

# CFA DIGEST

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## ALTERNATIVE INVESTMENTS

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### Are Hedge Funds Systemically Important?

Gregory W. Brown, Jeremiah Green, and John R.M. Hand

*Journal of Derivatives*

vol. 20, no. 2 (Winter 2012):8–25

The authors find that hedge funds during the 2008 financial crisis did not systematically benefit from opportunistic trading, which could have generated systemic risks in financial markets. Although some funds that used leverage actually performed worse than expected given *ex ante* risk-factor loadings, this result was most likely caused by meeting redemptions rather than by forced selling during the crisis.

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### What's Inside?

Disruptions in capital markets during the 2008 financial crisis were blamed on destabilizing actions by various types of investors, including hedge funds. The authors analyze hedge fund returns during the financial crisis and determine the role they may have played. If hedge funds had traded at the expense of the rest of the market, then they should have exhibited superior risk-adjusted returns. Likewise, if forced selling by hedge funds had driven down prices of assets, then those funds should have exhibited abnormally poor risk-adjusted returns.

### How Is This Research Useful to Practitioners?

The authors find no evidence of widespread opportunistic trading by hedge funds during the 2008 crisis. Some literature has suggested that traders can profit from opportunistic trading that manipulates stock prices. They look at funds that are most likely to have the ability and expertise to conduct such trades (short bias, long–short equity, and

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Gregory W. Brown is at Smith Breeden Associates. Jeremiah Green is at Pennsylvania State University. John R.M. Hand is at the University of North Carolina at Chapel Hill. The summary was prepared by Nicholas Tan, CFA.

market-neutral funds) and find that hedge fund returns during the financial crisis were, on average, subpar. The authors find that although hedge funds experienced significantly negative returns during the crisis, the risk-adjusted returns were also unusually poor, and the bad relative performance was concentrated among a small number of funds. Funds that used high levels of leverage are found to have had abnormally low returns as well. Thus, it does not appear that hedge funds as a whole had a large causal role in the financial crisis.

Hedge funds that used leverage and were thus most likely to be forced to liquidate positions in bear markets were found to have actually performed better compared with firms that did not use leverage. The separation of funds by use of leverage did not provide evidence that leveraged funds were more susceptible to forced deleveraging and portfolio liquidation at fire-sale prices. This finding suggests that hedge fund selling was more likely caused by a need to meet redemptions rather than by forced selling into a falling market, which would generate systemic risks.

The authors also comment on the new financial regulation framework enacted in the United States in July 2010 that requires hedge funds to increase transparency in reporting certain areas, such as assets under management (AUM), trading positions and practices, leverage, and risk exposure measurements. This regulation framework should provide a mechanism for determining systemic risks by hedge funds. But the authors believe that more reporting and transparency may not be effective in limiting the systemic risks because, based on their findings, it is probably just a small number of funds with difficult-to-identify characteristics that pose systemic risks.

## **How Did the Authors Conduct This Research?**

The data on hedge funds come from Lipper TASS, Hedge Fund Research, Bloomberg active and inactive hedge fund databases, and proprietary information on 297 funds from a large hedge fund of funds. The sample contained data for 17,127 unique funds and a sample period covering January 2002 through December 2008. The authors estimate that the sample includes most of the funds with at least \$50 million in AUM and about 85% of total industry AUM.

Two main tests were conducted on the aggregate dataset. First, the authors undertake time-series tests that estimate historical risk-factor loadings for hedge funds and then use those results to estimate abnormal returns for each of the months during the financial crisis from July through December 2008. The risk-factor loadings are estimated using ordinary least squares over 60-month rolling windows, ending in June through November 2008. Second, the authors conduct panel regressions over shorter time horizons to identify any short-run changes in factor loadings and abnormal returns during the crisis. Funds with leverage and high *ex ante* risk were then separately analyzed to determine whether those funds were differentially affected by deleveraging.

### Abstractor's Viewpoint

Hedge funds are private entities and have fewer public disclosure requirements than other financial institutions. Investors, such as institutional investors, could use their clout to encourage hedge funds to increase transparency in disclosing information, such as AUM and trading metrics, as part of their requirements when investing. This push from investors, coupled with regulators' requirements, would help the general public better identify the risks posed by hedge funds, especially the systemic varieties that affect an economy's well-being.

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## The Fundamentals of Commodity Futures Returns

**Gary B. Gorton, Fumio Hayashi, and K. Geert Rouwenhorst**

*Review of Finance*

vol. 17, no. 1 (January 2013):35–105

Over long periods of time, holders of commodity futures can earn a positive risk premium. The level of that premium varies with inventories; the highest expected return is from commodities that are in short supply. High returns are also expected from commodities with high price momentum and a high basis.

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Fumio Hayashi is at Hitotsubashi University. Gary B. Gorton and K. Geert Rouwenhorst are at Yale University. The summary was prepared by Keith H. Black, CFA, CAIA Association.

## What's Inside?

Investors with portfolios of commodity futures expect to earn a positive return. The theory of normal backwardation implies that producers need to hedge their commodities and are willing to sell at a discount to the long-term value of the commodity to induce speculators to take long positions. The expected return to long positions in commodity futures increases as inventories decrease and price momentum increases. Ultimately, all returns and the volatility of commodity futures can be traced back to the level of inventories and the related convenience yield. Because consumers of commodities require these raw materials for their production processes, lower levels of inventories increase the probability of disruption to their businesses. Therefore, the price and volatility of commodity futures increase as inventory levels decline.

## How Is This Research Useful to Practitioners?

Commodity market investment products are moving beyond index products that offer beta exposure and into the realm of alpha prediction. Segmenting the commodity portfolio into commodities with higher and lower expected returns can increase the expected alpha of the portfolio but reduce the diversification within the portfolio. Investors who desire to hedge inflation risk while adding alpha to their portfolios should examine this research closely.

Inventory data are correlated with a number of price signals. Commodities with higher-than-average inventory levels tend to have a negative basis, a lower price return, and a higher price volatility over the trailing 12 months. Inventory levels, as well as trailing returns and volatility, can be used to select commodities with higher expected returns. When compared with an equally weighted portfolio, commodities with lower inventories outperform, high-basis commodities outperform, commodities with high trailing price momentum outperform, and in 56% of months, commodities with high trailing price volatility outperform. Commodities with the highest return in the spot market over the trailing 12 months outperform in 58% of all months.

Investors can add substantial returns to their commodity portfolios through these strategies because the commodities expected to outperform earned excess returns between 8% and 12% per year compared



with those expected to underperform, which earned an average excess return of less than 1% per year.

## How Did the Authors Conduct This Research?

The authors measure the risk and return of 31 separate commodity futures markets from 1971 to 2010 and relate the risk and return of each commodity to price and inventory signals. Over this time period, an equal-weighted basket of commodity futures earned an excess return of 5.75%. Unlike equity returns, commodity futures returns are skewed to the right with fat tails; the largest returns occur during times of low inventories.

This research extends that of Gorton and Rouwenhorst (*Financial Analysts Journal* 2006), but the authors use a slightly reduced set of commodities because the prices of such financial commodities as gold and silver do not have price sensitivity to inventory, sugar and rice do not have monthly inventory figures, and electricity cannot be stored.

Two key hypotheses are tested. First, prices of commodities in the physical spot market increase as the levels of inventory decline. This relationship is explained by convenience yield, which rises sharply as inventories decline to the level at which commodity consumers become concerned about short supplies. Second, risk premiums increase with volatility and decline as inventories rise.

The basis, which is the difference between the futures prices and the spot market prices, is also equal to the difference between carrying costs (interest rates plus storage costs) and the convenience yield. Unless the convenience yield is high, the spot price is typically lower than the futures price, which implies a negative basis. There is a strong relationship between excess returns and the basis, with the highest expected returns occurring in times of a positive basis and a high convenience yield. The basis of more difficult-to-store commodities, such as oil and gas, can be more volatile than that of easier-to-store commodities, such as industrial metals. Energy and food products have substantially greater seasonality, as well as a higher probability of a stockout, than industrial metals.

The inventory variable compares the most recent monthly inventory estimate with the trailing 12-month average of inventories. For all commodities, lower (higher) inventories are associated with an above-

average (below-average) basis. Monthly excess returns for a particular commodity are higher when inventory levels are low compared with returns of that commodity at other times.

Data from the U.S. Commodity Futures Trading Commission Commitments of Traders reports are used in tests. Although commercial hedgers typically have net short positions, the size of these net positions does not predict future returns in a meaningful way.

## Abstractor's Viewpoint

As greater levels of assets move into commodity markets, the demand for both passive and active management strategies will increase. Historically, commodities have appeared to be less efficiently priced than equities. The question, however, is how these predictable differences in risk premiums will hold up in light of the increasing asset level and investor attention in the commodity market.

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## Measuring Risk for Venture Capital and Buyout Portfolios

**Susan Woodward**

*Journal of Performance Measurement*

vol. 17, no. 1 (Fall 2012):8–23

The author presents a methodology for estimating risk levels inherent in venture capital and buyout funds. In particular, she designs a systematic approach that produces risk measures more than twice as high as values generated by standard procedure. This improved approach also provides an opportunity to mark to market any alternative asset portfolio in a straightforward yet precise manner.

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## What's Inside?

The author attempts to find a remedy for the bias of staleness in valuations of venture capital or buyout funds. The bias derives from the lack

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Susan Woodward is at Sand Hill Econometrics. The summary was prepared by Michal Szudejko, CFA.

of a public market for such assets. As a result, the prices and valuations of venture capital or buyout investments change in a smoother manner over time compared with those of public market–driven benchmarks. Using standard risk measures against such data can produce overly conservative results.

The methodology the author presents carries two practical benefits. First, it reduces the bias in risk measurements. Second, it provides a readily available setup for preparing mark-to-market valuations of portfolios composed of such assets.

## How Is This Research Useful to Practitioners?

The author presents an approach for direct measurement of risk levels in alternative asset portfolios. In particular, the capital asset pricing model (CAPM) is enhanced through the additions of lagging market returns as well as autoregression corrections. As a result, the author estimates betas for venture capital and buyout funds at approximately 1.64 and 0.90, respectively, which is more than double the outcomes generated by the standard procedure.

The decomposition of a portfolio according to the size of the lag in the valuation of its individual components is a byproduct of the author's procedure. It creates a systematic and statistically documented approach for marking returns to market. To mark to market the fraction of the portfolio that is  $n$  quarters old, one must multiply the market return from that time by the beta for the portfolio.

There are several groups of investment-related professionals who might benefit from these outcomes, including investors trading in such assets, particularly if they are obliged to mark to market (e.g., when managing pension plans of public companies). Another group to benefit are funds' general partners. Thanks to increased predictability of the performance of funds under their management, they may be able to attract new investors more easily.

## How Did the Author Conduct This Research?

The author first calculates risk measures for stale portfolios using the standard CAPM. Then, she adds several lagging market returns and

autoregressive correction changes. This procedure generates betas twice as high as those generated with the standard method. It is worth noting that autoregressive correction has stronger effects for venture capital fund portfolios than for buyouts.

The dataset used for this analysis is sourced from Cambridge Associates (CA), an advisory organization concentrating on alternative investments. CA venture returns are regressed against the Wilshire 5000 index minus the three-month T-bill rate. The data cover 1990–2011 (86 quarters of data).

There are several limitations to the methodology. First, it is viable only for portfolios that include funds that are a mix of vintage years as well as a mix of partnerships. It may not be appropriate for individual vintages or portfolios with limited diversification in terms of partnerships (or individual partnerships). This issue means the methodology is not holistic in its approach. Second, there are some limitations related to the dataset itself. These limitations include a potential upward bias because CA clients may not be interested in getting advice on the worst-performing funds and their risk tolerance is higher than, for instance, that of clients of Thomson Venture Economics.

## **Abstractor's Viewpoint**

From my perspective, the approach presented in the paper is very appealing. Despite its relative simplicity, it contains a quite powerful yet comprehensible mechanism that may benefit different participants of the alternative investment market. These participants include investors, fund managers, and companies assuming venture capital as their source of financing. The author also did an excellent job identifying weaknesses of the methodology presented, which, in my opinion, increases the chance of practical application of the model and provides room for further research and discussion.

# Private Equity Performance and Liquidity Risk

Francesco Franzoni, Eric Nowak, and Ludovic Phalippou

*Journal of Finance*

vol. 67, no. 6 (December 2012):2341–2373

The authors build on existing research to demonstrate that the diversification benefits of private equity investments are overstated; when the illiquidity of the asset class is taken into account, the alpha of the asset class is actually close to zero. Furthermore, they show that private equity is exposed to the same liquidity risk factors as other asset classes because of a common funding liquidity channel.

## What's Inside?

Private equity investments tend to be popular with longer-term investors because of the asset class's perceived diversification benefits and excess return potential as compared with other asset classes. But the authors contend that the diversification benefits of the asset class may be overstated because of the underlying liquidity risk of the asset class; when this liquidity risk is taken into account, the excess return of the asset class is not statistically different from zero. The authors then explore a link between public and private equity investments through a common funding liquidity channel—namely, market liquidity—that they believe directly influences private equity performance.

## How Is This Research Useful to Practitioners?

Despite the widespread use of private equity investments, the authors contend that the underlying liquidity risk of the asset class remains unclear. In particular, they attempt to determine whether the asset class in general is affected by underlying market liquidity and, if so, to what extent this liquidity hampers diversification benefits and excess return potential.

Through careful examination of over half of the completed private equity investments between 1975 and 2006, the authors conclude that

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Francesco Franzoni and Eric Nowak are at the University of Lugano and Swiss Finance Institute. Ludovic Phalippou is at the University of Oxford Said Business School. The summary was prepared by Lawrence Gillum, CFA.

the liquidity premium of private equity might be understated. Practitioners typically use an 8% hurdle rate when evaluating private equity investments. But when the authors consider the underlying liquidity risk, they conclude that an 18% hurdle rate is more appropriate. This change would certainly affect the viability of the underlying investment as well as performance-based compensation metrics benchmarked to the hurdle rate.

Finally, understanding the real risk profile of the investment is important for risk managers. In times of market stress, private equity investments may not provide the diversification benefits managers expect.

## **How Did the Authors Conduct This Research?**

Using data from CEPRES (the Center for Private Equity Research), which collects monthly cash flow information on liquidated private equity investments, the authors construct precise measures of the investment performance and aggregate liquidity conditions over the life span of each individual investment. This methodology allows them to observe more than 4,400 completed deals between 1975 and 2006—a dataset that represents 51% of all private equity deals over the period. The authors then create portfolios of private equity investments, grouped by start date, that are sufficiently diversified with 20 investments. They create portfolios to reduce idiosyncratic risk and to provide more robustness in the explanatory values. Modified internal rates of return (MIRRs) are calculated for each portfolio.

After the portfolios' MIRRs are calculated, the authors derive the liquidity risk premium (beta) and alpha estimates relative to a public equity market proxy. They use three models with varying levels of specificity—the capital asset pricing model (CAPM), the Fama and French model (FF), and an augmented FF that captures a traded liquidity factor—and demonstrate the varying levels of total risk premium captured by the models, ranging from 7.3% (for CAPM) to about 18% (for the augmented FF). Finally, alpha estimates reveal that excess return diminishes as the number of factors in the model increases: 9.3% for CAPM, 3.1% for FF, and virtually zero for the modified FF. As such, the authors conclude that the liquidity risk premium is an essential component when accounting for private equity returns in aggregate.

The authors conclude with a hypothesis on why private equity returns are related to the liquidity of public equity markets. They consider individual private equity investments and use the Senior Loan Officer Opinion Survey on Bank Lending Practices as a proxy for funding liquidity, and they conclude that tightening credit standards, as measured by the opinion survey, is strongly correlated with private equity performance. The authors argue that because private equity investments have to occasionally refinance their debt, the liquidity of private equity lenders (mainly banks and hedge funds) is related more to the overall availability of credit than to the level and direction of interest rates.

### **Abstractor's Viewpoint**

The authors provide compelling and thorough evidence to suggest that private equity investments do not, in aggregate, provide sufficient diversification benefits and are not likely to add value to portfolios. But they do not measure the investment benefits of investing in private equity through actively managed private equity funds. The authors construct portfolios based on noninvestment-related criteria (diversified with 20 investments, same start date, etc.), but fund managers are likely to select investments based on underlying fundamental characteristics of a company as well as diversify across investment inception dates. Therefore, the article is unlikely to settle the debate on the viability of private equity investments within a diversified asset allocation. Nonetheless, the authors provide important information regarding the link between private and public markets.

## CORPORATE FINANCE

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### The Acquisitiveness of Youth: CEO Age and Acquisition Behavior

**Soojin Yim**

*Journal of Financial Economics*

vol. 108, no. 1 (April 2013):250–273

The compensation a CEO receives has a significant impact on acquisition activity. A CEO's compensation typically increases significantly with acquisitions, which can be an incentive to pursue acquisitions early in his or her career. With the age of a CEO being one of the influences on corporate policies, age is an important factor for boards to consider in their selection process.

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#### What's Inside?

Company acquisitions are typically accompanied by a large permanent increase in the compensation of the chief executive officer (CEO). This increase creates a situation in which CEOs are highly incentivized to actively look for potential acquisitions early in their careers. The author finds that relative to young CEOs (defined as 27–48 years old), CEOs who are 20 years older are about 30% less likely to announce an acquisition. This effect is more profound when there is an expectation of high permanent post-acquisition compensation. Declining overconfidence with age or the hiring of young CEOs by acquisition-prone firms does not explain the effect of age on acquisition behavior.

#### How Is This Research Useful to Practitioners?

During 1992–2007, the value of mergers and acquisitions was more than \$7 trillion. But there is no consistent evidence that acquisitions create value for the shareholders of the acquiring firm. This finding is typically attributed to agency problems associated with the CEO,

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Soojin Yim is at Emory University. The summary was prepared by Natalie Schoon, CFA.



which are further exacerbated by weak governance, excessive free cash flow, and poor compensation practices. Each of these explanations takes the firm as a starting point and ignores the fact that agency problems with CEOs may vary for individual CEOs.

A sizable acquisition (i.e., one that exceeds 5% of the firm's market capitalization) yields an average increase in permanent CEO compensation of \$300,000 per year. In addition, regardless of age, the CEO of an acquiring firm is much less likely to be terminated than the CEO of the firm being acquired. The combination of increased permanent compensation for the remainder of a CEO's career and limited termination risk provides strong incentives for a younger CEO with a longer career horizon to pursue an acquisition. The age effect is even more prominent in acquisitions in which expected compensation is larger and the CEO has the power to influence post-acquisition compensation. These acquisitions also turn out to have the lowest announcement day returns, implying that CEO age is a source of agency problems in driving value-destroying acquisitions. Age thus becomes an important consideration for a board when hiring a CEO.

The age effect is not present in other firm investment activities that do not include a permanent compensation increase.

## How Did the Author Conduct This Research?

The author's conclusion that CEO age has an impact on acquisition behavior is based on an analysis of top management compensation data of S&P 1500 companies, including CEO age and tenure during 1992–2007. Only CEOs whose period of service exceeds six months are included in the sample. To be able to attribute acquisitions to individual CEOs, instances of overlapping tenure by multiple CEOs are excluded from the sample. Although the sample contains only U.S.-based acquiring companies, both national and international targets are included.

The data show that the number of sizable acquisitions is only 15% of the total number of acquisitions during the period. The author finds that acquiring firms tend to be small in size, which is related to the fact that large firms are less likely to find target firms of the same size. Acquiring firms also tend to be younger, have higher market-to-book

ratios, and be led by younger CEOs who earn higher salaries. The average CEO is found to be 55 years of age, with five-year tenure and earnings of \$2 million a year.

Several age-related characteristics established by other research, such as changes in personal circumstances, the inclination to lead a quiet life, and overconfidence, are considered as part of the research. Although the findings do not support the overconfidence theory, the relevance of other age-related characteristics cannot be completely ruled out. But the findings clearly show that when a firm has a young CEO, the potential compensation after the acquisition has a much larger impact on an acquisition decision. Equally, the findings indicate that when there is no compensation benefit, there is no difference in acquisition behavior.

### **Abstractor's Viewpoint**

The research provides an interesting insight on how CEO age may influence the desire of the CEO to pursue acquisitions and thus affect shareholder value. The research also shows that the potential size of future compensation is a stronger driving force for a younger CEO than it is for an older one. Further research into why financial benefits do not feature in the acquisition decision-making process at a later age may provide even further insight for boards when they consider their next CEO.

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## **Agency Costs, Mispricing, and Ownership Structure**

**Sergey Chernenko, C. Fritz Foley, and Robin Greenwood**

*Financial Management*

vol. 41, no. 4 (Winter 2012):885–914

In corporate reorganizations, when sufficient opportunity is available in the form of equity mispricing, parent companies often seize advantages and offer fairly bleak prospects for outside investors.

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Sergey Chernenko is at Ohio State University. C. Fritz Foley and Robin Greenwood are at Harvard Business School. The summary was prepared by Gregory G. Gocek, CFA.

## What's Inside?

The potential conflicts of interest that motivate controlling shareholders pose hazards to investors during corporate reorganizations. Effective market pricing that internalizes related agency costs and limits such detriments may not exist when the involved equity is overvalued. Using stock market data that track spinoffs of subsidiaries in Japan, the authors investigate the impact on minority owners. They find evidence of value transfers to parent firms when larger equity stakes in subsidiaries are sold. Additionally, when there is greater market overvaluation at the time of spinoffs, the holdings of minority owners historically underperform. Finally, after reversion of mispricing, parent firms often repurchase their subsidiaries at large discounts to valuations at the time of listing, receiving positive abnormal returns at the repurchase announcement.

## How Is This Research Useful to Practitioners?

The authors pose the latest challenge to long-accepted theories that corporate ownership is organized to maximize firm value, with minority investors fully anticipating potential abuses by controlling shareholders and suitably charging for their outside capital. Additionally, they offer an explanation for the basis of the equity carve-out decision. Rather than seek otherwise unavailable capital to finance profitable projects, owners strive for market timing to offer shares at premium equity valuations. But such external stock market mispricing facilitates the creation of ownership structures that are prone to agency problems. These structures are often dismantled once prices correct themselves—a “have your cake and eat it too” proposition for manipulative insiders.

The authors stress the importance of pursuing a deep understanding of the business setting. The legal hurdles are low for motivated expropriators in Japan because of the weak nature of both transfer-pricing regulation, which affects intracorporate exchanges, and corporate reorganization rules, which affect minority squeeze-outs, related-party transactions, and usurped business opportunities.

## How Did the Authors Conduct This Research?

*Japan Company Handbook* data of the listings of subsidiaries of Japanese public companies are tracked at five-year intervals for

1980–2005 (including 1987), with subsidiaries defined as entities whose corporate parents owned at least 20% of their equity both before and after the listing. Post-listing ownership of both the parent and subsidiary firms are checked to ensure that no substantial overlap exists between the groups. This process allows the authors to account for differential effects of equity mispricing and focuses their research on firms in which the parent maintains effective control but owns a relatively small percentage of the cash flows. Market value and stock return data to track post-listing performance are sourced from DataStream.

The authors perform statistical tests and in most cases calculate risk-adjusted returns using the standard Fama–French risk factors. After establishing the parent firms’ financial constraints prior to listing and the cumulative monthly returns of parents and subsidiaries for three years after the listing, they use regression analyses to produce data tables for the book-to-market ratio of new listings, the cumulative three-year returns (at one-year intervals) following subsidiary listings, the risk-adjusted returns for the full sample and two subsets of subsidiaries, the comparative risk-adjusted returns of subsidiary versus nonsubsidiary listings, and the returns from ownership changes after listings, gained via either a buy-and-hold strategy or reacquisition by the original parent.

## **Abstractor’s Viewpoint**

The authors emphasize an aggregate influence on controlling shareholder sell-off decisions. Namely, when market mispricing induces higher misvaluations, corporate reorganizations accelerate and, given weak minority shareholder protections, benefit the issuers. Although they do not theorize on the source of such mispricing, the authors point to investor underestimation of agency problems in the misperceptions of conflicts of interest, even after prominent disclosure of such risks. Their work offers a foundation for reforms in corporate governance, such as increased prevalence of independent directors or avoidance of the inefficient ownership structures of pyramids, business groups, and dual-class shares prone to deadweight losses incurred to cover resource diversions. As Occam’s razor suggests, financial simplicity often works best.

# Agency Problems in Public Firms: Evidence from Corporate Jets in Leveraged Buyouts

Jesse Edgerton

*Journal of Finance*

vol. 67, no. 6 (December 2012):2187–2213

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Corporate ownership of private jets often enhances returns of both public and private firms. But the author argues that the possession of larger private jet fleets in publicly listed firms, relative to the fleets of comparable private firms, is symptomatic of excessive executive perquisites and compensation. Supporting evidence includes reductions in fleet size following leveraged buyouts and 40% smaller fleet sizes among firms owned by private equity funds compared with the fleets of comparable public firms.

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## What's Inside?

There are many legitimate reasons for corporate ownership of private jets, and such ownership can enhance shareholder returns in many cases. Even when excessive jet use detracts from shareholder returns, the overall agency cost is still small in relation to firm size. But the author argues that where identified, excessive jet use is symptomatic of wider agency problems that may be harder to pinpoint. The majority of firms show little evidence of excessive jet use, but an economically significant group above the 70th percentile show levels of jet use that are hard to reconcile with shareholder interests.

## How Is This Research Useful to Practitioners?

The efficiency with which a firm's resources are allocated toward maximizing owner returns is one of many variables that are relevant to a firm's value assessment. Red flags indicating that resources are being diverted toward other goals—for example, excessive managerial enrichment at the expense of capital providers—are widely used to assess the degree to which executive and owner motivations are aligned. In this vein, the author argues that excessive jet use is

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Jesse Edgerton is at the Federal Reserve Board. The summary was prepared by Isaac T. Tabner, CFA, ASIP, University of Stirling, United Kingdom.

a symptom of wider agency problems. His evidence indicates that such agency problems are more easily resolved when ownership is concentrated—for example, in a private equity fund rather than dispersed via a public listing.

Investment professionals should pay attention to corporate jet use by the firms they invest in. Seemingly excessive use should be queried and potentially prompt further investigation to determine the extent to which the behavior and actions of executives are aligned with the interests of capital providers.

### **How Did the Author Conduct This Research?**

The author retrieves data from the JETNET database, which tracks the ownership, financing, and operating of business aircraft in the United States. These data allow him to link characteristics of jet ownership, such as fleet size and available seats, with the publicly and privately held firms in the sample. He identifies private firms using the *Forbes* annual lists of the largest private firms in the United States and public firms using Compustat. He constructs both a cross-sectional sample comparing public and private firms and a sample that records jet ownership of firms prior to, during, and following a leveraged buyout (LBO).

After controlling for other variables, the author uses a least-squares regression model on the cross-sectional data to estimate the linear probability of jet ownership based on whether the firm is publicly listed, owned by a private equity fund, or private (but not privately owned). The results indicate that private equity ownership reduces the probability of corporate jet ownership by around 12 percentage points. For robustness, the author also uses probit models and obtains consistent results. He also finds consistent results when he uses firm ownership variables to model the ratio of jet seats to firm sales.

The author uses regression models to demonstrate that jet ownership declines following LBOs, and his results from quantile regressions indicate that firms in the 80th percentile and above in terms of the ratio of jet seats to sales are most sensitive to their ownership category. Specifically, private equity ownership in the upper quantiles is associated with a lower ratio of seats to sales than is public ownership, whereas

private firms that are not private equity owned have the highest ratios of seats to sales.

## **Abstractor's Viewpoint**

The author convincingly demonstrates that private equity owners value jet use less than do executives of comparable publicly listed firms. In addition, private equity owners have the power to reduce jet use after taking public firms private. Based on this finding, the author argues that excessive jet use may be a proxy for other agency problems. The arguments are intuitively appealing, but the inference is somewhat indirect because it rests on the assumption that private equity owners are correct in their evaluations and because there is little direct evidence that high jet use destroys value. Therefore, caution is required before staking too much on these claims.

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## **The Best since Sliced Bread**

*Economist*, Schumpeter Blog

(19 January 2013): [www.economist.com/news/business/21569679-giant-emerging-market-firms-continue-advance-everywhere-best-sliced-bread](http://www.economist.com/news/business/21569679-giant-emerging-market-firms-continue-advance-everywhere-best-sliced-bread)

The author discusses the composition and traits of large emerging market firms.

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## **What's Inside?**

More than 1,000 companies in emerging markets have sales exceeding \$1 billion. The author explores features and trends among these mega-firms and their role in the global economy.

## **How Is This Article Useful to Practitioners?**

Large emerging market firms are making inroads in their home markets where growth is prevalent, and others are also pushing into global markets. The Boston Consulting Group (BCG) has been providing annual studies of the top 100 of such “global challengers”

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The summary was prepared by Marc L. Ross, CFA.

since 2006. Criteria include revenues of more than \$1 billion, of which foreign revenues equal at least 10% of the total, and credible global aspirations according to select criteria and the opinion of industry experts.

Once dominated by companies in the BRIC countries, the list now includes firms from 17 nations. In 2006, heavy industries dominated the top 100; now, consumer services prevail. Large firms compete on price, innovation, and creation of new business models. They are also buying foreign companies as a way to enter new markets and acquire new skills.

The overall number of state-owned enterprises on the list has declined from 36 to 26 over the last seven years, but 9 new state-owned enterprises are on the 2013 list. They may survive because of an advantage in their home market and politically driven government intervention.

Undaunted, emerging market firms are encroaching on Western competitors, with some making a big splash in other developing economies. Chinese firms control 37% of Africa's construction market, for example. The presence of such behemoth companies in the developed world is a double-edged sword because they create both growth opportunities and disruption. These firms employ many workers and are big customers for developed-world companies.

## **Abstractor's Viewpoint**

As the author aptly concludes, emerging markets continue to emerge. The findings of the BCG study highlight that although some firms from the original list are gone, new and more nimble ones are replacing them.



# Do Stock Prices Influence Corporate Decisions? Evidence from the Technology Bubble

Murillo Campello and John R. Graham

*Journal of Financial Economics*

vol. 107, no. 1 (January 2013):89–110

Using data from the technology bubble, the authors argue that misvaluations can affect corporate investment, issuance, and savings policies. They find that managers do not systematically issue overvalued stocks and invest in ways that transfer wealth from new to old shareholders. Furthermore, during the technology bubble, technology firms did not allocate issuance funds to cash savings, whereas credit-constrained non-tech firms did allocate issuance funds to investments and cash savings.

## What's Inside?

Using data from “non-bubble firms”—that is, old economy firms—during the technology bubble, the authors present evidence that market misvaluations can affect corporate investment, issuance, and savings policies. They find that the issuance of overvalued stock does not always lead to a transfer of wealth from new to old shareholders. The run-up in equity can ease financing difficulties, which allows credit-constrained firms to engage in profitable investments that otherwise would not be available. They also discover evidence that bubble (technology) firms did not allocate issuance funds to cash savings, whereas credit-constrained non-bubble firms did allocate issuance funds to investments and cash savings.

## How Is This Research Useful to Practitioners?

The authors report at least two results that are useful for practitioners. First, they provide evidence that contradicts prior research indicating that the issuance of overvalued equity benefits old shareholders at the expense of new shareholders. The authors find that a run-up in equity prices can ease credit constraints of firms that would otherwise not be

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Murillo Campello is at Cornell University. John R. Graham is at Duke University. The summary was prepared by Clifford S. Ang, CFA.

able to borrow and fund profitable projects. This access to capital can then lead to an increase in shareholder value and result in a benefit to both new and old shareholders. Although the insight may not be new, the evidence provided by the authors is interesting and has significant implications in corporate finance.

Second, they find that financially constrained firms use issuance funds for both investments and cash savings, whereas unconstrained firms use issuance funds for investments. This result is interesting because it provides new insights into corporate investment and savings policies.

## How Did the Authors Conduct This Research?

Using sectors whose business fundamentals were probably not directly affected by advances in telecommunications and data processing, the authors identify non-bubble sectors during the tech bubble period. They use SIC codes and data from Compustat's P/S/T, Full Coverage, and Research annual files from 1971 to 2003. They focus primarily on data from 1992 to 2003 and use pre-1992 data to benchmark tests. Next, they identify financially constrained and unconstrained firms using *ex ante* sorting based on such observables as payout policy, size, and debt ratings.

The authors' baseline model regresses a proxy for investments on proxies for market valuation and cash flow. This simple model isolates the amount of investment that is unexplained by firm fundamentals, and the result indicates that market valuation is a strong driver of investments for financially constrained firms.

To continue their research and perform robustness tests, the authors modify the baseline model. For example, in one specification, they include a proxy for the profitability of the firm's capital as an additional independent variable, which causes the market valuation proxy to become insignificant. From this result, they infer that it is optimal for both constrained and unconstrained firms to increase their investments if changes to the fundamentals result in more investments becoming profitable and if market prices have not systematically driven corporate investment spending beyond its relationship with fundamentals.

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## Abstractor's Viewpoint

The authors find that the issuance of overvalued equity can benefit both new and old shareholders. But this result seems to be relevant only for credit-constrained firms prior to an equity price run-up. Moreover, even in such a situation, we still need to analyze the magnitude of the benefit to new shareholders and compare this benefit with the harm of buying overvalued equity. In addition, for firms that are not credit constrained, the issuance of overvalued equity seems to benefit only old shareholders.

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## Pitfalls in Levering and Unlevering Beta and Cost of Capital Estimates in DCF Valuations

**Robert W. Holthausen and Mark E. Zmijewski**

*Journal of Applied Corporate Finance*

vol. 24, no. 3 (Summer 2012):60–74

The standard weighted average cost of capital estimations in discounted cash flow (DCF) valuations cause some problems. The authors offer alternative formulas for leveraging and unleveraging beta and cost of capital to provide more accurate DCF valuations for growing companies. They include equity-linked securities in their formulas and show the importance of making adjustments when accounting treatment is different between companies.

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## What's Inside?

The authors address pitfalls in assumptions used in the Modigliani and Miller (M&M) model for estimating the weighted average cost of capital (WACC) with taxes (*American Economic Review* 1963). They present a framework for adjusting the cost of capital formulas that are used in discounted cash flow (DCF) valuations to consider growth and nonpermanent debt levels and to estimate an implied beta for debt and preferred stock in the leveraging and unleveraging of beta.

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Robert W. Holthausen is at the University of Pennsylvania. Mark E. Zmijewski is at the University of Chicago. The summary was prepared by Marla Howard, CFA, University of Maryland University College.

They show the potential impact on the WACC and company valuation (1) when equity-linked securities are ignored and (2) when accounting treatment for long-term leases and other quasi-financing instruments is different between companies.

## **How Is This Research Useful to Practitioners?**

The M&M model for estimating the WACC with taxes assumes a constant capital structure, no growth, and fixed perpetual debt. By using the cost of debt to discount all interest tax shields, the M&M model mitigates the impact of debt on the cost of equity for companies that refinance and increase their debt. The authors suggest that for growing companies in which new debt is issued and existing debt is refinanced, the interest tax shields are riskier than the company's cost of debt. With continuous refinancing, the interest tax shields are assumed to have the same risk as the unleveraged assets and are thus discounted at the cost of unleveraged assets instead of at the cost of debt. A continuous refinancing assumption yields a cost of equity similar to an annual refinancing assumption. Therefore, the authors' model discounts all interest tax shields at the unleveraged cost of capital.

They use CAPM-implied betas for debt and other nonequity securities in the leveraging and unleveraging of betas. The use of the implied betas leads to a lower cost of equity and WACC than the common practice of assuming zero betas for nonequity securities.

The authors demonstrate the importance of adjusting accounting information used in the WACC calculations when leases are not accounted for consistently between companies. They also encourage practitioners to include the effect of options and other equity-linked securities in the capital structure.

## **How Did the Authors Conduct This Research?**

The authors review the general framework for how the WACC is determined by first leveraging the equity cost of capital by adding together the return on unleveraged assets and the effect of financial leverage (which takes into account the difference in risk of the interest tax shields and the company's assets). Next, they unleverage the

cost of capital, which equals the WACC of the company's securities adjusted for the interest tax shields. They show how the WACC equals the unleveraged cost of capital adjusted for the value and risk of debt financing; that is, it reflects the tax deductibility of interest and the value of interest tax shields discounted at a different rate from the unleveraged cost of capital.

Using a hypothetical example, the authors show a 10% variation in relative discount rates (and thus a 10% difference in firm valuation) between the M&M model with taxes and the alternative formula that assumes continuous or annual debt refinancing. The difference results from discounting the interest tax shield at the unleveraged cost of capital instead of at the cost of debt as in the M&M model.

The authors also provide hypothetical examples to show the impact on DCF valuations for assuming zero betas for debt and preferred stock, as well as from using inconsistent accounting methods for leases.

### **Abstractor's Viewpoint**

The authors' extensions to the M&M model for estimating the WACC with taxes may be beneficial for practitioners in estimating discount rates for DCF valuations. They also show a significant difference in valuation between similar companies when one is capitalizing and the other is expensing lease payments. I would caution that accounting in GAAP requires capitalization when the substance is a financed purchase; that is, the accounting treatment is not a choice. Nevertheless, practitioners should be aware of accounting differences and how they impact the WACC estimates and valuations.

# A Primer on Distressed Investing: Buying Companies by Acquiring Their Debt

Stephen G. Moyer, CFA, David Martin, and John Martin

*Journal of Applied Corporate Finance*

vol. 24, no. 4 (Fall 2012):59–76

Distressed investors play a significant role in corporate restructurings; they acquire control of the distressed firm's assets by investing in its debt prior to the restructuring event. The authors highlight the importance of distressed investors providing liquidity and explain the complexities of their process.

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## What's Inside?

Distressed investors gain control of a distressed firm's assets by investing in a debt tranche in the firm, which will usually be transformed into equity in the event of default. The process involves valuing the firm's assets, arriving at the post-restructuring sustainable capital structure in view of the current position, and finally, executing the plan through implementation of the new capital structure. The authors highlight the complexities of the process, including potential valuation issues, negotiations with creditors and prior investors, and reorganization of the business, if required.

## How Is This Research Useful to Practitioners?

This research is highly relevant for private equity investors and practitioners involved in vulture investing as well as mergers and acquisitions. The authors discuss the important role distressed investors play in providing liquidity for firms on the verge of bankruptcy or for corporate restructuring. The high-return potential on such deals is justified by the substantial risk carried by the distressed investor, who has to manage a large number of stakeholders with varied interests.

The key to success for distressed investors is proper valuation and implementation of an appropriate post-restructuring capital structure that

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Stephen G. Moyer, CFA, is at Distressed Debt Alpha. David Martin is at Orix Corporation. John Martin is at Baylor University. The summary was prepared by Sadaf Aliuddin, CFA, Pak Brunei Investment Company.

will ensure the firm's viability. It is in the interest of initial investors and creditors/lenders of the distressed firm to negotiate the best price on their securities, especially if they expect a turnaround after the restructuring deal. Distressed investors' interests lie in securing the highest discount possible, which will increase the chances of turnaround as well as investors' profit potential. Thus, the situation calls for exhaustive negotiations from both ends. Distressed investors' negotiating leverage arises from the likelihood that the outstanding securities will become worthless if the deal does not occur.

For many reasons, there are a limited number of distressed investors in any market. Properly assessing and valuing distressed firms requires specialized skill and knowledge. The high level of uncertainty regarding the future of the distressed firm requires a very high risk tolerance level and the ability to sustain a long holding period. Many potential investors may also be prohibited from investing in such securities by their mandates.

## **How Did the Authors Conduct This Research?**

The authors' goal is to explain the process by which distressed investors take control of a firm prior to bankruptcy or reorganization. Using a hypothetical case study that the authors constructed, the finding help explain how distressed investing works and how the various players might fare in this fictitious case, depending on the company's fortunes. They cite different case studies as well as research and other articles on bankruptcy law. They conclude that in many cases, distressed firms enter the bankruptcy process under Chapter 11 but that bankruptcy does not materialize because alternatives are provided by distressed investors through the negotiation process. Therefore, there is a greater likelihood that initial stakeholders will obtain a better deal compared with what they would obtain from the winding-up process.

## **Abstractor's Viewpoint**

The incidence of bankruptcy has increased in recent times because of the 2007–09 financial crisis. A key point of the article is that this area requires specialized knowledge. Therefore, a high-net-worth individual who wants to participate must do so by investing in a limited partnership that buys distressed debt. For high-net-worth investors, there is opportunity in the

revival of distressed firms, provided that they have the necessary vision, risk tolerance, and specialized skills to identify and execute the deal.

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## **Risky Business: Why Right-Risking, Rather than De-Risking, Is Key for Pension Plans**

**Paul Sweeting, CFA**

*Journal of Performance Measurement*

vol. 16, no. 4 (Summer 2012):30–39

Recent surveys indicate that a significant number of pension plans in the United States and Europe now consider it prudent to materially reduce the level of investment risk in pension plans as funded status improves. The author argues that “de-risking” may actually raise the sponsoring firm’s and its plan participants’ exposure to risk.

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### **What’s Inside?**

The author identifies several reasons why “de-risking” is growing in popularity with pension funds. Although the reasons have considerable intuitive appeal, the author argues that the approaches have their limitations with respect to their ability to match the liabilities of the pension plan. Thus, an appropriate level of investment risk (i.e., “right-risking”) will always be needed to offset the limitations of de-risking strategies.

### **How Is This Research Useful to Practitioners?**

The most useful aspect of the author’s work for practitioners is his description of the limitations associated with the growing trend of de-risking strategies. The author identifies four arguments for de-risking strategies and the limitations of each.

The first argument relates to tax arbitrage. Plan sponsors attempt to engage in tax arbitrage when they increase the leverage of the firm while reducing the risk of the pension plan. In so doing, a firm can

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Paul Sweeting, CFA, is at J.P. Morgan Asset Management. The summary was prepared by Daniel J. Larocco, CFA, CIPM, CFA Institute.



deduct the interest expense of the additional leverage against its taxes, use the debt to reduce pension deficits, and have the higher level of plan assets grow tax free. But tax arbitrage suffers from several practical problems. First, issuing corporate bonds as an offset to the risk-free liabilities of the pension plan involves a mismatch. As the spread between the corporate rate and the risk-free rate increases, the benefits of the tax arbitrage disappear. Similarly, increasing firm leverage raises the risk of the firm's equity and increases the likelihood that the firm's equity will behave in a manner different from the equities in the pension plan.

The second argument is for member security, which states that less risk in the pension plan (all other things being equal) increases the likelihood that plan beneficiaries will receive their pensions. The author argues that this view is an oversimplification because less risk in the pension plan reduces the growth rate of assets, thereby increasing the pressure on the firm to fund pension deficits.

The third argument concerns agency risk. Agency risk recognizes that individuals often have incentives to act in a manner contrary to the needs of their employer. Applied to the de-risking of pension plans, this approach argues that lower levels of investment risk reduce agency risk; however, less risk will almost certainly lead to lower returns.

Finally, the risk appetite argument suggests that the current environment, with increasing regulation, low interest rates, and increasing longevity, has made pension plans a source of great risk for their sponsors. Although true, these points also increase the need for investment returns.

## **How Did the Author Conduct This Research?**

No empirical analysis was conducted to support this article. The author relies solely on arguments that have previously been made by others regarding the limitations of de-risking in order to support his contention that the "right" level of investment risk in pension funds does exist.

## **Abstractor's Viewpoint**

Although the argument that the limitations of de-risking result in an appropriate level of investment risk in pension funds is obvious, the author provides the practitioner with little in the way of practical guidance. A more

precise definition of de-risking and right-risking, as well as an empirical analysis of how these items interact with funding status, would be useful.

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## **Taking the Long View: The Pursuit of Shareholder Value Is Attracting Criticism—Not All of It Foolish**

*Economist*, Schumpeter Blog

(24 November 2012): [www.economist.com/news/business/21567062-pursuit-shareholder-value-attracting-criticismnot-all-it-foolish-taking-long](http://www.economist.com/news/business/21567062-pursuit-shareholder-value-attracting-criticismnot-all-it-foolish-taking-long)

The management principle of shareholder value maximization has its drawbacks, but it also has some benefits. The author reviews the principle and suggests that there may be more effective ways to put it into practice.

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### **What's Inside?**

At the November 2012 Global Peter Drucker Forum, several high-profile attendees—including at least one chief executive—expressed their misgivings regarding the management principle of shareholder value maximization. The author acknowledges that these critics may have a point but also cautions against discarding the principle altogether.

### **How Is This Article Useful to Practitioners?**

The author discusses the unfortunate side effects produced by the “cult” of shareholder value: (1) share price manipulation by managers with equity-based compensation, (2) firms’ failure to invest adequately in research and innovation, and (3) short-termism within the investment community. Even in an environment that has placed an emphasis on shareholder value maximization, most managers who manipulate results are caught, companies (e.g., Amazon) continue to invest their profits for the long term, and investors continue to eagerly fund those companies as well as companies showing limited short-term profitability.

The author also indicates that short-term share performance can sometimes provide vital early warning signals (e.g., Nokia), and regular

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The summary was prepared by Stuart Fujiyama, CFA.

company performance checks can often provide some insight regarding longer-term health.

In the author's opinion, critics have failed to produce a viable alternative to the clear external measure offered by a share price. Customer satisfaction, manager judgment, and the "stakeholder" model all fall short. Rather than discarding shareholder value maximization, the author suggests various ways for companies to improve its implementation. The suggestions include refraining from providing earnings guidance and placing time restrictions on executives' share option exercises and share sales.

### **Abstractor's Viewpoint**

The author astutely points out that the principle of shareholder value maximization is not inherently inconsistent with taking a long-term view of corporate performance. When evaluating a company that has adopted the shareholder value principle, investment practitioners should scrutinize the mechanisms (e.g., executive compensation arrangements) through which the firm has chosen to implement the principle.

## DERIVATIVES

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### Samuelson Hypothesis and Carry Arbitrage

**Robert Brooks, CFA**

*Journal of Derivatives*

vol. 20, no. 2 (Winter 2012):37–65

Analyzing 50 futures markets over a 20-year period, the author explores what appears to be an inverse relationship between the empirically based Samuelson hypothesis and the theoretical construct known as “carry arbitrage.”

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#### What’s Inside?

The author investigates what appears to be an inverse relationship between the Samuelson hypothesis and the strategy of carry arbitrage. The degree to which carry arbitrage is validated through observation may be linked to the extent to which the Samuelson hypothesis is not. A better understanding of futures price volatility can have a beneficial effect on investors’ use of proper hedging and on margin requirements, thereby improving risk management in these markets.

#### How Is This Research Useful to Practitioners?

Looking at 50 diverse futures markets from 1993 to 2012, the author explores the link between the Samuelson hypothesis and the carry arbitrage strategy. The degree to which the inverse relationship between these two conditions may hold is a function of the futures market in question.

The Samuelson hypothesis states that futures market price volatility increases as the contract expiration approaches. The carry arbitrage strategy entails purchasing the underlying instrument or commodity with borrowed funds and selling short a forward or futures market position to hedge price risk. The related reverse carry arbitrage strategy entails selling short the underlying instrument, investing the proceeds

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Robert Brooks, CFA, is at the University of Alabama. The summary was prepared by Marc L. Ross, CFA.

of the sale, and hedging price risk with a long forward or futures position. It is important to note that carry arbitrage is a theoretical model that empirical (observable) data may or may not support.

Carry arbitrage is more easily accomplished in some markets than in others, with many markets falling into a “semi-arbitragable” category. The presence of market participants willing to arbitrage, carrying costs, the ability to sell short, the ability to lend and borrow at the risk-free rate, and minimal margin requirements are important factors in how readily this strategy may be effectively executed. Markets bereft of some or all of these attributes may be subject to greater volatility as the contract expiration approaches because no release mechanism exists to control or moderate volatility.

Traders, futures market economists, regulators, and policymakers would benefit from this research because it would inform them of market and structural forces that drive commodity and financial markets. In addition, it carries important implications for the practice of risk management.

## **How Did the Author Conduct This Research?**

The author provides a robust review of the relevant literature on both the Samuelson hypothesis and the carry arbitrage strategy. He then presents alternative representations of futures markets to establish to what degree percentage price changes in a long-dated futures contract derive from changes in the nearby contract. Futures markets are some combination of markets where carry arbitrage may be conducted (e.g., minimal market frictions) and markets where arbitrage cannot be carried out because of the presence of such market frictions as an inability to sell short. The author terms this condition “quasi-arbitraged.”

He then develops four hypotheses that he tests on a variety of futures markets. These hypotheses explore futures variance by decomposing the futures contract into its long- and short-dated components to determine degrees of correlation. The degree to which the inverse correlation between the Samuelson hypothesis and the carry arbitrage strategy is validated is a function of the markets observed because of the differing structures of futures markets for specific products. The extent to which the Samuelson hypothesis is validated is a function of the degree of covariance (what the author calls “beta”) between

the longer- and shorter-dated futures contracts. For example, grains and oilseeds, livestock and meats, energy, and food and fiber exhibit marked differences in variance between short- and long-dated futures contracts, whereas interest rate markets display traits consistent with neither the Samuelson hypothesis nor a flat volatility structure.

The author concludes that futures markets are unique, and the observation that the Samuelson hypothesis is supported when carry arbitrage is not depends on the markets under observation, where volatility patterns vary as a function of supply and demand and of market structure.

### **Abstractor's Viewpoint**

The futures markets are an all-important risk management tool. In analyzing the connection between the Samuelson hypothesis and the carry arbitrage strategy, the author sheds light on the dynamics of these markets, finding that the Samuelson hypothesis holds when carry arbitrage does not. His findings are fodder for market participants and end users. Futures markets are alike, some more so than others. Differences relate to specific supply and demand conditions and market structures. Thus, the degree to which the Samuelson hypothesis is valid might be inversely correlated with the degree to which carry arbitrage holds.

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## ECONOMICS

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### Aggregate Savings and External Imbalances in China

Dennis Tao Yang

*Journal of Economic Perspectives*

vol. 26, no. 4 (Fall 2012):125–146

China has an extremely high savings rate and current account surplus, reflecting imbalances in the economy. The author believes these imbalances can be explained by government policies that encourage saving and promote exports. Some policy reforms are recommended to rebalance China's economy.

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#### What's Inside?

The author documents the trends in China's balance of payments, including dramatic changes in its current account balance and net foreign asset position, as well as the significant buildup of foreign exchange reserves. This balance of payments imbalance is mirrored by China's savings less the investment imbalance—that is, the  $X - M = S - I$  national accounting identity (where  $X$  is exports,  $M$  is imports,  $S$  is savings, and  $I$  is investment), which equates the current account balance with the savings–investment balance. The author believes that these imbalances are the result of government policies that encourage saving across the corporate, government, and household sectors; investing in foreign assets; and promoting exports. The government has not yet ameliorated these imbalances with policies increasing social welfare spending or encouraging domestic spending. The author suggests seven reforms to reduce the imbalances.

#### How Is This Research Useful to Practitioners?

After China joined the World Trade Organization (WTO) in 2001, which reduced trade barriers, China recorded persistent surpluses in its

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Dennis Tao Yang is at the University of Virginia Darden School of Business. The summary was prepared by Butt Man-Kit, CFA, Hong Kong.

current and capital accounts, producing a buildup in foreign exchange reserves. This buildup was reflected in a large savings–investment gap arising from an increased aggregate savings rate, constraints on investment growth, and limited public spending.

The aggregate savings rate is composed of the savings rates of firms, the government, and household sectors. By the late 1990s, China completed a series of economic reforms that increased the efficiency of firms. But these policies also involved the suppression of wage increases, low-interest payments on loans, and low land rentals, leading to sharply increased profits. Corporations retained a large share of these profits because the Chinese government did not ask state-owned enterprises to pay dividends until 2008. One reason private enterprises retained profits was that state-owned banks have an intrinsic bias to grant credits to state-owned enterprises. As a result, the aggregate enterprise savings rate increased.

Government savings in China rose from 3.3% of GDP in 2000 to 8.4% in 2008. The increase in tax revenues from production was the largest contributor to the higher savings rate as higher taxes and fees far outpaced the government's increase in spending. The growth of government revenues and lag of public spending are related to the “Nation Rich, People Poor” view that is widely discussed in the public media in China.

The aggregate savings rate in the household sector also increased. It can be explained partly by a decrease in the pension-to-wage ratio—that is, workers have to save more for their retirement. The policies to control population growth have also contributed to the increase by prompting people to save more for old-age security, as opposed to relying on offspring, and to support aging parents given the limited public old-age benefits. Finally, an imbalance in the gender ratio and an incomplete transition from public to private provision of social welfare are also reasons for the rising household savings rate.

Although the investment rate climbed rapidly between 2000 and 2005 (the period immediately after China joined the WTO), the investment rate plateaued afterward. In 2005, in an effort to avoid an overheated economy, the central government imposed investment controls for a set of industries. Moreover, the state-owned banks are



essentially incapable of providing effective investment loans to the growing and more-efficient private firms because of various legal and political problems.

China practices a combination of export-promoting and import-restricting policies. Policies include self-balancing regulation, which requires that foreign direct investment be oriented toward export industries. The rule states that exports must exceed 50% of the total annual output of foreign firms. Other policies, including export tax rebates, limits on certain imports, and exchange rate policy, may also contribute to the large trade surpluses.

### **How Did the Author Conduct This Research?**

The author documents, using government and IMF data, the trends in China's balance of payments, including the dramatic changes in its current account balance, net foreign asset position, and foreign exchange reserves. He then proposes a unified framework for understanding the joint causes of China's high savings rate and external imbalances.

After analyzing the causes, the author suggests that the government (1) provide credit preferences to private enterprises, (2) reduce distortions in the cost of production inputs, (3) enforce existing labor protection laws, (4) reduce import duty drawbacks and export tax rebates, (5) remove preferential policies toward export-oriented foreign direct investment in special policy zones, (6) encourage the private sector to invest abroad, and (7) review population control policies.

### **Abstractor's Viewpoint**

The Chinese government could increase spending in retirement pensions, education, and social welfare, as well as provide incentives for domestic investments. Encouraging consumption and investment could boost domestic demand and long-term productivity, eventually reducing the reliance on exports and the trade conflicts with external economies.

## The Great Intervention and Massive Money Injection: The Japanese Experience 2003–2004

Tsutomu Watanabe and Tomoyoshi Yabu

*Journal of International Money and Finance*

vol. 32 (February 2013):428–443

Japan implemented large-scale monetary intervention during 2003 and 2004 to stimulate its economy when lowering interest rates alone had not been adequate. The authors show that the increased money supply that resulted from unsterilized currency interventions had consequences for investor expectations about future inflation when the economy recovered. As a result, investors' expectation of increasing inflation affected the value of the Japanese yen.

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### What's Inside?

To put downward pressure on the yen, Japan engaged in large-scale selling of yen and buying of U.S. dollars from the beginning of 2003 until early 2004—a period that is called the “Great Intervention.” Countries engaging in currency interventions often sterilize the monetary effect through open market operations that increase liquidity in the system by buying financial assets, such as bonds denominated in the local currency, using local currency as payment. The authors find evidence that suggests the Bank of Japan intentionally did not immediately sterilize the yen-selling intervention because it wanted to keep the current account balances of commercial banks at a high level. In addition, their analysis reveals that even though interest rates were near zero, the unsterilized intervention had a greater impact on the yen/dollar exchange rate than a sterilized intervention would have had.

### How Is This Research Useful to Practitioners?

Although the overnight call money rate was near zero, the Bank of Japan (BOJ) initiated a policy of quantitative easing in 2001 to fur-

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Tsutomu Watanabe is at the University of Tokyo. Tomoyoshi Yabu is at Keio University. The summary was prepared by Rajiv Kalra, CFA, Minnesota State University at Moorhead.

ther stimulate economic growth. The objective of the policy was to stimulate demand by providing more liquidity to banks. The current account balance level was initially set at ¥5 trillion. This target level was steadily increased, until it reached ¥30 trillion to ¥35 trillion in January 2004.

During the time of quantitative easing by the BOJ, the Japanese Ministry of Finance engaged in massive selling of yen from January 2003 to March 2004 to put downward pressure on the yen/dollar exchange rate. The frequency of the intervention increased extraordinarily from once every 40 business days to once every 2 days.

It is not unusual for developed economies to enter the foreign exchange markets to affect their currency values. But the intervention in the currency market is usually almost entirely offset (sterilized) by the monetary authorities. The authors find that only about 60% of the yen supplied to the market during the Great Intervention was sterilized by monetary operations by the BOJ and that 40% remained in the market for some time. The authors suggest that the BOJ intentionally chose not to sterilize the entire intervention because it wanted the current account balances of banks at the BOJ to stay at a high level. Although the increased money supply did not affect the interest rate, it affected the yen/dollar exchange rate more than it would have if the interventions were fully sterilized. From this finding, the authors surmise that investors expect that an increased level of money supply is going to lead to higher inflation when the economy recovers than would occur with a sterilized intervention.

## How Did the Authors Conduct This Research?

The authors use a sample of observations from January 1992 to March 2006. The sample is divided into periods before and after 19 December 2001, the date on which the BOJ changed its policy goal for the current account balance from a particular target level to a target range. They conduct a correlation analysis between the level of current account balance at the end of a day ( $t$ ) and the value of yen sold/dollar purchased two days prior ( $t - 2$ ). The intervention on Day  $t - 2$  is used to control for a two-day settlement period for currency transactions. Although there is no correlation during the first period (before 19 December 2001), a

weak correlation is found during the second period. A regression analysis reveals that there is no strong evidence to suggest that interventions in the first period were not completely sterilized. But it does reveal that about 60% of the values of foreign-exchange interventions were sterilized immediately, whereas 40% were not. The authors find that interventions totaling ¥35 trillion were executed during the Great Intervention. Interestingly, the current account balance at the BOJ increased by ¥13 trillion (40% of the value of the interventions) during this period.

The current account balance target range was updated only five times during the Great Intervention period, but the yen-selling intervention took place over 123 days, which indicates that not all currency interventions were immediately sterilized. Unlike in preceding time periods when the yen selling was sterilized within two days, the authors find that the yen supplied during this period remained in the market for much longer. They determine that the unsterilized interventions had a greater impact on the yen exchange rate than would have occurred if the interventions were sterilized. They infer that investors update their expectations about the future money supply and inflation if the interventions are not fully sterilized.

### **Abstractor's Viewpoint**

During times of liquidity traps, increased money supply does not have any impact on interest rates. Nevertheless, the increased liquidity can help stimulate the economy. But an increased money supply is not without consequences. As the authors suggest, if investors perceive that the increased money supply resulting from an unsterilized currency intervention is likely to remain in the economy for some time, their expectation is that inflation rates will be higher in the future, which affects the currency value more than it would have if the intervention had been sterilized.

# Hoarding of International Reserves in China: Mercantilism, Domestic Consumption and US Monetary Policy

Luigi Bonatti and Andrea Fracasso

*Journal of International Money and Finance*  
vol. 32 (February 2013):1044–1078

Using a two-country, two-period model, the authors illustrate that the rapid accumulation of international reserves in China is the result of a deliberate pursuit of economic objectives by the Chinese and U.S. governments.

## What's Inside?

China's international reserves have accumulated rapidly and are concentrated in U.S. dollar assets. The authors believe the fast buildup is a result of the economic objectives of the Chinese and U.S. governments. For China, the objectives are fast GDP expansion and labor mobilization, and for the United States, the objective is high household consumption. The authors' model explains the persistence of Chinese foreign reserve accumulation in spite of the high associated cost, and it explains why a reversal of policy would probably have a negative impact on employment in both countries.

## How Is This Research Useful to Practitioners?

It is useful for investors to have an understanding of a range of possible economic scenarios and outcomes. The authors' starting point for their argument is the interdependence of policies, which contributes to the debate on global imbalances and the advocacy for global rebalancing. Their model supports the view of a symbiotic relationship between official U.S. and Chinese policy goals. In the United States, the goal is to preserve a high level of individual consumption by maintaining large public budget deficits and encouraging low household saving. In China, the goals are to pursue high export-led GDP growth and

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Luigi Bonatti and Andrea Fracasso are at the University of Trento. The summary was prepared by Billyana Kuncheva, CFA.

mobilize the rural labor force to move to industrial employment in the urban centers. Accumulating foreign reserves and maintaining an undervalued currency are not China's goals per se, but they are outcomes of mutually complementary policies in the two countries.

The authors show that the length of time of China's currency being undervalued accompanied by the buildup of foreign reserves is influenced by the relative importance the Chinese authorities put on maintaining a competitive lead in tradables at the expense of domestic consumption. This symbiotic relationship also depends on the United States maintaining a relatively loose monetary policy stance, as well as on the standard of living the Chinese government decides to guarantee its citizens. Using resources to increase Chinese domestic consumption would reduce consumption opportunities in the United States, and given that the nontradable sector in the United States employs the majority of the labor force, it would also increase unemployment in both countries. But this paradigm might actually change if the Chinese authorities lose their ability to sterilize the reserves through domestic financial repression or to control capital flows and credit allocation.

Other potential risks to the current scenario would be an unlikely deflationary process in the United States. A more probable risk is a regime change in China and a new political leadership that would assign a higher importance to household consumption than in the past.

## **How Did the Authors Conduct This Research?**

The authors use a two-period, two-country economic model. The model assumes the production of only three goods—an internationally tradable good, a U.S. nontradable good, and a Chinese nontradable good. The nontradable goods are produced and sold only domestically. The Chinese authorities control the nominal exchange rate and financial transactions. China's objective is to maximize GDP within the constraint of an acceptable level of household consumption. The U.S. goal is to maximize household consumption. The authors consider two time periods—the present (Period 0) and the future (Period 1).

In Period 1 with a given U.S. monetary policy, employment increases in China and decreases in the U.S. tradable sector by depreciating the real exchange rate. The U.S. authorities influence China's policy via the

money supply. By keeping its money supply high, the United States makes it more convenient for China to accumulate U.S. assets and to specialize in tradable production. In Period 1 equilibrium, the United States would inflate its external debt until China stops accumulating U.S. assets and decides to increase its current consumption and move production toward the nontradable sector.

For Period 0, the authors assume some persistent unemployment and alternative economic objectives. An increase in China's minimum standard of living leads to an appreciation of the Chinese real exchange rate, thus creating a negative impact on employment in both countries. If the United States were to target total employment instead of consumption, it would still have to induce the Chinese to accumulate U.S. financial assets and maintain an undervalued exchange rate. In this way, the domestic demand in the United States can be more expansionary and produce net benefits in terms of total domestic employment; jobs lost in the U.S. tradable sector would be more than offset by employment growth in the U.S. nontradables sector.

## Abstractor's Viewpoint

The study uses a simple stylized model to shed light on the symbiotic economic relationship between China and the United States. The conclusions are quite intuitive but have important implications for current debates on the sustainability of U.S. monetary policy, the undervaluation of the Chinese currency, and potential changes in the goals of the Chinese government regarding economic growth and domestic standards of living.

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## Home Truths: Global House Prices

*Economist*

(12 January 2013): [www.economist.com/news/finance-and-economics/21569396-our-latest-round-up-shows-many-housing-markets-are-still-dumps-home](http://www.economist.com/news/finance-and-economics/21569396-our-latest-round-up-shows-many-housing-markets-are-still-dumps-home)

Sharp differences exist between the housing market in the United States and the housing market in Europe.

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The summary was prepared by Marc L. Ross, CFA.

## What's Inside?

The global snapshot of house prices reveals many diverse situations. The sanguine outlook for the United States contrasts sharply with the outlook for some of the European economies. The author uses two metrics to support his findings and examines some Asian economies as well.

## How Is This Article Useful to Practitioners?

Recovery in global housing markets is mixed at best, with many economies still suffering. The author uses two price measures to determine whether houses are expensive or cheap. Both measures compare current estimates with a long-term average, typically dating back to 1975, that proxies for fair value.

The first measure is price-to-rent ratios, which are akin to the price-to-earnings ratios used for equities. This measure divides current prices by rent, which provides income to investors or savings to homeowners. Rent is equivalent to corporate profit. The other measure divides prices by disposable income per person. Both metrics display a wide range of over- to undervaluation. Canada falls into the former category, Japan into the latter. Both measures point to a sustainable revival in U.S. house prices because the correction that happened over the last few years has made houses inexpensive on a historical basis and monetary policy has been loose. Both measures point to undervaluation in the United States.

Homeowners fared less well in Europe. Markets that experienced massive overbuilding have done the worst. Unemployment rates and the availability of easy money are important determinants of value. Peripheral countries have struggled more than the anchor nations of France and Germany, where unemployment is relatively low and the banking systems are robust. Prices in England are close to fair value—a result of readily available mortgage financing and lack of a property glut.

Valuation misalignments may mean-revert, but the rate at which it will happen will vary according to the market. Consider Japan versus Canada: Fragile markets stand to lose the most once the salve of cheap money disappears.



Real estate fund managers and estate agents would consider these findings helpful because they provide a useful tool to aid in valuation decisions.

## Abstractor's Viewpoint

Global residential property markets continue to be challenged. The recent financial crisis has affected the housing markets of weaker economies more than stronger economies. An understanding of the levers of valuation can provide a clearer picture of where things stand but not necessarily how they will play out over the longer term. Such measures need to be integrated into the larger economic context to have clearer meaning and provide useful guidance.

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## Islamic vs. Conventional Banking: Business Model, Efficiency and Stability

**Thorsten Beck, Asli Demirgüç-Kunt, and Ouarda Merrouche**

*Journal of Banking & Finance*

vol. 37, no. 2 (February 2013):433–447

Islamic banks differ in significant ways from conventional banks. The authors find that Islamic banks are less cost-efficient but maintain higher asset quality. They also determine that during the 2007–09 financial crisis, Islamic banks fared better than conventional banks.

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## What's Inside?

The efficiency and stability of Islamic banks compared with conventional banks merits further research, particularly in light of the 2007–09 financial crisis. Using a sample of 510 banks—out of which 88 are Islamic—from 22 countries, the authors compare conventional and Islamic banks and find that Islamic banks are less cost-efficient but have higher asset quality. Furthermore, Islamic banks are less likely to disintermediate during a financial crisis.

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Thorsten Beck is at Tilburg University. Asli Demirgüç-Kunt is at the World Bank. Ouarda Merrouche is at the European Securities and Markets Authority. The summary was prepared by Natalie Schoon, CFA.

## How Is This Research Useful to Practitioners?

In theory, Islamic banking differs significantly from conventional banking. Five main principles set Islamic banking apart from conventional banking. The three main prohibitions of Islamic banking are against interest, speculation, and investing in banned industry sectors. *Shari'a*-compliant transactions also need to be based on profit- and loss-sharing principles and need to have an underlying tangible asset. These principles result in a different business model from that of conventional banks.

Islamic banks, for example, do not suffer from interest rate risk but do experience pass-through risk between depositor and borrower. Partnership loans are subject to a dual agency problem and are not always suitable as a transaction type from either the bank's or the depositor's perspective. Such transaction types as trade-based and leasing transactions, which provide financing and demand deposits to attract customer funds, are often applied in practice to manage the agency problem and pass-through risks.

The theoretical differences between Islamic and conventional banks do not have clear implications for total earnings, the capability to access market capital, or efficiency. Higher complexity in combination with the relatively young age of the Islamic financial institutions is likely to result in higher costs and thus a lower level of cost efficiency. Even in theory, it cannot be determined with clarity whether and how the business orientation, cost efficiency, asset quality, and stability differ between Islamic and conventional banks.

## How Did the Authors Conduct This Research?

The authors use a data sample of 510 banks, of which 88 are Islamic, from 22 countries over the period 1995–2009. Each country in the sample has both Islamic and conventional banks. To determine the difference in business model, the ratio of fee-based income to total income, the level of nondeposit funding, and the loan-to-deposit ratio are considered. The results suggest that Islamic banks intermediate more of their deposits than their conventional counterparts do.

Bank efficiency is measured by overhead cost and the cost/income ratio, which indicate that Islamic banks have significantly higher

overhead cost but only a marginally higher cost-to-income ratio. Asset quality is assessed using loss reserves, loan loss provisions, and nonperforming loans. Although there is no significant difference in loan loss provisions between the two types of banks, the authors find that loss reserves and nonperforming loans are significantly lower for Islamic banks. Finally, bank stability is assessed using the liquidity ratio, which does not appear to be significantly different between the two types of institutions. In addition, the *Z*-score—an indication of the likelihood of insolvency—indicates that Islamic banks are significantly closer to insolvency. They are thus less stable, and their returns are more volatile.

The general conclusion is that Islamic banks are less efficient, have higher intermediation ratios and higher asset quality, and are better capitalized. The latter two indicators in particular have helped Islamic banks outperform during the financial crisis.

### **Abstractor's Viewpoint**

The authors raise some interesting points, but their research also appears to miss a number of significant issues. Islamic financial institutions globally have suffered significantly from the real estate crisis that occurred at the end of 2009, which should have been captured by the data at least in part. In addition, the fact that Islamic banks are better capitalized seems to be taken as a given, without further investigation into the underlying reasons. Islamic banks' better capitalization is not necessarily by choice; it is mainly caused by the significant lack of liquidity in the market. It is thus not necessarily a strong argument in their favor. But the high level of capitalization is potentially one of the most important reasons Islamic banks did well during the crisis. At a time when conventional banks did not have any funds to lend, Islamic banks still had capital available and were open for business. As a final point, the authors are incorrect as to the number of Islamic banks in the United Kingdom: There were five at the end of 2009, not two as reported. This mistake raises a concern about the quality of the underlying data.

## Understanding China's Growth: Past, Present, and Future

**Xiaodong Zhu**

*Journal of Economic Perspectives*

vol. 26, no. 4 (Fall 2012):103–124

China's economic growth can be considered in several phases and along various dimensions. The author examines China's historical economic performance, the sources of its current growth, and its future.

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### What's Inside?

China's economic growth can be considered in several phases and along various dimensions. The first phase goes up to the establishment of the People's Republic of China in 1949. The second phase covers the impact of China's industrialization policy on the country's growth between 1952 and 1978. The author investigates the contributions of various sectors to China's productivity growth, the resource allocation among the different sectors after 1952, and the sources of China's growth since 1978, when it began its economic reforms. In the final section, the author examines China's future economic growth by investigating its potential for increasing its productivity growth and the factors that could prevent China from realizing these goals.

### How Is This Research Useful to Practitioners?

Prior to 1500, China was the world's leading technological and economic powerhouse, but its growth was slower from 1500 to 1800, during which time China's growth rate fell behind that of Western Europe. Between the industrial revolution and 1950, China's per capita GDP declined.

In analyzing China's growth during 1952–1978, the author notes that it was driven mainly by increases in human capital (because of an increase in the average schooling years) and physical capital rather than by productivity growth. His research demonstrates that, contrary to

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Xiaodong Zhu is at the University of Toronto. The summary was prepared by Ahmed Sule, CFA, Diadem Capital Partners Limited.

popular belief, aggregate productivity growth rather than capital accumulation has been the key contributor to China's economic growth since 1978. The author observes that China's industrial reform between 1952 and 1978, which contributed to capital accumulation in heavy industries, resulted in a misallocation of resources away from agriculture. This misallocation, in turn, led to reduced productivity in the agricultural sector and, eventually, to famine.

Between 1978 and 2007, productivity increased significantly in the agricultural and private sectors relative to the state sector. During this period, employment declined in the agricultural sector as employees left it for the private sector. The author suggests that productivity growth in the private sector was in part a result of its ability to absorb employees from the agricultural sector. Productivity in the state sector declined between 1978 and 1998 relative to that of the nonstate sector because the state sector was subject to increased central planning. Between 1998 and 2007, China's government introduced additional market-oriented reforms, such as privatization in the state sector and trade liberalization, which resulted in improved productivity in the state and nonstate sectors.

The author notes that China still has the potential to increase its productivity further and bridge the gap with other countries, such as the United States and other countries in East Asia. But it is imperative that China implement further institutional, policy, and political reforms.

This research would be beneficial to portfolio managers and other investors with exposure to China, as well as to research analysts and emerging market hedge fund strategists interested in understanding the sources of China's growth and its future growth patterns.

## How Did the Author Conduct This Research?

The author uses data from Angus Maddison's book titled *Contours of the World Economy, 1–2030 AD: Essays in Macro-Economic History* (2007). To decompose China's growth for 1952–2007 and compare China's performance with that of other countries, the author uses purchasing power parity data from the Penn World Table.

He conducts robustness tests by examining China's growth performance through various subperiods between 1978 and 2007 and decomposes

China's sources of economic growth for the period 1952–1978 using a growth accounting methodology that breaks down China's per capita GDP growth into growth from labor participation, the capital output ratio, average human capital, and productivity components. The author notes that his methodology does not account for the way China's one-child policy reduced the cost of migration, which could have indirectly contributed to productivity growth, thereby underestimating the growth contribution of demographic factors.

### **Abstractor's Viewpoint**

The author provides an excellent historical analysis of China's economic growth and the sources of its current growth. He arrives at a conclusion that departs from the widely held view that China's growth rate since 1978 has been driven by investment. In arguing that China's productivity growth rate has been the major contributor to China's growth in this period, the study is groundbreaking. One area of reservation is the accuracy of national statistics about China that the author uses.

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## **The Voice of Public Choice**

*Economist*, Free Exchange Blog

(19 January 2013): [www.economist.com/news/finance-and-economics/21569692-james-buchanan-who-died-january-9th-illuminated-political-decision-making](http://www.economist.com/news/finance-and-economics/21569692-james-buchanan-who-died-january-9th-illuminated-political-decision-making)

The late economist James Buchanan made many valuable contributions to the economics profession. His research emphasized the role of government in the economy.

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### **What's Inside?**

The architect of public-choice theory, James Buchanan was not a mainstream economist, yet his contributions to political economy are quite relevant today. His research focused on understanding the role of the state in the economy and why it matters.

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The summary was prepared by Marc L. Ross, CFA.

## How Is This Article Useful to Practitioners?

Public-choice theory helps explain the recent economic crisis and ongoing political gridlock in Washington, DC. Buchanan recognized early on that the increasing role of government in economic behavior warranted a closer look. Demands on the state grew because of national security concerns and economic calamities, such as the Great Depression.

Public-choice theory evaluates the benefits and drawbacks of policy choices with a detached view toward their execution. Government figures tend to act out of self-interest rather than public duty, which helps explain the increased reliance on fiscal deficits and debt over the potentially more prudent use of taxation to meet government obligations. Another example is the interaction of government and private industry in rent-seeking behavior, whereby private companies lobby for government contracts and special privileges rather than pursuing private clients. Such activity detracts from the productivity of the private sector. The view of public-choice theory is to question the role of the state.

The theory of public choice also helps in making sense of the recent wasted time and debate in the United States about the “fiscal cliff,” debt ceiling, and sequestration. All of these occurrences sprang from the self-interest of the politicians, but deadlines forced them to take action.

Economists, policy strategists, and government officials are all agents in the role of government in the economy. They need to understand the tradeoffs between self-love and public service. Decision makers in the investment management profession, whose motivations may well conflict with those of the investing public they purport to serve, would also benefit from the same understanding.

## Abstractor’s Viewpoint

Government’s increased presence in the national economy is unlikely to change. It is better to gain an understanding of it, which is the point of Buchanan’s work. Buchanan’s school of thought facilitates an understanding of what drives government action in the economy. The author focuses on the United States, but I think it would be interesting to examine the application of public-choice theory in other political-economic systems.

## EQUITY INVESTMENTS

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### Analyst Forecast Consistency

Gilles Hilary and Charles Hsu

*Journal of Finance*

vol. 68, no. 1 (February 2013):271–297

Analysts who have more consistent forecast errors over time influence the movement of stock prices significantly more than analysts who forecast accurately but less consistently, especially when sophisticated investors are involved. Consistent analysts receive more recognition, such as being nominated as “all-stars.”

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### What’s Inside?

The authors examine whether consistent estimates over time are more informative to investors than accurate estimates. They find that consistency is significantly more informative than accuracy, especially if institutional investors are involved. Their evaluation of the effect of consistency adds to the current literature because previous studies viewed accuracy, not consistency, as the critical measure. Accuracy is defined as the absolute distance from the forecast to actual earnings at a point in time. Consistency is defined as the volatility of the unexpected error in the forecast and assumes that investors are Bayesian.

The authors’ main findings are as follows: Consistent estimates provide more useful information to sophisticated investors than accurate ones with unpredictable forecast errors; more consistent forecast errors are associated with greater price moves; analysts showing more consistent forecast biases are more likely to be nominated as “all-star” analysts; and analysts tend to use downwardly biased forecasts in order to deliver more consistent but less accurate estimates, especially when covering stocks with more institutional ownership.

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Gilles Hilary is at INSEAD. Charles Hsu is at Hong Kong University of Science and Technology. The summary was prepared by Georgeann Portokalis, CFA, Gap Financial Counseling.



## How Is This Research Useful to Practitioners?

Consistent forecasts are more informative than accurate forecasts. Specifically, the authors find that consistency is two to four times more economically and statistically significant than accuracy with respect to the abnormal reaction in stock prices when earnings revisions are announced. A valuable takeaway for practitioners is the finding that if consistency increases by one standard deviation, the market reaction increases by about 50% of the median beta.

The authors test three implications of their conclusion and find that all of their deductions are valid. The first deduction is that analysts' welfare improves as the consistency of their forecasts improves. Consistent analysts are more likely to be designated as all-stars by institutional investors and less likely to be demoted.

The second deduction is that analysts tend to low-ball their true expectations to increase consistency, and the authors confirm that low-balling does increase consistency. Prior literature indicated that analysts can enable managers to beat consensus forecasts. By issuing biased reports, analysts may continue to gain favor with company management and receive better information than others, thus allowing them to improve their consistency.

The third deduction is that consistency is more useful to analysts who provide estimates to sophisticated investors. Institutions are able to untangle the consistent bias and identify analysts who have predictable forecasting capability. But accuracy is more important to analysts who cater to the retail investor. The retail investor seems less equipped to identify bias and thus desires more transparency.

Consistency, accuracy, and the tendency to low-ball have all declined since the enactment of Regulation Fair Disclosure in 2000, which requires companies to publicize material information to all investors simultaneously.

Practitioners and regulators could benefit from understanding the motives of the analysts they monitor.

## How Did the Authors Conduct This Research?

The authors regress abnormal stock returns on quarterly forecast revisions to test consistency and accuracy after controlling for many fac-

tors, such as analyst boldness, horizon, experience, and breadth of firms covered. They use actual earnings and analyst forecast data from the Thompson Reuters I/B/E/S database for quarterly forecasts beginning in 1994 and ending in 2006. The accounting data are from Compustat, and stock return information is from CRSP daily files.

The authors' findings are robust, and they are able to confirm their conclusions when using alternative specifications. They repeatedly find that consistency is more informative than accuracy.

### **Abstractor's Viewpoint**

The authors provide support for the belief that the relationship between an analyst and company management can be mutually beneficial. The analyst is rewarded as an all-star if he or she provides consistent forecasts and institutional investors are present, and management may be rewarded by beating low-balled consensus forecasts. Institutional investors also benefit from this process because they can identify and measure the consistent bias. Small individual retail investors may not benefit.

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## **Asset Fire Sales and Purchases and the International Transmission of Funding Shocks**

**Chotibhak Jotikasthira, CFA, Christian Lundblad, and Tarun Ramadorai**

*Journal of Finance*

vol. 67, no. 6 (December 2012):2015–2050

The authors discover a new channel through which international shocks are transmitted across global equity markets. They find that when investors contribute to or withdraw from global equity funds that are domiciled in developed markets, there are significant implications for equity allocations in those funds in emerging markets (EM). The forced asset sales and purchases in EM affect the pricing, correlations, and betas of EM equity investments.

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Chotibhak Jotikasthira, CFA, and Christian Lundblad are at the University of North Carolina at Chapel Hill. Tarun Ramadorai is at Saïd Business School. The summary was prepared by Victoria Rati, CFA, CFA Society Sydney.

## What's Inside?

Equity investments in emerging markets (EM) are of increasing interest to investors, so understanding what drives EM returns (EM prices, betas, and correlations) is becoming increasingly important. The authors study the contagion effect on EM equity markets of investor cash flows into and out of global funds domiciled in developed markets (DM). The authors find statistical evidence that investor flows into the DM-domiciled funds affect investment returns in EM (i.e., there is a contagion effect). Strong investor flows into and out of DM-domiciled funds generate overreactions in individual EM country returns. The authors find that flow-implied fund allocation changes (FIFA) have significant price return effects on EM equities. FIFA measures the amount of capital that is expected to flow into an individual EM as a result of the DM-domiciled fund inflows or outflows.

## How Is This Research Useful to Practitioners?

EM countries with the highest FIFA (top quintile) outperform those in the bottom quintile of FIFA by 176 bps over a three-week period. EM countries in the top quintile experience price increases, and those in the bottom quintile exhibit price decreases. The authors also find the price effects are mostly short term (over a 3-week period) and significantly reverse during the next 12 weeks. The effects are most pronounced when DM returns are at an extreme, either extremely high or extremely low, or when EM are experiencing a crisis.

Regarding the realized (*ex post*) betas of EM with the MSCI G-7 index, the authors find the betas of individual EM increase by 8–15% if the EM is in either the highest or the lowest FIFA quintile, but the effect depends, or is conditional, on the G-7 market return. If the G-7 market return is positive, the top FIFA quintile of EM has a higher conditional beta and the bottom quintile does not. If the G-7 market return is negative, the bottom FIFA quintile of EM has a higher conditional beta and the top quintile does not.

The authors then investigate whether FIFA can explain the comovement or correlation in returns among individual EM. They find that when individual EM are simultaneously in the top (or bottom)

FIFA quintile, the realized monthly correlations of the returns between these individual EM are 22–30% higher.

## How Did the Authors Conduct This Research?

The authors research EM equity returns using a new approach and a new, more comprehensive dataset to analyze the co-movement of international equity returns. They study more than 1,000 DM-domiciled funds that have allocations to EM (global equity funds) for the period of 1996–2009. Funds are selected from their database that have, on average, a 6% allocation to EM (25 EM countries), and the maximum allocation is 17%. The authors calculate the FIFA for each DM-domiciled fund. FIFA measures the amount of capital that should flow into an individual EM as a result of the DM-domiciled fund inflows or outflows.

The authors empirically quantify the effect of FIFA on EM equity market returns—namely, EM prices, betas, and correlations. They conduct robustness tests, and the key results remain intact. The impact of lagging and leading FIFA, the impact of underlying EM liquidity, and control for EM momentum trading are considered. Finally, the authors develop a simple theoretical model to better understand their empirical results. The theoretical model is a further robustness test and is successful in capturing and confirming the patterns observed in the empirical results.

## Abstractor's Viewpoint

The study is on the highly topical subject of EM investing. Given the expected better growth prospects for EM relative to DM and, thus, increasing interest in EM investments, these key findings are a reminder of the potential indirect or contagion shocks that may occur in a globally connected investment world. Indirect effects from investor cash flows into and out of DM-domiciled funds have a significant contagion effect on EM equity markets. It would be interesting to see the results for a similar study of EM debt markets, although data would be more difficult to collect. Given the interest in EM debt markets and the liquidity issues in some of these markets, one would expect there to be highly pronounced FIFA impacts.

## Beware of the Bias

*Economist*, Buttonwood Blog

(9 February 2013): <http://www.economist.com/news/finance-and-economics/21571443-investors-may-have-developed-too-rosy-view-equity-returns-beware-bias>

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Recently published work highlights a bias that exists in equity risk premium research that seems to misleadingly indicate that equities are the best investment over the long run.

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### What's Inside?

Recently published work exposes a bias in equity risk premium (ERP) research that is creating the misleading view that equities are the best investment over the long run.

### How Is This Research Useful for Practitioners?

The author reports that there are two important reasons for practitioners to be aware of a bias in ERP research. First, practitioners should be aware that ERP research primarily reflects the U.S. experience. The author cites results from a study that seem to indicate that equities do not always outperform bonds in countries other than the United States. Also, an investment in global bonds over 1980–2012 would have delivered a better return than an investment in global equities over the same period.

Second, practitioners should be aware that the current long-term outlook for real equity returns is 3–3.5% a year. The low outlook for equity returns has significant implications for some institutional investors. For example, charities' spending power would steadily decline because the average spending rate of 4% of their portfolios would outpace the returns generated. Another example is U.S. corporate pension funds, which would require an abnormally large real equity return of 10% to compensate for the current low bond yields and maintain their target nominal return of 7.6% of the portfolio.

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The summary was prepared by Clifford S. Ang, CFA.

## Abstractor's Viewpoint

The author's spin on the biases in ERP research are somewhat overstated. As a matter of economics, equities should have higher expected returns than bonds because of their higher risk. Findings to the contrary should be viewed skeptically because these results may be attributable to data mining or other biases. Moreover, the study the author references shows that, for the most part, equity returns outperform bond returns. Even in the case of an investment starting in 1980, the study indicated the amount by which global bonds outperformed equity returns is *de minimis* because both asset classes have an annualized real return of 6.4%.

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## Forecasting Stock Returns through an Efficient Aggregation of Mutual Fund Holdings

Russ Wermers, Tong Yao, and Jane Zhao

*Review of Financial Studies*

vol. 25, no. 12 (December 2012):3490–3529

Publicly disclosed mutual fund portfolio holdings contain valuable information about stock fundamentals and can be used to predict future stock returns. The authors' analysis suggests that investors can exploit the stock selection information of fund managers without directly investing in their funds.

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## What's Inside?

The authors develop a measure for predicting stock returns that aggregates the portfolio holdings of all actively managed U.S. domestic equity mutual funds. They use this model to show that a subset of funds exhibits some ability to outperform and can be accessed gross of fees. The goal of the approach is to improve on simple copycat strategies that mimic the holdings of a single mutual fund. The approach takes advantage of a cross-sectional copycat strategy that invests long

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Russ Wermers is at the University of Maryland. Tong Yao is at the University of Iowa. Jane Zhao is at PanAgora Asset Management. The summary was prepared by Rich Wiggins, CFA, Saudi Aramco.

in stocks that are held in common by many top-performing funds and that are not held by very many bottom-performing funds and invests short in stocks for which the reverse is true.

## How Is This Research Useful to Practitioners?

An increase in the transparency of financial institutions is a cornerstone goal of recent regulatory changes, such as the Dodd–Frank Act. The implication is that expanded disclosure requirements level the playing field for the average investor, but these changes also allow closer examination of the value of active mutual fund management. A burgeoning number of studies have explored how required disclosure of holdings can provide useful information to investors seeking to precisely measure manager skill and to evaluate fund investment style, strategy, and risk taking. The research is notable for the development of new approaches to measuring and attributing precisely the performance of mutual funds as well as devising winning strategies for investing in these vehicles.

The authors suggest that mutual fund managers, in aggregate, have better stock selection abilities than other investors and conclude that the stock selection information produced by fund managers through fundamental research is distinct from the information contained in publicly available accounting information and traditional quantitative signals. Notably, they find that the return-forecasting power remains significant after they control for well-known and publicly available quantitative predictors common in empirical asset pricing, such as size, book-to-market ratio, and momentum, and in linear factor models, such as Fama–French and Carhart.

## How Did the Authors Conduct This Research?

Using historical disclosures that funds must file every quarter, the authors introduce a technique that systematically harvests the best stock selections in the fund industry. The objective is to examine the aggregate holdings of mutual funds to measure the aggregate value of active fund management and use this information to estimate future stock returns rather than future fund returns. Stocks that are heavily held in common by multiple fund managers exhibiting past skills

might be expected to outperform. Using data from Thomson Reuters and CRSP, the authors study a sample period from 1980 to 2006; this period was characterized by tremendous growth in the number of actively managed domestic equity mutual funds.

Making adjustments to reflect the fact that observation of mutual fund holdings is delayed, the authors form portfolios that favor stocks that appear mainly in market-beating funds while shorting stocks that appear mainly in lagging funds. They introduce a methodology to obtain the expected value of future stock alphas that they refer to as “generalized-inverse alpha,” which is in reference to an unusual statistical approach necessitated by the fact that there are not enough funds to solve for each stock’s alpha because there are more stocks than mutual funds.

A portfolio’s weight measures the size of a bet and is a proxy for the amount of information possessed by the manager, whereas the fund’s past alpha estimates the precision of the private information. The authors find strong evidence that fund managers possess stock selection information and alternative skill proxies across a wide spectrum of characteristics. This evidence is consistent with the view that fund managers may be uncovering information about corporate fundamentals, but the return-predictive information possessed by fund managers with persistent skills is relatively short lived.

## **Abstractor’s Viewpoint**

Explaining cross-sectional differences in asset expected returns is one of the great challenges of modern finance. The authors’ work contributes to studies of the efficiency of securities markets, as well as the role of institutional investors in setting stock prices and the impact of their trades on stock markets. The results are particularly interesting in light of recent studies that have found improved stock market efficiency over time. If managers’ “high conviction” best-idea investments outperform, it would speak to the suitability of concentrated equity positions as a vehicle for higher returns and the need to suppress powerful institutional incentives to over-diversify and dilute performance.



# The Good, the Bad, and the Ugly of Automated High-Frequency Trading

**Tommi A. Vuorenmaa**

*Journal of Trading*

vol. 8, no. 1 (Winter 2013):58–74

Reviewing the current literature on automated high-frequency trading (HFT), the author tries to determine whether automated HFT affects the quality of financial markets. But the literature does not point to an empirical consensus, mainly because the datasets used span diverse subsets of markets, practices, and time frames. The author concludes that the industry and its regulators will need improved research and universal criteria to devise rational regulation.

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## What's Inside?

Through a review of the literature on automated high-frequency trading (HFT), the author tries to determine whether HFT affects liquidity, price efficiency, and price discovery. This subject is relevant to regulators, risk managers, and traders. The Flash Crash on 6 May 2010 and recent high-profile software-induced losses bring increasing public attention to automated trading.

## How Is This Research Useful to Practitioners?

The author provides an excellent source of citations for those interested in automated trading. The endnotes and references provide more than 120 citations, sourced from newspapers, periodicals, professional journals, speeches, and regulatory policy statements.

In addition to the discussion on HFT, the author offers an interesting digression on the black swan theory. He points out that the tail risk profile of a black swan event is dependent on the time frequency of the measurements. Black swans are “wild” only at certain time scales, and by changing the frequency of the measurements, the lightness or heaviness of the dis-

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Tommi A. Vuorenmaa is at Valo Research and Trading. The summary was prepared by Anthony J. Sylvester, CFA.

tribution's tails will change. The author suggests that probability distributions should model the appropriate time scales of the new technologies.

He further proposes that at such high frequencies, events may become serially dependent. "Dragon kings" is a term coined by Sornette (Cornell University 2009) to explain surprise events that are driven by internal positive feedback, which occur more frequently than expected.

The author points out that the industry may need to update its risk-measuring tools as risk-taking technology is updated.

## **How Did the Author Conduct This Research?**

The author conducts a literature review and summarizes the findings of several other authors. He defines HFT as a strategy for profit maximization, as opposed to algorithmic trading, which seeks to minimize transaction costs. HFT characteristics include high-speed execution, high volumes of subsecond orders and cancellations, co-location of servers to exchanges, and avoidance of overnight risk.

Some literature reports that HFT traders are preying on slower traders. Co-locating their servers near exchanges decreases the latency of the high-frequency trader's electronic signals. Front runners watch for large institutions that are using volume-weighted average price algorithms to execute large orders and then step in front of large trades.

Other predatory methods of speed trading include stuffing, smoking, and spoofing. These techniques are used to manipulate the order book and can cause order congestion, increased short-term volatility, and decreased liquidity. Rapid order submissions and cancellations can also obscure price discovery.

Studies indicate that although HFT did not trigger the Flash Crash of 6 May 2010, it exacerbated volatility because of the creation of volume in the direction of the price changes. Homogenous speed-trading strategies could lead to more systematic risk in the form of correlation. High-speed cross-market arbitrage strategies might spread that risk among markets.

HFT firms claim that speed gives them better risk protection and faster absorption of news. The author notes that low-latency automated trading has been associated with narrower spreads and increased market

depth. Most of the evidence suggests that HFT is beneficial to price efficiency. Some studies indicate that HFT decreases volatility. But the author points out that many studies are based on data taken during normal times.

### **Abstractor's Viewpoint**

Critics of HFT are pushing for more regulation, and pressure is building at regulatory agencies to define and regulate HFT. The author's strongest point is that current research is insufficient to inform the debate surrounding HFT. Industry participants, academics, and regulators need to carefully define and understand new technologies' effects on the markets before they regulate so that impending regulations will improve, and not impair, the financial markets.

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## **Islamic Equity Investing: Alternative Performance Measures and Style Analysis**

**Christian Walkshäusl and Sebastian Lobe**

*Journal of Investing*

vol. 21, no. 4 (Winter 2012):182–189

The authors highlight the impressive growth of Islamic financial assets, which amounted to \$1.3 trillion in 2011. They expand on the existing literature on Islamic financing by focusing on the risk-adjusted performance of Islamic indices compared with that of the conventional market benchmarks, as well as differences in style analysis and sector allocation.

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### **What's Inside?**

The authors examine the financial performance of Islamic indices versus that of conventional market benchmarks on a risk-adjusted basis for the period of June 2002–May 2012. They find that Islamic indices generally outperform in developed markets and underperform in emerging mar-

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Christian Walkshäusl is at the University of Regensburg. Sebastian Lobe is at WHL Graduate School of Business and Economics. The summary was prepared by Sadaf Aliuddin, CFA, Pak Brunei Investment Company.

kets, but the degree of underperformance is not material. Furthermore, they examine the investment style and sector weighting of Islamic indices.

## How Is This Article Useful to Practitioners?

Using traditional performance measures and nine alternative performance measures, the authors examine the financial performance, style, and sector allocation of regional Islamic indices. They find that Islamic indices generally outperform in developed markets and underperform in emerging markets on a risk-adjusted basis. The  $M^2$  measure, which shows the return relative to the market benchmark given the same standard deviation, is a positive 0.251% a month in the best-performing region, which is the developed markets of Europe. The worst-performing region (emerging markets in Europe, the Middle East, and Africa) is a negative 0.115% a month.

The methodology Islamic indices use for stock selection—an important factor for investors—is discussed at length. Furthermore, the funds' sector allocations can be indicators of their future performance. These funds strongly underweight the financial sector compared with conventional market benchmarks, as expected, and strongly overweight energy and materials stocks in both developed and emerging markets. The authors' style analysis reveals that Islamic funds have a strong emphasis on growth stocks in developed markets and on large-cap stocks in emerging markets.

## How Did the Authors Conduct This Research?

The authors compare the performance of Islamic indices with that of conventional market benchmarks using total return time-series data from Morgan Stanley Capital International (MSCI). Excess returns are calculated using the one-month U.S. Treasury bill rate. The sample includes 120 monthly data points from June 2002 to May 2012. The authors conduct their study based on two broad regions—developed and emerging markets—and further categorize those regions on the basis of six diversified, nonoverlapping subgroups.

They analyze risk-adjusted performance from nine different measures: the Sharpe ratio, the Treynor ratio, Jensen's alpha, the omega ratio, the

Sortino ratio, the Kappa 3 measure, the Calmar ratio, excess return on the value at risk, and the  $M^2$  measure.

Furthermore, the authors use Sharpe's (*Journal of Portfolio Management* 1992) style analysis—the asset class factor model—to explain the investment style and sector allocation of regional Islamic indices. This analysis reveals which asset class and sector would most closely replicate the same performance. For sector analysis, the 10-sector indices in MSCI are considered as the benchmarks.

### **Abstractor's Viewpoint**

It is interesting to note that there is significant underweighting of financial sector stocks and high-leverage stocks in Islamic indices. This fact is probably the driver behind strong performance in recent years, when financial markets have taken a significant plunge.

## FINANCIAL STATEMENT ANALYSIS

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### Audit Committee Characteristics and Firm Performance during the Global Financial Crisis

Husam Aldamen, Keith Duncan, Simone Kelly, Ray McNamara, and Stephan Nagel

*Accounting and Finance*

vol. 52, no. 4 (December 2012):971–1000

The authors assess the impact of audit committee composition on share price returns of Australian stocks during the global financial crisis. They find that smaller, more experienced audit committees tend to be associated with better performance than other committees. Other positive indicators include committees with blockholder representation and committee members with external directorships. Committees with a long-standing chairperson tend to be associated with underperformance.

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#### What's Inside?

The authors attempt to address the effect of an audit committee's composition on share prices during a period of increased market volatility. They use Australian data to identify the key characteristics of audit committee membership that lead to improved share price performance.

#### How Is This Research Useful to Practitioners?

Much of the research on the impact of corporate governance on shareholder returns has produced conflicting results. But the majority of the research has been done under favorable market conditions. This study is different in that it is focused on the impact of audit committee composition on share price returns during the most volatile period of the global financial crisis. The authors contend that high-quality corporate

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Husam Aldamen is at Qatar University. Keith Duncan, Simone Kelly, and Ray McNamara are at Bond University. Stephan Nagel is at V.O.P. Reperio. The summary was prepared by Derek Bilney, CFA, Sydney.

governance (as it pertains to the audit committee) is likely to be valued most highly during periods of elevated volatility.

Their main findings are intuitive and include the observations that smaller, more experienced, and more financially literate audit committees tend to be associated with outperformance, whereas committees with a long-standing chairperson tend to underperform.

The authors' research would be most useful for portfolio managers running portfolios with an environmental, social, and governance (ESG) or corporate governance focus or for managers using fundamental investment processes to filter out stocks with poor corporate governance characteristics.

## How Did the Authors Conduct This Research?

The authors classify 120 stocks (from the S&P/ASX300) as either high or low performers based on share price performance over the one-year period between June 2008 and June 2009. Financial firms are excluded. Fifteen different characteristics of audit committee composition are investigated; annual reports are used to source the raw data. The 15 characteristics include the profile of the committee chairperson, the number and profile of committee members (including experience, education, and independence), and the number of meetings held. Control variables include size, beta, industry membership, and a leverage factor.

A logit regression model is used to identify key audit committee characteristics that are aligned with high performers. Variations of the base case include the grouping of committee characteristics into a broader governance index (to reduce the number of variables in the regression) and the use of principal component analysis to derive three unique factors that the authors designate as expertise, commitment, and independence. They also test different dependent variables. These robustness tests produce broadly similar results.

Share price return, rather than total return, is used in the analysis.

## Abstractor's Viewpoint

The authors are correct that the relevance of strong corporate governance is difficult to prove when investment conditions are favorable. But prov-

ing the assertion during such an extreme event as the crisis is equally difficult. In Australia, stock prices during the peak of the crisis downturn were heavily affected by liquidity issues; highly leveraged investors sold liquid assets to fund other obligations. Margin calls were a significant feature, particularly in resource companies, which is confirmed by the large number of resource companies classified as low performers.

The extremely elevated levels of market volatility experienced during the period under investigation make it difficult to ascribe outperformance of a group of stocks to such a relatively benign factor as audit committee composition. This issue is magnified by the use of a single time period (June 2008–June 2009). It would have been interesting to see if the results were replicated using a different and/or longer time period. Another concern is that the authors attribute performance during the crisis to the membership of the audit committee at that time, rather than allowing for the cumulative impact of audit committee decisions prior to the crisis, which may not have been the responsibility of the current audit committee.

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## **Firm Incentives, Institutional Complexity and the Quality of “Harmonized” Accounting Numbers**

**Helena Isidro and Ivana Raonic**

*International Journal of Accounting*

vol. 47, no. 4 (December 2012):407–436

Investigating whether reporting incentives and institutional factors affect accounting quality, the authors determine that the global adoption of a single set of accounting standards is insufficient to increase the comparability and transparency of financial statements.

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### **What’s Inside?**

The authors assess whether reporting incentives and institutional factors, when analyzed with multicountry adoption of a homogenous

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Helena Isidro is at the Instituto Universitário de Lisboa. Ivana Raonic is at Cass Business School, City University London. The summary was prepared by Michal Szudejko, CFA.



set of accounting standards, affect the quality of financial reporting. Using linear regression to investigate the issue, they conclude that firm-specific factors have greater explanatory power of accounting quality than country-level factors. Furthermore, their results indicate that the global harmonization of accounting standards ought to be accompanied by implementing modifications to or reforms of institutional environments and systems. Lastly, by altering firm-specific conditions, managers might be able to reduce the impact on reporting quality of such institutional and systemic influences.

### **How Is This Research Useful to Practitioners?**

According to the authors, financial reporting quality is positively influenced by such strong monitoring mechanisms as ownership concentration, analyst scrutiny, effective auditing, external financing needs, and leverage. They also observe negative relationships between accounting quality and instability of business operations, existence of losses, and lack of transparent disclosures. At the country level, increased quality of financial statements is encouraged and supported by the institutionalization of more rigorous reporting standards and requirements, a higher level of economic development, greater business sophistication, and globalization. More importantly, firm-specific factors have greater explanatory power than country-level factors with regard to accounting quality, which supports the notion that increasing the comparability and transparency of financial statements on a global level must involve not only the harmonization of accounting standards but also changes to the institutional conditions and firm-specific reporting incentives.

The authors begin with prior empirical work on the topic but depart from previous researchers by keeping accounting standards constant in their study. They allow for a variation only within the design of the International Financial Reporting Standards (IFRS) themselves. They also investigate the nature of country-specific impact on the accounting quality—in particular, whether this impact is direct or indirect via an influence on the firm-specific reporting incentives.

The results have value for both policymakers and firm managers. The former can take steps to improve accounting quality through adopting reforms in institutional systems, leading to modifications in business

conditions at the firm level. Firm managers can mitigate the influence of institutional conditions through the manipulation of firm-specific factors (e.g., through adopting applicable corporate social responsibility standards). In addition, the accounting standards bodies should consider that unification of accounting standards worldwide may not yield homogenous results in terms of comparability and transparency of financial statements because country- and firm-specific settings can distort the desired outcome of harmonization.

## **How Did the Authors Conduct This Research?**

The authors' sample consists of nonfinancial firms in 26 countries that adopted IFRS by 2005. The data span fiscal years 2006 and 2007, resulting in 7,854 firm-year observations. The authors make several exclusions from the dataset, including the top and bottom 1% of the distribution of stock price returns and earnings and firm years with negative book value or equity or missing data. They do not restrict the sample to companies whose fiscal year-end is in December. The data are from multiple sources, including Worldscope, Datastream, I/B/E/S, and several sources for country-level conditions.

The accounting quality is assessed using two proxies. The first proxy is based on the market value and captures the relevance of earnings announcements to stock market investors. The second proxy is an accounting measure and shows how earnings are affected by managers' accrual choices. The selection of these particular proxies is backed by the literature.

The factor that distinguishes the authors' study from previous research is their selection of companies from countries that already adopted IFRS as an accounting framework. This choice enables them to produce a clearer picture of how accounting quality is affected by the institutional conditions and firm-level reporting incentives. But because IFRS allows for a certain degree of interpretation of accounting events, there is still some bias in the research methodology.

The authors' primary research tool is linear regression. They develop three models to test against each proxy of financial reporting quality. The first model examines the relationships between accounting quality and firm-level factors; the second model examines the relationships between accounting quality and country-specific factors; and the third

model examines both firm- and country-level factors and their interaction with accounting quality.

## **Abstractor's Viewpoint**

The principal innovation the authors deliver is their research procedure. The sample's construction allows them to keep the influence of accounting standards more or less constant, which considerably helps them understand the influence of the two other groups of factors (namely, firm- and country-specific factors) on the quality of reporting. The authors' other important contributions are the assessment of the relative strength of those factors and the indication of chain relationships between those factors and accounting quality. They translate their findings into clear recommendations for policymakers and firm managers, thus increasing the overall usefulness of the article.

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## **Home Bias and Cross Border Taxation**

**Anil V. Mishra and Ronald A. Ratti**

*Journal of International Money and Finance*

vol. 32 (February 2013):169–193

The role of cross-border taxation in equity home bias in international equity flows has been unclear. Dividend imputation, attributing tax credits to shareholders, is one of the impediments to cross-border equity flows. Tax credits for foreign taxes paid on dividends help reduce free-float home bias and traditional international portfolio home bias.

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## **What's Inside?**

The authors investigate the relationship that cross-border tax variables have with free-float home country bias. After they control for such factors as information asymmetries, behavioral biases, and governance issues, they find that a relatively high foreign tax rate without tax credits increases home bias. Free-float excludes locked-in shares,

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Anil V. Mishra and Ronald A. Ratti are at the University of Western Sydney. The summary was prepared by Nitin Joshi, CFA, Columbia Management LLC.

such as those held by promoters and governments. Higher income streams created by a dividend imputation tax system, which attributes taxes paid by the company to the shareholders through a tax credit, and cross-border taxation encourage a bias toward holding domestic financial assets.

## How Is This Research Useful to Practitioners?

Cross-border taxation plays an important role in international investing. Using a regression model, the authors study the effect of cross-border taxation on differences in bilateral home bias. Their empirical model includes various potential sources of home bias, such as cross-border taxes and proxies for information asymmetries, and it also includes control variables, such as familiarity, diversification, governance, and accounting. The familiarity and diversification variables include foreign listing, distance, size, language, transaction costs, and correlation. The governance variables comprise disclosure intensity, governance disclosure, audit, anti-director rights, accounting standards, and disclosure requirements.

Data to calculate the float-adjusted portfolio for countries and also the float-adjusted world market portfolio are from Datastream's Worldscope database. The authors calculate home country bias by using float-adjusted holdings of home country investors in a foreign country.

The results indicate that free-float home bias is reduced when foreign listings are available, the home and foreign countries share a common language, transaction costs are low, the correlation between home and foreign country returns is low, and the source country's market share of the world market capitalization is higher.

## How Did the Authors Conduct This Research?

The authors consider cross-border taxation rates, dividend imputation rates, and dividend tax rates during 2001–2009 for 49 countries—23 mature economies and 26 emerging economies. They use Arellano–Bover/Blundell–Bond (*Journal of Econometrics* 1995 and 1998) linear dynamic panel-data methods to control for endogenous variables and to test the robustness of their results. Because of the 2008 global

financial crisis, the authors present the results in two sample periods, 2001–2007 and 2001–2009.

As previously mentioned, the empirical model includes tax, familiarity, diversification, governance, and accounting variables. The governance control variables serve as a robustness check in the regression model. The authors find that home bias has a statistically significant positive correlation with the correlation of returns of home and host country and statistically significant negative correlation with foreign listing, size, and the dividend tax credit variables. They find a reduction in foreign investment when foreign investors' dividend income is taxed at relatively high rates.

International portfolio home bias is traditionally measured by using international capital asset pricing models. Results of regression analysis suggest that effects of dividend imputation and dividend tax credit are smaller for traditional international portfolio home bias than for free-float home bias. The effect of international taxation on free-float home bias holds with traditional international portfolio home bias as well. The model results imply that more disclosure, quality auditing, and better protection for shareholder rights in home countries result in lower home bias.

### **Abstractor's Viewpoint**

The authors build on the previous literature on home bias by recognizing and controlling for information asymmetries, behavioral issues, and corporate governance when examining the role of cross-border taxation. Tax-effective distributions to foreign shareholders and tax-free bonus shares are some of the schemes used by firms to address cross-border tax issues. The study could be expanded to include implications of cross-border taxation on a firm's behavior in catering to different investor clientele.

## Taxation: Unsafe Offshore

**Vanessa Houlder**

*Financial Times*

(13 January 2013)

As governments are seeing tax revenue from their citizens decrease, they are reconsidering how multinational firms move income to jurisdictions where the corporate taxes are the lowest. Preventing “taxation arbitrage” is the goal, but it is difficult to determine whether there is a sufficient amount of coordination and cooperation between countries to realize the goal.

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### What’s Inside?

Governments are becoming increasingly frustrated with multinational firms maneuvering to recognize income in countries that have lower tax rates. The main vehicles for performing this form of tax arbitrage are intangible assets, such as intellectual property. In one example, a company has one division pay another division royalties for its own intellectual property. The division receiving the royalties is located in a country with a lower tax rate.

With tax revenues from citizens declining, the issue of tax arbitrage by multinational corporations is becoming more of a hot topic, particularly in Europe and the BRICs (Brazil, Russia, India, and China). But the amount of coordination between taxing authorities necessary to create a “unitary tax code” does not seem possible. Also, if it is implemented poorly, a unitary tax code may simply encourage countries to create more tax havens to attract more corporate income. Already, there are examples of countries using their tax codes as a means to compete for business.

The author presents discussion of the topic by executives, academics, and the Organisation for Economic Co-Operation and Development.

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Vanessa Houlder is at the *Financial Times*. The summary was prepared by Thomas M. Arnold, CFA, University of Richmond.

## How Is This Article Useful to Practitioners?

The issue of shifting income from one country to another for tax reasons is not new, but the use of intellectual property as the vehicle is something that has evolved over time. Given that countries are becoming more aware of this type of income shifting to avoid tax, new tax rules will more than likely emerge in the future. A unitary tax code does not seem likely, but companies can expect higher taxation in some form. This taxation will be tempered by a given country's desire to attract corporate income using its tax code as a means to compete.

### Abstractor's Viewpoint

I find the discussion interesting, but in some ways I am surprised the activity of tax arbitrage by multinational firms appears to have not been foreseeable. I would expect any company to avoid as much tax as possible (multinational or not). Consequently, the countries mentioned in the article either are rather gullible or simply are not pressing the issue because the given country uses the tax code to its advantage in some other manner (perhaps to attract business). I suspect it is the latter reason and not the former.

Furthermore, what is not discussed are the tax revenues generated by employees. A country may choose to give a multinational corporation the ability to have a lower tax bill in exchange for the tax revenues generated by the employees the company hires. On a smaller scale, municipalities make this trade-off of lower taxation in exchange for job creation quite frequently.

## FIXED INCOME

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### Cash Holdings and Credit Risk

Viral Acharya, Sergei A. Davydenko, and Ilya A. Strebulaev

*Review of Financial Studies*

vol. 25, no. 12 (December 2012):3572–3609

Intuition tells us that cash-rich firms should have lower credit spreads and lower long-term probability of default than other firms, but numerous studies present evidence to the contrary. The authors explore this conundrum and discover that in the presence of financing restrictions, riskier firms tend to stockpile cash as a precaution.

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#### What's Inside?

The primary goals of the authors' research are to demonstrate that corporate cash holdings can be positively correlated with credit spreads, to investigate the probability of default, and to offer plausible explanations to substantiate this anomaly. Accordingly, it is important to separate variations in a firm's cash holdings that are exogenous and indirectly related to credit risk from variations in a firm's cash holdings that are endogenous, occurring as a direct result of changes in credit risk. Examples of exogenous factors are a firm's specific cash management policies and managerial incentives to avoid bankruptcy. Endogenous factors include a decline in a firm's expected future cash flows or an increase in leverage.

#### How Is This Research Useful to Practitioners?

The focus of the authors' research is the application of a corporate finance template in which firms must optimally choose between the amount of cash they invest and the amount they retain as a buffer for liquidity purposes. This process entails striking a balance between

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Viral Acharya is at New York University. Sergei A. Davydenko is at the University of Toronto. Ilya A. Strebulaev is at Stanford University. The summary was prepared by Keith Joseph Maclsaac, CFA, Canada Mortgage and Housing Corporation.



the opportunity costs of any forgone investments and the explicit interest rate costs embodied in credit spreads. The authors assert several hypotheses based on their model in order to explore this delicate interaction.

They begin by replicating previous studies that controlled for firm-specific risk attributes, and they make two discoveries that are both noteworthy and contradictory. First, they find that a standard deviation increase of 1 in the cash-to-assets ratio is associated with a 20 bp increase in credit spreads. Second, when testing such default-predicting models as Altman's *Z*-score, they find that in the short term, increased liquidity is associated with reduced probability of default. For periods longer than one year, the reverse is true. This counterintuitive outcome is a result of firms' precautionary motive for increasing cash in the face of increased risk. For example, if higher risk is defined as an expectation of lower cash flows, firms that must make debt payments will reallocate capital from investments to cash to reduce the risk of not having the cash for the debt payment. The direct effect of a firm's higher risk supersedes the indirect effect of a firm's internal policy that increases its cash holdings as a safety measure, as long as there are sufficient restrictions on obtaining external financing.

For variations in cash holdings unrelated to changes in risk factors, the authors' model calculates the expected negative association between variations in cash and credit spreads.

Finally, when studying the association between increased liquidity and the probability of default, the authors clarify that there is a negative correlation over the short term and a positive correlation over the long term.

## **How Did the Authors Conduct This Research?**

The authors' focus is on the credit spreads and default probabilities of nonfinancial U.S. firms that had at least one public bond outstanding from December 1996 to September 2010. They obtain bond information from the Fixed Income Securities Database provided by Mergent, default data from Moody's Default & Recovery Database, financial data from Compustat, executive compensation data from ExecuComp, and expected default probability estimates from

Moody's/KMV. Bond prices used to calculate yield spreads are gathered from the Merrill Lynch U.S. Investment Grade Index and the High Yield Master II Index. After the authors ensure that the bond spreads are uncontaminated, the sample includes 530 firms, 35,206 firm months, and 103,691 bond-month observations with which to calculate bond spreads.

The sample's credit spreads have a mean of 224 bps and a median of 153 bps. Not surprisingly, the spreads increase with maturity and credit rating. Noteworthy in this regard is the fact that the average BB spread of 361 bps is nearly twice that for BBB bonds (196 bps).

Balance sheet liquidity is represented by the ratios of cash to assets, working capital to total assets, current assets to current liabilities, and current assets less inventories to current liabilities. When cash holdings by credit rating are graphed, a U-shaped pattern emerges: The highest- and lowest-rated firms have the highest cash holdings. When the authors test if this same relationship is present for all (i.e., public and nonpublic) U.S. nonfinancial bond issuers in the Compustat database, the U-shaped pattern reappears.

## **Abstractor's Viewpoint**

For credit analysts, the authors uncover several subtle relationships that will be helpful when analyzing companies' credit risk. Namely, the limitations of standard methodologies in capturing the long-term effects of balance sheet liquidity on the probability of default and the distinction between the direct and indirect relationship between cash and spreads will advance the analysis. I also find it telling that despite all the industry clamor to streamline the role of credit rating agencies, the authors still find that investors attach meaningful significance to their opinions.

# A Stochastic U.S. House Price Model for Valuing Residential Mortgages and Other House Price-Dependent Assets

Kevin J. Stoll, CFA

*Journal of Fixed Income*

vol. 22, no. 3 (Winter 2013):5–20

A stochastic house price model can value and measure the risk of mortgages and other house price-dependent assets. The author develops a model that is designed for financial institutions that hold mortgage portfolios.

## What's Inside?

The author develops a model that focuses on house prices and their distribution; he uses the model for mortgage valuation and risk measurement. The model takes a long view of future house prices to account for the long potential cash flows of mortgage assets, and the author is the first to provide this type of valuation tool.

## How Is This Research Useful to Practitioners?

Mortgage value is derived from house prices; house prices are a function of rental and interest rates, which are proxies for inflation. The fundamental value and volatility of house prices affect the two embedded options in mortgages: the default option and the prepayment option. The author's model generates a full-term structure of house price volatility. An understanding of the long-term structure of house price volatility provides insight into the proper valuation and risk measurement of house price-dependent assets.

The model tracks quarterly changes in house prices, accounting for serial correlation and mean reversion to fundamental value. Fundamental value is a function of the stochastic variables of rental rates discounted by the 10-year risk-free rate (using U.S. Treasury STRIPS).

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Kevin J. Stoll, CFA, is at Smith Breeden Associates. The summary was prepared by Marc L. Ross, CFA.

Rental growth and interest rates are positively correlated. Higher rates result from inflation because of economic growth.

House prices are serially correlated; they drift over the long term but revert to fundamental value. Longer-term distributions of house prices, rather than a mean, account for mortgages' embedded options. The volatility of house prices increases over time, reflecting a term structure of volatility. Serial correlation in interest rates and rental rates results in the volatility of fundamental value increasing over time as well. But both actual prices and fundamental value experience mean reversion over the longer term.

Because of the volatility of house prices, embedded options in mortgages are a function of interest rate risk. House prices also have an impact on credit risk: House prices decreasing because of rates increasing damages the home's collateral value in the event of a borrower's unwillingness or inability to make mortgage payments.

Fixed-income portfolio managers who hold mortgage-backed securities and risk managers at financial institutions, as well as the managers of structured products and policymakers, will find the conclusions of this research useful.

## **How Did the Author Conduct This Research?**

The author intersperses a review of the relevant literature with the development of his model to forecast long-term house price behavior. The components of the house price model are equations to evaluate quarterly house price changes and the house's fundamental value (the present value of its discounted cash flows), the market rental rate, and the 10-year Treasury rate. The author proceeds to disaggregate these components to forecast the market rental rate.

For model inputs, he uses a constant-quality U.S. house price index (the Federal Housing Finance Agency Index) because of its long history and broad geographic coverage. To measure market rental rates, he uses the U.S. Consumer Price Index's Rent of Primary Residence series. Finally, for zero-coupon Treasuries, he uses the historical estimates of Gurkaynak, Sack, and Wright (Federal Reserve Board working paper 2006) because pricing discrepancies exist between on-the-run and off-the-run issues. Additionally, precise 10-year maturity STRIPS are typically not available.

The author then estimates the parameter values of the model equations. He observes clear evidence of serial correlation and mean reversion to fundamental value in house prices. Additionally, he captures the rising historical volatility of house prices with the return horizon. Price volatility exceeds that of fundamental value but mean reverts in the long run.

House prices and interest rates determine mortgage cash flows and valuation. Interest rates affect house prices because they discount cash flows from housing, and rental rates are positively correlated with interest rates. Both are factors in calculating a house's fundamental value.

### **Abstractor's Viewpoint**

The author defines and presents a unique stochastic model for U.S. house prices. He demonstrates the term structure of house price volatility, serial correlation, and mean reversion in the valuation of mortgages and other house price-dependent assets. It would be interesting to see this model applied to housing markets across countries. Mispricing and misunderstanding of housing risk before and during the financial crisis are not unique to the United States. House prices are an important barometer of risk for many economies and their financial markets.

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## **World Is Right to Worry about US Debt**

**Kenneth Rogoff**

*Financial Times*

(24 January 2013): [www.ft.com/cms/s/2/ed300802-63e5-11e2-84d8-00144feab49a.html](http://www.ft.com/cms/s/2/ed300802-63e5-11e2-84d8-00144feab49a.html)

According to the author, several existing and forthcoming issues need to be resolved concerning the U.S. economy: defense spending, privatization versus federal/state-run enterprises, infrastructure improvements, immigration, and healthcare. Potential solutions are not provided, but the author implies that resolution will be necessary if the world is going to be willing to sustain the current level of U.S. debt.

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Kenneth Rogoff is at Harvard University. The summary was prepared by Thomas M. Arnold, CFA, University of Richmond.

## What's Inside?

A number of issues have arisen regarding the sustainability of the current level of U.S. debt as the United States has become a proportionately smaller percentage of the global gross domestic product. The tolerance of the world to the level of U.S. debt is partly affected by how it is spent and partly by the role of the United States internationally. If the United States is expected to help defend other countries, then debt attributable to defense spending may be tolerated. But it is not clear what the U.S. government intends to do with regard to defense spending.

Other issues of government investment include decisions about whether such services as education should be funded and operated by the federal government, the state government, or the private sector. Similarly, infrastructure improvements currently appear to be stagnant because of indecision and protected self-interests. Another looming fiscal issue is the unresolved funding of healthcare as the population ages and costs increase.

The author suggests that immigration may be a way to build assets and productivity in the United States but that the issue is stymied by emotion rather than economic reasoning. He closes with the thought that the United States has the capacity to thrive, but these unresolved issues threaten budget/debt sustainability and could lead to economic stagnation. Consequently, there is reason to be worried about the level of U.S. debt.

## How Is This Research Useful to Practitioners?

The issues of defense spending, provision of services, infrastructure, healthcare, and immigration appear to be independent, but the author contends that all are related to the sustainability of U.S. debt because decisions or indecision on these issues will affect how tolerant the world will be about the level of U.S. debt. Practitioners may disagree on the resolution of these issues but probably can agree that a lack of decisive action is damaging to the United States' ability to thrive. How these issues are resolved (or not) will affect investment decisions in the future.

## Abstractor's Viewpoint

I like how the author demonstrates the interrelatedness of these issues from the perspective of sustainable debt levels and further states that

a temporary stimulus is not a cure but a delay in following a decisive path. I think solutions to these issues are debatable (and are not really debated in this article). But I tend to agree with the author that further indecision on these issues is certainly a cause for concern in considering a sustainable level for U.S. debt.

## LEADERSHIP, MANAGEMENT, AND COMMUNICATION SKILLS

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### Davos Man and His Defects

*Economist*, Schumpeter Blog

(26 January 2013): [www.economist.com/news/business/21570684-global-leadership-industry-needs-re-engineering-davos-man-and-his-defects](http://www.economist.com/news/business/21570684-global-leadership-industry-needs-re-engineering-davos-man-and-his-defects)

The cult of global leadership is pervasive but, in some respects, deficient. The author explores its shortcomings and offers remedies.

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### What's Inside?

Global leadership is considered by many to be vital, but the author questions this assumption and finds instances of flawed perspective on the part of global leaders. International captains of industry need to rethink globalization and leadership to be more effective in their missions.

### How Is This Article Useful to Practitioners?

Industrial globalization is proceeding apace. But the public's trust in international business leaders—"Davos men," in the author's terminology—is lacking. This lack of trust seems appropriate given how many of the global leaders seem to have been not paying attention before and during the Great Recession. The author suggests that increased oversight and accountability, as well as thoughtful introspection by global leaders themselves regarding their role, are important in solving the problem.

World business leaders need to become more watchful and consider local practices and customs so they do not misread cultural differences and underestimate political risks. They also need to consider the merits and drawbacks of a flattened management hierarchy, itself arising in the West from the proliferation of knowledge workers (i.e., those who

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The summary was prepared by Marc L. Ross, CFA.



think for a living, such as engineers, scientists, and lawyers). Finally, the relationship between business and the wider world needs to be given serious consideration. Opportunities to do good vary depending on the market. Lofty ambitions to solve social ills and improve the quality of life need to be put into action.

The author points to signs of self-improvement, noting, for example, that Harvard Business School now requires time abroad for its students. Another example is that many companies have their most promising employees work for overseas subsidiaries. Management pundits have produced tools to identify cultural differences that global leaders should be aware of.

### **Abstractor's Viewpoint**

People are the drivers of performance. In an increasingly interconnected world, companies with global leaders who are aware of and recognize the importance of local culture and politics will have a better chance of success. Self-awareness and humility can also alleviate the problem by acting to curb arrogance and the misuse of power. Global leaders would do well to be introspective and make haste slowly.

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## **Getting Pandas to Breed: Paradigm Blindness and the Policy Space for Risk Prevention, Mitigation and Management**

**Denis Fischbacher-Smith**

*Risk Management*

vol. 14, no. 3 (August 2012):177–201

Internal and external pressures force organizations to adapt their decision-making process concerning risk, sometimes with potentially unfavorable results. The author explores the causes and consequences of paradigm blindness that contribute to misguided risk decisions.

## What's Inside?

The development of risk policy in organizations can lead to paradigm blindness, or unquestioning adherence to a particular point of view. Such allegiance to a particular view among an organization's participants can lead to potentially misguided decisions in its approach to risk management.

## How Is This Research Useful to Practitioners?

Paradigm blindness is similar to groupthink in that adherents accustomed to a particular worldview do not accept any challenges to the prevailing orthodoxy. The author explores the challenges of this stance in the development of organizational policy concerning risk and uncertainty. Individuals need to be open to alternative points of view because if indecision and misdirected mindsets prevail, failure in the decision-making process and a misevaluation of risk can occur.

The author reviews frameworks for policy decision making as a basis for determining how to overcome paradigm blindness within an organization. He begins by considering the circumstances that can lead to failure. An organization can move off course when external pressures lead to shocks, or what the author calls "perturbations." The resulting actions of agents within the organization to deal with these disruptions may or may not be framed by certain prejudices and subject to the will of the most powerful faction, to the exclusion of all other interest groups.

How risk policy is shaped in an organization is a critical determinant in its approach to risk. The author discusses evolving terminology that frames resisted challenges with an understanding of science. He starts with the word "paradigm," moves to the concept of "Weltanschauung," or worldview, and ends with "hegemony" (i.e., a dominating influence). He then diagrams the origin of such unyielding orthodoxy in an organization by depicting its dispersion through concentric organizational circles, which represent resistance to any challenges to mainstream thinking. Causality, power, and uncertainty all create problems for effective risk management.

The author goes on to suggest a relevant framework for creating risk policy. His framework incorporates multiple forces in the decision-making and technical-verification process, including discussion and

ongoing debate, rather than relying on an approach that is subject to a restrictive outlook. Risk managers and policymakers in investment management firms and government would find this paper insightful and worthy of further study.

## How Did the Author Conduct This Research?

The author's discussion draws heavily on the scientific and social science literature regarding scientific processes and policy development. To avoid a closed, dogmatic thought process, the development and assessment of risk policy must be open and allow questions of causality and verification of data. Policy development runs on a continuum from what is called an "under-critical model," in which one prevailing group suppresses debate to safeguard policy consensus, to what is called an "over-critical model," in which policy and scientific debate are ongoing with no one school of thought dominating.

Management of risk and uncertainty equates to management of knowledge and its technical verification in the policy development, which needs to be sufficiently open to consider alternative propositions but not so much so that it results in decision gridlock.

## Abstractor's Viewpoint

An organization in which the decision-making process with regard to risk management is driven by unquestioned consensus is doomed to failure. Risk management is both art and science. Yet, scientific dogma has given rise to intellectual hegemony—"techno-rationalism of organizations and their attendant expert cohorts," as the author says—which crowds out potentially relevant alternative views in the approach to managing uncertainty. This issue occurred more than once during the recent financial crisis, in which agents whose input was critical to the organization's future either willingly or unwillingly failed to act. Examples are the ongoing debate on the relevance of neoclassical economics and such concepts as the efficient market hypothesis.

Calamity ensued, from which the world is still recovering. Policymakers and key decision makers should consider the implications of the author's work, lest history repeat itself.

# The Price of Incivility

**Christine Porath and Christine Pearson**

*Harvard Business Review*

vol. 91, no. 1/2 (January–February 2013):114–121

Some techniques can manage incidents of incivility both within an organization and in cross-cultural contexts. The authors address the forms and costs of incivility and then suggest and present methods to reduce the potential for such occurrences as well as the costs associated with such uncivil behavior.

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## What's Inside?

The authors collect data from more than 14,000 people, tracking the prevalence, types, causes, costs, and cures of incivility at work. They propose interventions for what they consider costly, but rarely dealt with, behavior.

## How Is This Article Useful to Practitioners?

Through their interviews, questionnaires, and experiments, the authors discover that incivility in the workplace is on the rise. There are costs associated with this increase, and few organizations are taking action against it.

In the workplace, both direct forms of incivility, such as unchecked rudeness by superiors toward subordinates, and more subtle forms, such as superiors taking credit for positive outcomes but placing blame for negative outcomes, are exhibited. Among the costs associated with incivility are decreased work effort, quality, and commitment to the organization among employees. In addition, incivility can result in a decrease in creativity and performance, a deterioration of team spirit, and negative customer responses.

Managing such rude behavior is expensive. The authors suggest a number of ways managers can deal with incivility: by demonstrating good behavior, requesting feedback, monitoring employees' progress toward reduc-

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Christine Porath is at the McDonough School of Business, Georgetown University. Christine Pearson is at Thunderbird School of Global Management. The summary was prepared by Marla Howard, CFA, University of Maryland University College.

ing incivility, hiring individuals who exhibit positive behavior, rewarding employees' positive behavior, and penalizing employees' uncivil behavior.

To promote civility in global relations, individuals are encouraged to consider issues that might offend those of other cultures and to research cultures with which they are dealing. While interacting with individuals in other cultures, show respect, be agreeable, pay attention, adapt behavior where appropriate, and learn from mistakes.

## **Abstractor's Viewpoint**

It is logical for financial practitioners to focus on financial reports, market trends, revenues, and expenditures. The authors encourage practitioners to look beyond the numbers. Uncivil behavior can negatively influence coworkers and clients and damage creativity and commitment within the work environment. Incivility can lead to loss of productivity, revenue, and good employees. The authors' research and suggestions are useful in promoting more effective hiring and management practices that reward civility, penalize incivility, and help individuals evaluate their behavior in the workplace with customers and with those from other cultures.

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## **Room with a View**

*Economist*, Free Exchange Blog  
(12 January 2013): [www.economist.com/news/finance-and-economics/21569378-if-economists-agree-something-public-will-almost-certainly-think](http://www.economist.com/news/finance-and-economics/21569378-if-economists-agree-something-public-will-almost-certainly-think)

The author explores how disagreement among economists may lead to reputational damage with the public.

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## **What's Inside?**

The degree to which economists agree on a particular issue appears to be inversely correlated with public opinion on that issue. The author discusses the reasons behind public skepticism of the profession.

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The summary was prepared by Marc L. Ross, CFA.

## How Is This Article Useful to Practitioners?

Economists' opinions may vary depending on the topic under consideration. For example, if a lack of research exists on a particular subject, the disagreement is more prevalent, such as whether lower energy costs from technology-enhanced natural gas extraction translate into export advantages. The level of disagreement (or agreement) among economists is drawn from articles about the results of a weekly survey of 41 leading economists from seven well-respected university departments. The survey series has been conducted by the University of Chicago since September 2011. The results seem to indicate that economists tend to agree more than most people realize.

But Justin Wolfers at the University of Michigan questions the validity of the poll because it focuses only on the views of a highly select audience. Consensus may forestall bad ideas from being implemented (e.g., a return to the gold standard) but may also stifle divergent points of view. Such divergence would have been welcome in questioning the complacency in the profession before the 2007–09 economic crisis.

The public questions the relevance of economists' views when they appear quite certain on a particular subject. Economists agree that the individual investor cannot beat the market, but only 55% of the public agrees with this view. People in the United States perceive economists as being detached from reality, which was highlighted by the widespread reticence during the fiscal cliff mess.

The perception of economists' relevance seems to always be under attack. Academics, policymakers, pundits, and even economists should consider the implications of this perception.

## Abstractor's Viewpoint

Economics suffers from a public relations problem. Certainty among its practitioners regarding select topics seems to be met with widespread public disagreement. The documented inability of economists to forecast the Great Recession and the public's disenchantment with a lack of policy traction in Washington, DC, only reinforce this perception. The challenge for the economic profession is to explain how its research is relevant in an increasingly complex world.

# PERFORMANCE MEASUREMENT AND EVALUATION

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## Are Too Many Private Equity Funds Top Quartile?

**Robert Harris, Tim Jenkinson, and Rüdiger Stucke**

*Journal of Applied Corporate Finance*

vol. 24, no. 4 (Fall 2012):77–89

The process of benchmarking private equity performance data is fraught with biases and is subject to the availability of accurate and standardized information. The authors discuss the complexity involved in and inherent challenges of measuring private equity performance.

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### What's Inside?

The authors identify a problem surrounding the certainty of private equity performance data and the lack of standardized practice, which results in more than the top 25% of funds claiming top-quartile performance. They suggest that a fund being in the top quartile relative to other funds does not ensure that the fund will fare better than other investment vehicles, such as publicly listed securities. Of particular interest to the investment community is their analysis of why benchmarks vary and how such factors as geography and currency can also make a significant difference.

### How Is This Article Useful to Practitioners?

Within the alternative investments arena and specifically within the private equity investment segment, investors tend to focus on funds whose performance is top quartile within a particular vintage year. Existing research supports the theory that funds raised by the best-performing general partners (GPs) tend to outperform their peers, beating most mutual funds and hedge funds. Generally, there is lim-

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Robert Harris is at the University of Virginia. Tim Jenkinson and Rüdiger Stucke are at the University of Oxford. The summary was prepared by Sridhar Balakrishna, CFA.

ited concern regarding the practices and sources used to compute performance data.

The authors discuss such conceptual aspects as vintage year, challenges of fund classification within the broader spectrum of private equity, availability of data, and performance measures. In addition, they critique the data provided by Preqin, Thomson Reuters VentureXpert, Cambridge Associates, and others. The main challenge for investors in this area is sourcing a dataset that is devoid of survivorship and/or backfill bias.

In addition, the authors identify the reason benchmarks are “moving targets” with regard to meeting specific fund performance needs. Illiquid and hard-to-value assets coupled with the stage of investment (e.g., early-stage venture capital investment and buyout of mature businesses to liquidate through IPO at a later stage) create a challenging terrain for most investors.

## **How Did the Authors Conduct This Research?**

The authors limit their performance analysis to two broad fund categories—venture capital and buyout—that contribute to the vast majority of private equity transactions. Availability of fund performance data is largely limited to the extent of disclosure by private equity firms (GPs) and the sourcing capability of the three prominent data providers. The most commonly used performance measures are internal rate of return (IRR) and money multiples. The median IRRs across each of the data providers are considered for this analysis.

Of particular note is the analysis of performance data with the data provided by the three main sources already mentioned, over a 15-year period (1992–2007). This analysis includes a thorough breakdown of the benefits and limitations of the performance data provided by the three data providers. Finally, the authors compare the performance of two specific private equity funds—Apollo and Bain Capital—and suggest that some of the funds of various vintages originated by these firms have the potential to resort to creative use of data to showcase their performance.

The inherent limitation of private equity data is that they are subject to disclosure of information, lack of timeliness (information usually lags availability by three to four years), and creativity of presenting informa-



tion by GPs. Furthermore, selective horizon picking and use of valuation metrics that do not exhibit consistency over time create ambiguity for investors.

## Abstractor's Viewpoint

It is essential for investors to customize the benchmark that they intend to compare with specific fund subcategories to measure fund performance. This benchmark should consider vintage year, industry, geographic focus, and performance of similar publicly listed funds and avoid backfilling performance data. Additionally, a comparison of performance with that of a broader range of publicly listed securities (e.g., S&P 500 Index in the United States) for which information is easily available and comparable would be beneficial to investors.

To put this research in context, the interest in private equity investments declined with the onset of the global financial crisis in late 2007. This situation was exacerbated by the decline in the financial markets and lack of exit opportunities for funds that typically have a seven- to eight-year lifespan. Another key factor that inhibits the level of investment within buyout and venture capital funds is their inherent illiquidity.

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## Asset Allocation vs. Security Selection: Their Relative Importance

**Renato Staub and Brian Singer, CFA**

*Journal of Performance Measurement*

vol. 16, no. 3 (Spring 2012):52–61

By assessing the importance of asset allocation compared with security selection, the authors show that the correlations between assets are a key source of information for investors rather than the level of risk. They show that asset allocation decisions are very important for explaining the return variation of portfolios.

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Renato Staub and Brian Singer, CFA, are at William Blair and Company. The summary was prepared by Servaas Houben, CFA, University of Maastricht.

## What's Inside?

The importance of asset allocation versus security selection has generally been assessed in two ways. The first way is to consider only what is feasible from a theoretical point of view and thus not assume any limitations or constraints. The second way is to consider what is actually done and take into account the constraints asset managers encounter in their portfolio selection process, such as benchmarking that limits the portfolio selection. The authors' approach is from a feasibility perspective. By increasing the complexity of interaction, they show that asset allocation explains the main part of the portfolio's return variation. They stress that correlation provides information whereas risk does not because risk is scalable. For example, because of (de)leveraging, risks can be rescaled, whereas the interaction between assets is unchangeable.

## How Is This Research Useful to Practitioners?

The authors explain the interaction between risks as a vector in a plane: The size of the vector can be altered (leverage), but the angle at which the vectors are related to each other (correlation) cannot. They then introduce principal component analysis (PCA) to assess the effects of asset allocation and security selection without considering whether managers actually have the skill to use this strategy. Previous research has either been based on constrained asset allocation or has led to the conclusion that any comparison is not possible. The authors do not impose any constraints and instead show how different levels of variety at which assets interact still lead to the conclusion that asset selection is the main driver of return volatility.

The results could be interesting for a wide variety of professionals: portfolio managers who want to understand what drives return volatility, risk managers who want to monitor return volatility, and benchmark investors who want to know how many securities are required to track a benchmark.

## How Did the Authors Conduct This Research?

The authors introduce their concept by comparing a portfolio return variation with a road network: When determining a route between two locations, a traveler will find that some road types explain more of the transit time than other road types. Similarly in portfolio management,

some factors explain more of the return variation than other factors. When assessing the importance of factors, the authors do not impose any constraints on asset allocation or stock selection. Also, they make no reference to any benchmarks, which might be applicable in real life.

The authors use PCA to estimate the impact of each of the factors. Uncorrelated factors are reflected in a correlation matrix, and PCA then determines which of these factors is most explanatory and provides the most information.

They define 20 equity markets and 20 bond markets that each include 100 securities. Correlations exist between all of these investments. The authors then define four cases in which the complexity of correlations is increased: assets or cash, asset classes (equity or bonds), markets (investment location), and security selection. They show that asset allocation becomes more relevant when correlations decrease as the benefits from diversification increase. Also, asset allocation is more relevant when the number of asset classes increases.

In the most advanced correlation assessment, security selection explains one-third of portfolio return variance whereas the asset allocation decision (consisting of assets or cash investment, asset class selection, and market selection) explains two-thirds of the return variance. Even when the authors replace correlation with the measure of covariance (which can be scaled) and perform a PCA, 50% of the portfolio variance is still explained by asset selection.

### **Abstractor's Viewpoint**

The authors provide a very concise and interesting article at a time when the topic of risk has become more central. The introduction of PCA via a street map approach makes it easy to understand the basics behind this method. The article builds nicely, starting from a plain portfolio without any diversification to more advanced and complicated situations. Also, the assessment of risk and the importance of correlation is a good reminder for practitioners.

# A Conceptual Framework for the Development and Verification of Attribution Models Including Arithmetic Attribution Models

**Yuri Shestopaloff**

*Journal of Performance Measurement*

vol. 17, no. 1 (Fall 2012):48–59

Existing attribution models have interaction terms that are difficult to understand and inconsistent with symmetry conditions that should ideally exist. The author introduces a new attribution model without interaction terms that meets the symmetry conditions. In addition, he uses a ratio test to illustrate how this new arithmetic model is consistent with a recently developed geometric model under certain conditions.

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## What's Inside?

The author demonstrates two general principles about attribution models: Arithmetic attribution models base securities' relative returns on weights generated from the initial market values of the securities, whereas geometric attribution models base securities' relative returns on weights generated from end-of-period market values. In his examination of two popular arithmetic attribution models, he shows that both produce terms for industry selection (or timing) and stock selection with either one or two extra terms, depending on the model. The extra terms are not easily assessed and violate symmetry in two ways: (1) The benchmark has more terms than the portfolio being assessed, and (2) switching the benchmark with the portfolio within the given model does not produce results of the same magnitude but with a different sign.

The new arithmetic attribution model the author suggests is in a canonical form (i.e., only industry selection and stock selection terms exist because interaction terms are eliminated). He also introduces a recently developed existing geometric attribution model (in canonical form) with conditions to make it compatible with the new arithmetic

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Yuri Shestopaloff is at SegmentSoft Inc. The summary was prepared by Thomas M. Arnold, CFA, University of Richmond.

tic attribution model. Both models meet the symmetry requirements, which existing models do not.

Furthermore, the author devises a ratio test in which both models must have equivalent ratios of industry selection over stock selection for the entire portfolio and within groups within the portfolio. The newer models meet the ratio condition, demonstrating the connection that should exist between arithmetic and geometric models despite their different weighting conditions.

### **How Is This Research Useful to Practitioners?**

Practitioners can benefit from the author's demonstration of the difference between an arithmetic attribution model and a geometric attribution model. The primary difference is in how security weightings are determined—that is, by either the initial holdings of securities (arithmetic) or the end-of-period holdings of securities (geometric). The two models are connected through the two symmetry conditions and the newly introduced ratio condition.

Furthermore, the author also makes the very logical point that attribution models should not contain cross-product or interaction terms that cannot be easily explained. Practitioners can certainly benefit from such logic and consequently benefit from the arithmetic model that is introduced, which does not have such terms because of its canonical form.

### **How Did the Author Conduct This Research?**

The author demonstrates mathematically how arithmetic and geometric attribution models differ. Using a simple numerical example, he demonstrates that two popular arithmetic attribution models are not symmetrical and have interaction terms that are not easily explained.

He introduces a new arithmetic attribution model that does not have interaction terms because it is in canonical form; he also demonstrates this model mathematically. The new model is symmetrical and connected with a previously developed (but also relatively new) geometric attribution model through a ratio condition. The same numerical example is used to demonstrate the symmetrical properties of the two models and the ratio condition.

## Abstractor's Viewpoint

I like how the author starts with very basic properties of attribution models and then introduces the new model without interaction terms between the industry selection and stock selection measures. I also like the logical argument regarding what criteria should be used to determine the effectiveness of a given attribution model.

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## Efficient Hedge Fund Style Allocations: A Rule-Based Model

**Wolfgang Drobetz, Dieter Kaiser, and Jasper Zimbehl**

*Journal of Derivatives & Hedge Funds*

vol. 18, no. 4 (November 2012):274–300

A rules-based framework can optimize hedge fund–style allocation. The authors construct four hedge fund–style indices and use them to develop technical and fundamental indicators. The indicators generate recommendations to allocate available funds across the four hedge fund styles. The results suggest outperformance of more than 1% per year.

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### What's Inside?

The authors develop a systematic hedge fund–style allocation model that captures the relevant hedge fund return drivers. Using these drivers, they develop technical and fundamental indicators to generate trading recommendations to optimize a portfolio consisting of four main hedge fund–style indices. The optimized portfolio delivers statistically significant outperformance against a benchmark of an equal-weighted hedge fund–style portfolio.

### How Is This Research Useful to Practitioners?

The academic hedge fund literature has focused on an exploration of the return and risk characteristics of hedge fund styles and the added

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Dieter Kaiser is at Robus Capital Management Limited. Wolfgang Drobetz and Jasper Zimbehl are at the University of Hamburg. The summary was prepared by Paras Gupta, CFA.

value these investments bring in a traditional equity and fixed-income portfolio context. There has been relatively little published about the optimal style allocation of hedge fund portfolios.

The four hedge fund–style indices that the authors construct are equity hedge, event driven, relative value, and tactical trading. They also develop a style allocation model to provide an allocation methodology and conduct an empirical study using the model’s best-fit specification. They present results that suggest annual outperformance of more than 1% over the period of January 1995–September 2010 against a benchmark of equal-weighted allocation across the four indices.

They show that the returns generated by this best-fit portfolio also exhibit superior risk–return characteristics and downside protection. In addition, the authors provide evidence that the outperformance is realized steadily over the sample period. The net asset value of the best-fit portfolio never falls behind that of the equal-weighted portfolio over the sample period.

It is possible, the authors conclude, to enhance hedge fund portfolio returns by using a systematic hedge fund–style allocation approach. They argue that their model, which incorporates financial market return factors and other technical and fundamental indicators, highlights the importance and validity of the approach.

## **How Did the Authors Conduct This Research?**

The authors use January 1995–September 2010 as the sample period for their empirical analysis. They retrieve data from the refined Lipper TASS database and, after making some adjustments, create a database of 6,088 funds. They then categorize hedge funds into four major styles according to investment process and technique: equity hedge, event driven, relative value, and tactical trading.

To create a framework that offers an allocation methodology across the four style indices, the authors develop a hedge fund–style allocation model. The allocation model has three parts. First, they construct technical indicators that generate trading signals for targeting hedge fund exposures. Technical market analysis allows investors to allocate across fund styles in a manner more correlated with equity markets.

The authors' model uses the indices' short-term and long-term simple moving averages.

Second, they incorporate a group of fundamental indicators to account for systematic and macroeconomic risks. Five fundamental indicators—hedge fund–style correlation, equity market correlation with hedge fund styles, market liquidity, business cycle volatility, and financial market volatility—are used. These five indicators contribute to a statistically significant aggregated outperformance across the four style indices.

Third, they combine both indicator groups with a rules-based portfolio construction mechanism. The mechanism contains two parameters:  $X$  (gross signal impact) and  $Y$  (relative weight of signals). The authors show that increases in  $X$  and  $Y$  enhance the performance of the model but also lead to increasingly extreme portfolio weights. They consider return performance, portfolio turnover, and weight distribution in defining the best-fit portfolio.

### **Abstractor's Viewpoint**

The authors' study is a step forward for the literature and is relevant for many hedge fund investors. They demonstrate the value of a framework for hedge fund allocation and, by using widely available information and simple indicators, show that statistically significant outperformance can be achieved. This research provides an initial foundation for subsequent studies on the same subject. As the authors mention, the subsequent studies could develop an allocation framework at the hedge fund–strategy level because the risk exposures could be more refined at the strategy level. Also, the subsequent studies could use advanced technical indicators and fundamental indicators to refine the model further.



# High Frequency Equity Performance Attribution

**Ricky Cooper and Tingting Li**

*Journal of Performance Measurement*

vol. 16, no. 3 (Spring 2012):24–36

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The ability to determine the source of returns in a high-frequency strategy is an important part of portfolio and risk analysis. The authors present a high-frequency equity attribution framework that allows for gains or losses to net market exposure, multiple-dimension bucket exposures, long and short stock-specific effects, market-making effects, and exchange-traded fund trading activities.

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## What's Inside?

Complications arise when a traditional attribution framework, which analyzes long-only positions and returns relative to a benchmark, is applied to high-frequency strategies. A portfolio that uses these strategies can have its value fluctuate substantially during the day, and the exact timing of a particular trade can affect the strategy's outcome. Additionally, exchange-traded fund (ETF) arbitrage strategies are often a large component of high-frequency trading activity. The authors extend traditional attribution analysis to include these strategies. They use a basic absolute return model that does not use a benchmark per se and begins by defining a universe and incorporating the distinct effects for attribution: net exposure effect, bucket exposure effect, and stock-specific effect. After verification, they modify the model to include market-making and arbitrage effects.

## How Is This Research Useful to Practitioners?

Attribution analysis allows clients, managers, and consultants to gain a better understanding of the effectiveness of their investment decisions on performance. But traditional attribution frameworks are not conducive to analyzing high-frequency strategies, the results of which generally depend on the speed of execution and ultra-low latency. These

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Ricky Cooper and Tingting Li are at the Illinois Institute of Technology. The summary was prepared by Sandra Krueger, CFA.

strategies usually exhibit very high trading turnover and take few, if any, overnight positions because they are focused on the accumulation of small short-term profits.

A high-frequency trading strategy's portfolio positions may fluctuate by the second. In a high-frequency context, even the concept of stock return can be unclear. The portfolio can have a \$3 million long position one moment, a \$200 million short position the next moment, and a flat, or zero, position the next. This fluctuation makes traditional (low-frequency) attribution models highly inaccurate because the use of a benchmark portfolio is not applicable. The authors overcome this problem by defining an arbitrary anchor value on which to base the portfolio weights.

Arbitrage and market-making profits are incorporated into the attribution framework. The addition of these profits is helpful for risk managers who want to ensure that high-frequency trading is adding sufficient value to justify the additional risk and fees that high-frequency strategies entail.

## **How Did the Authors Conduct This Research?**

To begin, the authors examine low-frequency attribution models by reviewing the relevant literature. They move away from a benchmark framework by determining a reference universe for high-frequency trades. They define five distinct effects for attribution: net exposure effect (the percent the portfolio is net long or short), bucket effect (long or short in defined sectors), stock-specific effect (broken down into long and short effects), market-making effect, and arbitrage effect. The authors present a simple example of the first three effects and show both notional return and dollar return attributions.

The authors introduce the market-making effect to handle fast arbitrage profits and to overcome the accompanying timing challenges. For example, in the case of a short time interval coupled with a long holding period, the effect will measure the effectiveness of placing the order at exactly the correct time. If the time interval is longer with a short holding period, the effect will fail to pick up some of the action because the action is faster than the “shutter speed” of the measurement.

Arbitrage is included as a component of the attribution model because ETFs are frequently arbitrated and can be broken down into indi-

vidual stock components for attribution. When an ETF is restored to its fundamental value, an extra arbitrage return is received.

All five components are placed together in the final high-frequency equity performance attribution model. The authors demonstrate this model by presenting an expanded portfolio example that includes ETFs and market making effects.

### **Abstractor's Viewpoint**

Traditional (long only) attribution analysis will not work for portfolios that use high-frequency trading. The authors' methodology can be adopted by the investment community because it extends the traditional attribution framework. The authors present their sample attribution results in easy-to-understand tables. This approach to attribution would benefit consultants, risk managers, and others who need to review the effectiveness of asset strategies. High-frequency trading also occurs in futures, options, bonds, and foreign-exchange trading. This framework could be extended to incorporate these types of assets as well. Additionally, the disadvantage of traditional performance attribution analysis is that it does not directly account for the type of risks in high-frequency trading. Extension of this research into risk attribution would be very useful.

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## **Institutional Investors and Mutual Fund Governance: Evidence from Retail–Institutional Fund Twins**

**Richard B. Evans and Rüdiger Fahlenbrach**

*Review of Financial Studies*

vol. 25, no. 12 (December 2012):3530–3571

The authors discuss how retail and institutional investors in similar investment products respond to investment signals, such as high fees and poor risk-adjusted performance. They examine the presence of greater monitoring and better performance for retail funds when an institutional twin exists.

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Richard B. Evans is at the University of Virginia. Rüdiger Fahlenbrach is at École Polytechnique Fédérale de Lausanne. The summary was prepared by Biharilal Deora, CFA, CIPM, India.

## What's Inside?

When advisers manage multiple versions of a fund that are sold to different types of investors (e.g., retail and institutional), the funds are considered twins. The authors summarize the impact on the performance and governance of a retail fund that has an institutional twin. They find that having an institutional twin increases a retail fund's risk-adjusted performance and offers greater monitoring, which results in reduced fees and improved managerial effort.

## How Is This Article Useful to Practitioners?

The authors find that having an institutional twin for a retail fund with the same fund manager actually improves the retail fund's risk-adjusted performance by 1.5% a year relative to a retail fund with no twin. The twin structure not only reduces the agency problems between mutual fund managers and investors but also results in stronger governance. The stronger governance is evident in lower fees, trading costs, and other implementation expenses as well as in less use of soft dollars and improved managerial efforts.

The authors also provide a positive perspective on recent legal and legislative developments related to excessive mutual fund fees. They suggest that the twin-fund arrangement provides better monitoring and thus justifies the fee differential. In the authors' sample, institutional and retail twins have an average expense ratio difference of 0.42%, which is significantly smaller than the risk-adjusted excess performance of 1.5% for retail funds with an institutional twin.

## How Did the Authors Conduct This Research?

The data consist of domestic U.S. equity mutual funds in the Morningstar database from January 1996 to December 2009, with a focus on 132 of 463 twin funds in which the institutional fund was created after the retail fund.

The authors use a regression to establish whether institutional investors are more sensitive to variables that predict returns than retail investors are. They then use propensity score matching techniques to establish improved risk-adjusted performance of retail funds after the creation of

their institutional twins and compare them with a sample of funds that have no institutional twins but are otherwise similar. Finally, they examine the different channels through which monitoring by investors in the institutional twin fund could improve the performance of the retail twin fund.

The authors look for any statistically significant change in direct expenses by examining the expense ratio. For indirect expenses, they examine the change in a measure created by other researchers called the “return gap.” The return gap is a measure of a fund’s actual return minus the theoretical return on the fund’s most recently disclosed holdings net of expenses. The return gap captures indirect costs, such as brokerage commissions, trading costs, and other implementation costs. Finally, the authors use the active share measure to measure manager effort. Active share is the fund’s holdings minus the holdings of its closest benchmark. The results are consistent with their conclusions about increased monitoring.

### **Abstractor’s Viewpoint**

It is a compelling argument that risk-adjusted performance increases for a retail fund with an institutional twin, but results may not be that statistically significant for fixed-income funds or other international mutual funds, including non-U.S. equity funds.

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## **The Other Side of Value: The Gross Profitability Premium**

**Robert Novy-Marx**

*Journal of Financial Economics*

vol. 108, no. 1 (April 2013):1–28

The gross profit ratio tends to favor growth firms but is not identical to identifying growth firms on the basis of standard metrics. The author examines using a ratio of gross profit (revenue less cost of goods sold) to assets as a means of creating and enhancing long-short portfolio strategies. He finds that the gross profit long-short strategy (long very profitable firms and short less profitable firms) hedges value strategies effectively and enhances a number of other strategies as well.

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Robert Novy-Marx is at the University of Rochester. The summary was prepared by Thomas M. Arnold, CFA, University of Richmond.

## What's Inside?

The author constructs long–short portfolios on the basis of a ratio of gross profit (revenue minus the cost of goods sold) to assets and finds that the strategy performs better than a typical growth strategy. The gross profit strategy tends to use growth stocks but in a more optimal way than standard growth strategy metrics. Because the gross profit strategy is growth oriented, it is a very good hedge for value strategies. Between July 1963 and December 2010 (the sample period), a combined strategy of gross profit and value never generated a losing five-year return.

In addition, the author constructs long–short portfolios on the basis of a double sort of the three Fama–French factors and a measure for momentum with gross profitability. The procedure takes long positions in stocks that are desirable with respect to the given factor and high in gross profitability and short positions in stocks that are not desirable with respect to the given factor and low in gross profitability. In each case, gross profitability adds a significant economic dimension to the strategy.

Finally, the inclusion of gross profitability with standard explanatory factors for stock returns improves the explanation of excess returns generated by a number of long–short strategies based on anomalies.

## How Is This Research Useful to Practitioners?

By incorporating gross profit in a given strategy, practitioners can improve their long–short strategies. Previous research had dismissed profitability as a metric, but the author demonstrates that profitability (generally measured with earnings in the past) may have been mis-specified and possibly misinterpreted because previous testing has been dominated by data from many smaller firms, which have not constituted the majority of the capitalization of the market.

On a more basic premise, it makes intuitive sense that gross profit should matter because it measures the effectiveness of the basic business plan before a number of other factors are considered when calculating earnings. Gross profit is certainly related to a firm's categorization as a growth firm, but as the author points out, gross profit seems to be a means of finding the better firms within the growth firms.

Furthermore, when combining gross profit with a value strategy, the performance results over the past few decades are difficult to ignore.

## **How Did the Author Conduct This Research?**

The accounting data are from Compustat from July 1963 to December 2010; most firms included are NYSE/Amex firms (financial firms are excluded). The return data are monthly.

Much of the analysis requires separating firms into groups on the basis of the ratio of gross profit to assets and, in many cases, another factor (Fama–French factors and momentum). When sorted, returns within groups are tested to determine whether return differences are statistically significant. The long–short portfolios are rebalanced annually; returns are regressed against a number of factors to determine whether excess return can be produced and to determine what factors may explain some of the long–short portfolio return.

Finally, the author tests 15 different anomaly strategies by regressing the given anomaly-generated return against explanatory factors that have gross profit incorporated. A shorter time series (July 1973–December 2010) is used in this analysis.

## **Abstractor's Viewpoint**

I like the idea of gross profit being valuable in explaining return from an intuitive perspective, and as demonstrated by the author, it makes sense from an empirical perspective. But I think the really valuable contribution is how a gross profit strategy can be used to hedge a value strategy.

## PORTFOLIO MANAGEMENT

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### A New Perspective on the Validity of the CAPM: Still Alive and Well

**Moshe Levy and Richard Roll**

*Journal of Investment Management*

vol. 10, no. 3 (Third Quarter 2012):9–20

Although the capital asset pricing model (CAPM) is the most popular method of measuring risk, beta, and alpha among practitioners, many academic studies have cast doubt on its reliability. The authors apply a reverse engineering approach to test the CAPM and show that, with slight variations in the empirically estimated parameters, the CAPM is a very accurate method of measurement.

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#### What's Inside?

The capital asset pricing model (CAPM) is the most widely used measure of risk, beta, and alpha; it implies that the market portfolio is mean–variance efficient and is thereby used to advocate for passive investment. Many academic studies empirically reject the CAPM. The authors illustrate through a reverse optimization method that the CAPM is consistent with the empirically observed return parameters and the market proxy portfolio weights. They conclude that the CAPM risk–return relationship is valid.

#### How Is This Research Useful to Practitioners?

Investors and corporate managers can gain far-reaching information from the CAPM. But academics have found—and the financial community seems to believe—that the CAPM model cannot be justified with empirical evidence. Practitioners continue to use the model in their investment processes (to a varying degrees) because they lack a better alternative. The typical approach for testing the CAPM

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Moshe Levy is at Hebrew University, Jerusalem. Richard Roll is at UCLA. The summary was prepared by Nitin Joshi, CFA, Columbia Management LLC.



model involves empirically estimating the stock return parameters and examining whether these parameters satisfy the relationships implied by the model.

Using a different approach, the authors choose return parameters that ensure an efficient market proxy and are as close as possible to their sample counterparts. Given a market proxy, the authors' optimization method looks for a set of mean return and standard deviation vectors that satisfy the condition of mean–variance efficiency for the proxy and are closest to the sample parameters. This approach does not assume the existence of a risk-free asset and considers simultaneous adjustments to average returns and standard deviations.

The authors show that the empirical proxy portfolio parameters are perfectly consistent with the CAPM, given an allowance for slight estimation errors in the return moments. Their analysis reveals that the CAPM delivers an improved estimate of expected return when they first calculate the adjusted mean return for the market index proxy and its corresponding zero-beta portfolio and then use those results along with the sample beta (which is close to the adjusted beta) in the model.

## How Did the Authors Conduct This Research?

The authors collect a sample of 120 monthly return observations for each of the 100 largest stocks in the U.S. market for the period January 1997–December 2006. They implement MATLAB's *fmincon* function to arrive at a set of adjusted expected returns and standard deviations and show that these adjusted parameters are not significantly different from the sample parameters used in *t*-tests.

They conduct two more tests: one with the assumption that individual stock returns are drawn from a multivariate normal distribution and the other with the assumption of a nonnormal distribution. They use the bootstrap method to show that the proxy portfolio is mean–variance efficient, even with some interdependence in estimation errors.

## Abstractor's Viewpoint

The authors show that the CAPM model cannot be empirically rejected because minor changes in return parameters lead to results that con-

tradict previous negative and disappointing findings for the model. A comparative analysis of other asset pricing models and the CAPM, in which simultaneous corrections to the means and variations are considered, would aid practitioners in selecting an appropriate model for asset pricing.

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## The Optimal Use of Return Predictability: An Empirical Study

**Abhay Abhyankar, Devraj Basu, and Alexander Stremme**

*Journal of Financial and Quantitative Analysis*

vol. 47, no. 5 (October 2012):973–1001

The active use of predictive information has the potential to enhance returns relative to those obtainable from fixed-weight “buy and hold” strategies. The authors use a conditional asset pricing framework to empirically examine portfolio management strategies that dynamically leverage predictive information while maintaining mean–variance efficiency from the perspective of an outside observer.

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### What’s Inside?

An active portfolio strategy that makes efficient use of conditional (predictive) information can appear inefficient to an outside observer—for example, an investor—who is attempting to evaluate performance unconditionally (without the benefit of that information) after the fact.

Hansen and Richard (1987) and Ferson and Siegel (2001) addressed this issue theoretically, demonstrating that it is possible to construct unconditionally efficient portfolios using conditional information. The authors enhance the relevance of this line of research for practitioners by empirically examining the efficiencies and economic benefits that can accrue from the use of these strategies.

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Abhay Abhyankar is at the University of Exeter. Devraj Basu is at SKEMA Business School. Alexander Stremme is at the University of Warwick. The summary was prepared by Stuart Fujiyama, CFA.

## How Is This Research Useful to Practitioners?

The authors empirically examine the in-sample (1960–2004) after-the-fact performance and economic benefits of three dynamically efficient portfolio strategies: maximum return (target volatility mean = 15%), minimum variance (target return mean = 15%), and maximum utility. They find that in the case of multiple assets using the Fama–French five-industry (FF5I) base portfolios, dynamic strategies effectively use predictive information to “decouple” from the market index and greatly outperform (reported betas approaching 0.30 and alphas higher than 9%).

In addition, they find that using term spread, credit spread, and inflation as predictive variables—both individually and collectively—earns excess returns that can support annual management premiums on the dynamic strategies (versus fixed-weight strategies) ranging from 2.5% to 6%. After transaction costs, strategies based on market index return, dividend yield, and inflation do not add to excess returns. The predictive power of factors varies by size and industry, with greater predictability in smaller-capitalization stocks. There is also a concern that return predictability has declined since 2004.

The authors also empirically examine out-of-sample performance and find that in the 1995–2004 subsample experiments, multiple-asset FF5I strategies based on term spread and credit spread outperform the fixed-weight strategies and strategies based on market index return by 6–12% for the 2000–04 (dot-com bubble collapse) period. A dynamically optimal maximum-return strategy that uses term spread and convexity as predictive variables avoids all losses and achieves a gain of about 40% during that period.

In the 2005–07 experiments, the authors report that in the single-asset case, the dynamically managed strategies achieve alphas between 5% (maximum-return strategy) and 7.4% (minimum-variance strategy). In the case of multiple assets using the FF5I base portfolios, all managed strategies underperform relative to the market index while the fixed-weight strategies achieve a respectable Sharpe ratio and a marginally positive alpha.

In the final 2005–June 2009 experiment, none of the strategies avoid losses and most of the dynamically managed strategies underperform relative to the market index in the final 18 months.

## How Did the Authors Conduct This Research?

Using the theoretical conditional asset pricing framework established by previous researchers, the authors derive propositions for estimating a dynamically managed portfolio's predicted efficiency—as measured by the Sharpe ratio—and for constructing dynamic portfolio strategies meant to be deemed efficient by an outside observer after the fact. They also use a utility-based framework to develop a formula to estimate the size of the management fee or premium that an investor is willing to pay for the predictive strategies.

The authors use monthly 1960–2004 data for the empirical tests and derive the formulas for calculating expected means and the variance–covariance matrix of base asset returns generated by using predictive variables. They also use bootstrap simulation to examine the robustness of calculated estimates.

For predictive instruments, they obtain the lagged return on the market index and the dividend yield on the index from CRSP; they construct all other variables using data from the economic database at the Federal Reserve Bank of St. Louis (FRED).

For base assets, the authors use the total return (including reinvested distributions) on the CRSP value-weighted market index for the single-risky-asset case. For multiple risky assets, they use the FF5I portfolios and the Fama–French  $2 \times 3$  portfolios sorted by size and book-to-market ratio.

Prior to examining portfolio performance, the authors make in-sample, empirical estimates of predicted annualized Sharpe ratios and examine the impact of each of the predictive variables.

## Abstractor's Viewpoint

This research should be of interest to portfolio managers and those charged with evaluating manager performance.

The study of conditional asset pricing has a history of robust, proof-driven theoretical development. And the authors' results—at least their in-sample results—indicate that dynamic portfolio management strategies based on this framework have the potential to enhance portfolio efficiency and returns.

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In the course of my limited survey of the literature, however, I could not help thinking that it might be a challenge for a practitioner to correctly implement—or even validate the implementation of—the complex portfolio-weighting formulas used in this line of research.

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## The Price of Faith: Performance, Bull and Bear Markets, and Screening Effects of Islamic Investing Around the Globe

Sebastian Lobe, Felix Rößle, and Christian Walkshäusl

*Journal of Investing*

vol. 21, no. 4 (Winter 2012):153–164

Examining whether screenings that are compliant with *Shari'a* law affect the performance of Islamic indices, the authors find no statistically significant difference in the performance of Islamic and conventional indices. But they do find statistically significant outperformance of Islamic indices during a single bear market period included in the study.

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### What's Inside?

The authors try to determine whether *Shari'a*-based screening of investments by Islamic indices affects the investments' performance relative to conventional indices. They use well-known financial tools, such as the Sharpe ratio, the capital asset pricing model (CAPM), and the four-factor model, in their research. Overall, they find no statistically significant evidence of Islamic indices outperforming or underperforming conventional indices when they examine the Sharpe ratio and output from the CAPM. But they do find performance differences in some individual regions when they use the four-factor model approach. The authors also find statistically significant outperformance of Islamic indices during the bear market that occurred during the study period, a finding that contradicts previous research on the topic.

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Sebastian Lobe is at the WHL Graduate School of Business and Economics. Felix Rößle and Christian Walkshäusl are at the University of Regensburg. The summary was prepared by Ghazal Zahid Khan, CFA.

## How Is This Research Useful to Practitioners?

Islamic indices avoid impermissible investments by screening stocks and focusing on both primary business activities and on financial ratios of the company in question. The screening process excludes companies involved in non-*Shari'a*-compliant activities, such as those related to pork, alcohol, gambling, or interest-based banking. The process also screens out companies with higher levels of interest-bearing debt, noncompliant investments, noncompliant income, or illiquid assets compared with predetermined thresholds approved by the respective *Shari'a* boards of the index providers. Screening criteria are more or less uniform across the Islamic investment world, although minor differences may exist in the threshold levels or basis of calculating financial ratios.

Compared with previous research on the topic, the authors include a larger number of indices covering global as well as regional markets and use three approaches (the Sharpe ratio, the CAPM, and the four-factor model) to validate their findings. Using aggregate annualized returns, the Sharpe ratio, or the CAPM, they find no significant underperformance or outperformance by Islamic indices. But the four-factor model shows statistically significant results in some individual regions. The authors find that Islamic indices invest mainly in growth stocks and positive momentum stocks, which was noted in previous research.

They also try to determine whether differences in the financial screening criteria of index providers affect performance. They analyze the performance of the MSCI and the Dow Jones indices for that purpose, and although Dow Jones' criteria allow a larger number of companies to be included in the index, there is no major difference in performance between the two.

## How Did the Authors Conduct This Research?

The authors' sample includes 155 Islamic indices from around the world. The time period covered is January 2001–June 2012, but because of limitations on data availability for all the indices through the entire period, the average return history for the Islamic indices covers approximately 54 months.

On an aggregate basis, the authors find that the annualized raw return over all Islamic indices in the sample was 2.4% compared with an average annualized return of 2.07% for the conventional indices, a difference that is not statistically significant. Using the Sharpe ratio, they then calculate performance for all the indices. The exercise reveals that 54% of the Islamic indices have a higher Sharpe ratio than their conventional counterparts, but this result is also not statistically significant.

Using a CAPM regression, the authors find that although there is no statistically significant occurrence of positive or negative alpha for Islamic indices, they do tend to have lower systemic risk given that beta for 75% of the funds was found to be less than 1. They then apply the four-factor model to countries and regions that, apart from beta, also have differential returns attributable to size, value, and momentum. The four-factor model shows some significant alphas, including a positive alpha for a Swiss index and an Asian index and a negative alpha for a North American index. The authors find little or no tendency of the Islamic indices to invest predominantly in either large- or small-cap stocks. But they do find a tendency to invest in growth stocks, especially in Asia. The momentum factor seems to play a big role in Islamic indices, 63% of which have a significant positive coefficient for momentum.

The authors divide the time period being studied into a bull market period (February 2009–June 2012) and a bear market period (February 2007–February 2009). After comparing the returns of Islamic indices with those of the conventional indices during the bear market, they find positive alphas for almost all of the Islamic indices, of which 30% are statistically significant. The authors attribute this result to the exclusion of financial sector stocks from Islamic indices, which might have cushioned their returns when the financial sector fell during the bear market time frame. They find no statistically significant under- or outperformance during the bull market period. Their findings contradict those of previous researchers who found that Islamic indices outperformed in a bull market and underperformed in a bear market. But the chosen time period for the previous study was different and covered a different bull and bear market regime. The authors conclude that it is not possible to generalize that Islamic indices out- or underperform in bull or bear markets because performance may differ from cycle to cycle depending on the market climate.

## Abstractor's Viewpoint

The authors use a larger dataset to confirm findings of previous researchers that Islamic indices do not subject investors to any disadvantage in terms of performance. Their research shows that Islamic indices might even outperform conventional ones when the financial sector comes under stress because Islamic indices avoid financial sector stocks.

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## The Price of Sin in the Pacific-Basin

**Robert B. Durand, SzeKee Koh, and Paul LiJian Tan**

*Pacific-Basin Finance Journal*

vol. 21, no. 1 (January 2013):899–913

Previous research has revealed “sin stocks” (stocks from the alcohol, tobacco, and gaming industries) in North American and European stock markets to be underpriced, and the authors explore whether the same is true for sin stocks that include stocks from the defense industry in the Pacific Basin. They find that sin stocks are overpriced in some Pacific-Basin countries and suggest that they are more overpriced when a culture is collectivistic rather than individualistic.

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## What's Inside?

Previous studies have demonstrated that “sin stocks” (alcohol, tobacco, or gaming) are underpriced in North American and European markets because of social norms that prevent institutional investors from holding such stocks. The authors investigate whether a similar result occurs in Pacific-Basin countries—namely, Australia, India, Japan, South Korea, Malaysia, New Zealand, and Singapore. They include defense industry stocks as an additional category for sin stocks, with all other stocks (except financials) categorized as non-sin stocks.

They find that almost all of the Pacific-Basin countries overprice sin stocks. They posit (but do not directly test) that collectivist cultures,

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Robert B. Durand is at Curtin University. SzeKee Koh and Paul LiJian Tan are at the University of Western Australia. The summary was prepared by Thomas M. Arnold, CFA, University of Richmond.



where the group is viewed as more significant than the individual, tend to overprice sin stocks more than individualistic cultures.

## How Is This Research Useful to Practitioners?

The authors' conclusion that sin stocks are overpriced in some Pacific-Basin countries may lead investors to consider avoiding or even selling short sin stocks in these markets. Assuming the reverse is true in U.S. and European markets (as has been suggested by previous research), long positions in sin stocks in those markets could also be viable. Taken together, a potential long–short investment strategy could emerge.

## How Did the Authors Conduct This Research?

Using monthly return and accounting data from 1990 to 2009 from Thomson Reuters Datastream, the authors categorize stocks from the alcohol, tobacco, gaming, and defense industries as sin stocks and stocks from all other industries, except the financial industry, as non-sin stocks. The authors first examine the proportion of sin stocks relative to all other stocks that institutional investors in Pacific-Basin countries hold. The proportion of shares held by entities with 5% or more of outstanding shares is a dependent variable, and a dummy variable for sin stocks serves as the key independent variable while controlling for other factors, such as size, risk, and return performance.

The coefficient for the sin stock dummy variable is negative and statistically significant for Australia and New Zealand, which was expected given those countries' similarities to the United States. But the sin stock dummy coefficient is positive and statistically significant for Japan and South Korea. One possible explanation, which is not directly tested, is a cultural factor: Japan and South Korea are believed to be more oriented toward collectivism (i.e., a desire to be part of a group) than individualism (i.e., a desire to act more independently).

By running regressions on subperiods (1990–1994, 1995–1999, 2000–2004, and 2005–2009), the authors demonstrate that the results from Japan and South Korea are indicative of recent times, whereas the results from Australia and New Zealand are most reflective of the

2000–04 period. A similar regression is performed using the proportion of shares held by government institutions as the dependent variable. The coefficient on the sin stock dummy variable is positive and statistically significant for Japan but negative and statistically significant for India. The authors posit that the willingness of Japan's government to invest in sin stocks may be what motivates others in Japan to invest in sin stocks as well.

The authors next examine the risk-adjusted return performance and relative valuation of sin stocks in comparison with all other stocks. Using a multifactor pricing model, the authors find that sin stocks statistically underperform all other stocks on a risk-adjusted basis in five of seven markets. Using the market-to-book ratio as a measure of relative performance, the authors find that sin stocks exhibit statistically higher valuations relative to all other stocks in six of seven markets.

Further regression analysis reveals another possible relationship: The more collective a culture is, the more sin stocks are overpriced. But this relationship is not directly tested by the authors. Sin stocks are also found to underperform in the more individualistic Pacific-Basin countries, similar to U.S. and European markets.

### **Abstractor's Viewpoint**

I find it interesting that Pacific-Basin markets tend to overprice sin stocks. But the connection between collectivistic cultures and overpricing sin stocks seems tenuous and, at best, a casual observation because of a lack of statistical testing. More investigation is necessary if a particular cultural designation is to be considered the cause of a systematic market behavior.

# The Return-to-Risk Performance of Socially Responsible Investing According to Catholic Values

Nicholas Carosella, CFA, Jose Rodriguez, Scott Williams, David Nawrocki, and Jonathan P. Doh

*Journal of Investing*

vol. 21, no. 4 (Winter 2012):47–58

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The authors explore the relationship between corporate social responsibility policy and corporate financial performance by studying the performance of stocks that are screened using guidelines published by the United States Conference of Catholic Bishops. They determine that investing according to the guidelines is detrimental to investment performance.

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## What's Inside?

The authors add to the existing body of research on the relationship between corporate social responsibility policy (CSP) and corporate financial performance (CFP). They seek to understand the link between Catholic social values and CFP by comparing the risk-adjusted returns of stocks with high scores according to the guidelines of the United States Conference of Catholic Bishops (USCCB) with those of stocks with lower scores. The authors find that, for the periods examined, investing according to the USCCB's social screening guidelines is detrimental to risk-adjusted returns. Policy recommendations are then offered for Catholic institutions using these guidelines.

## How Is This Research Useful to Practitioners?

Much of the existing research on the impact of social screens on investment performance identifies social screening factors as having a neutral to positive influence on investment returns. The authors, noting that

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Nicholas Carosella, CFA, is at myCIO Wealth Partners. Jose Rodriguez is at Fortaleza Capital Partners. Scott Williams holds an MS in finance from Villanova University. David Nawrocki and Jonathan P. Doh are at Villanova University. The summary was prepared by Martin A. Wildy, CFA.

much of this research was published in the 1990s, seek to add to the literature on the subject.

They analyze returns of social indices and individual stocks that are based on the USCCB's screening guidelines and perform regression analyses on returns of the KLD Catholic Values 400 Index, KLD Domini 400 Social Index, S&P 500 Index, and CRSP Value-Weighted Index. The results demonstrate that the KLD social indices underperformed during May 1998–December 2007.

Next, the authors examine the returns of individual stocks and reach a similar conclusion. They find that the best-performing companies on a risk-adjusted basis are more often the companies with the lowest socially responsible investing (SRI) scores. Specifically, the 94 best-performing securities include 34 from the top SRI quintile and 60 from the bottom SRI quintile. SRI scores are higher for stocks with lower risk-adjusted returns and lower for stocks with higher risk-adjusted returns. The authors also identify a relationship between economic sector, SRI score, and investment performance. The top three sectors by SRI ranking (financials, consumer staples, and discretionary) have below-average performance rankings. Conversely, the two sectors with the lowest SRI rankings (industrials and energy) have above-average performance rankings.

The authors conclude that Catholic social screens were detrimental to returns during the study period. They recommend that investors relax negative SRI screening constraints and focus on shareholder advocacy. They also advocate in-depth SRI sector analysis, sector rotation, and security analysis to improve returns.

This article will be of interest to practitioners and investors in the field of SRI, particularly those directly involved with institutions that invest according to Catholic social guidelines.

## **How Did the Authors Conduct This Research?**

The authors use the USCCB social investing guidelines to construct SRI scores using the IW Financial database. These guidelines include protecting human life, promoting human dignity, reducing arms production, pursuing economic justice, protecting the environment, and

encouraging corporate responsibility. It is not clear how the authors convert these general guidelines into the specific scoring profiles.

One limitation of this study is the inability of the IW Financial database to allow for historical screening. As a result, all of the securities are ranked by the IW Financial score on 27 June 2007 and divided into five quintiles, which restricts the authors' ability to determine whether the SRI quintiles would have changed during the sample period or to test whether CSP leads CFP. In addition, IW Financial does not have any screens related to predatory lending practices, which may have affected the SRI rankings of financial firms.

For data on individual security performance, the authors use the CRSP dataset. Monthly total return data are for 1 January 2003–31 December 2007, and daily return data are for 28 June 2007–31 December 2007. Index return data are obtained from CRSP and SunGard FactMaster. The authors run data tests using a portfolio management software program. A variant of the Sharpe ratio known as the reward-to-semivariability ratio is used to rank securities by risk-adjusted performance for comparison purposes.

The impact of the macroeconomic environment on sector returns during the study period is also discussed. For example, during the six-month period of daily returns in late 2007, a steady increase in energy prices benefited the energy sector, which had a low SRI ranking. The authors do not analyze returns by social screening factor.

## **Abstractor's Viewpoint**

The authors provide a good overview of existing research that links CSP with CFP, and their own research adds to the literature. They provide detailed insight into the performance of securities adhering to Catholic social investing guidelines. But some questions remain unanswered. The limitations of the social screening database and the impact of sector performance during the sample period make the conclusions less concrete. An examination of the results on a sector-by-sector basis, to control for the macroeconomic environment, would have been beneficial. It would also be interesting to see this work expanded to provide attribution by social screening factor.

## Towards an Ethical Research Agenda for International HRM: The Possibilities of a Plural Cosmopolitan Framework

Maddy Janssens and Chris Steyaert

*Journal of Business Ethics*

vol. 111, no. 1 (November 2012):61–72

Ethical research in international human resource management (HRM) focuses on the political role of global corporations and the impact of HRM practices on particular stakeholders. The authors propose that an ethical analysis of corporate policies and practices be conducted from three perspectives—political, cultural, and social—within a cosmopolitanism framework.

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### What's Inside?

The authors summarize ethical studies on international human resource management (HRM) and form a conceptual framework based on the perspectives of cosmopolitanism to serve as an ethical research agenda for international HRM. They explain how they incorporate three perspectives of cosmopolitanism—political, cultural, and social—in their research agenda, as well as offer methodological suggestions and explain how these perspectives could influence future HRM research development.

### How Is This Article Useful to Practitioners?

International corporate structures may lead to potential collisions between existing and desired corporate cultures and norms. Investors with international employers, with socially responsible investing interests, or with multinational investments may agree with the authors that there is generally limited research coverage of ethical aspects of HRM practices and their impact on international staff.

The authors begin with a review of available HRM literature. They then document their investigation and categorization of possible approaches to ethics and the formation of a theoretical and systematic cosmopoli-

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Maddy Janssens is at the Center for Organisation Studies. Chris Steyaert is at the University of St.Gallen. The summary was prepared by Jakub M. Szudejko, CFA.

tanism framework to use as the basis of their HRM research agenda. The authors define three perspectives (i.e., political, cultural, and social) of cosmopolitanism that they then use to analyze the impact of global corporations on stakeholders.

The political perspective on cosmopolitanism is related to the concept of world citizenship, with the presence of universal ethical codes and common values. The authors encourage HRM scholars to go beyond corporate social responsibility communication and perform an ethical analysis of global corporations, focusing on how their HRM practices support global justice by upholding human rights, fair labor, and environmental protection, with particular attention given to developing countries.

The cultural perspective highlights the open-mindedness and acceptance of cultural diversity and plurality. In this dimension, research focuses on the cultural differences within global corporations (i.e., they are a cultural hybrid), as well as how global human resource (HR) practices are translated into local business environments (e.g., particularly in a postcolonial context).

The social dimension concentrates on the actual impact of HR practices on individual and on ethical dilemmas rather than on formal policies. In this perspective, HRM scholars focus on work experiences and everyday employee interactions, which are analyzed in the context of global communication and HR practices applied to a particular case.

The authors conclude that all three cosmopolitanism perspectives should be applied simultaneously to reflect the complexity of global corporations by both scholars and global HR policymakers.

## **Abstractor's Viewpoint**

The authors offer a comprehensive review of existing HRM literature and present different perspectives on various ethical matters. They also highlight the areas of HRM that are not sufficiently covered in existing papers, as well as provide theoretical guidance, inherent limitations, and methodological suggestions for an ethical research agenda. However, they do not explain how the cosmopolitanism framework could directly influence global HR policymakers or attempt to link certain HR practices to value generated for shareholders. The addition of an

ethical analysis of actual HR practices used by multinational companies would make the research more relevant from the perspective of global managers, investors, and academics.

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## What Determines Corporate Pension Fund Risk-Taking Strategy?

**Heng An, Zhaodan Huang, and Ting Zhang**

*Journal of Banking & Finance*

vol. 37, no. 2 (February 2013):597–613

The authors show that the level of investment risk taken by corporate sponsors of defined benefit pension plans is dynamic and depends on such factors as the funding level of the plan, the default risk of the corporate sponsor, the taxation basis, the labor unionization coverage, the level of free funds available to the company, and accounting assumptions.

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### What's Inside?

Defined benefit pension plans play a significant role in financial markets and have a significant impact on the financial decisions taken by firms that provide them. The authors identify some key factors that determine the level of investment risk taken by corporate sponsors of defined benefit pension plans. They show that these factors can change over time, particularly because of changes in the level of plan funding and in the fund sponsor's probability of default.

### How Is This Research Useful to Practitioners?

This research is particularly useful to individuals involved in risk-based regulatory supervision because the authors identify a set of risk factors that can be monitored over time as pension investment risk changes. The findings, in conjunction with plan funding levels, could be used as a basis for Pension Benefit Guaranty Corporation (PBGC) premium

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Heng An is at the University of South Dakota. Zhaodan Huang is at Utica College. Ting Zhang is at the University of Dayton. The summary was prepared by Derek John Bilney, CFA, Sydney.



rates: Corporate sponsors operating at elevated risk levels could be charged higher risk premiums than sponsors operating at more conservative levels. Other practitioners can use these findings as a potential gauge of future credit deterioration.

## How Did the Authors Conduct This Research?

The authors use pension beta as a proxy for pension investment risk in a series of univariate regressions to identify the key factors that drive investment risk. Pension beta is defined as the difference between pension asset beta and pension liability beta, weighted by plan assets and pension liabilities, respectively. Pension beta has the advantage of taking asset/liability mismatching into account.

The first set of factors tests the authors' risk shifting and risk management hypotheses. Risk shifting (or moral hazard) can occur as a result of the safety net provided by the PBGC. Firms with defined benefit pension plans pay a premium to the PBGC, which then pays out a minimum level of pension benefit in the event of the failure of a corporate sponsor. The firm can treat this insurance as a put option and maximize firm value by increasing the level of investment risk. The authors investigate whether low funding levels and high risk of credit default are consistent with high investment risk.

The risk management hypothesis considers an alternate view. Because restrictions are placed on firms with low funding levels (such as capital expenditure and dividend payments), the risk management hypothesis postulates that firms have an incentive to adopt low-risk investment strategies to improve the funding position of their plans.

Other factors the authors test include taxation (firms with higher tax rates have an incentive to invest in such lower-risk assets as bonds, which are taxed at lower rates within pension funds), financial buffers (firms that are trying to build a buffer in the pension plan during favorable economic conditions tend to invest in liquid, low-risk assets that can be used in a downturn), an accounting effect hypothesis (to justify the use of a high expected rate of return on pension plan assets, an aggressive investment policy must be in place), and a labor unionization factor (firms with high levels of labor unionization tend to offer higher benefits, which require higher investment returns). Finally, a risk

synchronicity hypothesis is tested, which takes into account the correlation between firm performance and pension plan asset performance.

The regressions cover the period of 1990–2007. Unique sources of data include Form 5500 filings with the IRS and union membership data from the Union Membership and Coverage Database.

The univariate analysis shows that the risk management hypothesis dominates the risk shifting hypothesis. On average, firms with lower plan funding levels and higher credit default risk tend to adopt a more conservative strategy with lower investment risk (as proxied by pension beta) rather than the strategy suggested by the risk shifting hypothesis. The single-variable regressions support the risk management hypothesis; the evidence does not support the risk synchronicity or risk shifting hypotheses. The authors do find evidence to support the tax benefit, accounting effect, financial slack, and labor union hypotheses.

The authors' findings from multivariate regressions show that investment strategy decisions can change as a firm's circumstances change. For example, although firms with low funding levels and high default risk usually assume a low level of risk, firms on the brink of bankruptcy or those about to convert to a defined contribution plan, in which members' contributions rather than benefits are pre-defined, often adopt a very aggressive strategy (taking advantage of the PBGC safety net). Other examples of dynamic strategy implementation include funds recovering from a position of underfunding.

## **Abstractor's Viewpoint**

Unless senior management has a stake in the defined benefit pension plan, its financial incentives may be aligned with those of shareholders rather than pension plan members. Management is obligated to maximize firm value, which implies a high level of pension investment risk. Consequently, the stakeholders most affected by the authors' findings are likely to be the plan participants and their representatives, who may be relatively powerless to act because of the nature of defined benefit pension plans. The findings are also relevant to regulators using a risk-based supervision approach, but this method of supervision tends to be more resource intensive compared with the assessment of such quantitative-based measures as funding levels and proportion of equities.

Future research may include an exploration of whether there is a relationship between pension investment risk and subsequent movements in credit ratings, as well as an investigation of the time period after the financial crisis, non-U.S. funds, and differences between and within public and private sector funds.

## PRIVATE WEALTH MANAGEMENT

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### Mortgage Market Design

**John Y. Campbell**

*Review of Finance*

vol. 17, no. 1 (January 2013):1–33

A well-functioning mortgage system is critical to a nation's economic well-being, and an understanding of and experimentation with mortgage design could have positive long-term benefits. The author discusses mortgage market design using a multidisciplinary approach.

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#### What's Inside?

Residential mortgages are the largest liability in the finances of a typical household and a major portion of bank assets. Understanding design features of these contracts and how the United States can learn from other countries' mortgage systems is the focus of the author's research and analysis. Such a wide-ranging approach results in a more robust treatment and understanding of the seminal issues.

#### How Is This Research Useful to Practitioners?

The author argues in favor of a cross-disciplinary approach to gain better insight into the structure of mortgage markets.

Urban economics studies the impact of household decisions regarding location, ownership, and financing of a residence on other households in the same community. Financial distress and possible foreclosure can lead to neglect and declining house prices in a community. From the perspective of asset pricing, mortgages are risk-sharing contracts between the lender and borrower. The author reviews fixed-rate mortgages (FRMs) and adjustable-rate mortgages (ARMs)—the former are unaffected by interest rate changes and the latter are very much

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John Y. Campbell is at Harvard University. The summary was prepared by Marc L. Ross, CFA.

affected by them. Default risk is present with both contracts and can be accelerated by borrowing constraints and negative home equity, although default carries costs to the borrower (e.g., having to move and a blighted credit score). Unlike those in many other countries, U.S. lenders carry the risk of low house prices because borrowers have a put option on their house; they can walk away if they can't pay their loan.

Behavioral finance studies borrowers' financial decision-making processes in relation to personal circumstances. The author considers the effects of moving, degree of financial sophistication, and preferences for present consumption. He finds that FRMs create idiosyncratic risks, uncertainty over moving propensity affects prepayment risk, and information asymmetry can influence mortgage market structure, which all contribute to illiquidity in mortgage-backed securities. The degree of financial sophistication affects mortgage selection and the refinancing decision. Finally, home equity may lead borrowers to succumb to present temptation for consumption at the expense of long-term well-being.

Financial intermediation discusses how intermediaries fund mortgage loans. The author reviews deposit-finance lending, the securitized mortgage system, and covered bonds. Although deposit-finance lending encourages prudent lending by having lenders keep "skin in the game," it suffers from the risks of liquidity and maturity transformation and potential incentive misalignment during the threat of a negative economic shock. His review of securitization includes an emphasis on the risks revealed in the 2007–09 financial crisis. The author includes a brief discussion of covered bonds and highlights their potential benefits and risks relative to the first two systems.

The macroeconomics of a country can influence its mortgage system. The author cites the Federal Reserve's reluctance to raise interest rates, lest it create distress among mortgage lenders. Indeed, interest rate changes can affect both ARM and FRM borrowers differently.

Finally, the author briefly evaluates the causes of the recent credit debacle. Critical components were misaligned incentives and loose underwriting. The merits of mortgage modification are still unclear in the wake of so many foreclosures. He presents some potential

alternatives to the standard FRMs and ARMs along with policy recommendations for greater transparency, but he does note that too much regulation could stifle innovation. He concludes with a review of the attributes of the current U.S. mortgage funding model and highlights the merits of the Danish covered-bond system as a possible alternative.

## **How Did the Author Conduct This Research?**

The author draws on established literature from several different fields, arguing that insights from different areas of study are critical to a better understanding of mortgage systems and how they can be improved. He applies his conclusions to the U.S. mortgage market, particularly in light of its dysfunction during the 2007–09 financial crisis. Better regulation is needed in the form of consumer protection to facilitate transparency and ease of evaluating various mortgage types. Additionally, the author reviews current mortgage design and touches on suggested alternatives to the standard offerings of FRMs and ARMs. These alternatives are possible solutions to asymmetry and conflicts of interest that are inherent in the current system. He concludes with a discussion of the Danish mortgage system.

## **Abstractor's Viewpoint**

The topic of mortgages needs to include discussion of both the people who design them and those who use them. Any study of the topic that limits itself to a niche approach misses several critical components. The author draws a similar conclusion and takes a far-reaching look at essential disciplines that underpin the functioning of mortgages. Events of the past five years have made it an opportune time to revisit mortgage market design in the quest for a more efficient housing system.

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## Retirement Plan Assets

**Barbara A. Butrica**

*Urban Institute*

Retirement Security Data Brief no. 6 (November 2012): [www.urban.org/publications/412622.html](http://www.urban.org/publications/412622.html)

The author summarizes the value of assets held in retirement plans and how retirement plan issues have changed since the 2008–09 global financial crisis and the Great Recession.

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### What's Inside?

The author summarizes the value of assets held in defined benefit plans, IRAs, and defined contribution plans. Employers are now more likely to offer defined contribution plans, such as a 401(k), rather than defined benefit plans.

### How Is This Article Useful to Practitioners?

This article is useful to practitioners because it succinctly summarizes the current and recent historical statistics on retirement plan assets. In 1989, 42% of full-time workers in the private sector were enrolled in defined benefit plans. Since then, the retirement savings landscape has changed dramatically. By 2012, only 20% of full-time workers in the private sector participated in defined benefit plans, and a quarter of these workers were in frozen plans that locked out new workers or no longer accrued benefits for participants.

Employers are now more likely to offer such defined contribution plans as 401(k) plans. In 2012, 50% of full-time workers in the private sector were enrolled in such plans, up from 40% in 1989.

Between 1990 and 2011, the combined value of assets held in defined contribution plans and IRAs increased sixfold, while assets in defined benefit pensions doubled. The impact of the stock market crash in 2008 was more dramatic for defined benefit plans, whose assets declined 37% from their peak 2007 value. In the third quarter of 2012, the value of defined

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Barbara A. Butrica is at the Urban Institute. The summary was prepared by Mark K. Bhasin, CFA, Basis Investment Group LLC.

benefit plans was still only \$2.3 trillion—15% below their 2007 value in current dollars and 23% below their 2007 inflation-adjusted value.

### **Abstractor's Viewpoint**

In contrast to other retirement accounts, defined benefit plans have not fully recovered from the crisis and the Great Recession. Defined benefit plan freezes since 2007 have likely contributed to this shortfall. An explanation of why freezes were instituted with defined benefit plans but not with other retirement accounts would be helpful.



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## QUANTITATIVE METHODS

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### Easy Gram–Charlier Valuations of Options

Ray Popovic and David Goldman

*Journal of Derivatives*

vol. 20, no. 2 (Winter 2012):79–97

The Gram–Charlier method can be used to achieve computationally efficient closed-form approximations for Asian options and their path-dependent sensitivities. The authors examine an alternative solution for modeled processes in derivative securities in which closed-form valuation formulas either do not exist or are difficult to implement.

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#### What’s Inside?

The Gram–Charlier (GC) method allows the construction of closed-form valuations and hedging approximations for a variety of financial processes. The authors’ analysis includes further exploring the GC estimator of the risk-neutral density and stressing its timewise advantage when it comes to valuing a chain of Asian options, for which each claim in the chain requires extensive processing time to compute because of the sample average method.

#### How Is This Article Useful to Practitioners?

The authors present an alternative to the popular Monte Carlo simulation whose distributional properties are not known. They incorporate the GC method into several old and new models—such as the Black, Scholes, and Merton; constant elasticity of variance; and variance-gamma models—to show accurate results for closed-form valuations and hedging approximations. They note how the GC method can be extended by preprocessing the volatility parameter estimates to obtain the sensitivity vega. The approach is similar to finding variance-stabilizing transformations when faced with heteroscedasticity in statistics.

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Ray Popovic is a consultant in Atlanta. David Goldman is at Georgia Institute of Technology. The summary was prepared by Biharilal Deora, CFA, CIPM, India.

In exploring the GC estimator of a risk-neutral density, the authors find the GC method can save time. They also determine when it can achieve affirmative outcomes or nonsensical outcomes, such as when hedging Asian contingent claims that are independent of the path properties on which many sensitivities depend.

The GC method does not impose a known rigid approximating probability density function on the analyzed problem and can be improved by appropriate variance reduction techniques at the point when the model moments are estimated.

## **How Did the Authors Conduct This Research?**

For a chosen process, the authors construct estimates of the initial six moments of the distribution of the arithmetic average via a simulation, which are then used as inputs to a GC expansion to approximate the average's probability density function. Next, they extend the results using effective variance reduction techniques, such as constant elasticity of variance (CEV) diffusions. They verify the GC approximation using a proof that gives the exact expressions for the first two moments of the arithmetic average of an underlying geometric Brownian motion process.

To clarify the construction of the GC estimate and its use in valuing Asian options, the authors provide various examples to expand on each part of the process. They then provide an example of representative valuations of Asian claims and compare the standard simulation technology with the GC probability density function closed-form approach. Finally, they go over how option sensitivities are calculated.

The authors conclude by illustrating how the GC operates in a stochastic process using the CEV class of diffusions. They focus on arithmetic averages for which the closed-form moment formulas are unavailable. They test the results on exact limiting higher-order moments in a GC estimator. But the GC estimator fails to provide an appropriate probability density function when used with positive point probability.

## **Abstractor's Viewpoint**

The authors provide a technique that, when applied correctly, can produce accurate and faster results without imposing rigid probability density func-

tion restrictions on the problem. They offer an interesting way of incorporating the GC method into existing stochastic processes with the benefit of reduced processing time, particularly when pricing typical Asian options.

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## Market Skewness Risk and the Cross Section of Stock Returns

**Bo Young Chang, Peter Christoffersen, and Kris Jacobs**

*Journal of Financial Economics*

vol. 107, no. 1 (January 2013):46–68

Using S&P 500 Index options data to measure market volatility, skewness, and kurtosis, the authors seek to determine whether innovations in these market moments help explain cross-sectional equity returns. Market skewness appears to be the most robust of the measures, with some evidence of market volatility also being robust earlier in the sample period. The effect of market kurtosis never comes through in a consistent conclusive manner.

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### What's Inside?

In an exhaustive study, the authors measure the effects of market volatility, market skewness, and market kurtosis on the cross-section of equity returns. The authors obtain measures of these three moments from S&P 500 Index options, which means these measures are forward looking, rather than estimates based on historical data. Moment measures obtained from options prices are considered to be better because historical data may not be indicative of the *ex ante* return distribution of the market (i.e., what actually happened in the past may be different from what was expected to happen).

In many of the empirical tests, the authors find that market skewness appears to be a significantly priced risk factor for cross-sectional equity returns, after accounting for other noted risk measures: excess market return, size, book-to-market ratio, and momentum. Stocks with high exposure to the skewness factor have lower returns, on average.

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Bo Young Chang is at Bank of Canada. Peter Christoffersen is at the University of Toronto. Kris Jacobs is at the University of Houston. The summary was prepared by Thomas M. Arnold, CFA, University of Richmond.

The authors find that the risk premium on the other market moment factors, volatility and kurtosis, are smaller in magnitude. Overall, the results provide evidence that the higher moments of market returns are important in asset pricing.

## **How Is This Research Useful to Practitioners?**

Because of the possible effect of market skewness on equity returns, practitioners may need to think beyond variance when forecasting expected returns. Hopefully, recognizing this added dimension of risk will lead to better decisions or explain why certain types of existing hedges work so well.

Another benefit is the use of information implied from option prices beyond what is available from the Volatility Index (VIX). Option prices may provide a treasure chest of information that has not yet been fully exploited by the finance community.

## **How Did the Authors Conduct This Research?**

The authors use daily S&P 500 options with 30-day maturities (1996 through 2007) to extract risk-neutral market measures of volatility, skewness, and kurtosis without the aid of a particular option pricing model. Because of very high correlation with the VIX, they use the VIX (a more tractable measure) instead of the original implied market volatility data. Furthermore, because of high correlation between skewness and kurtosis (i.e., if skewness exists, then kurtosis exists), they regress the market kurtosis measure against the market skewness measure to generate residual errors. These residual errors (i.e., the variations in market kurtosis that are not captured by variations in market skewness) are then used instead of the original market kurtosis data.

To determine the effect of these market measures on individual equity returns (all stocks available in CRSP), the authors follow a two-step procedure. First, they regress a security's daily return in excess of the risk-free return over a 30-day period against the market premium with either (1) the change in a market measure of volatility, skewness, or kurtosis individually or (2) all three market measures simultaneously. Based on the magnitude of the coefficient for a particular market measure (regressed alone or with the other two measures present), the equities are sorted into quintiles (Quintile 1 being the lowest exposure).

Second, they create a value-weighted portfolio for each quintile and then generate each portfolio's return for the following 30 days (called "post-ranking returns"). To measure portfolio alphas, the authors regress each portfolio's post-ranking returns (and a portfolio that is long Quintile 5 and short Quintile 1) against previously noted risk factors (excess market return, size, book-to-market, and momentum). This procedure is also performed using longer time periods for the first step.

The authors find that market skewness appears to be a robustly priced risk factor. Market volatility appears to have some risk factor elements but is not very robust. Market kurtosis does not appear to be a significant risk factor. Finally, they use the portfolios to build a time series of risk factor measures for innovations in market volatility, market skewness, and market kurtosis. Again, market skewness appears to be a very robust risk factor when analyzed with other noted risk factors.

### **Abstractor's Viewpoint**

Skewness has been suspected for some time as being an important dimension of risk, but it has never been exposed as a risk factor in this manner. Furthermore, the method of implying information from option prices is intriguing. Because of option pricing model complexity, I think the industry has been too timid to fully exploit the information contained in option prices.

## RISK MANAGEMENT

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### Rethinking Portfolio Risk in Asset Management

**Charles T. Hage**

*Journal of Performance Measurement*

vol. 16, no. 4 (Summer 2012):8–17

Existing risk measures for portfolio performance are leading investment managers to misallocate capital. Corrective actions by the investment community can lead to huge payoffs because of better allocations. It is important to remember that opportunity and risk are inseparable and that the returns of hedge funds are not normally distributed, so Gaussian measures are not very helpful. The author contends that the Omega ratio is one measure that can help overcome the misallocation problem.

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#### What's Inside?

Many return distributions are not bell-shaped, and existing risk measures do not capture these distributions properly. The existing methods of calculating risk are leading to the misallocation of funds. According to the author, a complete rethinking of risk fundamentals can lead to huge payoffs in the productivity of investments. The Omega measure, devised by Keating and Shadwick (Finance Development Centre 2002), is a measure that can capture all of the data in any return distribution shape.

#### How Is This Article Useful to Practitioners?

Market participants mistakenly assume that risk can be derived from return distributions and that Gaussian tools are valid for any type of return distribution. This approach presupposes normally distributed returns, which is not the case with such leveraged investments as hedge funds. The fact that normally distributed returns cannot always be assumed highlights the need for the investment industry to fundamentally rethink prevailing risk concepts.

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Charles T. Hage is at Mohican Financial Management, LLC. The summary was prepared by Vipul K. Bansal, CFA, St. John's University.

Existing measures encourage the separation of opportunity and risk, but the author contends that the two cannot be separated. In fact, the inseparability of opportunity and risk is acknowledged in the statement of a fund's objectives; the goal is to gain quantitatively (annual percentage of return) and to limit loss qualitatively (preservation of capital). The tolerance for loss is unique to each investor and to each circumstance. Investors' patience and threshold of tolerance for loss are important aspects in the investment process. The use of existing risk measures has misinformed the assessment of performance and the task of allocating investments to the best managers.

The Omega ratio is much more valuable because it captures return distributions with tail risks. It is effectively equal to the probability-weighted gains divided by the probability-weighted losses at a threshold return. The Omega ratio is equal to 1 when the threshold value is the average return. The entire return distribution can be captured in the Omega ratio. According to the author, using this measure to screen and select managers can lead to a better allocation of capital to managers. The added profitability from this effort has the potential to be huge.

The author contends that value at risk (VaR) serves a great purpose in banking, where uncorrelated risks are integrated and the resulting aggregate exhibits a normal distribution. But VaR is not appropriate for some investment portfolios, such as hedge funds. These portfolios do not exhibit bell-shaped return distributions, which can stem from a myriad of such factors as large trades, correlated positions, leverage, and illiquidity.

The author believes that the correct performance measures, such as the Omega ratio, have been developed and can be used. He thinks that the problem is behavioral because wrong concepts are deeply embedded in the investment industry and participants have not yet acknowledged the importance of not separating opportunity and risk along with using appropriate measures of risk. He states that the stakes are too high to ignore these problems indefinitely.

## **Abstractor's Viewpoint**

The current notion that risk can be treated separately from opportunity is misplaced, and corrective action by the investment community has the potential to produce huge profits from better asset allocations.

## This Time Is the Same: Using Bank Performance in 1998 to Explain Bank Performance during the Recent Financial Crisis

Rüdiger Fahlenbrach, Robert Prilmeier, and René M. Stulz

*Journal of Finance*

vol. 67, no. 6 (December 2012):2139–2185

Evidence indicates that a bank's stock return performance during the 1998 crisis predicts its stock return performance and probability of failure during the financial crisis that started in 2007. The authors' findings are consistent with persistence in a bank's risk culture and/or aspects of its business model that make its performance sensitive to crises.

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### What's Inside?

If a financial institution has a culture or business model that affects its sensitivity to crises, then it is expected that the performance of the institution in one crisis will predict its performance in another crisis. The authors show that poor stock return performance of a bank during the crisis of 1998 is a strong predictor of both poor performance and failure during the crisis that started in 2007. Banks that relied more on short-term funding, had more leverage, and grew more than their peers are more likely to be banks that performed poorly in both crises.

### How Is This Research Useful to Practitioners?

Practitioners can use the findings to better navigate a future crisis. The authors' risk culture hypothesis states that the persistence of a risk culture or aspects of the business model that affect a bank's performance in one crisis predict its poor performance in the next crisis. Alternatively, the authors' learning hypothesis states that a bad experience in a crisis will prompt a bank to change its risk culture or modify its business model so that it is less likely to face such an experience again. Assuming that banks learn from

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Rüdiger Fahlenbrach is at the Ecole Polytechnique Fédérale de Lausanne. Robert Prilmeier is at Tulane University. René M. Stulz is at The Ohio State University. The summary was prepared by Jennie I. Sanders, CFA, Austin, TX.



their crisis performance, their performance in one crisis would not make it possible to distinguish performance across banks in the next crisis.

The authors empirically test both hypotheses against each other and find evidence that supports the risk culture hypothesis. Their results hold regardless of whether investment banks are included in the sample. They find that for each percentage point of equity value lost in 1998, a bank lost an annualized 66 bps during the financial crisis from July 2007 to December 2008. The correlation of crisis returns is driven by the quintile of the lowest performers and is inconsistent with the learning hypothesis.

The authors explore various scenarios that could explain the results. The personality traits of the executive rather than the persistence in a bank's risk culture do not explain their results, nor does the possibility that banks found it unnecessary to change their risk culture because of a strong rebound from the 1998 crisis.

## **How Did the Authors Conduct This Research?**

The authors test the risk culture hypothesis and the learning hypothesis using a sample of 347 publicly listed U.S. banks and show that the stock market performance of banks in the recent crisis is positively correlated with that of banks in the 1998 crisis. After summarizing the findings from various related papers, they present an overview of the events that hit financial markets starting in the middle of 1998.

The authors build their sample by starting with all companies in the CRSP and Compustat databases that have SIC codes between 6000 and 6300, which identifies them as financial institutions, and that existed in July 1998. They then exclude companies with foreign incorporations and further reduce the sample to include only those firms that also existed with the same Compustat identifier (gvkey) or permanent CRSP company identifier (permco) in Compustat and/or CRSP at the end of 2006. They do manual examination when firms match on either the gvkey or the permco criterion but the names do not match. Mergers and acquisitions are included in the sample. Finally, they exclude firms that are not in the traditional banking industry, such as investment advisers.

The authors use buy-and-hold returns from 1 July 2007 to 31 December 2008 to investigate the determinants of individual banks' returns.

In an additional analysis, they split the sample into large and small banks by median 2006 assets and find that large banks emerged from the crisis of 1998 faster but that smaller banks tended to do better during much of 2000–2009.

### **Abstractor's Viewpoint**

The authors' findings are mostly consistent with expectations, such as that the correlation of poor returns during the 1998 and recent crises is at least partially attributable to banks having a risk culture or business model that favors high leverage, more short-term funding, and strong asset growth during the boom preceding a crisis. The findings may help investors construct portfolios that are more resilient in a future crisis, assuming that these results can help predict which financial firms are more likely to survive a future crisis and which may rebound faster.

# STANDARDS, ETHICS, AND REGULATION (SER)

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## Considerations around Placement Agents

**Christopher M. Schelling and Tom Masthay, CFA**

*Journal of Private Equity*

vol. 16, no. 1 (Winter 2012):13–25

Investment management firms have been increasingly using placement agents to market alternative investments to public pension funds. The authors examine the abusive practices that can result from such arrangements and the legislative proposals designed to diminish conflicts of interest and increase transparency. They conclude that policies focused on investment staff are more likely to achieve the best result than a ban on the use of placement agents.

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### What's Inside?

The authors consider the effects of recent scandals involving the use of placement agents by investment management firms entrusted to manage the assets of public pension funds. They attempt to identify the true risks in the process and how best to achieve integrity while minimizing negative unintended consequences. They conclude that such actions as careful hiring practices on the part of pension funds and due diligence on the part of investment managers contracting with placement agents would be more effective in preventing abusive behavior than banning the use of placement agents.

### How Is This Research Useful to Practitioners?

Pension fund assets make up a large percentage of the investment universe, and a growing portion of pension fund assets are being invested in alternative investments that use placement agents for sales and marketing. The authors estimate that, historically, placement agents have

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Christopher M. Schelling and Tom Masthay, CFA, are at Kentucky Retirement Systems. The summary was prepared by Claire Emory, CFA, Clarity Financial Planning, LLC.

been used in roughly 40–60% of private equity fundraising. Large amounts of money are involved in these placements, and regulators attempt to keep the process free from conflicts of interest, lavish gifts, kickbacks, and other abusive behaviors.

The authors are concerned that proposed regulations to ban placement agents do not adequately define what constitutes a placement agent and may also inadvertently reduce a pension plan's ability to work with desirable investment management firms or increase the costs to the system. They posit that the most effective approach to avoiding abuse lies in policies directed toward those entrusted to make decisions on behalf of beneficiaries. Examples of such policies include prohibiting investment staff members from receiving gifts of any value from anyone with whom they do business (as is the case with government entities in the United States), requiring staff members to disclose any conflicts of interest, and mandating that firms follow diligent hiring procedures that include background checks.

## **How Did the Authors Conduct the Research?**

The authors begin by determining the average public pension allocation to alternatives and alternative fundraising activity over the last five years. They then describe seven examples of marketing structures used by investment management firms, ranging from firm executive or investment professional as principal fundraiser to registered external third-party marketing firm contracting with an additional third-party marketer for a selective effort. The authors arrange the firms according to their risk for potential conflicts of interest and evaluate each arrangement in terms of compensation structure and alignment of interests.

They examine a series of scenarios that represent real-world situations that pension plan investors face and contend that the placement agent arrangement itself does not increase the potential for abuse or higher fees. The authors note that a ban on placement agents not only would disproportionately affect smaller, newer, and niche investment managers that often cannot afford to pay a base salary to an in-house salesperson but also would lead to an array of unintended ill effects, notably fostering the perception of having altered the landscape for transgressions without actually having done so.

## **Abstractor's Viewpoint**

The trend in public pension funds toward the use of alternatives that often rely on placement agents seems clear. The authors effectively describe the diversity and complexity of arrangements that can arise when investment management firms market themselves to public pension plans; their observations about the possible unintended effects of a ban on placement agents are noteworthy, especially the reduction of investor choice that would result from a ban. Enhanced attention on the decision-making side of the marketing structure in terms of hiring procedures, due diligence, disclosure of potential conflicts, and so forth seems like a sensible approach. But the degree to which industry self-regulation has been, or can be, shown to be effective in preventing abuse might be subject to additional debate and exploration.