

# HEDGE FUNDS AT A CROSSROADS

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## EXECUTIVE SUMMARY

In the last five years, hedge fund returns have been disappointing. The low volatility, low interest rate market environment, thought to have created a poor opportunity set, is often blamed for the return deterioration. While the returns of the 2009-2013 period may be strong enough for hedge funds to be considered for stand-alone inclusion in an institutional asset allocation mix, 2014-2018 returns may not qualify. On the other hand, excess returns of hedge funds compare favorably to the excess returns of long-only managers, even in the last five years, possibly indicating that hedge funds in a portable alpha framework may be a viable component of institutional asset allocation. The very low investor share ratios of hedge fund excess returns in recent years, however, may render even the portable alpha channel unattainable. As the cloud of artificially imposed abnormal market conditions starts to lift, hedge funds are at a crossroads. Going forward, they will need to deliver significantly higher returns.

## PRE-CRISIS

Hedge fund returns in the post-Global Financial Crisis (GFC) period have been generally below historical levels. In the last 10 years, hedge fund returns have significantly lagged the exceptionally high returns of the early 2000s and 1990s. With increased regulation and disruptions in market intermediation, the GFC ushered in a new era for hedge funds. In addition, the continuing emergence of institutions as major hedge fund investors caused a greater focus on risk management, compliance, and sound business and ethical practices that, while positive changes in themselves, may have had a negative impact on the level of returns.

## POST-CRISIS

It is too simplistic to lump all post-GFC hedge fund returns together, with no regard to specific time period and strategy type. In fact, the 10-year period that elapsed since the GFC, can be divided into two 5-year periods with distinctly different return characteristics. Similarly, hedge fund strategies with significant equity and credit beta exposure have performed differently than low beta strategies.

The 2009-2013 period started in the aftermath of the crisis, in the midst of significant market disruptions. Those disruptions,

widespread in equity, mortgage, credit and other markets, were available for monetization by hedge fund strategies for a number of years post-GFC. By the time the 2014-2018 period came about, however, they had already been mainly arbitrated away. Market volatility was also different across the two periods. While volatility was generally low by historical standards over the entire 10-year period, it was even lower during 2014-2018. As an example, the VIX equity volatility index averaged 22.0 with a standard deviation of 8.5 for the 2009-2013 period, while it only averaged 14.9 with a standard deviation of 4.3 in 2014-2018, calculated with daily data. The impact of lower market volatility on active returns, including those of hedge funds, is considered to be negative, as volatility tends to create valuation dispersion and enhances the opportunity set.

Among potential reasons for the volatility difference across the two 5-year periods, central bank policy appears to be very important. While the entire 10-year period was characterized by historically low interest rates, by 2014, markets were firmly convinced that global central banks were committed to doing whatever it takes to support risky assets. In the U.S., this effect was often characterized as “the Fed put,” meaning that the Fed’s policy represented effectively a put on the market, available for free to all market participants. Similarly, the ECB introduced and supported negative interest rates, also making investing in riskier assets attractive, in both return and risk terms. This environment of indiscriminate market support provided by global central banks created the proverbial tide that lifted all boats, suppressed fundamentals-based valuation discrimination and dispersion and, as a collateral effect, had a negative impact on active returns. As explained, this impact was felt much more in the second 5-year period.

## RETURN CHARACTERISTICS

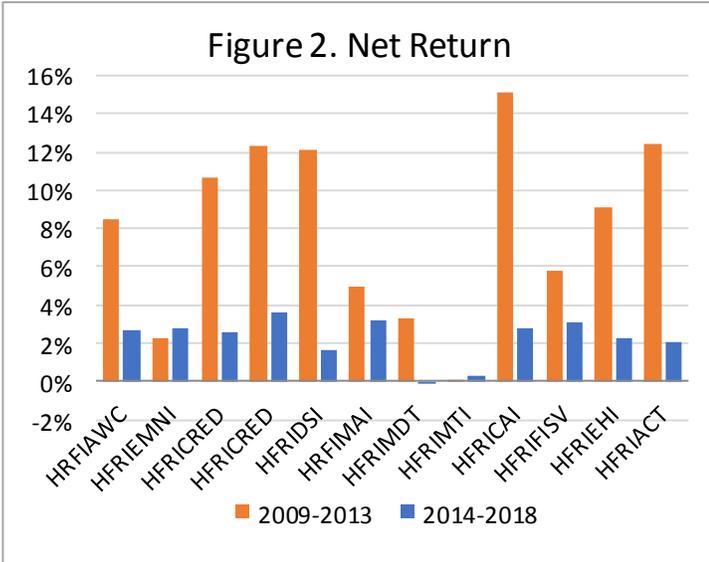
As a result, hedge fund returns experienced a significant drop during the second 5-year period. The annualized return of the HFRI Hedge Fund Asset Weighted Index was 8.46% and 2.63% for the 2009-2013 and 2014-2018 periods, respectively. Notably, 9 out of 11 HFRI hedge fund sub-indices, representing major hedge fund strategy types in HFR’s strategy classification, experienced a similar drop in returns across the two periods. Equity Market Neutral returns experienced a small rise and the CTA strategy was approximately flat across both timeframes. Figure 1 (following page) shows the HFR tickers for the strategies used.

**Figure 1. HFR Tickers**

Hedge Fund Strategy	HFR Ticker	Hedge Fund Strategy	HFR Ticker	Hedge Fund Strategy	HFR Ticker
Hedge Fund Asset	HFRIA WC	Distressed	HFRIDSI	Convertible Arbitrage	HFRICAI
Equity Market Neutral	HFRIEMNI	Merger Arbitrage	HFRIMAI	Fixed Income Arbitrage	HFRIFISV
Event Driven	HFRIEDI	Discretionary Global	HFRIMDT	Equity Long-Short	HFRIEHI
Credit Arbitrage	HFRI CRED	CTA	HFRIMTI	Activist	HFRIACT

Source: HFR

**Figure 2. Net Return**



**Figure 3. Volatility**

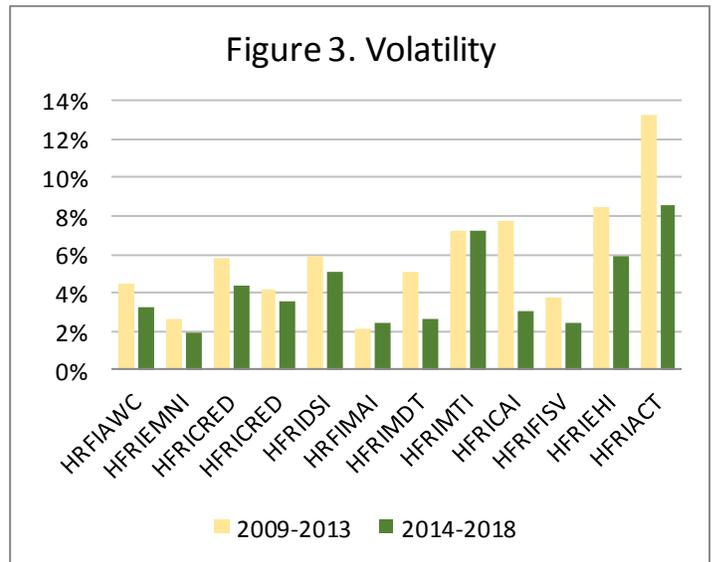


Figure 2 shows the returns for the indices mentioned above.

The volatility of hedge fund strategies, expressed as the annualized standard deviation of monthly returns, also dropped for the above indices. The volatility of the HFR Hedge Fund Asset Weighted Index was 4.46% and 3.20% for 2009-2013 and 2014-2018, respectively. Similarly, 9 out of 11 major hedge fund strategy indices experienced a significant volatility decline, with Merger Arbitrage seeing a small rise and the CTA strategy's volatility being approximately unchanged. Figure 3 shows the volatility data.

While lower volatility in itself is not a negative return attribute, in this case, it may be indicative of a poorer opportunity set and potentially less risk taken by funds.

Not surprisingly, Sharpe ratios also dropped nearly across the board. The Sharpe ratio of the HFR Hedge Fund Asset Weighted Index dropped from 1.87 to 0.62 across the two periods. While the Equity Market Neutral Index improved in Sharpe ratio terms, 10 out of the 11 major strategies saw a decline. Figure 4 shows the Sharpe ratio data.

**Figure 4. Sharpe Ratio**

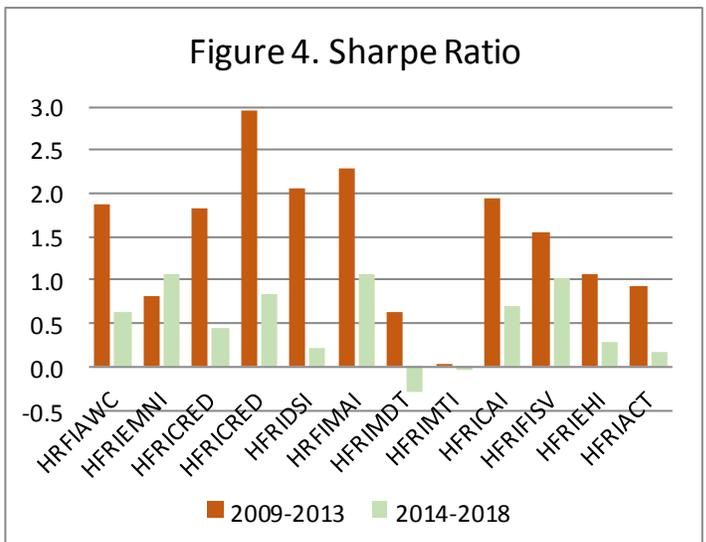


Chart Data Source: HFR, DCM

**DO HEDGE FUNDS BELONG IN AN INSTITUTIONAL ASSET ALLOCATION MIX?**

As mentioned, hedge funds are presently at a crossroads. As the Fed has now raised short-term interest rates to levels that can arguably be characterized as normal, US bond yields have risen from historically low levels and equity volatility has returned, the argument of low dispersion and a poor opportunity set impeding hedge fund returns has been materially weakened. So, the high-level answer to the question posed in this paragraph's heading is that hedge funds now must produce returns consistent with expectations to retain and continue to attract institutional capital. As the burden of low volatility and central bank-induced financial repression goes away, there would be no more excuses for unacceptable performance.

**STAND-ALONE ALLOCATION VERSUS PORTABLE ALPHA**

There are nuances to the general answer provided in the previous section. Clearly, hedge fund performance over the last five years does not support inclusion even in an asset allocation mix with a return target as modest as in the mid to low single digits. This view would not change even after considering risk efficiency. An overall index Sharpe ratio of 0.4 over the last 5 years would not have been strong enough to make subpar returns attractive on a risk-adjusted basis.

If hedge funds do not have strong enough returns for inclusion as a stand-alone structural component of an asset allocation scheme, would they be acceptable for a portable alpha program? We will address the question comparing hedge fund excess returns to those of long-only managers.

**LONG-ONLY COMPARISON**

Portable alpha consists of combining an instrument with full sensitivity to a market beta, such as futures or other derivatives linked to a market index, with a portfolio of hedge funds. The derivatives should not require any significant upfront capital contribution and would thus allow for the funding of the hedge fund portfolio. In that construct, hedge fund excess returns (above the funding rate of derivatives) represent the alpha component of the portfolio return and derivative returns that of beta. We performed a simple exercise to examine how hedge funds might have performed in a portable alpha framework over the most recent 10-year period. In the exercise, we conservatively applied only 80% of the portfolio capital to hedge funds, in order to account for margin requirements, liquidity needs and other types of friction. We used the HFRI Hedge Fund Asset Weighted Index excess returns over T-bills, scaled by 80% as mentioned. We considered those returns comparable to the excess returns of a long-only portfolio, over its benchmark. We then compared the hedge fund alpha to the excess return of four universes of long-only strategies, as reported by eVestment. The four strategies used were US Large Cap Equity, US Small Cap Equity, Global Equity and US Core Fixed Income.

Figure 5 shows the comparison of the hedge fund-based strategy excess returns to the long-only top quartile and median values for both excess return level and information ratio. Note that in the case of hedge funds, Sharpe and information ratios are the same, since the implicit benchmark for absolute return strategies is the risk-free rate itself.

**Figure 5. Hedge Fund Excess Return and Selected Long-Only Quartile Data**

	5-Year Annualized Excess Return				10-Year Annualized Excess Return			
	US Large Cap Equity	US Small Cap Equity	Global Equity	Core Fixed Income	US Large Cap Equity	US Small Cap Equity	Global Equity	Core Fixed Income
Median	-0.42%	0.66%	0.30%	0.27%	-0.01%	1.80%	0.62%	0.89%
Q1	0.52%	1.99%	1.57%	0.56%	0.89%	3.01%	1.87%	1.46%
Hedge Fund-based	1.60%	1.60%	1.60%	1.60%	4.11%	4.11%	4.11%	4.11%
	5-Year Information Ratio				10-Year Information Ratio			
	US Large Cap Equity	US Small Cap Equity	Global Equity	Core Fixed Income	US Large Cap Equity	US Small Cap Equity	Global Equity	Core Fixed Income
Median	-0.13	0.15	0.11	0.59	0.00	0.37	0.21	0.97
Q1	0.18	0.48	0.50	1.07	0.25	0.60	0.52	1.28
Hedge Fund-based	0.62	0.62	0.62	0.62	1.30	1.30	1.30	1.30
As of 12/31/2018								
Source: HFR, eVestment, DCM								

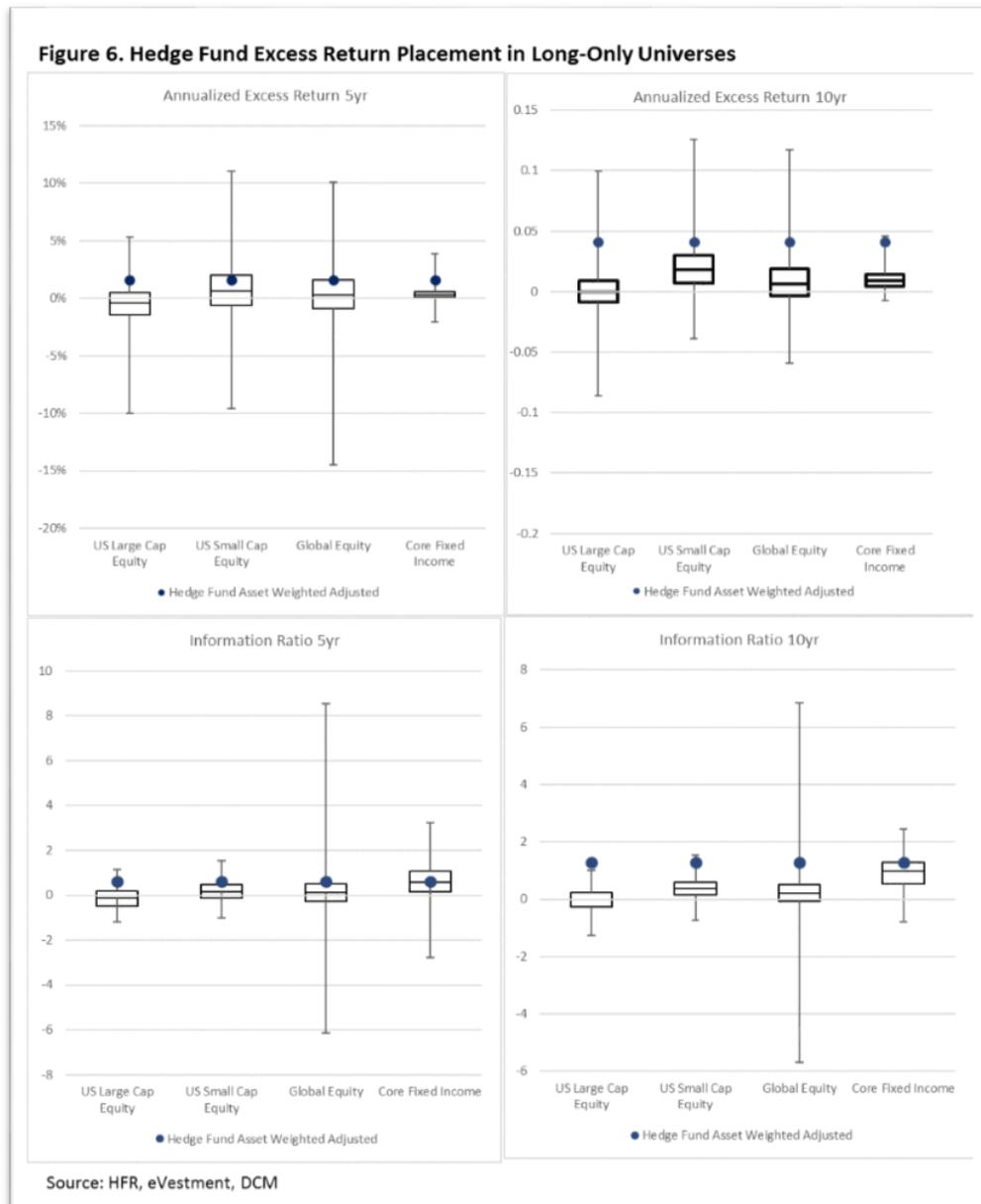
Results show that for the 10-year period, hedge fund-based excess returns place in the top quartile for all four long-only strategies. Hedge fund information ratios also rank in the top quartile in the four long-only universes as well.

For the 5-year period, hedge fund excess returns place in the top quartile for three of the four universes, placing in the second quartile of the US Small Cap Equity universe. Information ratio ranks in the top quartile for three of the universes, ranking in the second quartile of Core Fixed Income managers. Figure 6 shows a graphical representation of the quartile placement of hedge fund returns.

Interpreting the results, we can conclude that hedge fund returns, as expressed by the HFRI Hedge Fund Asset Weighted

Index, have performed as a top quartile long-only manager in excess return and information ratio terms, in both 5- and 10-year timeframes for the long-only strategies examined. The 5-year universe comparison is favorable despite the hedge fund return deterioration of the last five years.

A couple of points suggest this analysis understates hedge fund performance. First, since the use of hedge fund indices reflects average manager performance, hedge fund portfolios with above average results would rank higher in the universes of long-only managers. In addition, while long-only manager performance is reported by eVestment in gross terms, hedge fund returns in our analysis are net of fees. Hedge funds would compare more favorably in an “apples-to-apples” comparison.



**INVESTOR RETURN SHARE**

There is an additional attribute of hedge fund returns, however, that may diminish their attractiveness, even in a portable alpha framework. While investors usually look at hedge fund returns in net terms, they are typically mindful of their fee and cost structure. ERISA and Public funds, in particular, have legal and regulatory obligations to be fee sensitive. A helpful measure in assessing the relative burden of hedge fund fees is the Excess Return Investor Share ratio (ERIS ratio). This is the ratio of net over gross excess return, which effectively measures the portion of the gross return captured by the investor.

We calculated ERIS ratios for the HFRI overall index, as well as for the 11 major strategies, by estimating gross excess returns using average strategy fee data we compiled from consultant

and capital introduction sources. Figure 7 shows ERIS ratios for all indices for the two most recent 5-year periods.

In the 2009-2013 period, the overall index and most strategies were in the 65%-75% range. Exceptions were Equity Market Neutral at 48%, Discretionary Global Macro at 57% and the CTA strategy at 1%, with the last reflecting the general malaise that has plagued that strategy.

Not surprisingly, all ERIS ratio values dropped in the 2014-2018 time period, as a result of the drop in excess returns. The overall index and most strategies scored in the 36%-59% range. Discretionary Global Macro and the CTA strategy had negative excess returns for the period and their ratio was not calculated.

The overall 70% investor share ratio of 2009-2013 returns may arguably be satisfactory. Investors, however, would probably find the 2014-2018 return share ratio of below 50% unacceptable and unsustainable. Investors who may otherwise find hedge fund returns usable in a portable alpha framework may be discouraged by this concern. Of course, the real issue is not the ERIS ratio itself but the level of returns. If returns improve, investor share ratios would improve as well. The investor return share issue is further evidence that hedge funds are at a crossroads. Hedge fund managers have referred to the low volatility, poor opportunity environment of recent years as a reason for their inability to produce alpha. As the burden of these impediments to active investing lessens, hedge funds need to drastically improve their returns in the near to intermediate term to justify their fees and inclusion in institutional portfolios.

**Figure 7. Investor Excess Return Share Ratio (ERIS Ratio)**

HFRI Index	2009-2013	2014-2018	Change
Hedge Fund Asset Weighted	69.58%	47.18%	-22.40%
Equity Market Neutral	48.08%	45.96%	-2.13%
Event Driven	71.63%	46.59%	-25.04%
Credit Arbitrage	73.57%	55.73%	-17.84%
Distressed	73.88%	35.68%	-38.20%
Merger Arbitrage	68.53%	58.92%	-9.61%
Discretionary Global Macro	57.01%		
CTA	1.35%		
Convertible Arbitrage	72.84%	45.64%	-27.21%
Fixed Income Arbitrage	65.95%	52.22%	-13.73%
Equity Long-Short	69.11%	41.51%	-27.60%
Activist	71.82%	38.88%	-32.94%

Source: HFR, DCM



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