20 when the index experienced its best quarterly return on record (+31.4%).
- Small cap stocks surged on stronger GDP and economic recovery forecasts due to higher exposure to cyclical sectors relative to large cap indices.
- Industrials, Financials, and Real Estate sectors benefit most from expectations of GDP expansion.
- Small cap stocks have historically outperformed in recoveries following market crashes.

U.S. Equity: Quarterly Returns



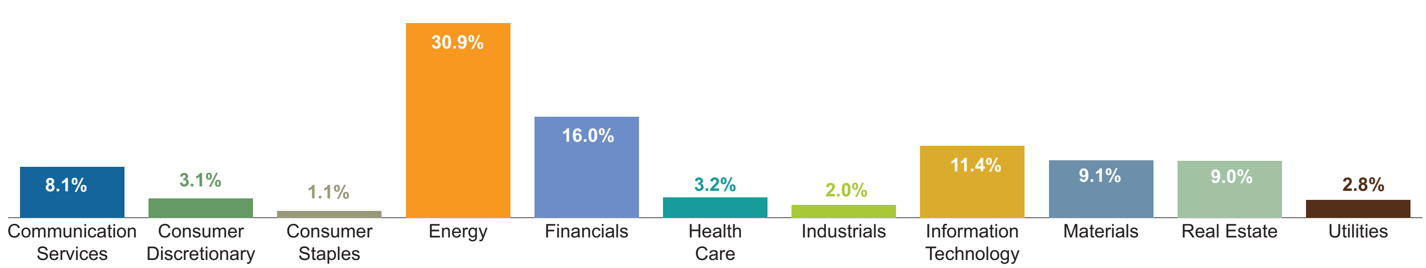
U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

- Cyclical sectors and industries (Energy, Financials, Industrials, Materials) continued to outperform their growth counterparts as GDP forecasts improved, stimulus was enacted, and vaccinations progressed.
- November 2020 vaccine data news was a catalyst for the market rotation into value/cyclicals.

Quarterly Performance of Industry Sectors



Source: S&P Dow Jones Indices

Global Equity

Nearly 100 million people fully vaccinated worldwide

- Markets responded positively to the global rollout of the COVID-19 vaccine.
- Most risk assets continued to outperform as global businesses reopen.
- Small cap outperformed large over the quarter on continued economic optimism.
- Emerging markets trailed developed markets; COVID-19 outbreaks and vaccination challenges hindered EM results.

Market continues to favor cyclicals

- Market recovery and rising interest rates buoyed cyclicals; Energy, Financials, and Industrials drove the gains.
- Factor performance showed a preference for beta and volatility, similar to 4Q20.

U.S. dollar vs. other currencies

- The U.S. stimulus package announcement, combined with yields rising on economic confidence, fueled the U.S. dollar.

Growth vs. value

- Value outpaced growth for the second consecutive quarter.
- Vaccination rollout has stoked style rotation.
- Value outperformed growth by 17.0% and 10.5% in developed and emerging markets over the past two quarters, respectively.
- The rotation to value in 4Q20 was sharp and narrow.
- Cheap, low-quality factors were rewarded, favoring fundamental deep value managers.
- Quantitative value managers struggled as market rotation yielded a severe momentum reversal.

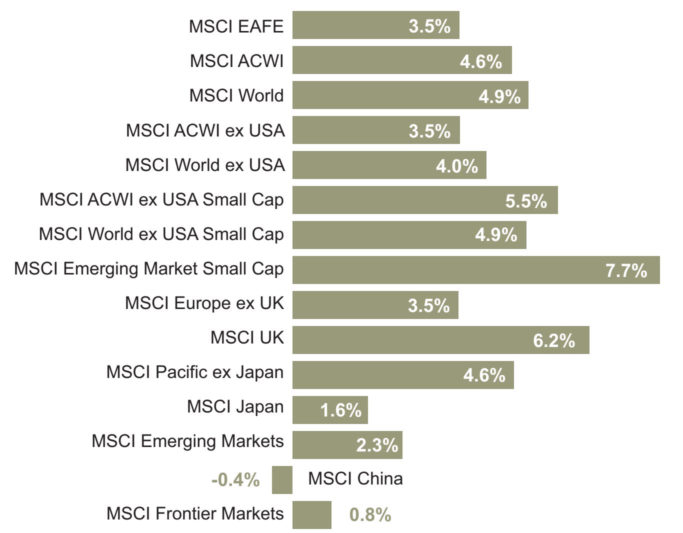
Factor payoffs may hinge on macroeconomy

- Over the past 20 years, small cap and value thrived in recoveries, momentum in expansions, low volatility in slowdowns, and low volatility and quality in contractions.
- As the market continues its recovery and transitions to expansion, value run may persist.
- Furthermore, relative value and quantitative managers are expected to participate as the value rally broadens out.

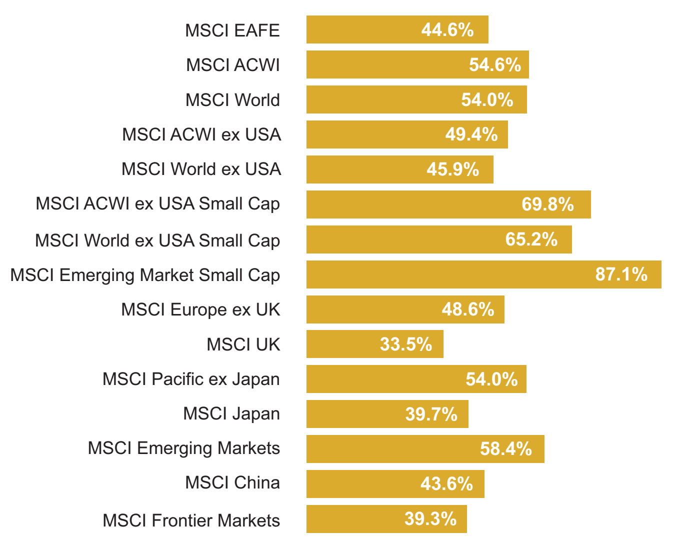
COVID-19 resurgence may delay EM recovery

- Although daily COVID-19 fatalities for developed markets have declined dramatically by 70% from the peak in January, they are notably increasing in emerging markets.
- China, South Korea, and Taiwan have by and large contained the pandemic, while pockets of developing economies are challenged with rising infections.

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 steepens

- The 10-year U.S. Treasury yield closed 1Q21 at 1.74%, up 81 bps from 4Q20.
- The short-end of the curve remained anchored, with no rate hikes expected until at least 2023, steepening the yield curve.
- TIPS outperformed nominal U.S. Treasuries as 10-year breakeven spreads widened from 1.99% to 2.37%.

Bloomberg Barclays Aggregate falls

- The Bloomberg Barclays US Aggregate Bond Index dropped 3.4%, with spread sectors outperforming treasuries.
- Demand for corporate credit remains strong, and spreads did not change meaningfully over the quarter

High yield bonds gain as rally extends

- High yield bonds outperformed investment grade in 1Q, gaining 0.8% amid a wave of new issuance.
- Leveraged loans rose 2.0% during the quarter, driven by favorable supply/demand dynamics, floating rate coupons, and relatively short durations.

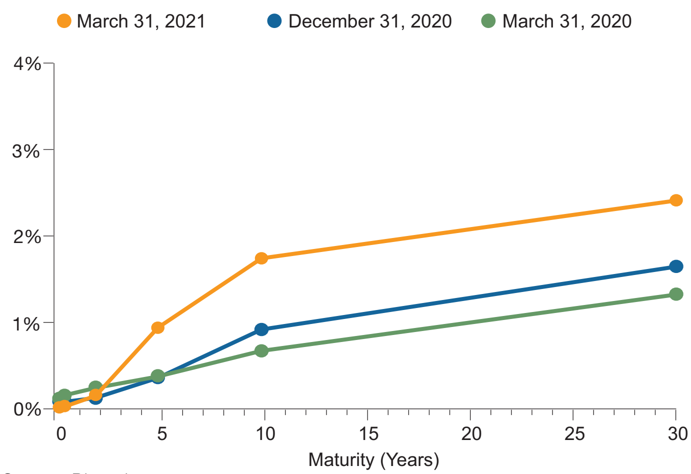
Stimulus boosts munis

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

Fixed income outlook

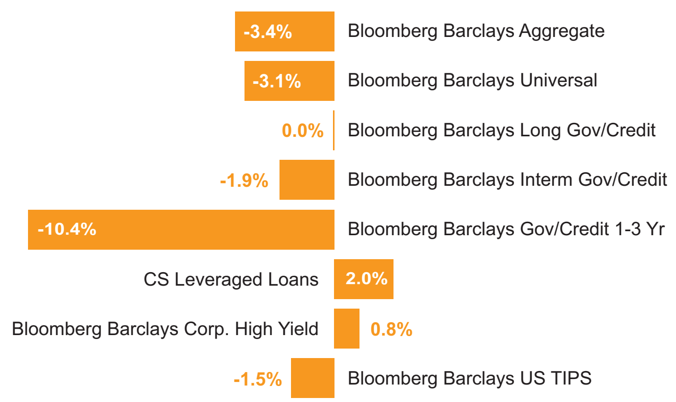
- High demand, low and negative interest rates globally, and improving growth should continue to support spread product.
- The Federal Reserve continues to support U.S. fixed income markets.
- Private credit remains a compelling, actionable opportunity.
- Bond pickers stay constructive on select COVID-sensitive sectors.

U.S. Treasury Yield Curves



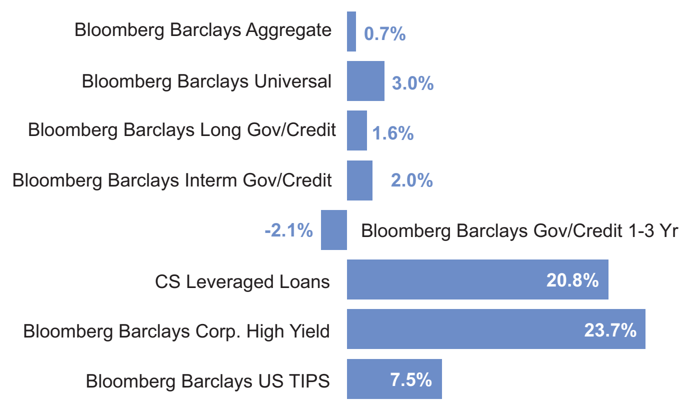
Source: Bloomberg

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

Growth and inflation expectations

- In 1Q21, the Treasury curve steepened 78 bps as the market anticipated stronger economic growth after another round of fiscal stimulus.
- The 10-year breakeven inflation rate rose 38 bps, reaching levels last seen in 2014 and 60 bps above pre-pandemic levels, implying the market expects the economy to heat-up.

Market expectations diverge from Fed guidance

- The Fed dot plot continues to indicate the central bank should keep its policy rate low until 2023.
- Inflation (PCE) is estimated to tick up in 2021, but the policy shift to average inflation targeting in 2020 allows for inflation to rise above the 2% target during economic expansions, letting the Fed keep rates lower for longer.

Bond market response

- The common sentiment among managers is a near-term inflation increase. However, the front-end should remain anchored as unemployment and savings rates remain elevated, bank lending activity is muted, and secular forces persist.
- Recent and additional curve steepening provides opportunities along the curve and better roll down.

Global Fixed Income

Global fixed income posts negative returns

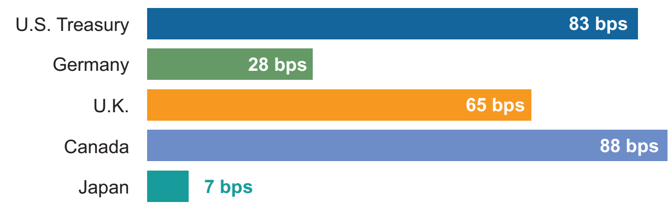
- Global fixed income fell as developed market rates rose and the U.S. dollar strengthened.
- The U.S. dollar gained nearly 4% versus a basket of currencies, 6.6% versus the yen, and nearly 4% versus the euro.

Emerging market debt sells off

- Emerging market debt indices fell in 1Q21, with EM corporates faring better than hard and local currency sovereigns amid improving corporate fundamentals.
- U.S. dollar-denominated index (EMBI Global Diversified) fell 4.5% as rising U.S. rates spilled into emerging markets; returns were largely negative across the 70+ constituents.
- Local currency index (GBI-EM Global Diversified) fared worse than hard currency, as real yields rose higher than in the U.S.

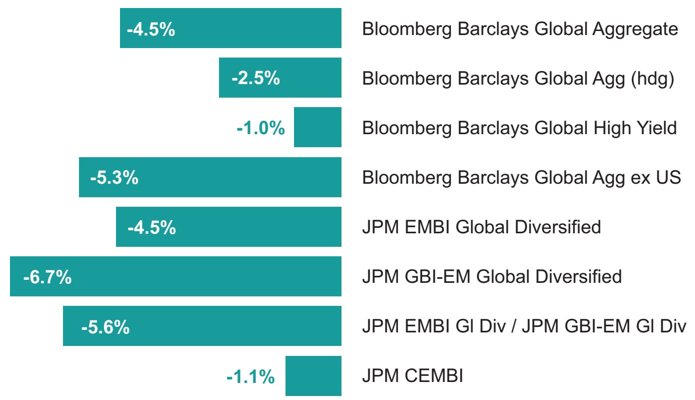
Change in 10-Year Global Government Bond Yields

4Q20 to 1Q21



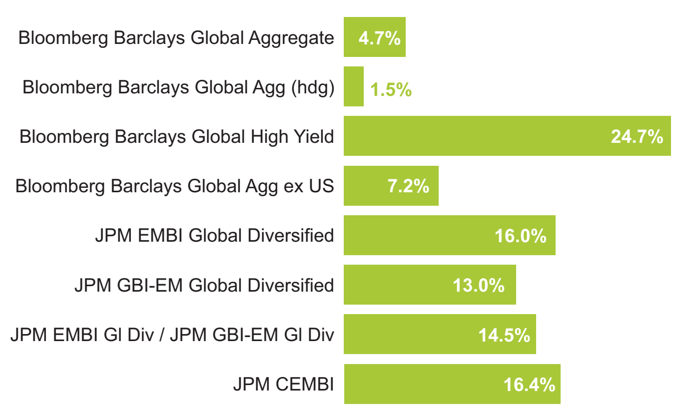
Source: Bloomberg Barclays

Global Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays and JPMorgan Chase

Global Fixed Income: One-Year Returns



Sources: Bloomberg Barclays and JPMorgan Chase

Signs of Stability Amid Continued Virus Challenges

REAL ESTATE/REAL ASSETS | Munir Iman

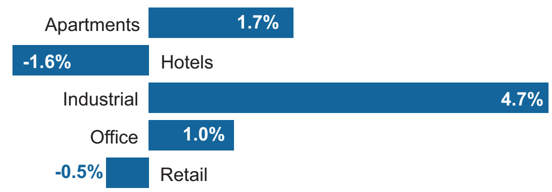
Pandemic affects all sectors

- Hotel and Retail are the most challenged sectors of private real estate, while Office faces uncertainty; Industrial remains the best performer.
- Income remains positive except for the Hotel sector.
- Vacancy rates for all property types are or will be impacted.

NOI declines as Retail suffers

- Net operating income (NOI) declined as Retail continues to suffer.
- 1Q21 rent collections showed relatively stable income throughout the quarter in the Industrial, Apartment, and Office sectors. But the pandemic's impact on regional malls has hindered Retail.
- Class A/B urban apartments were relatively strong, followed by Industrial and Office.
- Transaction volume has dropped off during the quarter with the exception of multifamily and industrial assets with strong-credit tenants, which are trading at pre-COVID-19 levels.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates will not adjust much. Price discovery is happening and there are limited transactions.

Sector Quarterly Returns by Property Type



Source: NCREIF

Global REITs outpace equities

- Global REITs outperformed in 1Q21, gaining 5.8% compared to 4.9% for global equities (MSCI World).
- U.S. REITs rose 8.9% in 1Q21, beating the S&P 500 Index, which gained 6.2%.
- Globally, REITs are trading above NAV with the exception of those in Hong Kong, the United Kingdom, and continental Europe.
- Property sectors are mixed, between trading at a discount or premium.
- Ongoing volatility in REIT share prices offers opportunities to purchase mispriced securities, individual assets from REIT owners, and discounted debt, as well as to lend to companies and/or execute take-privates of public companies.

Callan Database Median and Index Returns* for Periods Ended 3/31/21

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	**1.6**	**1.6**	**2.1**	**4.8**	**5.7**	**8.8**	**5.3**
NFI-ODCE (value wt net)	1.9	1.9	1.5	4.0	5.3	8.7	5.3
NCREIF Property	1.7	1.7	2.6	4.9	5.8	8.8	7.0
NCREIF Farmland	0.6	0.6	2.4	3.7	4.8	9.9	11.0
NCREIF Timberland	0.8	0.8	1.5	1.7	2.5	4.5	5.3
Public Real Estate							
Global Real Estate Style	**5.6**	**5.6**	**34.7**	**8.0**	**6.2**	**7.8**	**5.4**
FTSE EPRA Nareit Developed	5.8	5.8	34.6	5.1	3.9	5.7	--
Global ex-U.S. Real Estate Style	**2.3**	**2.3**	**33.6**	**7.5**	**6.4**	**7.4**	**5.1**
FTSE EPRA Nareit Dev ex US	2.0	2.0	31.0	2.6	4.4	4.7	--
U.S. REIT Style	**8.3**	**8.3**	**36.0**	**11.2**	**6.8**	**9.5**	**7.0**
EPRA Nareit Equity REITs	8.9	8.9	37.8	9.5	5.3	8.6	6.1

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

Roller-Coaster Ride Ends on a High Note

PRIVATE EQUITY | Gary Robertson

Ebullience in the capital markets is facilitating strong liquidity for private equity, with investors reaping robust distributions and returns. The key negative is that new investment prices have risen into uncharted territory, particularly for the "COVID-19 resistant" Technology sector. If opening up the economy proceeds without major setbacks, we expect 2021 may set new records in volumes and private equity industry growth.

Fundraising ► Based on preliminary data, 1Q21 private equity partnerships holding final closes totaled $212 billion, up 6% from 4Q20. New partnerships formed dropped 17% to 385 as the trend toward more capital concentrated in larger funds continued. Callan expects fundraising to remain vigorous as 2021 advances. (Unless otherwise noted, all data come from PitchBook.)

Buyouts ► Funds closed 2,472 investments with $85 billion in disclosed deal value, a 15% decline in count and a 44% drop in dollar value from 4Q. The largest investment was the $4.3 billion carve-out of BlueTriton Brands, Nestle's bottled water division, by One Rock and Metropoulos & Co. The lack of any notably large investments explains the quarter's announced value decline.

VC Investments ► New investments in venture capital companies totaled 8,608 rounds of financing, up 19%, with $135 billion of announced value, up 41%. The largest investment was a $3.4 billion 10th round in online brokerage Robinhood by a syndicate of 13 investors including Sequoia, NEA, and Andreessen Horowitz.

Funds Closed 1/1/21 to 3/31/21

Strategy	No. of Funds	Amt ($mm)	Share
Venture Capital	211	46,734	22%
Growth Equity	31	14,062	7%
Buyouts	109	111,612	53%
Mezzanine Debt	4	602	0%
Distressed	4	8,282	4%
Energy	0	0	0%
Secondary and Other	20	27,922	13%
Fund-of-Funds	6	2,312	1%
Totals	**385**	**211,526**	**100%**

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

Exits ► There were 453 private M&A exits of private equity-backed companies, a drop of 7%. Disclosed values declined 13% to $102 billion. There were 82 private equity-backed IPOs, up 32%, which raised an aggregate $26 billion, up 8%.

Venture-backed M&A exits totaled 434 with disclosed value of $18 billion. The number of sales declined 8% from 4Q, and announced value fell 61%. There were 147 VC-backed IPOs, up 24%, and the combined float totaled $39 billion, a 50% increase.

Private Equity Performance (%) (Pooled Horizon IRRs through 9/30/20*)

Strategy	3 Months	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	11.1	27.9	20.8	14.6	16.6	12.3	6.0	26.6
Growth Equity	12.4	25.8	19.2	16.4	14.7	13.5	11.3	15.1
All Buyouts	10.8	15.6	13.4	14.3	14.0	12.4	11.9	13.2
Mezzanine	5.5	7.5	9.0	10.0	11.5	10.5	8.4	9.8
Credit Opportunities	3.5	-1.8	2.7	5.6	8.2	8.5	9.4	9.5
Control Distressed	7.8	5.9	5.8	8.5	10.3	9.6	10.3	10.7
All Private Equity	**10.5**	**18.1**	**14.7**	**13.9**	**13.9**	**12.1**	**10.0**	**14.1**
S&P 500	8.9	15.2	12.3	14.2	13.7	9.2	6.4	9.3
Russell 3000	14.7	20.9	14.5	15.4	13.8	10.0	7.8	9.7

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.

Strong Demand and Favorable Pricing for Direct Lending

PRIVATE CREDIT | Catherine Beard

Attractive in a low-rate environment

- The yield and income-generating characteristics of private credit remain attractive in a low-rate environment.
- Alpha generation can be magnified through strategies that extract a complexity premium.
- In the early phases of the dislocation, nimble multi-strategy private credit managers were able to purchase high-quality securities at steep discounts.

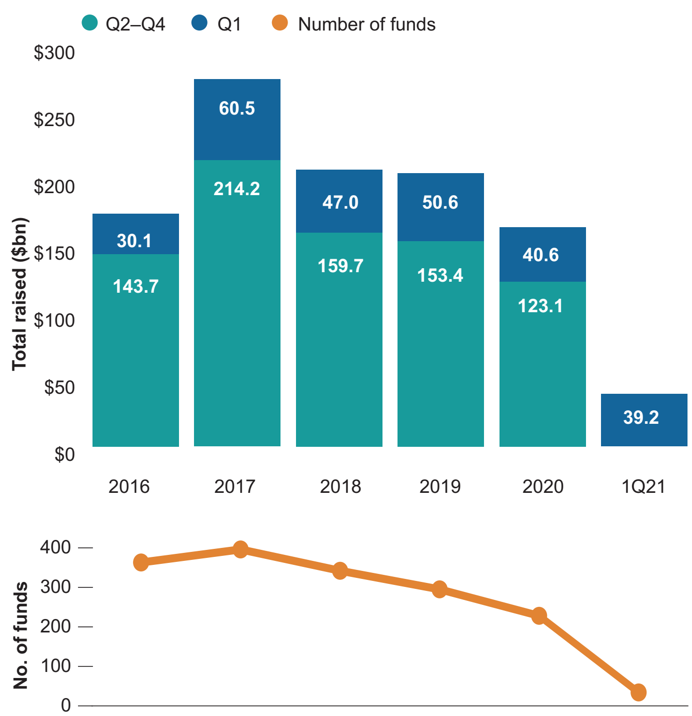
Favorable direct lending pricing trends

- Unlevered direct lending historically generated premiums of 150-200 bps over traditional high yield bonds and leveraged loans, with downside protection.
- Direct lenders are seeing a premium in new deals with less-risky structures, but trends are reverting to pre-pandemic levels. Most existing portfolios weathered the dislocation well. Deal flow is robust as sponsors are particularly active in funding leveraged buyouts in the health care, technology, and business services sectors.

Spreads snap back

- Government stimulus has driven a snap-back in leveraged loan and high yield spreads despite continued high levels of unemployment and economic uncertainty.
- Early pandemic pricing premiums of 200-300 bps for newly underwritten deals have compressed to 50-100 bps, with structures approaching pre-pandemic levels.
- 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 evolving but somewhat muted as businesses benefit from the reopening of the U.S. economy.
- An injection of significant liquidity into the credit markets may mute the corporate distressed opportunity in the U.S.

Year-On-Year Fundraising ($bn)



Source: Private Debt Investor

Recent slowing in fundraising

- Private credit fundraising tapered off in 2020 due primarily to COVID-related market disruptions.
- Senior debt and mezzanine capital fundraising were the bulk of private credit capital raised in 2020.
- Significant distressed capital was raised leading up to the dislocation but has since tapered off.
- In the first part of 2021, fundraising in opportunistic credit, specialty finance, and asset-based lending strategies has ramped up.

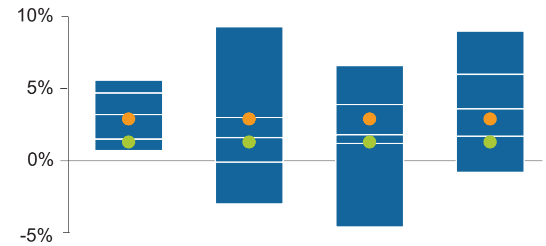
Damn the Shorts and Margin Calls, Full Risk Ahead

HEDGE FUNDS/MACs | Jim McKee

Emboldened by more injections of vaccines, central bank liquidity, and fiscal stimulus in 1Q21, investors' risk appetites grew again, particularly among equities, commodities, and lower-rated credits. However, growing fears of inflation stemming from a stronger-than-expected economic outlook caused some violent side effects elsewhere. Risk assets leaning on benign interest rate assumptions, like growth stocks, longer-dated bonds, and gold, suffered indigestion from the prior year's strong advance.

Below the surface of these capital markets, shifting economic currents created notable turbulence within the hedge fund community. In January, retail investors dominated headlines with their social media-coordinated trades to upend short sellers in certain stocks like GameStop. At the end of March, a concentrated and levered equity bet by Archegos suffered massive losses from a margin call. However, Archegos was more of a non-event for the hedge fund community.

Hedge Fund Style Group Returns



	Absolute Return FOF	Core Div. FOF	Long/Short Equity FOF	Institutional Hedge Funds
10th Percentile	5.6	9.3	6.6	9.0
25th Percentile	4.7	3.0	3.9	6.0
Median	3.2	1.6	1.8	3.6
75th Percentile	1.5	-0.1	1.2	1.7
90th Percentile	0.7	-3.0	-4.6	-0.8
CS Hedge Fund ●	2.9	2.9	2.9	2.9
90-Day T-Bill +5% ●	1.3	1.3	1.3	1.3

Sources: Callan, Credit Suisse, Federal Reserve

Callan Peer Group Median and Index Returns* for Periods Ended 3/31/21

Hedge Fund Universe	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years
Callan Institutional Hedge Fund Peer Group	**3.6**	**19.4**	**5.5**	**6.9**	**6.1**	**7.4**
Callan Fund-of-Funds Peer Group	**2.1**	**27.1**	**5.6**	**6.0**	**4.8**	**4.6**
Callan Absolute Return FOF Style	**3.2**	**19.3**	**4.5**	**5.0**	**4.0**	**3.9**
Callan Core Diversified FOF Style	**1.6**	**25.5**	**5.3**	**5.8**	**4.7**	**4.5**
Callan Long/Short Equity FOF Style	**1.8**	**33.7**	**8.9**	**8.6**	**6.3**	**5.5**
BB GS Cross Asset Risk Premia 6% Vol Idx	0.1	-2.0	0.3	1.6	4.7	5.7
Credit Suisse Hedge Fund	2.9	20.2	4.8	5.1	3.9	4.5
CS Convertible Arbitrage	2.7	19.5	5.9	6.1	3.9	4.6
CS Distressed	6.2	23.6	3.1	5.1	4.0	4.5
CS Emerging Markets	2.6	28.7	5.1	7.7	4.8	5.3
CS Equity Market Neutral	0.9	8.3	-0.6	0.6	1.4	-1.0
CS Event-Driven Multi	6.8	40.6	6.6	6.5	2.8	4.8
CS Fixed Income Arb	2.1	12.3	3.7	5.0	4.6	4.0
CS Global Macro	2.8	19.1	6.3	5.5	4.3	5.8
CS Long/Short Equity	2.4	24.3	5.4	6.1	5.0	5.2
CS Managed Futures	2.3	4.1	3.2	-0.5	0.9	2.6
CS Multi-Strategy	2.1	15.3	4.0	5.1	5.4	5.4
CS Risk Arbitrage	2.0	26.9	7.7	6.4	3.9	4.4
HFRI Asset Wtd Composite	2.7	18.5	3.7	4.7	3.7	--
90-Day T-Bill + 5%	1.3	5.1	6.5	6.2	5.6	6.2

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

Looking past these distracting headlines, the first quarter was broadly good, or at least benign, for hedge funds. Illustrating hedge fund performance without implementation costs, the Credit Suisse Hedge Fund Index (CS HFI) gained 2.9% in 1Q. As a proxy for live hedge fund portfolios, net of all fees, the median fund in the Callan Hedge Fund-of-Funds Database earned 2.1%. Over the last year, the median fund rebounded 27.1%.

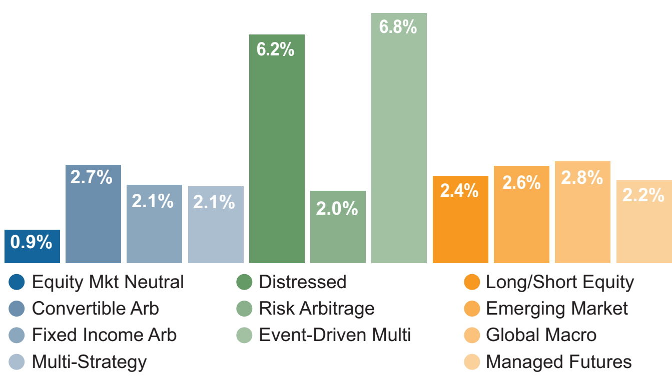
During this year's first quarter, all of CS HFI's underlying strategies added value. The best-performing strategy was Event-Driven Multi-Strategy (+6.8%), aided by unusually strong issuance of IPOs, SPACs, and convertibles along with resilient M&A activity. Another strong-performing strategy was Distressed (+6.2%), which derived support from recovering market values in stressed industry assets. Strategies hedged against equity and rate risks yielded more modest, however less stressful, profits, such as Convertible Arb (+2.7%), Fixed Income Arb (+2.1%), and Risk Arb (+2.0%).

Representing 50 of the largest, broadly diversified hedge funds with low-beta exposure to equity markets, the average Callan Institutional Hedge Fund (CIHF) manager for the quarter earned 4.1%, net of fees. Within this peer group, the average Hedged Credit fund gained 6.1% while the average Hedged Cross-Asset fund advanced 3.7%. With minimal net equity exposure, the average Hedged Equity fund yielded 2.2%. The weakest sub-peer group was Hedged Rates (+1.5%).

Within the Callan Hedge Fund-of-Funds Database, market exposures did not notably differentiate a hedge fund portfolio's performance in the first quarter. Despite a strong U.S. equity rally, the median Callan Long/Short Equity FOF (+1.8%) lagged the Callan Absolute Return FOF (+3.2%) that benefited more from corporate events and recovering credits. With diversifying exposures to both non-directional and directional styles, the Core Diversified FOF netted 1.6%.

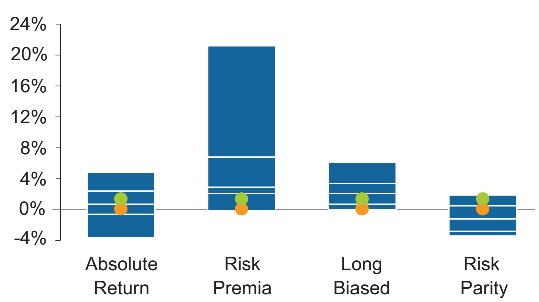
Within Callan's database of liquid alternative solutions, three of the four Multi-Asset Class (MAC) style groups generated positive returns, gross of fees, consistent with their underlying risk exposures. For example, the median Callan Risk Premia MAC rose 2.9%, aided by the rebounding value factor. Given a usually long equity bias within its dynamic asset allocation mandate, the Callan Long-Biased MAC (+2.1%) marginally outperformed the traditional benchmark of 60% MSCI ACWI and 40% Bloomberg Barclays US Aggregate Bond Index (+1.4%). Typically targeting equal risk-weighted allocations to major asset classes with leverage, the Callan Risk Parity MAC lost 1.2%, given its outsized dollar weight to bonds. As the most conservative MAC style focused on non-directional strategies of long and short asset class exposures, the Callan Absolute Return MAC edged ahead 0.7%.

Credit Suisse Hedge Fund Strategy Returns



Source: Credit Suisse

MAC Style Group Returns



	Absolute Return	Risk Premia	Long Biased	Risk Parity
10th Percentile	4.8	21.2	6.1	1.9
25th Percentile	2.4	6.8	3.4	0.5
Median	0.7	2.9	2.1	-1.2
75th Percentile	-0.6	2.1	0.7	-2.8
90th Percentile	-3.6	-0.1	0.0	-3.4
BB GS Cross Asset Risk Premia (6%v)	0.0	0.0	0.0	0.0
60% MSCI ACWI/ 40% BB Barclays Agg	1.4	1.4	1.4	1.4

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

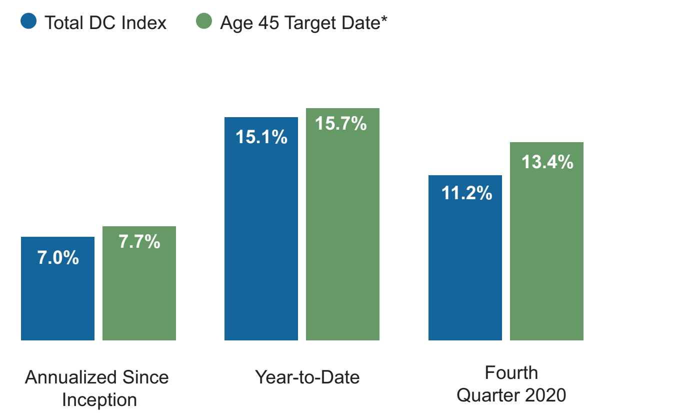
Index Caps off 2020 with Third Straight Quarterly Gain

DEFINED CONTRIBUTION | Patrick Wisdom

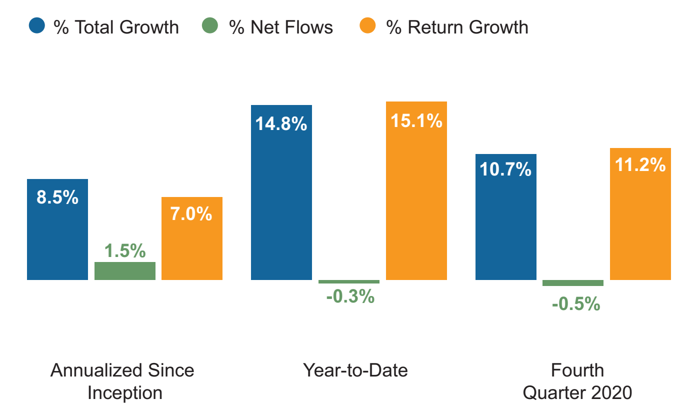
- The Callan DC Index™ rose 11.2% in 4Q20, the third straight quarter of gains after a 15.0% 1Q20 plunge, and increased 15.1% for the year. The Age 45 Target Date Fund (analogous to the 2040 vintage) posted a larger gain (13.4%), attributable to its higher allocation to equity, which outperformed fixed income during the quarter.
- Balances rose by 10.7%, the third straight quarter of gains. Robust investment returns (11.2%) were the sole driver of the growth; quarterly net flows (-0.5%) had a negative effect.
- Target date funds, uncharacteristically, saw low quarterly net inflows of only 0.6%.
- Relatively safer asset classes, such as stable value (66.5%) and U.S. fixed income (9.8%), received sizable net inflows.
- Global equity received its largest-ever quarterly net inflows (6.5%). Conversely, U.S. large cap (-47.1%) and U.S. small/mid cap (-26.4%) had the largest percentage of net outflows.
- Turnover (i.e., net transfer activity levels within DC plans) declined from the previous quarter's 0.75% to 0.14%, the lowest figure since 3Q18.
- The overall allocation to equity increased to 70.5% from the previous quarter's 68.8%, despite the net outflows in U.S. large cap and small/mid cap.
- After the largest percentage decrease in allocation the previous quarter, U.S. small/mid cap had the biggest increase in 4Q, bringing the overall allocation to 8.2%.
- Despite sizable net inflows, stable value (9.1%) experienced the largest decrease in allocation, signaling the asset class was a relative underperformer. Similarly, U.S. fixed income (6.3%) had the second-largest decrease, while money market funds (1.4%) saw a modest reduction.
- The prevalence of a money market offering (47.4%) decreased by 1.7 percentage points after rising by a similar amount the previous quarter. Many more DC plans continue to offer a stable value option (75.9%).

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 (4Q20)
(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Stable Value	66.54%
U.S. Fixed Income	9.77%
U.S. Smid Cap	-26.40%
U.S. Large Cap	-47.10%
Total Turnover**	**0.14%**

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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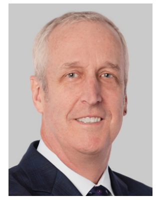

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The *Capital Markets Review* is a quarterly macroeconomic indicator newsletter that provides thoughtful insights on the economy and recent performance in the equity, fixed income, alternatives, real estate, and other capital markets.

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