Spring 2018 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 estate and real assets.*

The global public equity markets generated strong performance during 2017, buoyed by synchronized global economic growth and a solid rebound in corporate earnings. Diversifying asset classes such as alternatives posted mixed results, generally lagging the robust performance of the broader public equity markets. Hedge funds generated positive absolute performance through 2017, with the HFRI Fund Weighted Composite Index delivering its strongest calendar year performance since 2013 as many managers found opportunities on both the long and short sides of the portfolio. Commodity-related investments faced strong headwinds throughout 2017 following largely strong performance in 2016. Illiquid strategies, including private equity and private real estate, have performed well on an absolute basis but failed to keep pace with the resilient performance of liquid peers during the one-year ending September 30, 2017.

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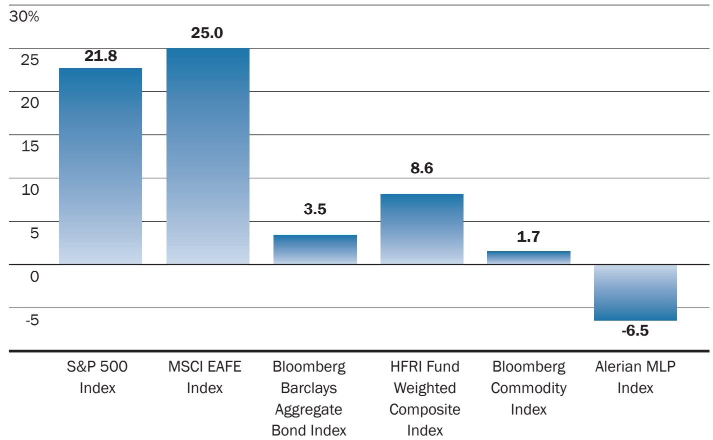
**LIQUID STRATEGIES: 2017 RATE OF RETURN**

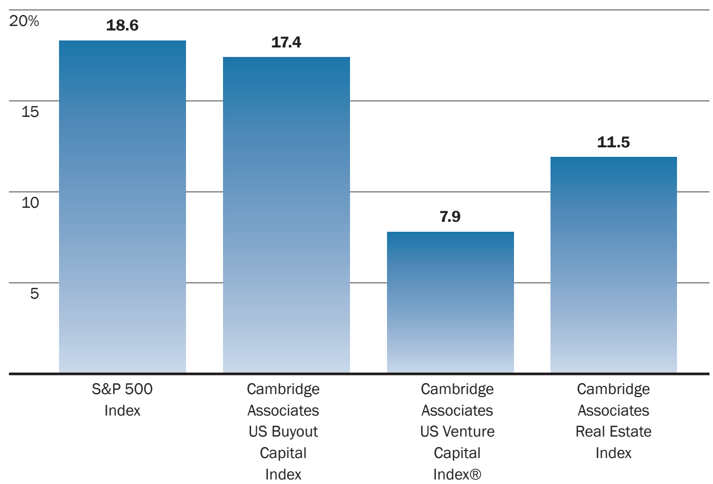
As of December 31, 2017




Source: S&P Dow Jones Indices, LLC, a division of S&P Global, MSCI, Bloomberg Finance, LP, Hedge Fund Research, Inc. and Alerian.

**ILLIQUID STRATEGIES: ONE YEAR RETURN**

As of September 30, 2017




Source: S&P Dow Jones Indices, LLC, a division of S&P Global and Cambridge Associates.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# The Alternatives Landscape

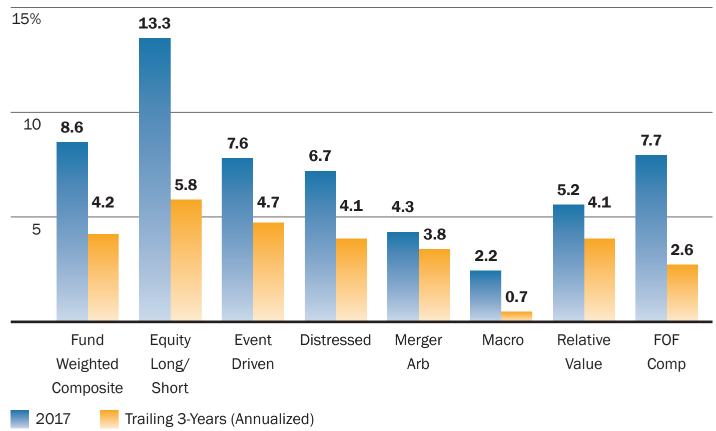
## HEDGE FUND UPDATE

The broad hedge fund universe, as measured by the HFRI Fund Weighted Composite Index, generated strong absolute and risk-adjusted returns during 2017. Over the past year, managers were able to find opportunities on both the long and short side of portfolios as credit spreads have tightened, equity market valuations have become increasingly expensive, and global equity market correlations have declined as compared to recent years.

Equity long/short was the best performing strategy across the broad hedge fund universe. Overall, Ellwood observed that equity long/short managers generated strong alpha during the year on both the long and short side of the portfolio. Managers that maintained a fundamental growth bias tended to outperform fundamental value managers, as was the case within the global equity market. Event driven was the second best performing strategy during 2017, as special situations, credit, and distressed strategies performed well. Strong returns in these strategies were driven by idiosyncratic opportunities in addition to credit spread tightening throughout the year. The transaction-related positions within merger arbitrage portfolios continued to generate positive returns with low levels of risk as we continued to see strong merger and acquisition volume. The regulatory environment and change in corporate tax rates is expected to provide a favorable environment for mergers and acquisitions activity going forward. Relative value managers generated consistent returns, but the lack of volatility and a robust equity market was a negative for the strategy. While the environment for global macro managers appeared appealing given divergent central bank policy, the strategy failed to live up to those expectations and generated only modestly positive returns.

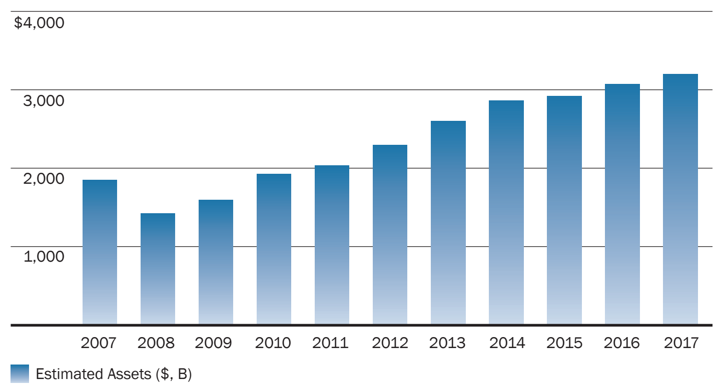
Total hedge fund assets under management reached a new peak of $3.2 trillion at the end of 2017, largely driven by positive fund performance as well as net positive cash flows. The hedge fund industry experienced net inflows of $9.8 billion during 2017, which was a reversal from the previous year where the industry had net outflows for the first time since 2009. The largest areas of demand were to event driven and macro based strategies, while equity long/short and relative value strategies experienced modest net outflows. Fees in the hedge fund industry continued to decline during the period. This trend is a continuation from prior years, as more and more investors are negotiating lower fees. However, top tier funds continue to command a higher fee structure.

**2017 and Trailing Three Year HFRI Index Performance**



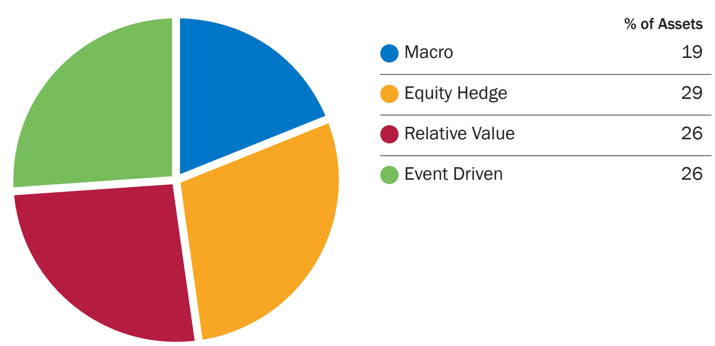

Source: Hedge Fund Research, Inc. See endnotes for index names.

**Hedge Fund Universe Growth**




Source: HFR Industry Reports, © HFR, Inc., 2018.

**Hedge Fund Strategy Allocation**
As of December 31, 2017




Source: HFR Industry Reports, © HFR, Inc., 2018.

# The Alternatives Landscape

## PRIVATE EQUITY UPDATE

Private equity returns remained competitive with public markets over trailing one and five year periods and exhibited significant value-add over long-term time periods as compared to broader public equity markets. Purchase price multiples on buyout transactions leveled off at 10.5x trailing EBITDA after increasing for four years. Debt multiples have increased slightly, which is a sign that private equity funds are taking advantage of favorable financing rates and covenant-lite debt in an effort to enhance returns. That said, greater balance sheet leverage could pose risks if the broad economic environment deteriorates, especially for cyclical industries in the private markets.

Add-on transactions in the U.S. buyout market are estimated to comprise 64% of all transactions in 2017, which compares to only 52% a decade earlier[1]. We believe that above average valuations and below average GDP growth contributed to the increase in add-on activity. As background, add-on transactions are when a private equity manager uses a privately owned company to acquire a smaller, complementary company. Add-on transactions have two primary benefits if executed properly. First, managers can often acquire add-on companies at lower multiples due to a size discount prevalent in private markets. Second, add-ons can drive EBITDA growth in an environment where meaningful top-line revenue growth has been difficult to achieve. That said, limited partners must assess how capable managers are at combining multiple businesses into a larger company and integrating the people, systems, and culture. Private equity managers who are skilled in completing add-ons have the ability to add value to their portfolio companies, regardless of the economic cycle.

The exit market slowed in 2016 and 2017 after reaching a peak total sale value in 2015. A likely contributor is the increase in purchase multiples as prospective buyers are being more cautious. Further, per Pitchbook data, the only sector to log an increase in exit volume from 2016 was information technology as innovation continues to be a key macroeconomic theme. Interestingly, for the first time since the credit crisis, financial buyers (private equity firms) are expected to outpace strategic buyers (corporations) in 2017 acquisitions of private-equity owned businesses. The high level of interest in private equity and corresponding increase in dry powder may partially explain this phenomenon as private equity buyers have capital to invest.

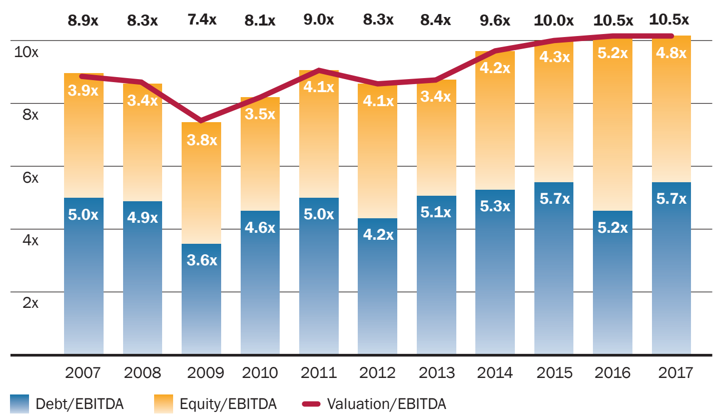
1 Pitchbook Data, Inc.

**Market Performance (%)**
As of September 30, 2017

| Asset Class | 1-Year % | 5-Year % | 10-Year % | 20-Year % |
|---|---|---|---|---|
| U.S. Private Equity | 16.9 | 13.7 | 9.7 | 12.2 |
| U.S. Buyout | 17.4 | 15.7 | 10.0 | 12.1 |
| U.S. Growth Equity | 18.0 | 15.2 | 11.1 | – |
| U.S. Venture Capital | 7.9 | 14.8 | 9.1 | 22.3 |
| Russell 3000® Index | 18.7 | 14.2 | 7.6 | 7.2 |

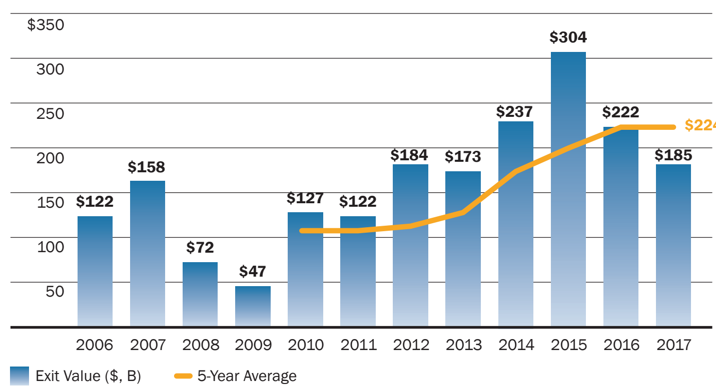
Source: Cambridge Associates and Russell. See endnotes for index names. Data as of December 31, 2017.

**U.S. Mergers and Acquisitions Multiples (Including Private Equity Buyouts)**




Source: PitchBook Data Inc. Data as of December 31, 2017

**U.S. Private Equity-backed Exits ($B)**




Source: PitchBook Data Inc. Data as of December 31, 2017.

## PRIVATE CREDIT UPDATE

The U.S. economy showed impressive results and U.S. companies benefited as robust global growth characterized much of 2017. Middle market companies continued to show notable results as compared to S&P 500 companies, as evidenced in the first chart which illustrates revenue growth of an index that is commonly understood to be indicative of the performance of middle market companies. Middle market companies also experienced strong employment growth and expressed near record high confidence levels[1].

Returns across risk assets remained robust, particularly for equities and credit investments. Generally speaking, assets with a higher risk profile outperformed as equities posted the strongest returns in 2017. Credit-oriented investments, including public high yield and loans, posted respectable returns amid a benign economic and capital market environment.

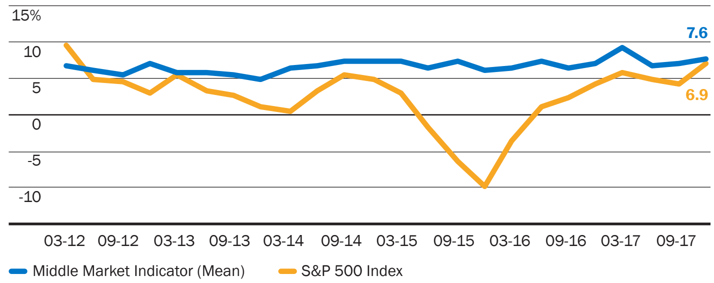
Direct lending continued to show attractive returns, outperforming its publicly-traded credit counterparts. The Cliffwater Direct Lending Index returned 9.3% for the year ending September 2017. Total returns have moderated due to compressing income (resulting from an increase in the supply of capital) and realized losses from restructuring and liquidation of select oil and gas, retail, and consumer goods companies[2].

Ellwood's research shows that middle market lending activity was driven by robust deal-making among middle market private equity firms (driving demand for capital) and an influx in supply, driven by robust fundraising among middle market lenders. Spreads among large corporate and middle market issuers continued to compress in 2017. As evidenced in the third chart, spreads for middle market issuers compressed by 57 basis points, ending the year at 457 basis points. New issue yields on middle market loans settled in at 6.06%, down 30 basis points from a year earlier[3], as an increase in LIBOR partially offset spread compression.

Middle market lending approached $170 billion in 2017, increasing 23% year-over-year[3]. Activity in 2017 was the highest in three years, with a strong uptick among large middle market issuers[3]. It appears that lenders' risk appetites increased as leverage multiples ticked up, as shown in the last chart.

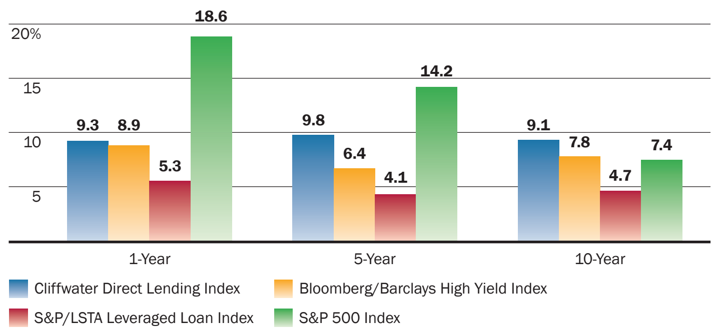
1 Source: 4Q 2017 Middle Market Indicator Report, National Center for the Middle Market
2 Source: 2017 Q3 Report on U.S. Direct Lending, Cliffwater LLC
3 Source: Leveraged Loan Monthly, Year-end 2017, Thomson Reuters LPC

**Year-Over-Year Revenue Growth Comparisons**



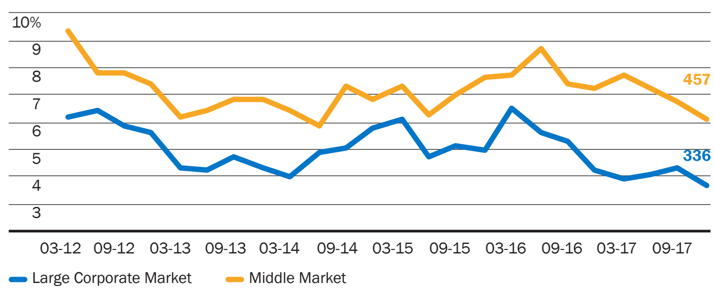

Source: National Center for the Middle Market and S&P Dow Jones Indexes, a division of S&P Global. Data as of December 31, 2017.

**Trailing Annualized Market Returns**



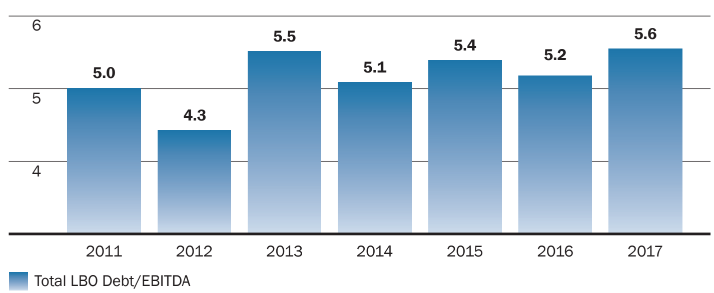

Source: Morningstar Direct, Cliffwater, LLC. Bloomberg Finance, LP, LCD, an offering of S&P Market Intelligence, and S&P Dow Jones Indices, a division of S&P Global. Data shown as of September 30, 2017.

**Middle Market Loan Spreads (basis points)**




Source: Leveraged Loan Monthly, year-end 2017. Thompson Reuters, LPC. Data as of December 31, 2017.

**Leverage Multiple Evaluation**




Source: 2017 US PE Middle Market Report. Pitchbook Data, Inc.

## REAL ASSETS UPDATE

Real assets strategies produced mixed results in 2017. Natural resource stocks generated strong results while master limited partnerships (MLPs) struggled.

Oil prices continued to be at the forefront of investors' minds. After increasing by over 40% in 2016, oil prices improved at a more modest pace of approximately 10% in 2017, as shown in the third chart. While U.S. crude oil production increased by more than 384,000 barrels per day in 2017[1], we believe that OPEC's reduction of global production, coupled with strong global demand, led to higher oil prices. The OPEC cuts and the increase in global demand were the likely drivers for U.S. crude inventory to drop below its five year-year average for the first time in over four years, as shown in the fourth chart.

Natural resource stocks produced strong results benefitting from the significant rise in public global equities. In particular, industrial metal-related companies focused on aluminum and copper[2] performed well as demand from China remained robust.

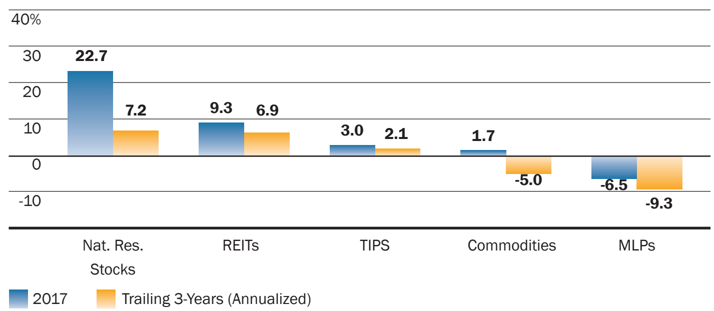
Real estate investment trusts (REITs) produced positive results, led by infrastructure and data centers[3], as the subsectors continued to manage their balance sheets and remained focused on lowering debt. Within REITs, retail struggled in 2017 as brick and mortar[2] areas continued to battle the Amazon effect.

Within commodities, industrial metals and precious metals performed well, led by gold[2]. Conversely, agriculture-related commodities struggled[2] as supply was relatively strong due to fairly benign global weather conditions in major crop regions.

Declining natural gas prices led MLPs, as shown in the first chart, to produce weak results as the majority of MLPs within the index are natural gas-related. Other factors included distribution cuts of the larger players and the prospect of rising interest rates. Despite the rise in interest rates, MLPs still look attractive from a yield standpoint, and demand for transporting oil and natural gas remains robust.

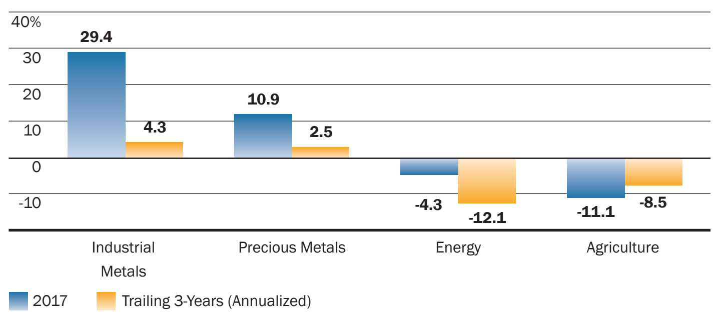
1 Source: U.S. Energy Information Administration
2 Source: Bloomberg Finance, LP. Data as of December 31, 2017.
3 NAREIT. Data as of December 31, 2017.

### Major Real Assets Strategy Returns



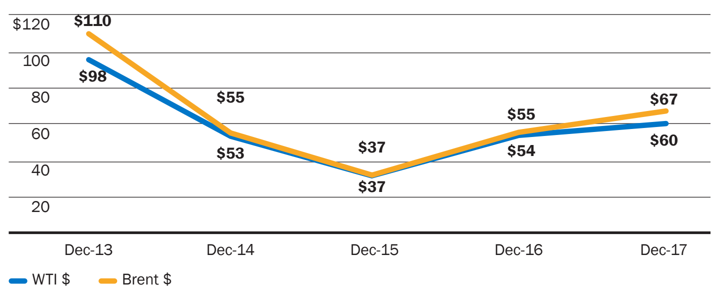

Source: Morningstar Direct, S&P Dow Jones Indices LLC, a division of S&P Global, FTSE, ICE data Indices LLC, Bloomberg Finance, LP, Alerian.
Data shown as of December 31, 2017. See endnotes for index names.

### Commodity Sector Returns



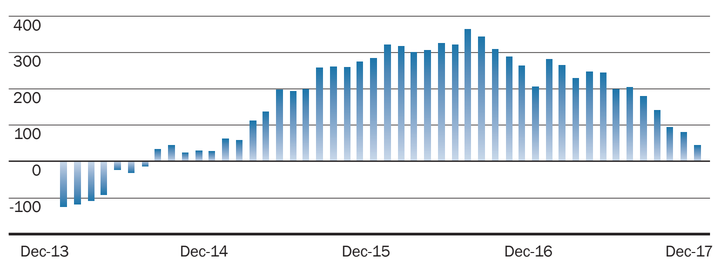

Source: Morningstar Direct, Bloomberg Finance, LP. Data shown as of December 31, 2017.
See endnotes for index names.

### Spot Crude Oil Prices




Source: U.S. Energy Information Administration (December 2017).

### U.S. Crude Inventories Above Five Year Average (Million Barrels/Month)




Source: U.S. Energy Information Administration (December 2017).

## REAL ESTATE UPDATE

Returns for core commercial real estate moderated during 2017 from double digit annual returns driven by capital appreciation gains to more normalized levels in the high single digits, as measured by the long-term average for the NCREIF Open-End Diversified Core Index (ODCE). As displayed in the first chart, income returns have remained relatively stable while the appreciation component of the NCREIF Property Index has declined.

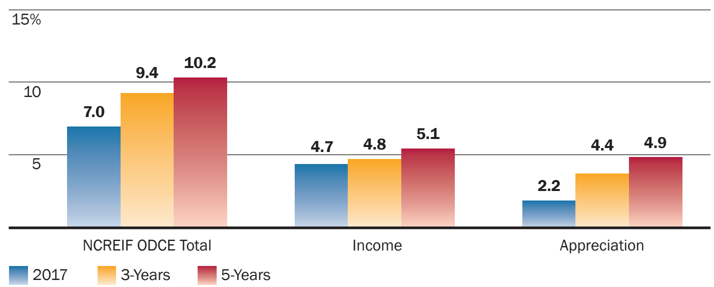
The U.S. economy continued to expand, creating job growth and an increase in disposable income, both key components to positive real estate investment outcomes. As described in our 2018 Investment Outlook, the world appears to be in a phase of global synchronized growth. Combined with the recent tax reductions in the U.S., we expect corporate earnings to remain robust and personal net income to rise. Both bode well for demand for real estate and increases in net operating income (NOI).

Industrial properties continued its three-year streak of outperformance. We believe that ecommerce and last mile delivery will continue to drive demand for modern warehouse space to the detriment of brick and mortar retailers. The second chart highlights the strong returns within the industrials sector and the diminished results in the retail sector. Overall, supply and demand for rental space appear to be in equilibrium as developers have shown restraint this cycle as compared to prior real estate cycles. One area that may be overheated is luxury apartments, especially in gateway markets.

The third chart shows the decline in cap rates for core real estate. Compared to historical rates, the current low cap rates suggest that core real estate's valuations are expensive. When measuring cap rates to yields on 10-Year Treasuries, the relative valuation of core real estate exhibits a more median level.

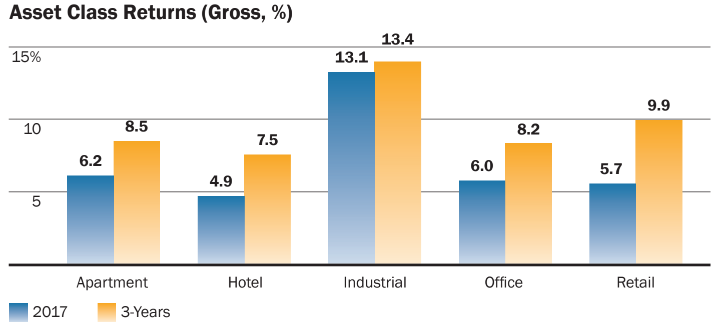
The current cycle has shown constraint as rental markets are primarily in balance, developers are cautiously using leverage, and transaction volumes are high, despite a slowdown in 2017. Fundamentals continue to show strength with NOI growth around the 5% mark for several years, as depicted in chart four. If supply continues to be disciplined and the economy performs as expected, core real estate investments are well positioned for 2018.

**NCREIF ODCE Returns (Gross, %)**



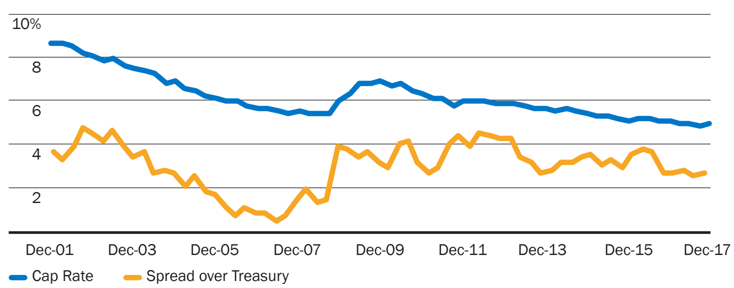

Source: National Council of Real Estate Fiduciaries NCREIF Property Index.

**Asset Class Returns (Gross, %)**



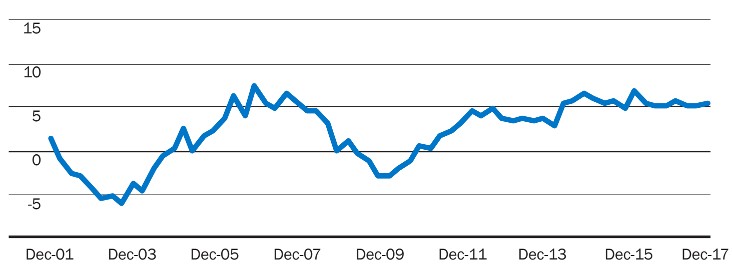

Source: National Council of Real Estate Fiduciaries NCREIF Property Index.

**Cap Rates and Treasury Spreads (%)**




Source: NCREIF National Council of Real Estate Fiduciaries as of December 31, 2017.
Note: Spread represents the difference between the Cap Rates and 10 Year Treasury Yield.

**NOI Growth (Four Quarter Moving Average)**




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

**ENDNOTES**

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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: 2017 and Trailing Three Year HFRI Index Performance as of December 31, 2017. 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 (%). Cambridge Associates U.S. Private Equity Index; 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 are represented by FTSE NAREIT Index; Natural Resource Stocks are represented by S&P Global Natural Resources Index; TIPS are represented by ICE BofA Merrill Lynch 1–5 Year US Inflation-Linked Treasury Index; MLPs are represented by Alerian MLP Index; and Commodities are represented by Bloomberg Commodity Index.

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.

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