

## Overview

The fourth quarter of 2018 was characterized by a heightened level of volatility and negative returns for the majority of risk assets. Though equity markets experienced an initial decline in October, the strongest risk-off environment emerged in December as global growth forecasts, inflation expectations, and corporate earnings expectations began to roll over in unison. During the quarter, the Federal Reserve, European Central Bank (“ECB”), and International Monetary Fund (“IMF”) lowered 2019 GDP growth forecasts across regions, and the 5Y/5Y inflation expectation rate fell from nearly 2.3% at the start of the quarter to 1.9% at quarter-end. With this as a backdrop, market participants repriced global equities and moderated expectations for corporate earnings growth in 2019. Factset data indicates that 2019 earnings expectations for the S&P 500 fell from a high of \$178.50 per share near the beginning of the fourth quarter to \$173.45 at quarter-end. On the other side of the spectrum, duration-sensitive assets and government bonds performed well during the December flight to safety, while high yield credit and loan markets posted losses. Emerging market equities outperformed developed equity markets during the quarter, but still trailed their developed counterparts for the full year.

In a move that proved to be more controversial than many anticipated, the Federal Reserve Open Market Committee (“FOMC”) raised the target range for the federal funds rate by 0.25% for the fourth time in 2018 during its December meeting, resulting in a target range of 2.25% to 2.5%. Economic data in the US remained strong, with non-farm payrolls up 312,000 in December on a 3.9% unemployment rate, and the Atlanta Federal Reserves GDP Nowcast estimated fourth quarter GDP growth at a robust 2.8%. However, with market attention focused on data indicating a potential Chinese economic slowdown, Chairman Powell’s reference to the Federal Reserve’s balance sheet normalization process being on “autopilot” may have generated further volatility in security pricing, particularly for equities. At this stage, year-end forecasts indicate a likelihood of two rate hikes in 2019 opposed to three as originally forecast earlier in the year. The turmoil in equity markets and uncertainty with respect to 2019 global growth has pushed market implied expectations for another rate increase at the FOMC March meeting down to zero according to data provided by CME.

While the odds of a recession occurring in 2019 remain low, leading indicators such as falling oil prices, a flattening yield curve, declining consumer confidence and a subdued housing market contributed to negative investor sentiment at year-end. The IMF lowered its 2019 growth forecasts for Asia from 5.6% to 5.4% during the quarter, citing trade tensions and evolving financial market stresses as the major drivers behind the decline. The ECB reported that Eurosystem staff lowered 2019 growth guidance for the Eurozone following disappointing growth numbers in the third quarter and tightening financial conditions, and the Federal Reserve lowered its 2019 growth guidance for the United States from 2.5% to 2.3%.

### Trailing Period Market Performance (%)

	QTD	CYTD	1 Year	5 Years	10 Years
S&P 500	-13.5	-4.4	-4.4	8.5	13.1
Russell 2000	-20.2	-11.0	-11.0	4.4	12.0
MSCI EAFE	-12.5	-13.8	-13.8	0.5	6.3
MSCI EAFE SC	-16.0	-17.9	-17.9	3.1	10.5
MSCI EM	-7.5	-14.6	-14.6	1.6	8.0
Bloomberg US Agg Bond	1.6	0.0	0.0	2.5	3.5
BofA ML 3Mo US T-Bill	0.6	1.9	1.9	0.6	0.4
Wilshire US REIT	-6.7	-4.6	-4.6	7.9	12.1
Bloomberg Commodity Index	-9.4	-11.2	-11.2	-8.8	-3.8

### Quarter-to-Date Performance (%)



## Key Economic Indicators

		As of	Q3 2018	Q2 2018	10 Year Average
Federal Funds Rate	2.40%	12/31/2018	2.18%	1.91%	0.41%
Treasury - 1 Year	2.57%	12/31/2018	2.59%	2.33%	0.59%
Treasury - 10 Year	2.72%	12/31/2018	3.05%	2.85%	2.52%
Treasury - 30 Year	3.04%	12/31/2018	3.19%	2.98%	3.34%
Breakeven Inflation - 1 Year	-2.73%	12/31/2018	1.18%	1.42%	0.84%
Breakeven Inflation - 10 Year	1.71%	12/31/2018	2.14%	2.13%	1.98%
Breakeven Inflation - 30 Year	1.84%	12/31/2018	2.16%	2.12%	2.15%
Barclays US Corp: Hi Yld Index - OAS	5.22%	12/31/2018	3.16%	3.63%	5.48%
Capacity Utilization	78.48%	11/30/2018	78.48%	77.46%	75.84%
Unemployment Rate	3.90%	12/31/2018	3.80%	3.80%	6.78%
ISM PMI - Manufacturing	54.10%	12/31/2018	61.30%	58.70%	53.82%
Baltic Dry Index - Shipping	1,271	12/31/2018	1,540	1,385	1,405
Consumer Confidence (Conf. Board)	128.10	12/31/2018	134.70	128.80	83.35
CPI YoY (Headline)	1.90%	12/31/2018	2.30%	2.90%	1.55%
PPI YoY - Producer Prices	1.40%	12/31/2018	3.70%	4.10%	1.47%
US Dollar Total Weighted Index	\$92	12/31/2018	\$90	\$90	\$81
WTI Crude Oil per Barrel	\$45	12/31/2018	\$73	\$74	\$73
Gold Spot per Ounce	\$1,281	12/31/2018	\$1,193	\$1,253	\$1,305

## Asset Class Commentary

### US Equity

Amid broadening macroeconomic concerns, US equity markets faltered during the fourth quarter as the S&P 500 Index posted returns of -13.5%, ranking within the top 15 largest quarterly drawdowns for the index since 1970. Despite a year-to-date return of 10.6% through September, fourth quarter losses drove total S&P 500 Index returns to -4.4% for the year, marking the first negative calendar year result for the index since 2008.

The surge in volatility was met with a shift in investor preference from momentum oriented stocks to bond-proxy and defensive segments. As a result, Utilities, Real Estate and Consumer Staples bested all other sectors in the index, marking a notable reversal from the previous leadership from the Technology, Consumer Discretionary, and Health Care sectors in the first nine months of the year. Consequently, low volatility and dividend-based factor indices outperformed their growth, high beta, and momentum factor counterparts. Outside of this broad trend, the quarter's marked decline in oil prices led to sharp losses in Energy as the S&P 500 Energy Index returned -23.8%, the largest loss across all sectors.

Active management results were mixed during the quarter. Value managers across styles and market capitalizations generally struggled due to persistent underweights in defensive, income-oriented sectors. Meanwhile, growth managers performed moderately better during the quarter, buoyed by exposure to

companies with strong secular earnings and revenue growth as many experienced more muted declines than the broader market.

### Non-US Equity

Developed international equity markets outperformed the US equity market, but still ended the fourth quarter with negative double-digit returns. Value broadly outperformed growth, bucking a long-term trend of growth stock leadership. Large cap stocks outperformed small cap stocks as well. The international equity sell-off was partially induced by volatility in the US market, but also driven by international economic tensions. For instance, Brexit-driven uncertainty continued to influence stock prices as did rioting in France in response to President Macron's fiscal agenda. Economic concerns also continued to rise in Europe due to a sharp decline in new manufacturing export orders and third quarter GDP growth of only 0.2%, the slowest pace seen in years.

The emerging markets were the best performing region for equities in the fourth quarter, but still finished the quarter and year in negative territory. For the second quarter in a row, value outperformed growth across most emerging market countries. In a notable trend difference compared to developed markets, emerging markets small cap stocks broadly outperformed the stocks of larger

companies. Regionally, one of the few bright spots in the emerging world was Brazil, where optimism grew after right-wing candidate Jair Bolsonaro won the presidential election. Despite this positive response, overall emerging markets investor sentiment still weakened due to continued fears of growth moderation in China. These fears not only stemmed from pessimism surrounding the ongoing trade war with the US, but were reflected in recent economic data as well. For example, in China, year-over-year import and export growth declined -8% and -4% in December, respectively, compared to growth of 37% and 11% at the beginning of 2018. Thus far, China is responding to the recent slowdown by stimulating the economy through both monetary and fiscal measures, however investor sentiment remains mixed.

### Fixed Income

The Bloomberg US Aggregate Index recouped losses from earlier in the year, returning 1.6% during the fourth quarter to end the year roughly flat. Yields of Treasuries with maturities of 1-year and less increased while the yields of Treasuries with maturities between 2- and 30-years fell. This movement caused an inversion at the front end of the yield curve with 1-year yields ending higher than 2-, 3-, 5-, and 7-year maturities. The yield spread between 2-year and 10-year maturities, a popular range often cited as a recession indicator, narrowed to just 0.21%, the lowest quarter-end value since the second quarter of 2007.

Credit spreads widened over the quarter, as investors sought the safety of Treasuries in the midst of elevated market volatility. Securities rated below investment grade were hit particularly hard in the fourth quarter, with the Bloomberg US High Yield Index returning -4.5% after an otherwise positive year. While the highest-rated corporate bonds finished the quarter in positive territory, the negative returns of the large BBB-rated segment were an overall drag on the Bloomberg US Corporate Investment Grade Index, which had a quarterly return of -0.2%.

Globally, developed market government debt ended the quarter positively amid ongoing political tension, including Italy's budget disputes, protests in France, and continued uncertainty surrounding Brexit. Non-dollar denominated emerging market debt also experienced positive returns during the quarter, led by a rebound in Turkish bonds after the release of an American pastor

and the subsequent lifting of sanctions by the US. The JPM GBI-EM Global Diversified Index returned 2.1% during the period, but still finished the year with negative returns of -6.2%.

### Diversified Hedge Funds

The hedge fund industry experienced its worst quarter since the third quarter of 2011 as measured by HFRI's Fund Weighted Composite Index, capping off a difficult year for the majority of hedge fund strategies with a return of -5.3%. Equity Long/Short ("ELS") funds in particular were a source of poor relative returns, with losses across this subset of managers wiping out all the alpha earned by this category in the prior three quarters of the year. Specifically, the HFRI Equity Hedge Index fell -8.3% for the quarter and finished the year with a return of -6.9%. The subset of ELS strategies that RVK follows closely produced better results than their broader peer group, though dispersion across managers and trading styles was especially high in the fourth quarter. Recent data from prime brokers indicate potential crowding in the equity hedge fund space, and momentum reversals were significant drivers of ELS underperformance during the quarter.

Across the Fund of Hedge Fund ("FoHF") universe, HFRI data indicate the average FoHF lost -4.4% during the fourth quarter, finishing the year down -3.5%. The FoHFs RVK tracks closely produced marginally better results than their broader universe, but still suffered losses for the quarter and the year with very few exceptions. Managers that had previously rotated away from traditional long biased ELS strategies and toward more market neutral and higher gross leverage strategies generally produced better fourth quarter results than those that maintained heavy ELS exposure. These higher leverage, market neutral strategies in the macroeconomic, quantitative, and fundamental stock picking spaces generally aided FoHF managers during the year, though few strategies were standouts in the fourth quarter specifically.

Multi-strategy managers generally produced better returns during the fourth quarter and for 2018 than their FoHF competitors. Many of the multi-strategy managers tracked by RVK ended the year with marginal gains, as merger arbitrage provided a reasonably good source of positive returns for the year, and most managers were also able to add additional value through credit and equity trading strategies.

As with most periods of heightened volatility, credit-oriented hedge fund strategies broadly experienced more muted losses than their equity-driven counterparts during the fourth quarter, due to lower levels of capital structure risk and a stronger focus on generating returns from income as opposed to asset price appreciation. Credit-oriented hedge funds also generally benefitted from a fairly low cost of hedging going into the fourth quarter due to compressed option-adjusted credit spreads for a range of higher-risk fixed income securities at the beginning of the quarter and the persistence of low interest rates relative to long-term historical levels.

### Global Tactical Asset Allocation (“GTAA”)

Most GTAA managers underperformed a less diversified blend of 60% US equity and 40% US fixed income in 2018, despite outperforming this benchmark in the fourth quarter. Performance varied widely across the manager universe in both 2018 and in the fourth quarter. In general, the GTAA managers that achieved the strongest 2018 performance held significant short exposures and fixed income allocations compared to those of their less successful counterparts. GTAA managers with significant US equity exposure also modestly outperformed peers in 2018, while most absolute return-oriented managers participated less significantly in market declines than did most long-oriented GTAA managers. The GTAA managers that lagged their peers by the largest margins in 2018 generally held heavier weights in global equities. However, a few strategies with large allocations to specific idiosyncratic positions fared the worst in 2018 by a wide margin. Examples of idiosyncratic positioning that significantly detracted in the fourth quarter include overweight allocations to equity in the European and US Financial sectors and significant fixed income exposure to countries such as Barbados, Russia and Argentina.

### Diversified Inflation Strategies (“DIS”)

Performance of DIS managers ranged widely in the fourth quarter, though virtually all managers provided losses in 2018. Poor DIS manager performance during the fourth quarter coincided with both declines in measured inflation and market-based expectations of future inflation levels. The Headline CPI decreased from 2.30% in September to 1.90% at year-end while 10-year Treasury break-evens, a market-based measure of future

inflation expectations, also declined over the quarter, dropping from 2.14% to 1.71%. Asset classes considered to be more economically sensitive, such as equities, also declined during the fourth quarter and finished with negative returns in 2018.

Two primary factors drove the dispersion in returns among DIS managers during both the fourth quarter and 2018. First, in a difficult year for riskier assets, managers with larger allocations to Treasury Inflation Protected Securities (“TIPS”) experienced significantly less downside participation. Second, among managers with lower levels of TIPS exposure, those with larger natural resource equity and commodity exposure lagged peers by the widest margins. Managers with larger REIT and Global Listed Infrastructure allocations did not participate as significantly in the poor performance of 2018.

### Real Estate

Core private real estate returned 1.8% during the fourth quarter (on a preliminary basis), as tracked by the NCREIF-ODCE Index, with the total return comprised of 1.0% income and 0.7% price appreciation. This represented a 31 basis point tick down over the prior quarter for the appreciation component of total return. While the income return component was lower, it remains in line with historical levels. Investors in publicly traded real estate significantly underperformed their private market counterparts during the fourth quarter. Publicly traded real estate experienced heightened price volatility over the quarter, ending the year with a negative total return, as measured by FTSE/NAREIT All REITs Index, of -6.1%.

In 2018, the commercial real estate market experienced moderating year-over-year transaction volume. However, many view the moderation in transaction volume as a healthy signal that the overall market is operating in an efficient manner. During the quarter, investors in private real estate took notice of the public market volatility and continue to evaluate the signals from the Federal Reserve. During the fourth quarter, the US 10-year Treasury crept above 3.0%, raising investor concerns about the potential impact on property valuations and future returns. By the end of the quarter, however, it ended near 2.7%, relieving some concerns about the potential negative impacts from increased borrowing costs and direction of capitalization rates.

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