

## **Does International Diversification Work Better for Real Estate than It Does for Stocks and Bonds?**

Yes, it does

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International diversification reduces the risk of investment portfolios since asset returns in different countries are not perfectly correlated. For stocks and bonds, the extent of this risk reduction has been investigated in numerous academic studies. For real estate, the benefits of international diversification have been documented less extensively.

In the real world, the developments are analogous. International diversification is a widely used strategy for stock and bond investors, but, with the exception of the Dutch and the British, this is not the case for real estate investors.

This research project is concerned with the risk-reduction potential of international real estate diversification relative to international diversification of stock and bond portfolios. The analysis is based on two international datasets of property share returns: the Datastream Global Indices and the LIFE Global Real Estate Securities Indices. We have data for Belgium, France, Italy, the Netherlands, the United Kingdom, Australia, Hong Kong, Japan, Singapore, Canada and the United States. The returns and risks of property shares are first compared with the returns and risks of stock and bond investments. Property share, stock and bond returns vary substantially across countries. On average, real estate securities appear to be a little more risky than stock returns. The average volatility of bond returns is lowest.

To investigate the benefits of international diversification for the three asset classes considered, I calculate international correlation matrices of property share returns, common stock returns and bond returns, and test whether these differ. I find significantly lower correlations among real estate returns than among common stock or bond returns. This finding is confirmed for subsamples.

I also construct the international efficient frontier for each asset class. These frontiers give strong evidence regarding the effectiveness of international real estate diversification. Despite the fact that property shares' standard deviations are, on average, somewhat higher than common stocks' standard deviations, the minimum variance portfolio of the property shares has 1% less monthly standard deviation than the common stock minimum variance portfolio: 3% versus 4% per month. Only with a bond portfolio can one obtain lower risk. However, this is mainly due to the low standard deviation of bonds in general, not to the effectiveness of international diversification.

Based on these results, I conclude that international diversification works better for property shares than it does for stocks and for bonds. The question is whether this conclusion can be extended to direct real estate investments. The returns on property shares are some function of the returns on the stock markets and of the returns on the real estate markets. Therefore, correlations among property share returns are also a function of the correlations among common stock returns and the correlations among real estate returns. Thus, these correlations should be some average of common stock and real estate returns. Since we find property shares to be less strongly correlated than common stock returns, this can only mean that the international correlations of direct real estate returns are even lower than those of property share returns. Therefore, even though we cannot observe direct real estate returns, we can extend our conclusions to direct real estate. International diversification works better for real estate than it does for stocks.

My findings could possibly be explained by barriers to real estate related capital movements. If that would be the case, the results would have no practical consequences, since it would be impossible to act on them. However, the countries I look at maintain no restrictions whatsoever concerning cross border real estate investments.

Other barriers do exist, however, and they are related to information. It is very costly and time consuming to acquire information about ones own real estate market, and for foreign markets, these information costs are multiplied. This could explain the rarity of international real estate portfolios.

This does not give a full explanation for my results, since these are based on the returns on publicly listed property funds. One can buy shares of these funds at low cost, and relevant information is widely available. One should keep in mind, however, that the combined market capitalization of all property investment funds in the world was, until recently, very small. So small, that property shares were not treated as a serious investment vehicle by institutional investors, let alone as a way to construct an international real estate portfolio. In the mid-eighties, the combined market capitalization of all property investment funds was about 13 billion US dollars. Presently, that has grown to 125 billion US dollars. Indirect real estate investment has now become a serious possibility to build up an international real estate portfolio.