



Where to Find Diversification in a Highly Correlated World

Correlations vs. U.S. Large-Cap Stocks

	Past 20 yrs	Past 3 yrs	Change
U.S. Small-Cap Stocks	0.79	0.95	+0.16
Foreign Developed-Country Stocks	0.72	0.93	+0.21
Emerging-Market Stocks	0.67	0.84	+0.17
High-Yield Bonds	0.59	0.79	+0.21
Commodities	0.09	0.48	+0.38
U.S. Government Bonds	0.01	-0.12	-0.13

Became
More
Correlated
with U.S.
stocks

Correlations vs. U.S. Government Bonds*

	Past 20 yrs	Past 3 yrs	Change
U.S. Large-Cap Stocks	0.01	-0.12	-0.13
U.S. Small-Cap Stocks	-0.09	-0.14	-0.05
Foreign Developed-Country Stocks	-0.02	-0.08	-0.05
Emerging-Market Stocks	-0.14	-0.14	0.00
High-Yield Bonds	0.01	-0.26	-0.27
Commodities	-0.04	-0.19	-0.15

Became
Less
Correlated
with U.S.
Gov't
Bonds

Legend

>0.7	Strong correlation	(-0.2) – 0.2	Little to no correlation
0.4 – 0.7	Moderate correlation	(-0.4) – (-0.2)	Weak negative correlation
0.2 – 0.4	Weak correlation		

*U.S. Gov't Bonds=Barclays Capital U.S. Gov't Bond Index; U.S. Large-Cap Stocks=S&P 500 Index. Please refer to the appendix for important index information. Diversification does not assure a profit or protect against a loss in declining markets. You cannot invest directly in an index. Correlations calculated using monthly data. Source: Ibbotson, FMRCo (MARE) as of 8/31/09.

Many Asset Categories Have Become More Correlated

- ▶ One of the basic tenets of portfolio construction is diversification, the strategy of owning multiple asset classes with different risk characteristics. In theory, diversifying a portfolio with different, imperfectly correlated assets can help lower performance volatility over time.
- ▶ During the past three years, the returns of many riskier assets that historically have provided some diversification benefits became nearly perfectly correlated (moved in the same direction) with U.S. stocks, which are often used as the core holding of a portfolio.
- ▶ For example, small-cap stocks (0.95), foreign developed-country stocks (0.93), emerging-market stocks (0.84) and high-yield bonds (0.79) all have been highly correlated with U.S. stocks in recent years, with their correlations rising from long-term averages (see table, upper left).
- ▶ The correlations between commodities, a popular diversifier, and U.S. stocks also rose from being nearly uncorrelated (0.09) over the long term to a much higher correlation (0.48) in recent years.

Holy Grail of Diversification: U.S. Government Bonds

- ▶ The only major asset category that has provided a significant degree of diversification benefits to U.S. stocks (and other riskier assets) in recent years has been U.S. government bonds (see table, left).
- ▶ In fact, government bonds, such as Treasury and agency bonds, actually have become less correlated with most other major assets (lower left).

Investment Implications

- ▶ U.S. government bonds performed very well as riskier assets tumbled during the financial crisis in 2008, but so far in 2009 have fared poorly as riskier assets have rallied amid signs of economic stabilization and improvement.
- ▶ There are potential scenarios where U.S. bonds could either hold up well in the months ahead (a double-dip recession, further financial system turmoil, etc.) or underperform riskier assets (rising inflation, increased concerns about the U.S. fiscal deficit/creditworthiness, or a better-than-expected economic recovery).
- ▶ It remains to be seen whether the recent increase in correlations among riskier assets will define a new, more highly correlated era. In any case, investors are likely to be on safer ground anticipating that U.S. government bonds will continue to be one of the few ways to effectively diversify a portfolio.



Investment decisions should be based on an individual's own goals, time horizon, and tolerance for risk.

Past performance is no guarantee of future results.

All indices are unmanaged and performance of the indices includes reinvestment of dividends and interest income. Unless otherwise noted, indices are not illustrative of any particular investment and an investment cannot be made in any index.

Although bonds generally present less short-term risk and volatility than stocks, bonds do contain interest rate risk (as interest rate rise, bond prices usually fall and vice versa) and the risk of default, or the risk that an issuer will be unable to make income or principal payments. Additionally, bonds and short-term investments entail greater inflation risk, or the risk that the return of an investment will not keep up with increases in the prices of goods and services, than stocks.

Foreign investments involve greater risks than U.S. investments, including political and economic risks and the risk of currency fluctuations, all of which may be magnified in emerging markets.

* Asset classes represented by the following indices: U.S. Large-cap stocks – S&P 500 Index; U.S. Small-cap stocks – Russell 2000 Index; Foreign developed-country stocks – MSCI EAFE Index; Emerging-market stocks – MSCI Emerging Markets Index; High-yield bonds – Merrill Lynch High-Yield Master II Index; Commodities – S&P GSCI Commodities Index; Government bonds – Barclays Capital Government Bond Index.

The Russell 2000® Index is a market-capitalization-weighted index of smaller company stocks.

The Morgan Stanley Capital InternationalSM (MSCI®) Europe, Australasia, Far East Index (EAFE), an unmanaged market-capitalization-weighted index, is designed to represent the performance of developed stock markets outside the United States and Canada. The MSCI® Emerging Markets (EM) Free Index is a market capitalization weighted index of over 850 stocks traded in 22 world markets.

S&P GSCI Commodities Index is a world-production weighted index composed of 24 widely traded commodities.

The Merrill Lynch High-Yield Bond Master II Index is an unmanaged index that tracks the performance of below investment grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market.

The S&P 500®, a market-capitalization-weighted index of common stocks, is a registered service mark of the McGraw-Hill Companies, Inc. and has been licensed for use by Fidelity Distributors Corporation.

The Barclays Capital U.S. Government Bond Index measures performance of U.S. dollar-denominated U.S. Treasuries and government-related securities that have a remaining maturity of greater than or equal to one year. In addition, the securities have \$250 million or more of outstanding face value, and must be fixed-rate and non-convertible.

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