

Commercial Real Estate Correlation White Paper

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Executive Summary

In the years following the recent global financial crisis, volatile markets and risk-aversion among investors have become commonplace. Conventional wisdom suggests that putting all of your eggs in one basket could lead to an undesirable outcome. Therefore, diversifying a portfolio in order to offset periods of decline within one asset class with those of growth in another can help reduce the risk associated with investing in any single asset class. Due to its low, or even negative, correlation to other asset classes, commercial real estate – private real estate in particular – can help offset investments in other asset classes, thereby potentially strengthening a portfolio overall.



Glenn R. Mueller, Ph.D. is the Real Estate Investment Strategist for Dividend Capital Group. He is also a full professor at the University of Denver's Franklin L. Burns School of Real Estate and Construction Management and a visiting professor at Harvard University.

Taking a Closer Look at Commercial Real Estate

To better understand the correlation of commercial real estate to other asset classes, it's imperative to understand the two primary real estate return indices:

NAREIT Equity REIT Index (publicly traded real estate)

The FTSE/NAREIT Equity REIT Index is published by the National Association of Real Estate Investment Trusts in conjunction with the international EPRA/FTSE stock index group and is the index of publicly traded Real Estate Investment Trusts (REITs) in the United States. Real estate investment trust returns come from the dividends they pay (REITs must pay out 90% of their taxable income to retain their tax pass-through status like mutual funds) and the change in their stock price. REIT returns include the use of leverage and management's ability to manage properties as well as purchase and sell properties for a larger overall portfolio profit.

NCREIF NPI (private/direct income-producing real estate)

The NCREIF NPI, published by the National Council of Real Estate Investment Fiduciaries, is an index of properties owned by institutional investors such as pension funds and endowments. The index is an unleveraged return (e.g., the property's return is based on the income it generates as though there is no mortgage on the property, as most institutions buy their properties all cash) plus the price appreciation. The price appreciation is based upon quarterly appraisals done on each property and the actual sales price when

the property is sold. Because many institutional investors do not use leverage, the return is lower than many private individual investors may experience in their equity investments when they use leverage (a fixed rate mortgage) on a property.

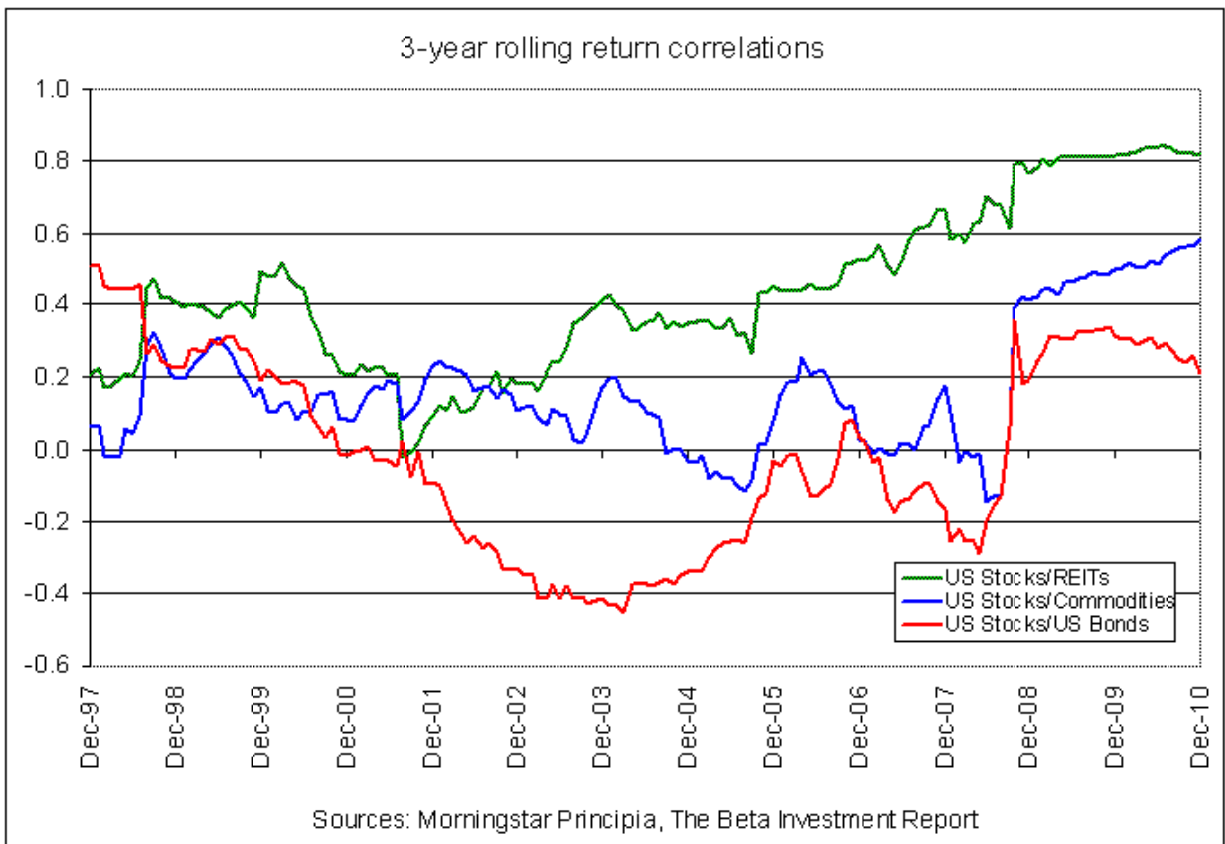
What is Correlation?

Correlation measures how returns on two investments move in relation to each other. Measured on a scale of +1 to -1, positively correlated assets tend to move up or down at the same time, while negatively correlated assets tend to move in opposite directions. With perfect positive correlation, a +1 rating (or 100% correlated), two investments always move in the same direction. Conversely, with perfect negative correlation, two investments always move in the opposite direction.

Correlation Strategy

Observing the historical correlations between asset classes can provide some guidance in selecting investments that may perform when others are lagging. For example, historically, correlations between stocks, bonds and REITs have been relatively low, or even negative, prior to 2007, as seen in Exhibit 1.

Exhibit 1



This suggests that, in the past, even if an investor's stocks are underperforming, their bonds may still be providing positive returns or, worst case, performing less negatively. While this figure does not measure the degree to which the two investments move, it still demonstrates how the investments move in relation to each other. Planning a portfolio based on this mechanic traditionally has been effective.

Commercial Real Estate Correlation Variance

Assets like stocks, bonds and publicly traded REITs, from a valuation perspective, are directly affected by myriad intangible factors such as investor emotions. For example, news in 2011 of turmoil in European markets has had a direct impact on investor confidence here in the United States, in turn affecting the valuation of many exchange-traded assets (such as stocks) and the overall strength of the market.

Private real estate, which is often represented by the NCREIF NPI, however, is valued on factors different from those that can affect publicly traded assets. Private real estate has a low, or even negative, correlation to other asset classes, allowing these investments the potential to help with portfolio diversification.

The chart in Exhibit 2 below displays the correlation between six widely used indices across the past ten years. In particular, the NCREIF NPI, which often serves as a benchmark for private real estate, exhibits consistently low or negative correlation with the other investment indices.

Exhibit 2

	NCREIF NPI	NAREIT Equity Index	S&P 500	Russell 2000	Barclays Agg Bond Index	Morgan Stanley EAFE Int'l Stock
NCREIF NPI	1					
NAREIT Equity Index	0.29	1				
S&P 500	0.23	0.71	1			
Russell 2000	0.21	0.77	0.94	1		
Barclays Agg Bond Index	-0.17	-0.02	-0.36	-0.39	1	
Morgan Stanley EAFE Int'l Stock	0.21	0.69	0.92	0.86	-0.24	1

Sources: NCREIF, NAREIT, S&P, Russell, Barclays Capital, and MSCI. Clarion Partners Research & Investment Strategy. Note: correlation coefficient among quarterly returns.

Conclusion

Considering its traditionally low correlation to other asset classes, despite periods of economic turmoil, private, commercial real estate has the potential to bring diversification benefits to investor portfolios. Thus, adding direct commercial real estate to an investor's portfolio should help lower the long-term volatility in portfolio returns.

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