

July 2014 Investment Publications Highlights

“Asset Allocation: Risk Models for Alternative Investments”

Niels Pedersen, Sébastien Page, and Fei He, *Financial Analysts Journal* vol. 70, no. 3 (May/June 2014): 34–45

Investors frequently use factor-based approaches to asset allocation to improve portfolio diversification and implement economic views. The characteristics of alternative asset classes, however, can make it difficult to map them to their true underlying factor exposures. Niels Pedersen, Sébastien Page, and Fei He of PIMCO attempt to measure these risk factors and find that alternative investment returns are driven by many of the same risk factors as bonds and equities.

Investors allocate to alternative asset classes—including hedge funds, private investments, and real assets—partly due to their compelling risk-adjusted returns. Their often high returns are frequently accompanied by apparently low risk, high diversification benefit, or both. As three PIMCO researchers point out, however, these perceptions of a “free lunch” are in fact *misperceptions*. The relatively low frequency with which illiquid assets are marked to market leads to an artificially smoothed return series and masks the true volatility of the alternative positions.

The authors note that alternative asset returns must be unsmoothed using statistical techniques before conducting any factor analysis. Making the appropriate adjustments, they find that the difference between “true” and reported volatility is dramatic in the most illiquid asset classes, such as venture capital (difference of 27%) and opportunistic real estate (19%). The difference

is more moderate in private equity (11%) and core real estate (10%), while it is muted in hedge funds (3%).

Pedersen, Page, and He develop a framework for measuring risk factor exposures across alternative investments. They choose to use a narrow set of factors consistent with economic intuition for each asset class, eschewing a “kitchen sink” regression approach that starts with many variables. Factor models developed using such an approach tend to have high in-sample fit but poor out-of-sample results. For private equity, for example, the authors measure exposure to US equities, size, value, liquidity, and high-yield corporate spreads. (Using credit spreads in the model makes sense because spreads help to explain the costs of financing private equity deals.)

Applying their regression models across asset classes, the authors find notable factor exposures among alternatives. Most assets other than farmland have meaningful US equity beta (0.5 and 0.9 for core and opportunistic real estate, respectively, for example, and 1.0 and 1.4 for private equity and venture capital, respectively). These figures reflect meaningful increases from their “as reported” equity betas. Several property categories—especially farmland and timberland—have large duration exposures. Private equity has a large-cap growth bias.

The authors’ results indicate that the diversification benefits of alternative assets are often overstated. While the reported volatility,

for example, of a six-asset portfolio including bonds, equities, farmland, private equity, real estate, and timberland is 5.3%, the authors estimate a true volatility of 8.8%. This compares with a volatility of 9.0% for a simple bond and equity portfolio—in other words, not that different. Investors should not necessarily avoid illiquid or alternative investments, but demanding an appropriately high return may be prudent considering the increased risks relative to reported figures. The authors recognize that their model has limits in describing the risks of allocating to alternative investments, but it should nonetheless deliver superior insight as compared to mean-variance analysis based on artificially smoothed index returns.

“The Moneyball of Quality Investing”

Vitali Kalesnik and Engin Kose, Research Affiliates, June 2014

On its own, investing in so-called quality stocks does not earn a long-run premium, according to Vitali Kalesnik and Engin Kose of Research Affiliates. Nonetheless, a value investing approach conditioned on certain indicators of quality has delivered attractive historical results.

Although investors tend to think of “quality” companies as those with durable, profitable businesses, there is no single, widely accepted definition for quality as there is for value or momentum. In academic circles, the most commonly used definition is profitability as measured by the gross-profits-to-assets ratio. Other definitions, however, focus on alternate measures of profitability, or on financial variables as wide-ranging as margins, leverage,

earnings stability, and accounting quality, among others.

Vitali Kalesnik and Engin Kose of Research Affiliates compiled a list of 40 quality measures and test the historical performance of long/short portfolios based on each factor. Of the 40 portfolios, 25 have positive performance, though only six of these results are statistically significant. Kalesnik and Kose note that the measures with positive results have been more likely to get attention in publications. This fact, taken together with the long list of possible quality portfolios with mediocre performance, suggests that data mining has played an important role in the attention received by the quality factor.

The authors turn to history to highlight that quality stocks do not generate a premium—rather, their performance depends on the price paid—in other words, the value they offer. Buying a great business at a high price is not likely to lead to superior investment results. In the 1960s and early 1970s, for example, investors were drawn to the “nifty fifty” group of large, stable, and fast-growing companies, paying 50, 80, and even 100 times earnings for their shares. During the period of growth in the late 1960s and early 1970s, this strategy was successful; however, when the S&P 500 fell by 39% over 1973–74, the nifty fifty fell by 47%. After 41 years, the S&P 500 investors of 1973 are 23% ahead of nifty fifty investors from the same year.

Since there is little disagreement that low valuations influence expected returns, Kalesnik and Kose propose using quality characteristics to improve upon simple value strategies. More specifically, they suggest that

a simple average of a stock's percentile rank on three variables should help investors make better use of a value signal: likelihood of default (as measured by debt coverage ratio), company profitability and growth (as measured by ROE), and degree to which the reported accounting variables of the company can be trusted (as measured by accruals-to-average total assets). They find that value investing conditioned on a carefully defined concept of quality is indeed a good investment strategy. While a simple long/short strategy based on the quality measure defined above produced a -0.4% average annual

return from July 1963 to January 2014, a long-value/high-quality, short-growth/low-quality portfolio delivers an annual return of 11.2%, owing largely to the quality factor conditioning. The approach has worked similarly well in long-only form, especially in risk-adjusted terms. While a value/high-quality portfolio only outperformed a value/low-quality portfolio by 0.6% per annum since 1963, it did so with a 14% reduction in volatility, resulting in a Sharpe ratio of 0.60 as compared to the 0.49 of the lower-quality group. ■

Copyright © 2014 by Cambridge Associates LLC. All rights reserved.

This report may not be displayed, reproduced, distributed, transmitted, or used to create derivative works in any form, in whole or in portion, by any means, without written permission from Cambridge Associates LLC ("CA"). Copying of this publication is a violation of US and global copyright laws (e.g., 17 U.S.C. 101 et seq.). Violators of this copyright may be subject to liability for substantial monetary damages. The information and material published in this report is nontransferable. Therefore, recipients may not disclose any information or material derived from this report to third parties, or use information or material from this report, without prior written authorization. This report is provided for informational purposes only. The information presented is not intended to be investment advice. Any references to specific investments are for illustrative purposes only. The information herein does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction. Some of the data contained herein or on which the research is based is current public information that CA considers reliable, but CA does not represent it as accurate or complete, and it should not be relied on as such. Nothing contained in this report should be construed as the provision of tax or legal advice. Past performance is not indicative of future performance. Any information or opinions provided in this report are as of the date of the report, and CA is under no obligation to update the information or communicate that any updates have been made. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified.

Cambridge Associates, LLC is a Massachusetts limited liability company with offices in Arlington, VA; Boston, MA; Dallas, TX; and Menlo Park, CA. Cambridge Associates Fiduciary Trust, LLC is a New Hampshire limited liability company chartered to serve as a non-depository trust company, and is a wholly-owned subsidiary of Cambridge Associates, LLC. Cambridge Associates Limited is registered as a limited company in England and Wales No. 06135829 and is authorized and regulated by the Financial Conduct Authority in the conduct of Investment Business. Cambridge Associates Limited, LLC is a Massachusetts limited liability company with a branch office in Sydney, Australia (ARBN 109 366 654). Cambridge Associates Asia Pte Ltd is a Singapore corporation (Registration No. 200101063G). Cambridge Associates Investment Consultancy (Beijing) Ltd is a wholly owned subsidiary of Cambridge Associates, LLC and is registered with the Beijing Administration for Industry and Commerce (Registration No. 110000450174972).