

BULLSEYE

Highlights

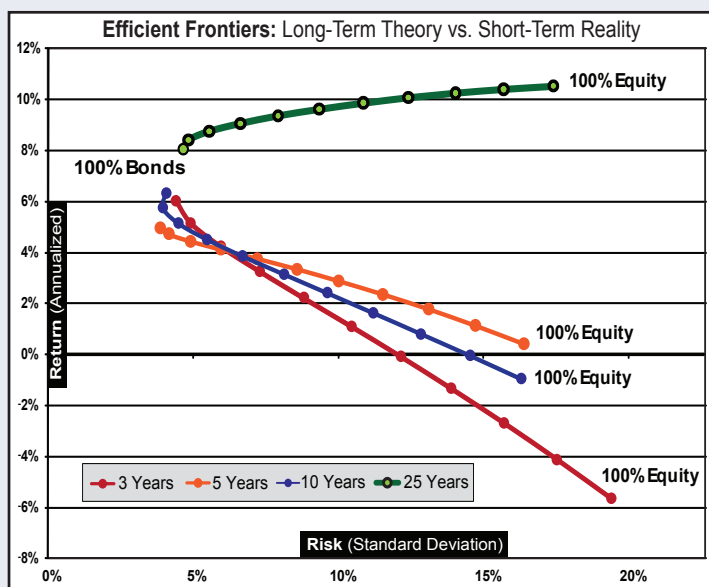
Correlation

The term “correlation” is used a lot these days, but what does it really mean? In the world of investing, correlation is the statistical measurement of two or more securities’ price movements in relation to one another, or to a benchmark. But perhaps it’s better to think of correlation in plain English—how closely related are the actions of seemingly different things? Correlation tries to answer this question.

In the mid 1950s, Nobel Prize winning economist Harry Markowitz developed an idea that became known as Modern Portfolio Theory which focused on the concept of achieving diversification by combining multiple assets. The idea was to combine stocks and bonds, which historically behave differently from one another, thus smoothing out the bumps. But is that always the case? The image to the right shows a long-term 25 year “Efficient Frontier” (1985-2009) of combining stocks and bonds. In contrast, the graph also shows the same combinations over shorter time periods of 3, 5 and 10 years through 2009. This illustrates how theories based on long-term averages can differ from shorter-term reality.

In the 1960s and 1970s, it became popular for investors to apply Markowitz’s theories by combining stocks and bonds. Unfortunately, U.S. stocks and bonds often had spikes in their correlation, especially during that period of social and economic unrest. So in the 1980s, international stocks became the next big trend. But the world’s economies became increasingly globalized with the introduction of new technologies and improved means of communication (e.g., the internet). Correlations between domestic and international companies have been on the rise ever since.

Finally, after the global “dot com” bubble burst from 2000 to 2002, investors began to rely on less traditional asset classes such as real estate, precious metals and other commodities. Unfortunately, even these historically noncorrelated asset classes displayed extremely high periods of correlation by the end of the decade.



How is Correlation Measured?

In finance, correlation is measured using a technical calculation known as the *correlation coefficient*. The price movements of investments are measured against a benchmark and a score is assigned on a scale ranging from 1.0 to -1.0.

A correlation score of 1.0 is considered to be 100% perfectly correlated because the investment’s results are identical to the benchmark.

A score of -1.0 reflects perfect inverse correlation. In other words, when one investment goes up, the other always goes down.

A score that falls in the middle at 0.0 is said to be perfectly noncorrelated because the price movements appear to be completely independent from the the benchmark.

Each of these three hypothetical scores represents a perfect scenario. In the real world, actual investments generally fall somewhere in between and often move around on the scale.

Perhaps searching for the optimal diversification blend is a fool's errand because asset classes rarely seem willing to cooperate. The only consistent thing about correlations is that they are constantly changing. Markowitz based his research on long-term averages, but short-term correlations tell quite a different story.

The table to the right shows the historical rolling 12-month correlations of various asset classes vs. the S&P 500. The data shows shorter time periods having higher correlations than their longer-term averages might have initially indicated.

Increasing Correlations: Rolling 12-Month Averages vs. S&P 500

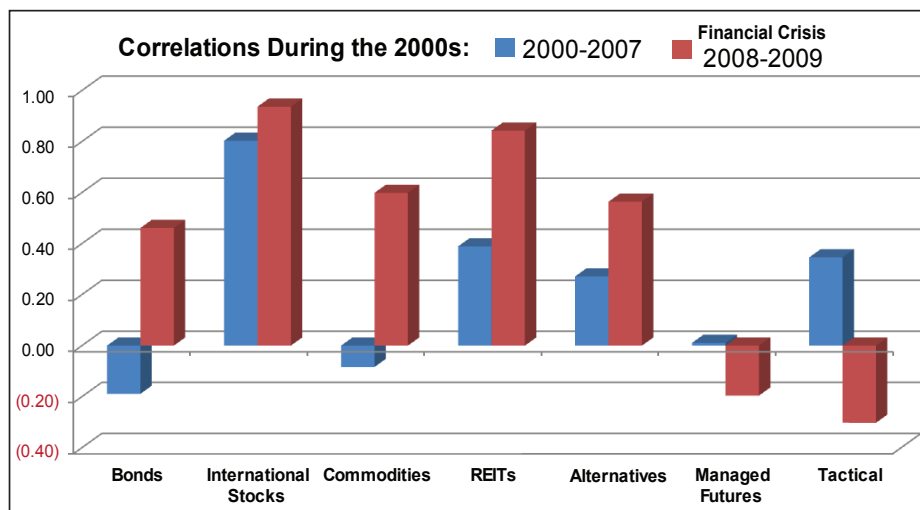
As of 6/30/2010		1 Yr	3 Yr	5 Yr	10 Yr
Long-Only	Bonds	0.282	0.070	0.026	(0.088)
	International Stocks	0.913	0.861	0.788	0.824
	Commodities	0.517	0.323	0.148	0.047
	REITs	0.832	0.763	0.686	0.466
Long/Short	Alternatives	0.680	0.547	0.623	0.332
	Managed Futures	0.350	0.017	0.103	(0.007)
	Tactical	0.206	0.228	0.397	0.290

There's an old saying: *"The only thing that goes up in a down market is correlation."* Portfolios based on long-term correlation data would have seemed to be fairly well positioned throughout the majority of the last decade. But during the Financial Crisis of 2008-09, there was a clear spike in correlations across each of the traditional "buy & hold" long-only asset classes. Of those, only Bonds showed positive performance with annualized returns of 5.58%. On the other hand, long/short and tactical investments held their ground. A blend of long/short Alternatives continued to add value despite an increase in correlation, losing an average of less than 1%. Managed Futures and the Tactical model both reduced their correlation while also posting positive annualized returns of 10.13% and 0.66%, respectively. Perhaps this is not unexpected, since managed futures and tactical strategies are typically designed to adapt to the market environment.

This illustration shows the difference in correlations across asset classes relative to the S&P 500 Index for the 2000s decade.

The Blue Bars show the correlation during the first eight years of the decade (2000-2007).

The Red Bars show the correlation during the 2008-2009 Financial Crisis.



Conclusion: Achieving true diversification is not only about what you own, but also what you do with it. Market volatility is difficult to avoid with a "buy & hold" long-only approach, especially when correlations spike. As the illustration above shows, long/short and tactical strategies have proven to be an effective way to help reduce the impact of correlation swings, while offering the potential for positive returns in difficult market environments.

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