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## PRACTITIONER'S DIGEST

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### **A NEW PERSPECTIVE ON THE VALIDITY OF THE CAPM: STILL ALIVE AND WELL**

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*Moshe Levy and Richard Roll*

The mean/variance optimality of the market portfolio proxy is central to the debate over active versus passive money management. The optimality of the market portfolio is also a key feature of the Capital Asset Pricing Model (CAPM), and its Security Market Line (SML) risk-return relationship. The CAPM is the basis for the very wide practical use of beta as a risk measure, and of alpha as a measure of excess return.

While the CAPM is used extensively by practitioners, most academic studies testing the CAPM empirically reject the model. These studies find that the market proxy is grossly non-optimal. While it is well-known that return parameters are subject to estimation error, standard “shrinkage” corrections do not change the basic negative conclusion about the validity of the CAPM. This is an uneasy situation, where the only justification for the extensive practical use of the CAPM is the lack of a better alternative.

In this paper the authors employ a new “reverse engineering” approach for testing the CAPM. Given a set of sample return parameters, they look for the minimal adjustment to these parameters required to make the market proxy optimal. Surprisingly, they find that these adjustments are very small, well within the estimation error bounds of the sample parameters. Thus, in contrast to the “common wisdom” in the financial community, they show that the CAPM cannot be empirically rejected.

**REDEMPTION FEES AND THE RISK-ADJUSTED PERFORMANCE  
OF INTERNATIONAL EQUITY MUTUAL FUNDS****PAGE 21***Iuliana Ismailescu and Matthew Morey*

In the wake of the market timing and late trading mutual fund scandals, many mutual funds adopted redemption fees to limit market timing. In this paper we investigate the impact of redemption fees on the risk-adjusted performance of U.S. based international equity funds, the very funds that many market timers used. To do this we compare the performance of international funds for the three year period prior to the implementation of the redemption fee to the performance of the fund for the period three years after the implementation of the fee.

We find three interesting results. First, using event study methodology we find that after the introduction of a redemption fee there is a significant increase in the risk-adjusted fund performance. Second, we find that funds that introduced larger-size redemption fees have significantly better performance after the introduction of the redemption fee than other funds. Third, we find that the main reason for the improvement in fund performance after the introduction of the redemption fee is due to lower amounts of cash being held by the fund after the redemption fee.

In sum our results suggest that the implementation of redemption fees is performance enhancing for international equity funds. As such, long-term international investors should actively look for international equity funds that have redemption fees.

**HOW DOES YOUR STATE STACK UP? PARTICIPATION COSTS IN HIGHER  
EDUCATION OPTIONAL RETIREMENT PLANS****PAGE 34***Daniel Bradley and Lei Wedge*

In this paper, we examine the costs to higher education employees investing in optional retirement plans (ORP). Despite the increasing importance of defined contribution plans in the public sector, very little systematic evidence exists on the efficacy of such plans. We find vast differences in the number of providers, funds offered, and costs to participants across states. In many cases, we find that the same provider offering the same fund in different states has significantly different costs.

Our evidence suggests that net performance is worse, on average, for investors participating in ORP plans compared to investing directly in the same funds not within an ORP system. We find that funds offered by insurance companies systematically have worse performance than mutual fund providers. Further, we find that states with more ORP providers have better net performance. Our evidence suggests that by giving employees more choices, the additional competition within the ORP system would result in lower fees, thereby increasing terminal wealth for participants.

Although this paper focuses on retirement plans for college faculty, the results can be generalized to the broader public sector and perhaps even the private sector. Trustees responsible for selecting a financial sponsor(s) to administer the retirement plan need to fully understand all the costs associated with such

plans to ensure their constituents are getting the best products available at the best price. Our results bring this into question.

## **ESTIMATING THE NEGATIVE IMPACT OF “NOISE” ON THE RETURNS OF CAP-WEIGHTED PORTFOLIOS IN VARIOUS SEGMENTS OF THE EQUITY MARKETS**

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*Russell J. Fuller, Bing Han and Yining Tung*

We propose a simple method of estimating the maximum total amount of ex post excess return available to all investors in various segments of the equity markets. Our methodology is based on the concept of a perfect foresight (PF) portfolio, which is a portfolio holding long positions in all stocks in the given equity segment with *beginning* weights proportional to the market capitalization of the companies in the segment at the *end* of the investment period.

We show that the PF portfolio are on the ex post efficient frontier, while ex ante cap-weighted portfolios will always be interior portfolios relative to the end-of-investment-period ex post efficient frontier. The positive difference in their performance increases monotonically with the cross-sectional dispersion of stock returns during the performance measurement period. The cross-sectional dispersion of returns generally increases as one moves down into smaller capitalization segments. We find results that are consistent with this, as the performance difference between the PF portfolios and the ex ante cap-weighted portfolio increases as one examines equity market segments that have decreasingly smaller market capitalizations.

Our estimate of the average ex post excess return for the U.S. large-cap segment of the capital markets is about 7% on average. This average ex post excess return can be thought of as a measure of how “valuation efficient” the U.S. large-cap segment market is. By “valuation efficiency” we refer to the idea of “is the market price right today?”, such that investors earn the consensus expected return for the period  $t = 0$  to  $t = 1$ . Our results help consultants, plan sponsors and individual investors form more reasonable estimates of what might be achievable by active management.

## **THE RELATIVE STRENGTH OF INDUSTRIES VERSUS COUNTRIES IN GLOBAL EQUITY MARKETS**

**PAGE 75**

*Jose Menchero and Andrei Morozov*

In this article, we investigate the relative strength of industry versus country effects in the global equity markets over the sample period 1994–2010. In particular, we examine three market segments: (a) the world market, (b) emerging markets, and (c) developed Europe. We employ a factor-based approach to construct portfolios that capture the “pure” effect of each industry or country. We define two quantities to measure the relative strength of the two effects: diversification potential and mean absolute deviation.

For the world market, we find that industry and country effects are of comparable strength, although each dominates during different sub-periods. In particular, countries dominated in the mid-to-late

1990s, whereas industries dominated in the aftermath of the internet bubble. For emerging markets, we find that countries have dominated industries over the entire sample period. In developed Europe, by contrast, we find that industries have dominated countries since the introduction of the euro.

We also investigate the size dependency of the relative strength of industry versus country effects. In particular, we find that in the small-cap segment, industry effects become weaker whereas country effects retain their full strength.