

Asset Class Correlation

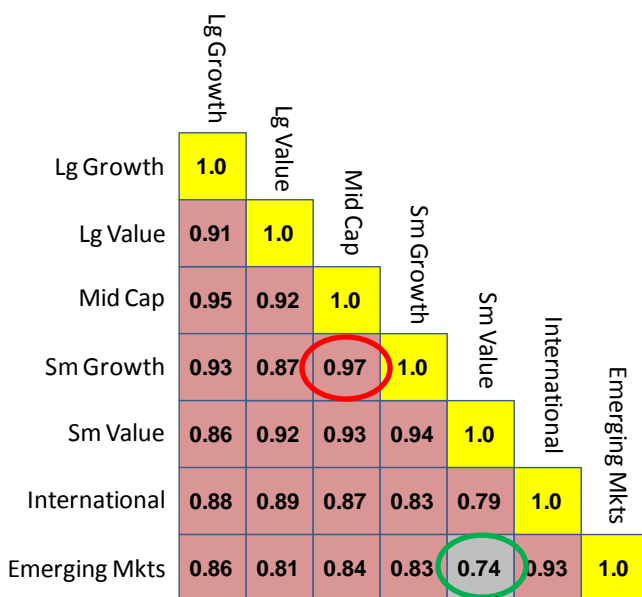
Why Simple Diversification Is Not Working

One of the fundamental assumptions of Modern Portfolio Theory is that risk reduction requires a well-diversified portfolio that consists of a variety of non-correlated assets. Simple mutual fund asset classes consist of the following categories, listed in a typical priority order:

- Level 1 – U.S., Foreign, Emerging Markets (geographic location)
- Level 2 – Large Cap, Mid Cap, Small Cap (company size)
- Level 3 – Growth, Value (asset style)

Although these asset classes may have behaved independently (non-correlated) a few decades ago, they have steadily become more and more correlated over the last 10-20 years. Below are a couple of examples of this correlation. The numbers indicate the statistical correlation of each asset class (e.g. 0.91 = 91% correlation over the given time period).

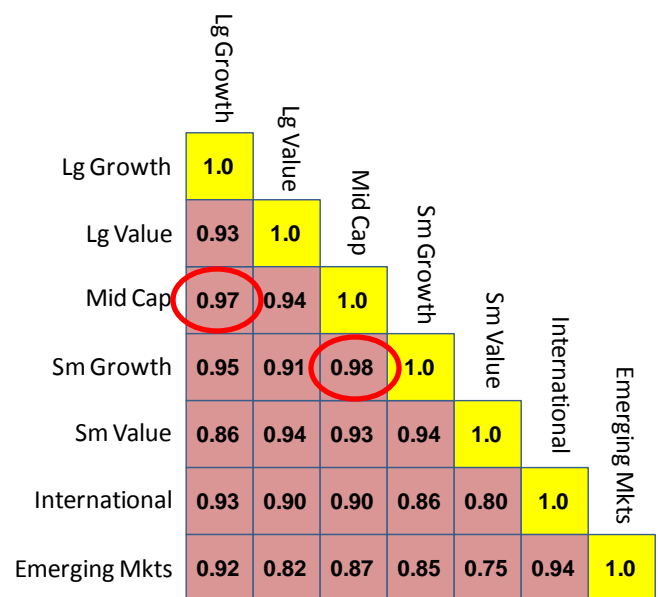
5-year (6/1/05 – 5/31/10) Correlation Matrix



- High correlation (>0.75)
- Moderate correlation (0.50 – 0.74)
- Low correlation (0.25 – 0.49)
- Negative correlation (<0.24)

As good as it gets
 (74% correlation does not get
 the diversification job done)

3-year (6/1/07 – 5/31/10) Correlation Matrix

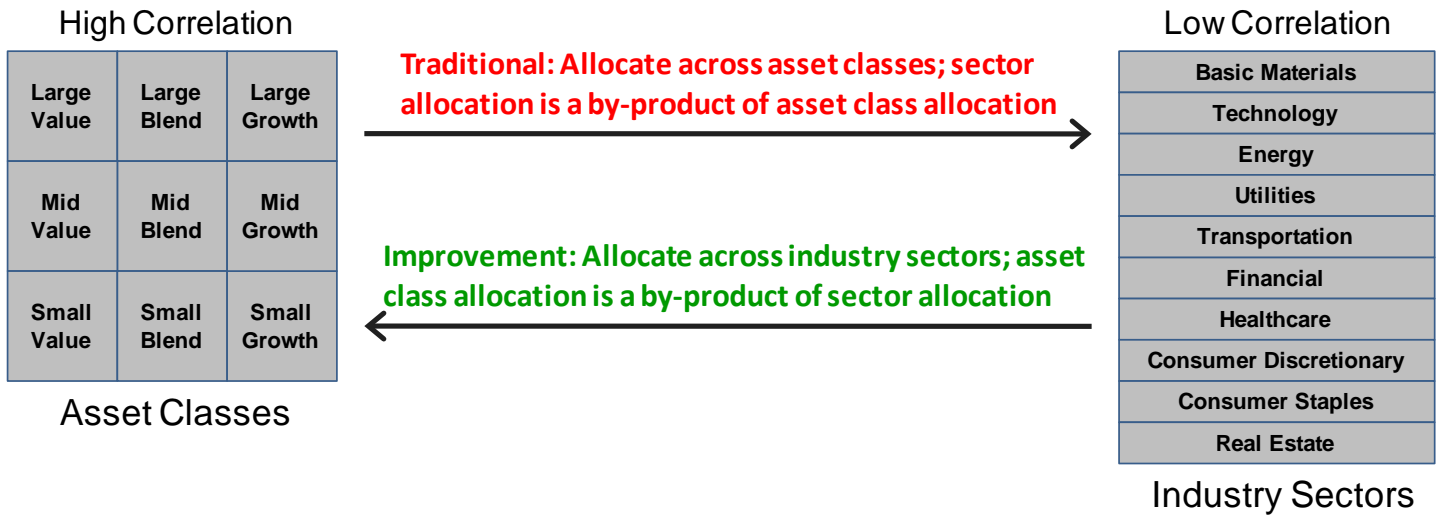


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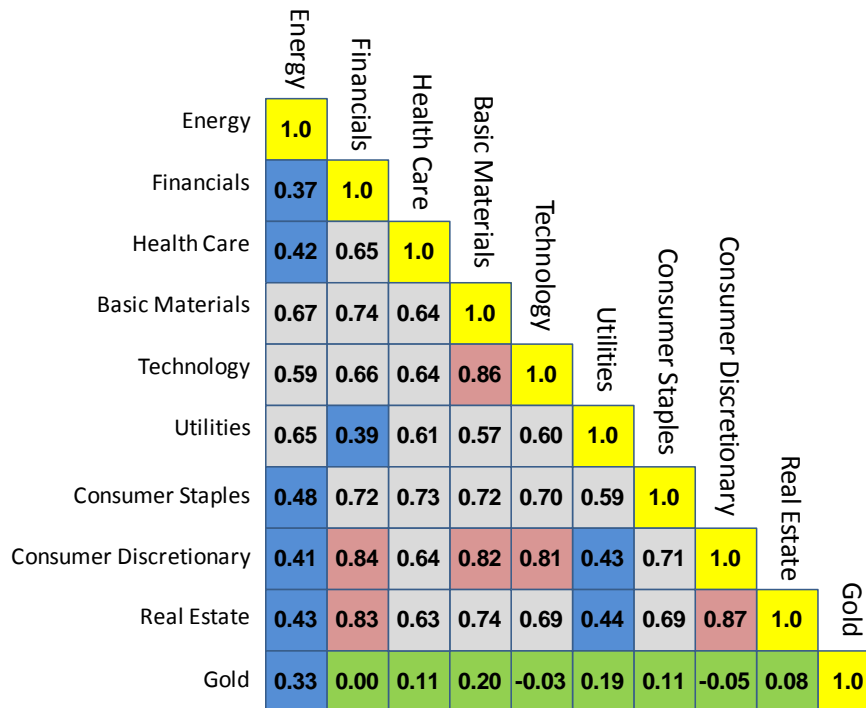
Conclusion: Correlation has been steadily increasing for many years. Probable reasons that were not a factor 20 years ago include:

- ❖ **Globalization:** All major world markets are clearly dependent on one another, and many growth companies are looking to emerging markets (China, Eastern Europe) as their avenue for growth.
- ❖ **Communication Technology:** Expands the market reach of smaller companies. Small companies are no longer exclusively "local".

Diversification Improvement: Diversify across low-correlated industry sectors



5-year (6/1/05 – 5/31/10) Sector Correlation Matrix



- High correlation (> 0.75)
- Moderate correlation (0.50 – 0.74)
- Low correlation (0.25 – 0.49)
- Negative correlation (< 0.24)

VFM Sector Portfolios (subject to change):

Sector	Preferred Security	Expense	Aggr	Mod-Aggr	Mod	Cons
Basic Materials	SPDR Basic Materials	0.22%	9%	8%	6%	4%
Technology	SPDR Technology	0.22%	9%	8%	6%	4%
Energy	iShares U.S. Energy	0.47%	9%	8%	5%	4%
Utilities	Vanguard Utilities	0.25%	8%	7%	5%	4%
Financials	Vanguard Financials	0.25%	8%	7%	6%	4%
Health Care	SPDR Health Care	0.22%	8%	7%	5%	4%
Real Estate	Vanguard REIT Index	0.13%	8%	7%	5%	4%
Small Cap Index	Vanguard Small Cap Index	0.13%	9%	8%	6%	4%
Total Stocks:			68%	60%	44%	32%

Bonds – Total Market	Fidelity Total Bond	0.45%	5%	5%	9%	11%
Bonds – Gov't Agency	Vanguard GNMA	0.23%	0%	0%	6%	8%
Bonds – Multisector	Fidelity Strategic Income	0.44%	5%	7%	8%	10%
Bonds – Corporate	Dodge & Cox Income	0.43%	4%	4%	6%	8%
Bonds – High Yield	Fidelity Capital & Income	0.78%	5%	5%	6%	6%
Bonds – Inflation-protected	Vanguard Infl-Prot Securities	0.20%	4%	5%	7%	9%
Bonds – Emerging Mkt	Fidelity New Mkts Income	0.90%	4%	4%	5%	5%
Total Bonds:			27%	30%	43%	55%

Alternative – Collar	The Collar Fund	0.90%	0%	4%	6%	6%
Metals - Gold	SPDR Gold Shares	0.40%	5%	6%	7%	7%

Proprietary Buy/Sell Algorithm:

Although a sector-based portfolio improves diversification significantly, additional dramatic performance improvements can be made through intelligent buy and sell decision making. Over the long-term, market timing based on “feeling” has proven to degrade performance. However, a disciplined approach to buying and selling with strict rules-based criteria can avoid serious downturns in individual sectors and smooth out volatility. Veripax Financial Management uses a strict algorithm that is based on current market behavior and does not attempt to predict future market behavior based on analysts’ opinions.