



# Where's the Hedge in Hedge Funds?

By Nathan Barnard

In 1952, Harry Markowitz published his seminal paper, *Portfolio Selection*, proving mathematically what had been understood for centuries: the benefits of diversification. As the merchant Antonio says in Shakespeare's *The Merchant of Venice*:

*My ventures are not in one bottom trusted,  
Nor to one place; nor is my whole estate  
Upon the fortune of this present year:  
Therefore my merchandise makes me not sad.*

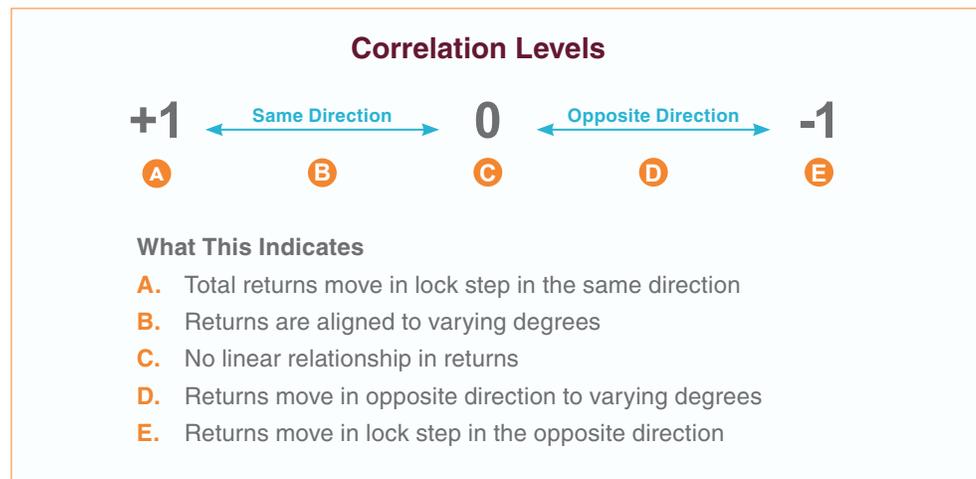


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Nathan is an Investment Research Analyst in LNWM's Investment Strategy & Research group. He specializes in alternative investments and has more than a decade of experience sourcing and analyzing investment strategies across all major asset classes.

Unfortunately, Antonio was not nearly as diversified as he thought he was.

At LNWM, we try as much as possible to create truly diversified portfolios by including a wide variety of investments, including hedge funds. How do we gauge diversification? A major consideration is correlation, which is the extent to which two assets' returns are aligned. The diagram below shows general levels of correlation. Markowitz proved mathematically that assets with correlation less than +1 enhance portfolio diversification.



We view hedge funds as a unique tool in constructing more diversified portfolios to achieve better risk-adjusted returns over a full market cycle. It's worth noting that we don't think of hedge funds as a "hedge" to traditional asset classes. A hedge is analogous to insurance – it reduces risk in a portfolio in exchange for a premium. For example, to hedge a portfolio of stocks, you could buy put options, which are designed to gain in value when stocks fall below a specific level. By definition, a hedge has a correlation that is negative.

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## Correlation in Returns between Large US Equities and Other Asset Classes (1990 - Nov. 2018)

Asset Class		Correlation Levels		
		Overall Correlation to US Large-Cap Equity	Up Market Correlation to US Large-Cap Equity	Down Market Correlation to US Large-Cap Equity
Traditional Asset Classes	US Large-Cap Equity	1.00	1.00	1.00
	US Small-Cap Equity	0.84	0.61	0.74
	International Developed Equity	0.75	0.52	0.70
	International Emerging Equity	0.78	0.55	0.71
	US Bonds	0.10	0.11	0.04
	High Yield	0.62	0.33	0.60
	REITs	0.56	0.28	0.53
	Cash	0.00	0.10	-0.02
Hedge Fund Strategies	<b>Equity Hedge</b>	0.76	0.51	0.66
	Equity Hedge - Market Neutral	0.29	0.20	0.18
	Equity Hedge - Sector - Tech/Healthcare**	0.63	0.37	0.50
	Equity Hedge - Sector - Energy <sup>+</sup>	0.50	0.33	0.33
	<b>Event Driven</b>	0.72	0.35	0.69
	Event Driven - Credit Arbitrage*	0.66	0.42	0.65
	Event Driven - Distressed Securities	0.54	0.11	0.58
	Event Driven - Merger Arbitrage	0.53	0.20	0.48
	<b>Macro</b>	0.33	0.17	0.16
	Macro - Discretionary*	0.67	0.55	0.38
	Macro - Systematic	0.38	0.30	-0.08
	<b>Relative Value</b>	0.53	0.22	0.53
	Relative Value - Asset-Backed <sup>†</sup>	0.18	-0.08	0.29
	Relative Value - Convertible Arbitrage	0.49	0.38	0.44
	Relative Value - Volatility*	0.37	0.00	0.43

\*Historical returns as of 1/1/2008. \*\*Historical returns as of 1/1/1991. †Historical returns as of 1/1/1993. +Historical returns as of 1/1/1995.

Source: HFRI, Morningstar.

By contrast, the strategies used by hedge funds have varying levels of **positive** correlation to the stock market (between 0 and +1). Please see the table above. It shows correlation in returns relative to US large-cap stocks for traditional assets (different types of stocks, bonds, etc.) and also for various types of hedge fund strategies since 1990. In addition, the last two columns show correlations during periods when US stocks were up and when stocks were down. As you can see, hedge funds have had different levels of positive correlation with the US stock market, so they add another layer of diversification than bonds, which historically have had the lowest correlation to stocks outside of cash.



## Levels of Equity Market Exposure

While hedge fund strategies vary widely, they can be grouped into four major types: Equity Hedge, Event Driven, Macro and Relative Value (see box on right). Within these categories there are further sub-strategies, a few of which are listed in the table on the previous page. Not surprisingly, the strategies with higher net exposure to equities tend to have higher correlation to equity markets.

As the table on the previous page shows, Equity Hedge strategies have had the highest correlation to large US stocks, at 0.76. This provides some diversification, but maybe not much more than foreign stocks in developed markets (International Developed Equity), which had a correlation of 0.75.

However, take a look at the sub-strategy Equity Market Neutral, which had a correlation of just 0.29. Much of the difference is due to portfolio construction: Equity Market Neutral funds aim to have zero exposure to the stock market by balancing their long positions (purchases of stock outright) with their short positions (selling stocks short). Many other funds in this category, however, do have substantial exposure to the stock market, usually net long.

Within Event Driven, the sub-strategy Merger Arbitrage matches long with short positions in the stocks of companies taking part in mergers and acquisitions, thus reducing the correlation to equity markets. By contrast, Credit Arbitrage strategies usually have net long positions in US corporate debt, which has a moderately high correlation with US equities.

The Macro and Relative Value strategies tend to be less heavily invested in equities, reflected in their lower correlation levels. Macro invests across equities, fixed income, currencies and commodities both long and short, while Relative Value strategies aim to profit from deviations in the relationships between securities.

**If hedge funds aren't an overt hedge, do they at least perform well when equities do poorly?** As it turns out, hedge fund correlation to equities tends to increase during poor stock market performance, which is the opposite of what

## 4 Major Hedge Fund Strategies

- **Equity Hedge** – The oldest and most common strategy. Managers in this category generally buy stocks (go long) and/or sell stocks short. There are wide differences among funds as to levels of net market exposure, investment process (fundamental or quantitative), amount of leverage, holding period and areas of expertise.
- **Event Driven** – On the radar are companies that are, or likely to be, involved in a merger, buyout, restructuring, bankruptcy, tender offer, debt exchange or any other type of corporate transaction. A common approach is Merger Arbitrage, in which the fund attempts to capture the spread in pricing before and after a merger.
- **Macro** – Complex strategies that attempt to profit from changes in global macroeconomic conditions. Investments can be in equities, fixed income, currencies, or commodities and include both long and short exposures, as well as options, futures, forwards and other forms of derivatives. Decision-making can be strictly quantitative (known as “systematic”), it can be “discretionary” or a mix of both.
- **Relative Value** – Although all types of markets can be involved, the underlying goal is the same: to profit from price discrepancies in securities that are related somehow – convertible bonds and stock issued by the same company; shares of two companies in the same sector; two bonds issued by the same company but with different maturity dates and/or coupons.



a true “hedge” should do. Looking at the last two columns of the table from page 2, we can see that hedge fund correlations to equities tend to be higher when equities go down than when equities go up.

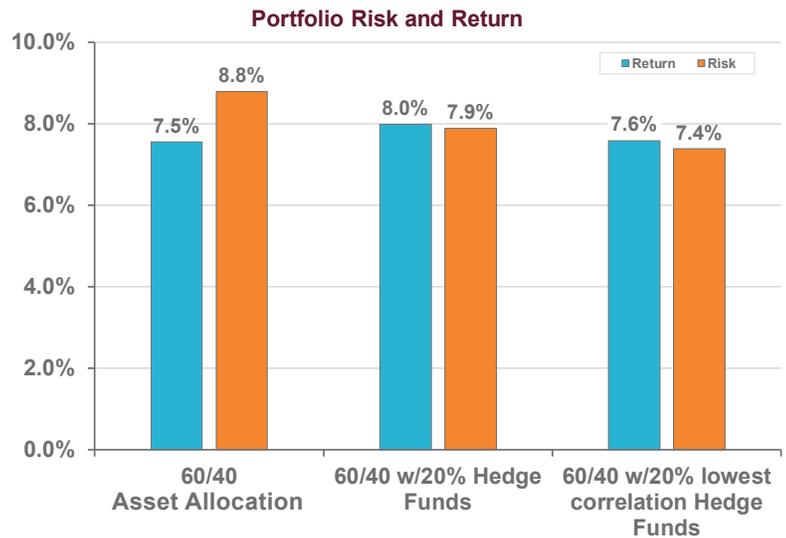
## LNWM's Approach to Hedge Funds

Over longer periods of time, adding hedge funds to a portfolio can lower risk without sacrificing return. The chart at right shows results for adding a 20% position in hedge funds equally (across all four major strategies) for the time period Jan. 1990 to Nov. 2018 (keeping stock/bond proportions the same).

During this time period, the addition of hedge funds would have lowered overall risk and increased return. More interesting: with perfect hindsight, we could have chosen the lowest-correlation hedge fund sub-strategies. The results for this hypothetical portfolio are shown in the far right of the chart: roughly the same return as a 60/40 portfolio but with significantly less risk.

Granted, the above results are historical, and what we care about is returns and correlations in the future. During the past decade, overall hedge fund returns have declined and correlations with equities have increased as more money has flowed into hedge funds and many managers in this space are pursuing similar strategies. However, overall, hedge funds continue to offer different sources of return than a traditional portfolio of stocks and bonds, based on the additional strategies they have at their disposal and how well those are executed.

**Bottom Line:** We view portfolio construction as a balancing act between risk and return, with the level of correlation among investments as the fulcrum. The varying levels of correlation provided by hedge funds allow us to increase portfolio diversification, giving us a better chance to attain the twin goals of (1) lowering overall risk (2) without sacrificing long-term return. ■



\*Basic 60/40 portfolio consist of 60% Equities and 40% Fixed Income. Please see Disclaimer at the end for specifics on types of equities, fixed income and hedge fund indexes used to create these hypothetical portfolios. Risk is measured by the standard deviation of return.

Source of Data: HFR Inc., Morningstar.



## ABOUT THE AUTHOR

**NATHAN BARNARD** is an Investment Research Analyst within Laird Norton Wealth Management's Investment Strategy and Research Group. He is responsible for analyzing developments in alternative assets, including hedge funds and private equity, and providing recommendations to LNWM's Chief Investment Officer, as well as conducting ongoing due diligence and monitoring of asset managers, including mutual funds, separately managed accounts and limited partnerships. Nathan is a Chartered Financial Analyst® (CFA®) and has a Bachelor's degree in finance from the University of Colorado. He has more than a decade of experience conducting investment research and analysis, asset manager due diligence and the sourcing and analysis of investment strategies

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## DISCLOSURE

Hypothetical portfolio allocation definitions:

**60/40:** 40% Russell 1000 Index; 20% MSCI EAFE Index; 40% Bloomberg Barclays US Aggregate Bond Index.

**60/40 w/20% Hedge Funds:** 80% 60/40; 5% HFRI Equity Hedge Index; 5% HFRI Event-Driven Index; 5% HFRI Macro Index; 5% HFRI Relative Value Index

**60/40 w/20% Lowest Correlation Hedge Funds:** 80% 60/40; 5% HFRI EH: Equity Market Neutral Index; 5% HFRI ED: Merger Arbitrage Index; 5% HFRI Macro: Systematic Diversified Index; 5% HFRI Relative Value Index: Fixed Income – Asset Backed Index.

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