Serving Up Diversification

When Assets are More Correlated than Expected

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For decades the financial industry has promoted diversification as the most logical, prudent way to maximize returns and minimize risk. However, in order to truly reap the benefits of diversification, a strategic investment plan must be implemented correctly.

Without proper implementation, diversification will likely not yield its purported benefits.

Diversification Strategies: Tried, But Perhaps Not So True…

For many investors, diversification meant investing across a wide array of investment styles or asset classes. Frequently some sort of optimization algorithm was utilized to maximize the trade-off between expected returns and expected risks. Lynchpin to this approach is the key role that correlation plays in the equation. The benefits of diversification are realized only if the investments truly behave differently from one another.

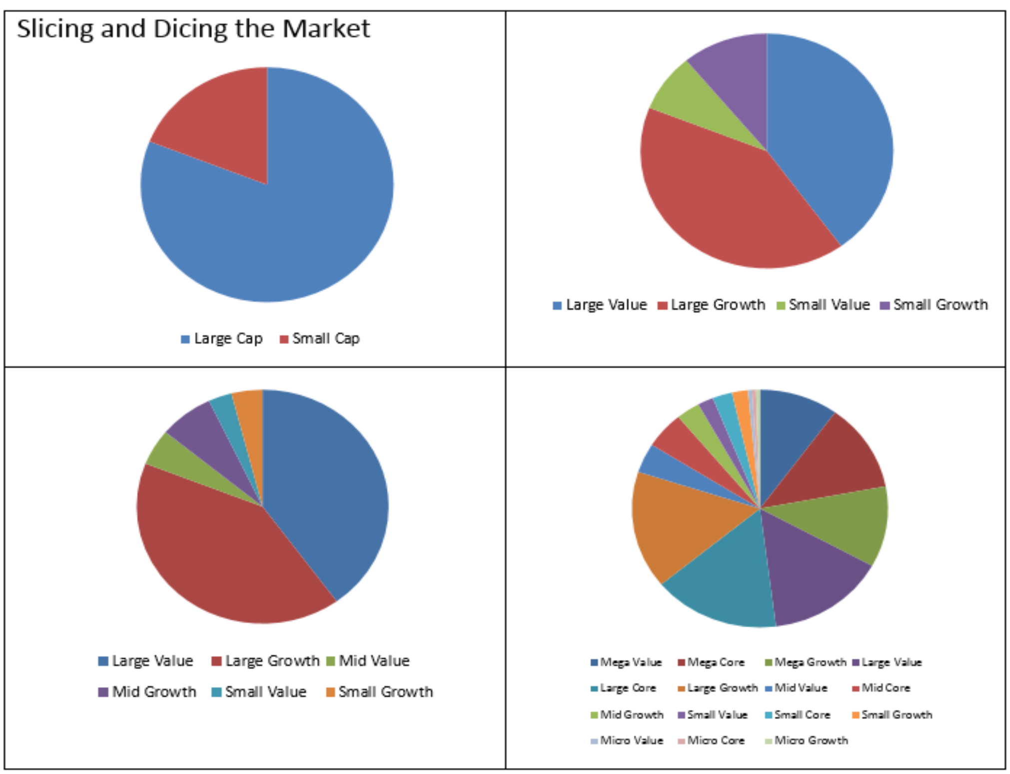
Unfortunately, many investors pursued “false diversification”, or a diversification strategy that involved simply ‘slicing and dicing’ the market.

False Diversification

One widely followed form of false diversification was to slice up the market into smaller and smaller pieces while neglecting to move the eggs out of the proverbial basket.

As the chart below displays, initially, investors divided equity markets into large cap and small cap “styles”. Next, a value and growth distinction was made. Eventually, the concepts of mid-cap and core were added to the style mix.

Splitting the hairs even further, concepts like mega-cap, micro-cap, “SMID”-cap, deep value, relative value, growth-at-a-reasonable-price, and momentum-growth were all incorporated into the concept of diversification. However, none of these styles were truly new assets: *they were simply smaller slices of the same pie.*



Source: Swan Global Investments

Real Portfolio Diversification Requires a Lack of Correlation

As noted above, true diversification is achieved when two or more investments exhibit different responses to market moves.

The table below shows how highly correlated all of these styles, or slices of the market pie, are to one another. Correlations between +0.80 and +0.90 are highlighted in yellow, between +0.90 and +0.95 in orange and above +0.95 in red.

No two styles have correlations less than +0.80, severely limiting the diversification potential of these investments.

Style Correlations

January 2005 - December 2014

	1	2	3	4	5	6	7	8	9	10	11	12
1) Russell Top 200	1.00	0.97	0.98	0.94	0.92	0.94	0.90	0.88	0.89	0.88	0.85	0.86
2) Russell Top 200 Growth	0.97	1.00	0.90	0.93	0.94	0.90	0.87	0.88	0.84	0.85	0.85	0.81
3) Russell Top 200 Value	0.98	0.90	1.00	0.91	0.86	0.93	0.88	0.84	0.89	0.86	0.82	0.87
4) Russell Midcap	0.94	0.93	0.91	1.00	0.99	0.99	0.95	0.95	0.93	0.93	0.92	0.91
5) Russell Midcap Growth	0.92	0.94	0.86	0.99	1.00	0.95	0.94	0.95	0.89	0.91	0.92	0.87
6) Russell Midcap Value	0.94	0.90	0.93	0.99	0.95	1.00	0.95	0.93	0.95	0.93	0.90	0.93
7) Russell 2000	0.90	0.87	0.88	0.95	0.94	0.95	1.00	0.99	0.99	0.99	0.96	0.97
8) Russell 2000 Growth	0.88	0.88	0.84	0.95	0.95	0.93	0.99	1.00	0.95	0.97	0.98	0.94
9) Russell 2000 Value	0.89	0.84	0.89	0.93	0.89	0.95	0.99	0.95	1.00	0.97	0.93	0.99
10) Russell Microcap	0.88	0.85	0.86	0.93	0.91	0.93	0.99	0.97	0.97	1.00	0.98	0.98
11) Russell Microcap Growth	0.85	0.85	0.82	0.92	0.92	0.90	0.96	0.98	0.93	0.98	1.00	0.93
12) Russell Microcap Value	0.86	0.81	0.87	0.91	0.87	0.93	0.97	0.94	0.99	0.98	0.93	1.00

Between 0.80 and 0.90
Between 0.90 and 0.95
Over 0.95

Investors with assets across each of these "styles" probably felt great when markets were going up and likely assumed diversification was working as advertised. But the simple and neglected truth was that if everything was going up at the same time, they would very likely all go down at the same time. And of course, that's exactly what happened.

Even investors who moved into other asset classes like international stocks, emerging market stocks, high yield bonds, real estate, and commodities saw those investments plunge in lock-step with their US equity investments during the 2008 crisis. When portfolio diversification was needed most, the correlations spiked. The two tables below display how correlations shifted from their long-term averages during the crisis of 2008:

Long-Term Correlation Matrix: January 1988 - July 2007

	1	2	3	4	5	6
1) Russell 3000	1.00	0.62	0.61	0.52	0.41	-0.08
2) MSCI EAFE Index	0.62	1.00	0.58	0.35	0.25	0.01
3) MSCI Emerging Markets	0.61	0.58	1.00	0.43	0.30	0.04
4) Barclays U.S. Corp High Yield	0.52	0.35	0.43	1.00	0.44	-0.11
5) FTSE Nareit All REITs	0.41	0.25	0.30	0.44	1.00	-0.10
6) S&P GSCI	-0.08	0.01	0.04	-0.11	-0.10	1.00

Crisis Correlation Matrix: August 2007 - February 2009

	1	2	3	4	5	6
1) Russell 3000	1.00	0.92	0.83	0.75	0.86	0.59
2) MSCI EAFE Index	0.92	1.00	0.94	0.73	0.74	0.63
3) MSCI Emerging Markets	0.83	0.94	1.00	0.75	0.62	0.69
4) Barclays U.S. Corp High Yield	0.75	0.73	0.75	1.00	0.70	0.50
5) FTSE Nareit All REITs	0.86	0.74	0.62	0.70	1.00	0.41
6) S&P GSCI	0.59	0.63	0.69	0.50	0.41	1.00

Less than 0.50
Between 0.50 and 0.70
Between 0.70 and 0.80
Between 0.80 and 0.90
Over 0.90

Source: Zephyr StyleADVISOR

The dampening of a portfolio's overall volatility is only possible if the constituents of a portfolio have low or, ideally, negative correlations. In a follow-up blog post, we will explore the mathematical underpinnings of correlation. Suffice it to say, a well-constructed diversification strategy should have losses in one portion of the portfolio offset by gains in another.

How are you serving up portfolio diversification for your clients?

Swan Global Investments' Defined Risk Strategy (DRS) was designed to be a better way to implement diversification. The DRS is composed of three components: equity, hedge, and income. The hedge, implemented via put LEAPS, is negatively correlated to the direction of the equity portion. The income generated by the sale of option premium is designed to be market-neutral and uncorrelated to the market's direction. For a more thorough discussion of how the DRS seeks to diversify its sources of return click here.

About the Author

Marc Odo, CFA®, CAIA®, CIPM®, CFP®, Client Portfolio Manager, is responsible for helping clients and prospects gain a detailed understanding of Swan's Defined Risk Strategy, including how it fits into an overall investment strategy. Formerly, Marc was the Director of Research at Zephyr Associates for 11 years.

Important Notes

The Russell Top 200® Index measures the performance of the largest cap segment of the U.S. equity universe. The Russell Top 200 Index is a subset of the Russell 3000® Index. It includes approximately 200 of the largest securities based on a combination of their market cap and current index membership and represents approximately 68% of the U.S. market.

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The Russell Top 200® Value Index measures the performance of the especially large cap segment of the U.S. equity universe represented by stocks in the largest 200 by market cap that exhibit value characteristics. It includes Russell Top 200 companies that are considered more value oriented relative to the overall market as defined by Russell's leading style methodology.

The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell Midcap Index is a subset of the Russell 1000® Index. It includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership.

The Russell Midcap Growth Index measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell Midcap Index companies with higher price-to-book ratios and higher forecasted growth values.

The Russell Midcap Value Index measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap Index companies with lower price-to-book ratios and lower forecasted growth values.

The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000® Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

The Russell 2000 Growth Index measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-value ratios and higher forecasted growth values.

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The Russell 3000 Index measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market.

The Russell Microcap® Index measures the performance of the microcap segment of the U.S. equity market. Microcap stocks make up less than 3% of the U.S. equity market (by market cap) and consist of the smallest 1,000 securities in the small-cap Russell 2000® Index, plus the next 1,000 smallest eligible securities by market cap.

The Russell Microcap® Growth Index measures the performance of the microcap growth segment of the U.S. equity market. It includes Russell Microcap companies that are considered more growth-oriented relative to the overall market as defined by Russell's leading style methodology.

The Russell Microcap® Value Index measures the performance of the microcap value segment of the U.S. equity market. It includes Russell Microcap companies that are considered more value-oriented relative to the overall market as defined by Russell's leading style methodology

The MSCI EAFE Index is a market-capitalization weighted, stock market index that is designed to measure the equity market performance of developed markets outside of the U.S. & Canada. It is maintained by MSCI Barra, [1] a provider of investment decision support tools; the EAFE acronym stands for Europe, Australasia and Far East.

"The MSCI Emerging Markets Index captures large and mid cap representation across 23 Emerging Markets (EM) countries*. With 838

constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country."

The Barclays U.S. Corporate High Yield index measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below.

The FTSE NAREIT All REITs Index is a market capitalization-weighted index that includes all tax-qualified real estate investment trusts (REITs) that are listed on the New York Stock Exchange, the American Stock Exchange or the NASDAQ National Market List. The Index is not free float-adjusted and constituents are not required to meet minimum size and liquidity criteria.

The S&P GSCI is a composite index of commodity sector returns which represents a broadly diversified, unleveraged, long-only position in commodity futures.

sources: www.russell.com, www.investopedia.com

Important Disclosures

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