Spring 2020 Edition

The Alternatives Landscape

The Alternatives Landscape provides a broad overview of the current environment for the primary alternative asset classes: hedge funds, private equity, private credit, real assets, and real estate.

Global capital market returns continued their strong rally through the second half of 2019, due in part to more accommodative global central banks and easing concerns over the U.S.-China trade dispute. The S&P 500 Index posted its strongest annual return since 2013 and declines in interest rates led to the strongest annual return for the U.S. bond market since 2002. Diversifying asset classes, such as alternatives, also posted positive results during the year. Hedge funds out-paced bonds but failed to match the rally in global public equities, while commodities and commodity-related investments were also positive. Illiquid strategies, including private equity and private real estate, generated favorable results on an absolute basis and outpaced more liquid peers for the one-year ending September 30, 2019.

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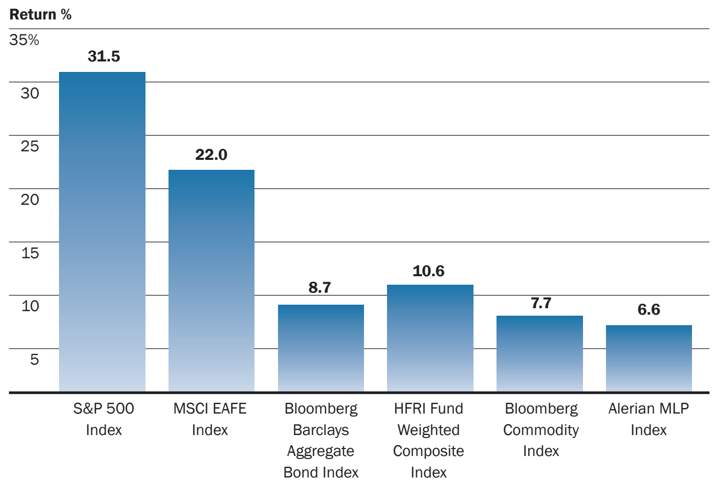
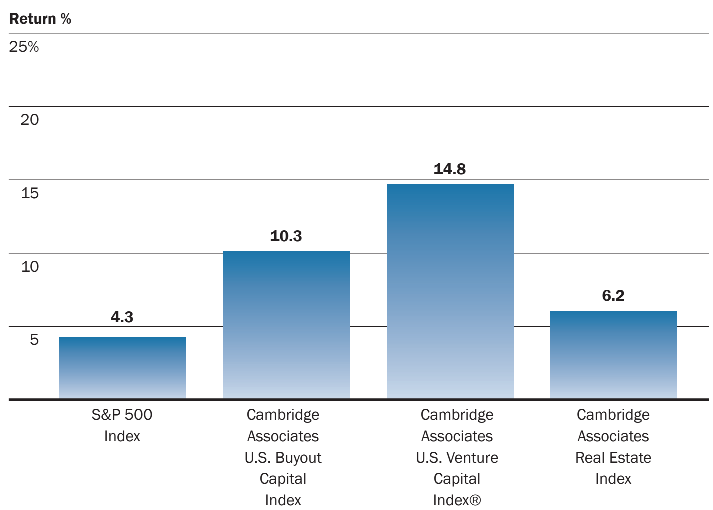
LIQUID STRATEGIES: 2019 RETURN



Source: S&P Dow Jones Indices, MSCI, Bloomberg Finance, LP, Hedge Fund Research, Inc., Alerian.

ILLIQUID STRATEGIES: ONE-YEAR RETURNS

As of September 30, 2019



Source: S&P Dow Jones Indices, Cambridge Associates.

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HEDGE FUND UPDATE

The broad hedge fund universe, as measured by the HFRI Fund Weighted Composite Index, generated a 10.6% return during 2019. Most hedge fund strategies did not experience the strong upside capture of the global equity and fixed income markets during 2019, due to the hedged nature of the strategies relative to long-only investors. Overall, the best returns were generated by managers in higher beta oriented strategies.

While all four of the core hedge fund strategies generated positive returns for the year, there was significant dispersion across the various strategies. The equity hedge strategy generated outsized returns relative to the other three strategies. Both fundamental growth and value managers performed well within the segment, as growth oriented stocks became a large portion of many managers' portfolios. Additionally, sector focused managers within information technology and healthcare performed well, while energy biased funds struggled.

The event driven strategy has continued to generate attractive risk adjusted returns. Within the event driven index, activist funds had some of the best returns given the concentrated long equity bias of these portfolios. Additionally, merger arbitrage strategies generated consistent returns throughout the year even as acquisition activity slowed in the wake of heightened trade rhetoric. The distressed credit environment was challenged during the year, as credit spreads remained tight and defaults are below historical averages[1]. Additionally, many distressed managers hedge out interest rate risk, which limited returns driven by the decline in interest rates.

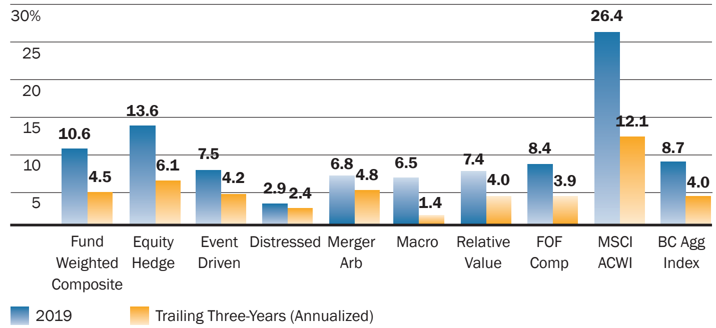
While the macro strategy has experienced challenging returns over the past five years, on both an absolute and risk adjusted basis, the strategy generated strong risk adjusted returns during 2019. The underlying global macro strategy returns were driven by both discretionary and systematic managers.

Total hedge fund assets under management grew by approximately $220 billion during 2019 and total industry assets ended the year at $3.3 trillion. The growth in assets under management was driven by performance, as the industry experienced net outflows during 2019, which continued the trend over the past four years. The majority of net outflows have been from equity hedge and macro strategies.

1. JPMorgan Guide to the Markets Q1 2020

Hedge Fund Strategy Returns

2019 and Trailing Three-Year Performance as of December 31, 2019



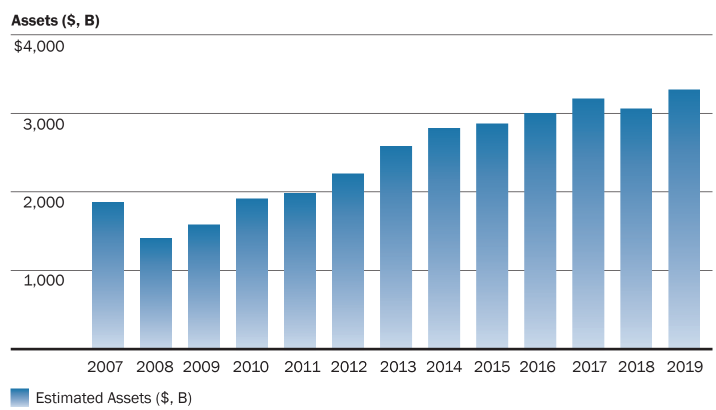
Source: Hedge Fund Research, Inc. www.hedgefundresearch.com, MSCI and Bloomberg Finance, LP.
See endnotes for HFRI index data names.

Risk Adjusted Returns Trailing Three Years as of December 31, 2019

	Standard Deviation	Beta vs. MSCI ACWI IMI	Alpha vs. MSCI ACWI IMI	Sharpe Ratio	Max Drawdown
HFRI Fund Weighted Comp	4.4	0.4	0.0	0.6	-6.9
HFRI Equity Hedge Index	6.5	0.5	-0.4	0.7	-9.7
HFRI Event-Driven Index	3.6	0.3	0.8	0.7	-4.8
HFRI ED: Distressed/ Restructuring Index	3.8	0.2	-0.3	0.2	-5.7
HFRI ED: Merger Arbitrage Index	2.3	0.1	3.4	1.4	-1.2
HFRI Macro Index	4.4	0.2	-0.5	-0.1	-6.8
HFRI Relative Value Index	2.6	0.2	1.6	0.9	-3.4
HFRI FoF Composite Index	3.7	0.3	0.3	0.6	-6.2
Bloomberg Barclays US Aggregate	2.9	0.0	4.6	0.8	-3.3
MSCI ACWI IMI-ND	11.5	1.0	–	0. 9	-14.7

Source: eVestment Alliance, LLC, Hedge Fund Research, Inc. www.hedgefundresearch.com, MSCI and Bloomberg Finance, LP.

Hedge Fund Universe Growth as of December 31, 2019



Source: HFR Industry Reports, © HFR, Inc., 2019, www.hedgefundresearch.com.

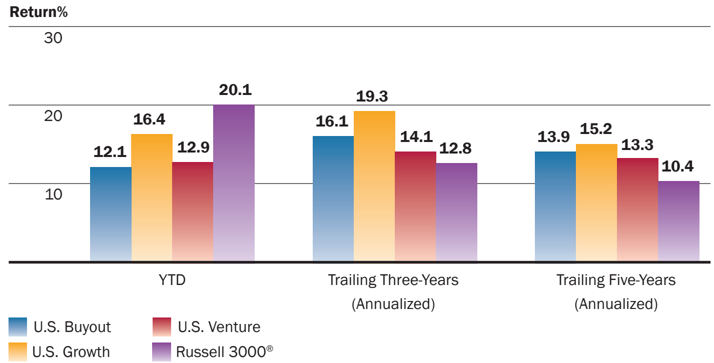
PRIVATE EQUITY UPDATE

Despite generating attractive absolute returns during the first nine months of 2019, private equity failed to keep pace with the very strong rally in the public equity markets. However, extending the timeframe to the past three and five years shows that all three private equity segments (buyout, growth, venture) have outpaced the public markets, with U.S. growth equity leading the way.

Although year-end numbers are still being finalized, 2019 is on track to be the second straight year with a decline in median U.S. private equity purchase multiples. After a decline of approximately 15% from peak pricing levels of 12.8x in 2014, purchase multiples are now in line with a trailing five-year average (11.0x) and modestly above the trailing ten-year average (10.3x). Elevated valuations are a natural outcome of a ten-year bull market; we're seeing this reflected in both private market and public market valuations. Over the past decade, private equity purchase multiples have stretched from 8.0x to 10.9x—an increase of 36%. Over that same time period, the S&P 500 Index P/E ratio has expanded from 16.8x to 22.9x—also an increase of 36%—suggesting that by at least one metric, private equity and public are similarly expensive.

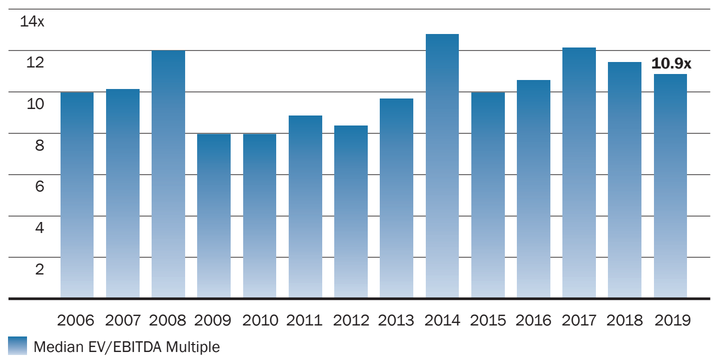
Within the private capital universe, dry powder remains at an elevated level and set a new all-time high in each of the past eight years. We believe there are a couple of takeaways from this level of dry powder. On one hand, this dry powder may keep purchase multiples elevated in the intermediate term as an excess of cash to be invested is often accompanied by increased competition for deals. On the other hand, deal making activity has, on average, increased in recent years, suggesting a healthy level of deployment in the marketplace. A key to investing in this market is partnering with disciplined fund managers that have experience in various market cycles and an ability to add value to a company's bottom line in multiple ways. While the environment is competitive, we feel it is important to remind our long-term investors that a commitment made today will be invested over the coming four to five years in market cycles that remain unknown.

Market Performance as of September 30, 2019



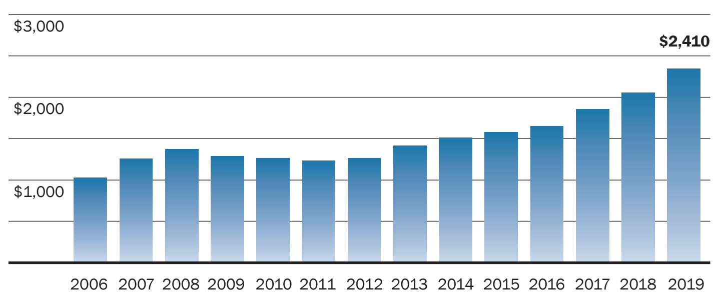
Source: Cambridge Associates and Russell. See endnotes for index names.

U.S. Private Equity: Median Buyout EV/EBITDA Multiples
as of December 31, 2019



Source: Pitchbook Data, Inc.

Private Capital Dry Powder, As of Each Year End



Source: Pitchbook Data, Inc. 2019 data is through June 30, 2019.

The Alternatives Landscape

PRIVATE CREDIT UPDATE

Riding a tailwind of accommodative monetary policies and depressed interest rates, debt markets enjoyed strong performance for the calendar year 2019. Through the third-quarter, private credit markets outpaced more liquid counterparts over both shorter- and longer-term trailing periods. Across floating-rate segments of the market, middle market direct lending maintained a yield premium versus more liquid areas, as represented by broadly syndicated loans (also known as bank loans). However, all segments saw yields contract through 2019, driven by a decrease in reference rates, specifically LIBOR.

Private debt strategies continue to raise large amounts of capital, though fundraising remained slightly down from the peak in 2017. However, private equity fundraising reached an all-time high in 2019 and continues to outpace capital raised through debt funds. The growth of private equity capital, a core demand driver for private lending, has created a robust pipeline for private lenders.

While it has been widely reported that the influx of capital to private lending has impacted competition for deals, data suggests that there has been minimal influence on lenders' ability to deploy limited partner capital. Dry powder on hand for private debt funds – which provides an estimate for the expected length of time to invest the existing capital raised based on the prior years' deployment rates—has been largely flat since 2013, signaling that deal making and capital deployment have kept pace with growth in fundraising.

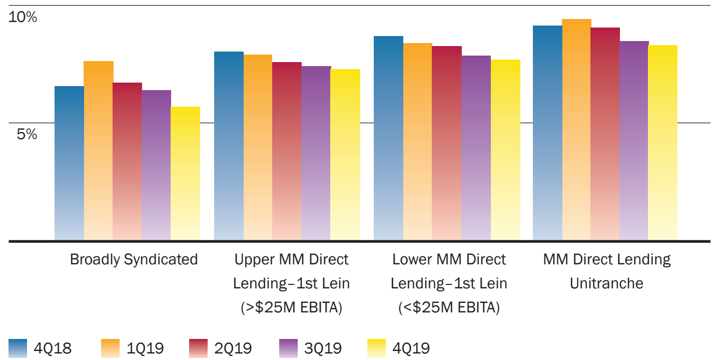
After climbing in recent years amid frenzied market conditions, leverage levels for middle market lending began to tighten toward the end of 2019, perhaps signaling a bit more conservatism among lenders. Markets also witnessed a marginal widening of spreads, countering a drop in LIBOR. Both favorable trends were more pronounced at the smaller end of the market. At the end of 2019, the most competitive area of the lending market was for borrowers in the $25-$40 million EBITDA range. Generally, lenders have typically earned a yield premium from smaller issuers, while also lending at lower leverage levels.

Cliffwater Direct Lending Index as of September 30, 2019

	1 Year	5 Years	10 Years
Cliffwater Direct Lending Index	7.9%	8.3%	10.6%
Bloomberg/Barclays High Yield	6.4%	5.4%	7.9%
S&P/LSTA Leveraged Loan	3.1%	4.0%	5.2%

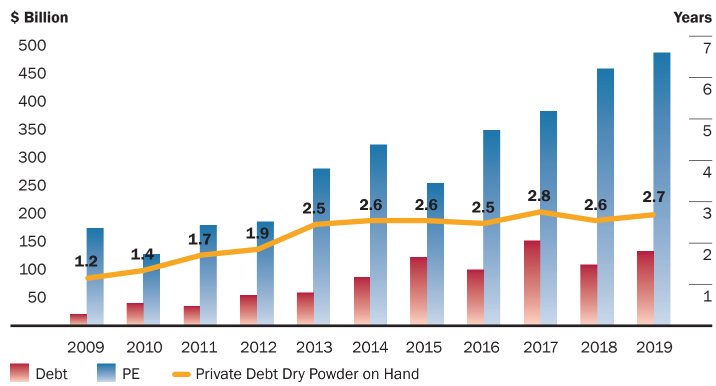
Source: Cliffwater LLC, LCD an offering of S&P Global Market Intelligence, Bloomberg Finance, LP. Returns for the Cliffwater Direct Lending Index before 2015 are back-tested. See Endnotes for important disclosures.

Floating Rate Market Yields at Issuance – Three-Year Term Loans



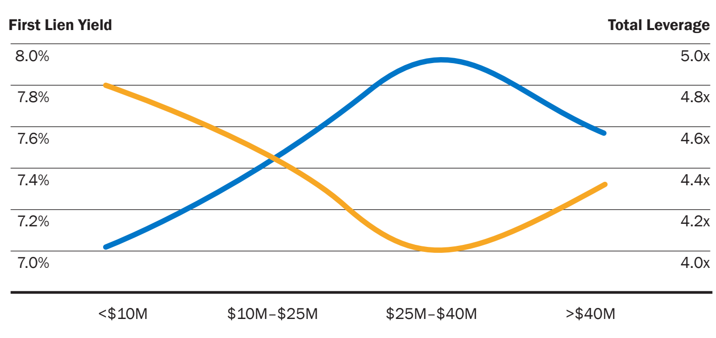
Source: Middle Market Weekly, February 7, 2020. Refinitiv LPC.

Private Capital Fundraising ($B - LHS) & Private Debt Dry Powder On Hand* (Years - RHS)



Source: Pitchbook 2019 Annual Private Fund Strategies Report.
*As of 6/30/2019; Current year's contributions are annualized for the cash on hand calculation.
**Cash on hand is the end of year dry powder divided by the contributions during the year.

First Lien Yield & Leverage by EBITDA Range – Q4 2019



Source: Middle Market Weekly, February 7, 2020. Refinitiv LPC.

The Alternatives Landscape

REAL ASSETS UPDATE

Real asset strategies rebounded in 2019 as each of the five major strategies generated positive returns after struggling in 2018. While returns were broadly positive, REITs and natural resource stocks were standout performers. REITs generated strong returns as industrial, data centers and timber performed particularly well. Consumers' shift to online shopping continued to fuel the industrial sector's outperformance. REITs also benefitted from increasing occupancy rates, which hit a record high in June.[1]

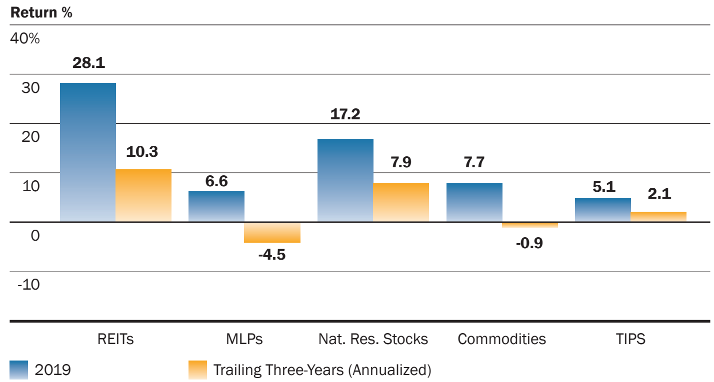
The rally within U.S. public equities benefited natural resource stocks. The rise in crude oil prices positively impacted companies with an upstream focus. OPEC production cuts and geopolitical concerns contributed to upward pressure on oil prices, while excess U.S. supply kept prices range bound. Producers of gold and other precious metals benefited from increasing prices, due in part to a potential trade deal with China.

MLPs started the year off strong, returning over 17% through June. However, returns did not fare as well in the second half of the year, ending 2019 with a modest 6.6% return. Improving fundamentals within MLPs were not enough to counter negative investor sentiment that built up in the second half of the year. Generally, companies with greater upstream assets will have higher correlation with commodity price movement. However, MLPs rose despite natural gas prices falling more than 37%.

Commodities returned 7.7%, well above the 40-year historical average of 1.9%. Gains within the energy segment of commodities drove returns, as did precious metals. Natural gas prices declined during the year as increased domestic production growth and a mild winter put downward pressure on natural gas prices. Despite a tough period of returns for agriculture-related commodities over the past three years, they were able to generate slightly positive returns for the year. Coffee prices rallied late in 2019 after a dry season in Brazil, the world's largest producer of coffee. Lean hog prices fell as supply increased in the fourth quarter of the year.

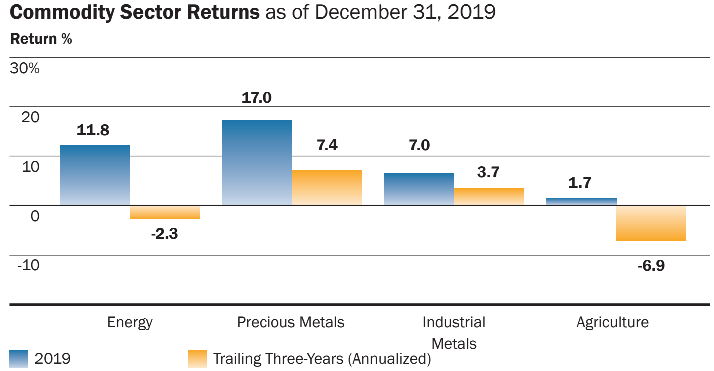
Gold rose over 18% in 2019, it's highest annual return since 2010. Slowing global growth, U.S. recession fears, and Federal Reserve policy all contributed to investors' increased appetite for gold, which tends to be a safe haven for investors during times of economic uncertainty.

Major Real Assets Strategy Returns as of December 31, 2019



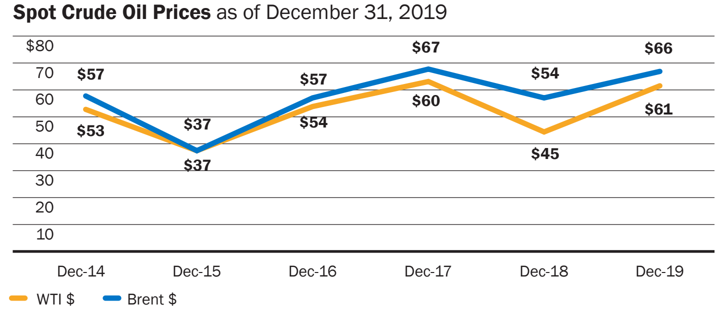
Source: FTSE, S&P Dow Jones Indices, Bank of America Merrill Lynch, Alerian, Bloomberg Finance, LP. See endnotes for a list of indexes.

Commodity Sector Returns as of December 31, 2019



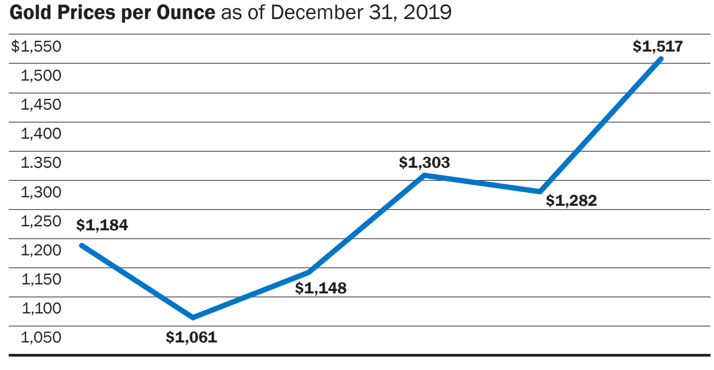
Source: Bloomberg Finance, LP. Bloomberg Commodity Index Sectors are shown above.

Spot Crude Oil Prices as of December 31, 2019



Source: Bloomberg Finance, LP.

Gold Prices per Ounce as of December 31, 2019



Source: Bloomberg Finance, LP.

1. (Source: Bloomberg, NAREIT).

REAL ESTATE UPDATE

Commercial real estate results have moderated during the last three years with the NCREIF Property Index ("NCREIF") producing a 6.4% return in 2019. The income component of the NCREIF return has remained largely consistent at 4.5% for 2019 with an average of 4.7% over the trailing five-years. The appreciation component of the index return over the last three years demonstrates the moderation of real estate returns with a 2.0% annualized yield over the trailing three-years compared to 3.4% for the trailing five-years. While appreciation has slowed, valuations are still increasing.

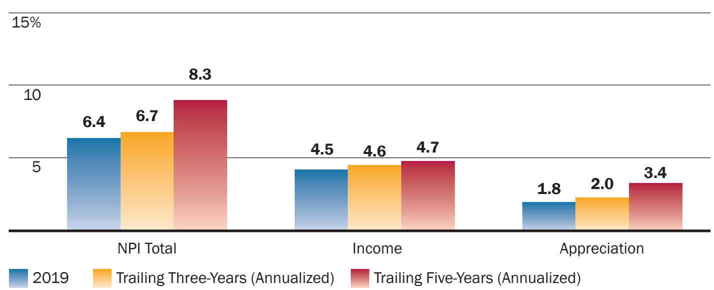
The strength of the real estate market in 2019 continued to be the industrial sector (+13.4% return), trailed by other real estate sectors, including office (+6.6%), apartment (+5.5%), and retail (+1.9%). The economic conversion to online shopping and last-mile delivery needs have been a boon for the industrial sector but a continued drag on the brick-and-mortar retail sector.

As seen in the third chart, cap rates have continued to decline, indicating that core real estate's valuations are elevated. The four-quarter moving average cap rate for core real estate dropped to 1.8% in 2019 compared to the five-year average appreciation of 3.4%. However, the spread between cap rates and the 10-year Treasury yield has remained wide, indicating real estate remains attractive on a relative basis.

Fundamentals within the real estate market remain strong with net operating income growth holding in the 4%-6% range over the last nine years. Commercial real estate has benefited from low U.S. unemployment which has led to low vacancy rates. While some areas of the apartment sector have become overbuilt, new supply of commercial real estate has been restrained while demand has increased.

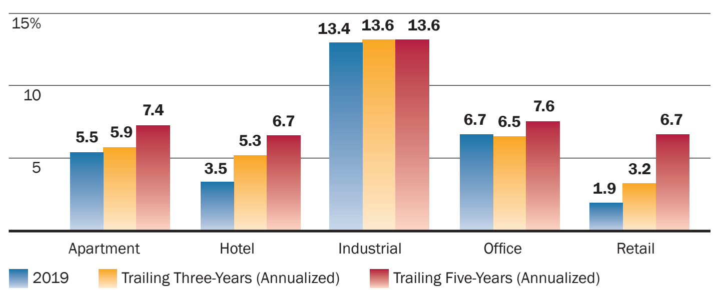
Market participants point to rental growth as the key component of maintaining current levels of investment returns going forward. It is unlikely that cap rate compression and declining vacancy rates can persist unabated in the years to come, however there is a belief that low interest rates have the ability to support increasing property values.

NCREIF Property Returns (Gross) as of December 31, 2019



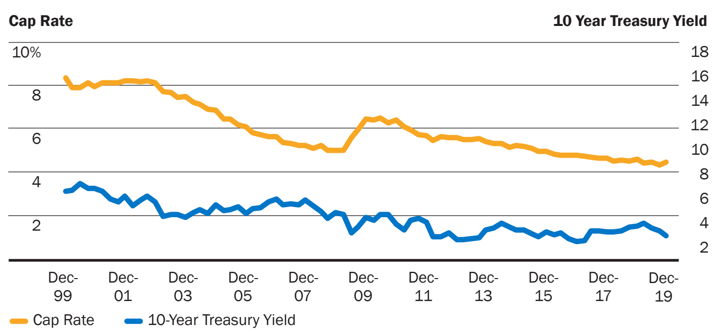
Source: National Council of Real Estate Fiduciaries NCREIF Property Index.

Asset Class Returns (Gross) as of December 31, 2019



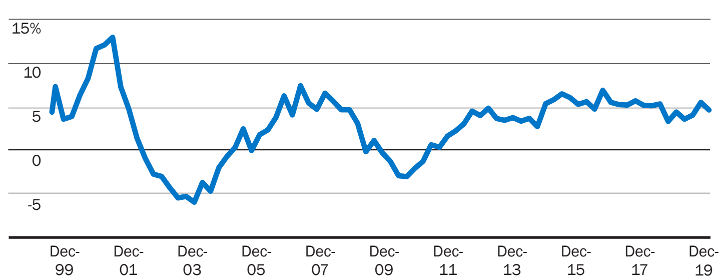
Source: National Council of Real Estate Fiduciaries NCREIF Property Index.

Cap Rates and Treasury Yields as of December 31, 2019



Source: NCREIF National Council of Real Estate Fiduciaries and Board of Governors of the Federal Reserve System (US), 10-Year Treasury Constant Maturity Rate [DGS10], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/DGS10.

NOI Growth (Four Quarter Moving Average) as of December 31, 2019



Source: NCREIF National Council of Real Estate Fiduciaries.

ENDNOTES

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Equity investments are more volatile than bonds and subject to greater risks. Small- and mid-cap stocks involve greater risk than large-cap stocks.

Bonds are subject to interest rate, price, and credit risks. Generally when interest rates rise, bond prices fall.

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The HFRI Fund Weighted Composite Index, HFRI Equity Hedge (Total) Index, HFRI Event-Driven (Total) Index, HFRI ED: Distressed/ Restructuring Index, HFRI ED: Merger Arbitrage Index, HFRI Macro (Total) Index, HFRI Relative Value (Total) Index, and the HFRI Fund of Funds Composite Index are being used under license from Hedge Fund Research, Inc., which does not approve of or endorse the contents of this report. www.hedgefundresearch.com

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Cliffwater Direct Lending Index (the Index) is an index comprised of all underlying assets held by public and private business development companies (a "BDC") that satisfy certain eligibility requirements. Any information presented prior to the Launch Date (September 30, 2015) of the Index is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-tested calculations are based on the same methodology that was in effect when the Index was officially launched. Please refer to the methodology paper for the Index (available at www. CliffwaterDirect LendingIndex.com) for more details about the Index. Hypothetical performance results have many inherent limitations. No representation is being made that any performance will or is likely to achieve profits or losses similar to those shown. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently achieved by any particular trading program. One of the limitations of a hypothetical performance record is that decisions relating to the selection of managers and the allocation of assets among those managers were made with the benefit of hindsight based upon the historical rates of return of the selected trading advisors. Therefore, performance records invariably show positive rates of return. Another inherent limitation of these results is that the allocation decisions reflected in the performance record were not made under actual market conditions and, therefore, cannot completely account for the impact of financial risk in actual trading.

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Indexes referenced on page two, chart one: 2019 and Trailing Three Year Performance as of September 30, 2019. HFRI Fund Weighted Composite Index; HFRI Equity Hedge (Total) Index; HFRI Event-Driven (Total) Index; HFRI ED: Distressed/Restructuring Index; HFRI ED: Merger Arbitrage Index; HFRI Macro (Total) Index; HFRI Relative Value (Total) Index; HFRI Fund of Funds Composite Index.

Indexes referenced on page three, chart one: Market Performance as of December 31, 2019: Cambridge Associates U.S. Buyout Index; Cambridge Associates U.S. Growth Equity Index; Cambridge Associates U.S. Venture Capital Index; Russell 3000® Index.

Indexes referenced on page five, chart one: Major Real Assets Strategy Returns. REITS, MLPs Natural Resources Stocks, Commodities and TIPS are represented by FTSE Nareit All REITs TR, Alerian MLP TR USD, S&P Global Natural Resources TR USD, Bloomberg Commodity TR USD and ICE BofA Merril Lynch 1-5 Year US Inflation-Linked Treasury Index, respectively.

Indexes referenced on page five, chart two: Commodity Sector Returns. Industrial Metals are represented by the Bloomberg Industrial Metals Subindex; Precious Metals are represented by the Bloomberg Precious Metals Subindex; Energy is represented by the Bloomberg Energy Subindex; and Agriculture is represented by the Bloomberg Agriculture Subindex.

Published March 31, 2020
TAL_0003_032020

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