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**Formulating retirement targets and the impact of time horizon on asset allocation** (pp. 1–17)

Laurence Booth

This paper looks at standard retirement targets such as “70@65,” meaning 70% income replacement at age 65, and reconsiders them in a probabilistic setting. The paper uses a chance constrained programming model, supplemented with Monte Carlo simulation, to extend the target to “70% of 70@65” meaning a 70% chance of meeting the target. One implication of the paper is that asset mix is a function of the investment horizon. This conflicts with the constant portfolio result of Samuelson et al. but supports the standard “your age in bonds” rule of thumb of financial planning professionals. © 2004 Academy of Financial Services. All rights reserved.

**Embedded options in enhanced certificates of deposit** (pp. 19–32)

Brandon N. Cline, Robert Brooks

Deregulation and competition have led to the introduction of many new esoteric investment products in the financial service industry. One such product is the enhanced certificate of deposit, which contains embedded interest rate options. These securities are commonly known as flex certificates of deposit. We find that these products are currently being priced in a peculiar manner. A discussion of the logical breakdown of options embedded in the flex certificate of deposit is given. We also consider why banks are willing to give away valuable interest rate options. © 2004 Academy of Financial Services. All rights reserved.

**Multiple-share classes and mutual fund composition** (pp. 33–56)

Matthew R. Morey

This article investigates the effect of multiple-share classes on mutual fund composition. Using 10 annual samples of data, we find that before the mass adoption of multiple-share classes, load funds held less cash relative to no-load funds. However, after most load funds had adopted multiple-share classes, we find no difference in cash held between load and no-load funds. These results suggest that the rise of multiple-share-class funds has reduced the compositional advantages of load funds, and hence makes the case for investors to hold single-class, no-load funds. © 2004 Academy of Financial Services. All rights reserved.

## **An empirical investigation of personal financial risk tolerance** (pp. 57–78)

Terrence A. Hallahan, Robert W. Faff, and Michael D. McKenzie

We analyze a large database of psychometrically derived financial risk tolerance scores (RTS) and associated demographic information. We find that people's self-assessed risk tolerance generally accords with RTS. Furthermore, we find that gender, age, number of dependents, marital status, income, and wealth are significantly related to the RTS. Notably, the relationship between age and risk tolerance exhibits a significant nonlinear structure. © 2004 Academy of Financial Services. All rights reserved.

## **Mutual fund performance, management behavior, and investor costs** (pp. 79–91)

Richard J. Downen, Thomas Mann

We examine pure no-load funds over a 5-year period. For equity funds, trading activity is negatively related to returns. Expense ratios are not significantly related to returns. Potential capital gains exposure and tax cost ratio are positively related to return. For fixed income funds, trading activity is positively related to return. Expense ratios and tax cost ratios are negatively related to returns. Mutual funds exhibit economies of scale and managers experience scale and scope economies. The individual investor is better off in a large fund that is a member of a large fund family. © 2004 Academy of Financial Services. All rights reserved.

## **Emergency funds and alternative forms of saving** (pp. 93–109)

Lan Bi, Catherine P. Montalto

The likelihood of meeting the three-month expenditure guideline for monetary, comprehensive, and subjective emergency funds is examined using data from the 1998 Survey of Consumer Finances. Specific independent variables of interest include the household's attitude towards credit, whether the household overspent, the expectation of future income, the working status of the spouse, and alternatives to emergency funds. Results suggest the actual emergency fund level held by households is more closely related to the ability to save than to the need for emergency funds. A home equity line of credit may be a feasible alternative to emergency funds. © 2004 Academy of Financial Services. All rights reserved.

**The impact of loan rates on direct real estate investment holding period return** (pp. 111–121)

James E. Larsen

Today's low mortgage interest rates make direct real estate investments attractive to individual investors. However, low rates may result in an investor paying too much for the property. Sensitivity analysis conducted on a set of projected financial statements for a direct real estate investment shows the potential impact of changing rates on holding period return. Higher subsequent loan rates can have a significant negative effect on the investor's return, but the impact may be mitigated by extending the holding period. Individuals can use the system presented here to compare the expected return of alternate holding periods given expected interest rates. © 2004 Academy of Financial Services. All rights reserved.

**Cubes and the Individual Investor** (pp. 123–138)

Richard J. Curcio, Joanna M. Lipka, John H. Thornton, Jr.

We investigate issues of importance to individual investors concerning Cubes, the NASDAQ-100 Index Tracking Stock. Individual investors are the major long-term holders of Cubes and they hold and trade proportionately more Cubes than Standard & Poors Depository Receipts. Nevertheless, individuals account for less than 50% of the daily trading volume in Cubes. Individuals investing in Cubes are protected from return dilution resulting from market timing and late trading devices like those possible with open-ended mutual funds. Cubes do demonstrate large, but rare, short-lived intraday deviations from net asset values, which appear not to present a significant problem except, possibly, for high frequency traders. © 2004 Academy of Financial Services. All rights reserved.

**Stock selection based on mutual fund holdings: Evidence from large-cap funds** (pp. 139–150)

Robert A. Weigand, Susan Belden, Thomas J. Zwirlein

In this study, we investigate whether individual investors should consider the weightings mutual fund managers place on the stocks held in their funds when making stock selection decisions. Specifically, we compare the performance of the stocks that are most heavily weighted in mutual funds versus the stocks that are most lightly weighted. We find that the heavily weighted stocks in mutual funds perform no better than, and sometimes significantly underperform, the most lightly weighted stocks. These results contradict the idea that individual investors can earn excess returns by following the implicit stock selection picks of mutual fund managers—particularly short-term and momentum investors who trade large-cap stocks. Our findings rather suggest that individual investors should be wary of investing in stocks that are the top holdings in general equity mutual funds. © 2004 Academy of Financial Services. All rights reserved.

## **Disclosure of information on order execution practices of market centers: How can investors utilize it?** (pp. 151–165)

Hakan Saraoglu, N. Asli Ascioğlu

The U.S. Securities and Exchange Commission has recently adopted Rule 11Ac1-5 that requires market centers to disclose statistical information regarding their order execution practices. The rule enables investors to assess the quality of execution for different types and sizes of orders in market centers. This paper develops a framework for comparing order execution quality across competing market centers by utilizing the data set made available as a result of the new rule. Different investors may have different preferences related to the execution quality of their orders. Our framework allows investors to incorporate their preferences as well as order types and sizes into the measurement of execution quality. © 2004 Academy of Financial Services. All rights reserved.

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## **Time, wealth, and human capital as determinants of asset allocation** (pp. 167-184)

Brian Boscaljon

This paper provides a theoretical model for individuals to make asset allocation decisions based on their value of leisure time, risk tolerance, and a retirement goal. As individuals go through life cycles financial wealth increases while human capital and time decrease. A critical point is identified where individuals maximize leisure time and financial wealth. The model suggests basing asset allocation decisions on the level of wealth in relationship to the retirement goal and time, rather than the age of the individual typically used in investment planning. © 2004 Academy of Financial Services. All rights reserved.

## **Characteristics of consumers targeted and neglected by credit card companies** (pp. 185-198)

Amdetsion Kidane, Sandip Mukherji

This study identifies the primary characteristics of consumers who are targeted and those who are neglected in mail solicitations by credit card companies. We find that credit card companies target consumers who do not have recent payment difficulties and credit damage, and have strong financial resources, substantial and responsible credit use, and established credit history. They neglect consumers who have recent payment difficulties and credit damage, weak financial resources, little or no credit use, and scant credit history. These results show that, contrary to speculation by some researchers, credit card companies target more credit-worthy consumers and neglect less credit-worthy ones. © 2004 Academy of Financial Services. All rights reserved.

## **Diminishing gains from international diversification** (pp. 199-213)

Rajiv Kalra, Miroslav Stoichev, and Srinivasan Sundaram

Academics and practitioners have long maintained that internationally diversified portfolios are more efficient—offer better risk-return performance—than a purely domestic portfolio. We examine the effectiveness of international diversification in the presence of periodic rebalancing and associated transaction costs. We find that the benefits of international diversification are much smaller than previously understood. Our findings suggest that only a small allocation (10%) of a domestic equities portfolio to international securities may be justified. Even the slight advantage of the international diversification may disappear when taxes are incorporated in portfolio evaluation. © 2004 Academy of Financial Services. All rights reserved.

## **Moving from unbanked to banked: Evidence from the Money Smart program** (pp. 215-231)

Angela C. Lyons, Erik Scherpf

Using data collected from participants of the FDICs Money Smart program, this study investigates the impact that financial education has on an individual's decision to move from unbanked to banked. To date, most programs and initiatives that target the unbanked define program impact by the number of bank accounts opened. This study provides evidence that the best measure of program “success” may not be the number of accounts opened, but instead whether the program has provided the unbanked with the skills and tools necessary to make sound financial decisions given their financial circumstances. © 2004 Academy of Financial Services. All rights reserved.

## **Breakeven holding periods for tax advantaged savings accounts with early withdrawal penalties** (pp. 233–247)

Stephen M. Horan

At what point does an IRA with an early withdrawal penalty accumulate more wealth than a fully taxable investment? This paper models breakeven holding periods, allowing tax rates to change and the annual return to be partitioned into ordinary income, realized capital gains, and unrealized capital gains—each being taxed differently. Breakeven holding periods decrease at a decreasing rate with the return and can be quite short for investors facing declining tax rates. In addition, breakeven points are very sensitive to how the return on the non-IRA investment is taxed, doubling or tripling when the return is taxed as a typical mutual fund rather than taxed as ordinary income. © 2004 Academy of Financial Services. All rights reserved.

**Changes in financial risk tolerance, 1983–2001** (pp. 249–266)

Rui Yao, Sherman D. Hanna, Suzanne Lindamood

Using six Survey of Consumer Finances cross-sectional datasets representing the years 1983 through 2001, this study investigates changes in financial risk tolerance levels over time. Logit analyses are performed to test changes in risk tolerance, controlling for respondent and household characteristics. Willingness to take some risk fell from 1983 to 1989, did not change from 1989 to 1992, increased in 1995, increased again in 1998, then decreased in 2001. Financial risk tolerance tends to increase when stock returns increase and decrease when stock returns decrease. This relationship could lead to buying when prices are high and selling when prices are low. Financial education is needed to help investors overcome the bias of overweighting recent events. © 2004 Academy of Financial Services. All rights reserved.

**The risk and return of investment averaging: An optiontheoretic approach** (pp. 267–283)

Robert Dubil

Automatic stock investment plans are touted to offer dollar cost averaging (DCA) advantages. Rather than focusing on potential lower costs and thus enhanced returns, we analyze the impact of the averaging on the risk of the investment. We use an option theory-based simulation model to compute the standard deviation of the realized return, the probability of shortfall, and the conditional expected shortfall for a periodic DCA plan. The plan's terminal value depends on the total number of shares acquired over time. The number of shares is a stochastic variable that depends on the volatility of the underlying stock. We show that the risk reduction because of averaging is significant not only in terms of standard deviation, but also in terms of the expected shortfall of funds when the investment turns a loss. We show that the DCA benefits are greater, the longer the averaging, and the riskier the underlying investment. © 2004 Academy of Financial Services. All rights reserved.

**Asset allocation decisions of mutual fund investors** (pp. 285–302)

Padma Kadiyala

I extend the Warther (1995) evidence to show that stock market returns are related to contemporaneous flows into mutual funds that invest in risky stocks and bonds, but are unrelated to flows into funds that invest in safer stocks and bonds. I examine whether common sources of predictability in returns and flows can explain this contemporaneous relation. I find that variables with predictive ability for stock returns, such as the lagged one-month T-bill rate and the lagged term premium, also predict flows into the risky categories of mutual funds. © 2004 Academy of Financial Services. All rights reserved.

## **The economics of savings bonds** (pp. 303–318)

Marcelle Arak, Stuart Rosenstein

Series EE Savings Bonds have provided floating rate returns since 1982. They also contain valuable embedded options, including an early redemption option, a guaranteed minimum rate option, and a tax-timing option. Our analysis indicates that the simulated risk-return performance of Savings Bonds has been relatively attractive compared to other default-free assets. Thus, Savings Bonds appear to be worthy of consideration by individual investors. Our regression analysis indicates that, over the 1990 through 2001 period, investors considered both interest rates and economic conditions in their EE Savings Bond purchase and redemption decisions. © 2004 Academy of Financial Services. All rights reserved.

## **Consumer information search when making investment decisions** (pp. 319–332)

Qihua “Catherine” Lin, Jinkook Lee

We discuss the characteristics of investment decisions and identify the factors that affect consumers’ information search behavior when they make investment decisions. Using the 2000 to 2001 MacroMonitor data set, we find that subjective knowledge, amount of investment, risk tolerance, age, education, and income influence both the extent of information search and the use of specific information sources, including literature, media, the Internet, friends/family, and professional services. © 2004 Academy of Financial Services. All rights reserved.