



IT DOESN'T TAKE LONG FOR ASPIRING EXECUTIVES
TO LEARN THE VALUE OF BUSINESS MEDIA.

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Financial Week

FW Special

Five more intriguing money management ideas

Ten innovative ideas in money management

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6. ROBERT ALMGREN

Calculating block trading costs



'Since investment returns are getting harder and harder to find, you have to trade a lot'

DESPITE YEARS OF EFFORT, THE COST OF TRADING large orders remains hard to measure.

Enter Robert Almgren, adjunct professor in financial mathematics at the Courant Institute of Mathematical Sciences at New York University.

Mr. Almgren's noted papers include "Direct Estimation of Equity Market Impact," published in Risk magazine. He is also known for his work on algorithmic trading, co-writing papers with former academic Neil Chriss, including "Portfolios from Sorts," and "Optimal Portfolios from Ordering Information."

"A lot of Almgren's work about transaction costs and how to measure them provides a great framework to help with relative measure, knowing that certain trades are relatively more expensive than others," said Richard Vigsnes, senior vice president and head trader in the quantitative management group of Northern Trust Global Investments, which has \$778.6 billion in assets under management.

"Almgren has been out there with Neil Chriss. It's very valuable in terms of providing an overall framework to try to incorporate the trade-off between costs and impact vs. the opportunity cost of not getting it done," Mr. Vigsnes said.

Mr. Almgren, who has a Ph.D. in applied and computational mathematics from Princeton University, said transaction costs today matter more than ever because a good execution strategy helps enhance a portfolio's overall performance.

"All traders are interested in execution costs. Since investment returns are getting harder and harder to find, you have to trade a lot to generate returns, and impact cost becomes a larger contributor to the overall P&L,"

he said.

“Also, I think you need to distinguish between equity and non-equity. In equities, algorithmic trading technology and cost measurement are very well developed and very well appreciated by the buy side. Outside of equities, it is much less developed. I am working to address some of these issues,” he added.

7. ROBERT WHALEY

Research from '90s finally wins attention



His long-short options strategies gain fans amid volatility

SOMETIMES IT TAKES YEARS FOR TRAILBLAZING ACADEMIC RESEARCH to have its full effect on portfolio strategies.

Such is the case with Robert Whaley, professor of management at Vanderbilt University's Owen Graduate School of Management, who has written pioneering studies, beginning in the 1990s, on how to protect portfolios against surging volatility.

Mr. Whaley has also helped to create some of these hedging instruments, including options and futures contracts based on the Chicago Board Options Exchange's market volatility index (VIX), the Nasdaq market volatility index (VXN) and the BuyWrite monthly index (BXM). He described the VIX contract in a 1993 *Journal of Derivatives* article.

His work on the risk/return of strategies based on the CBOE BuyWrite monthly index—being long stocks and short option calls on the same equities—is seen by an increasing number of portfolio managers as relevant in today's volatile markets.

“BuyWrite strategies work best in this particular environment because, when volatility goes up, people are prepared to pay more for insurance, even extreme premiums. So if you write the insurance and the market does not move as much as feared, you get the insurance premium and enhanced return on your portfolio,” Mr. Whaley said.

These once-exotic strategies have simple applications as well to capture added returns. Last summer, Mr. Whaley published “Failure to Exercise Call Options: An Anomaly and a Trading Game,” which showed that investors failed to capture \$491 million over a 10-year period by not exercising options prior to ex-dividend dates.

The paper was written with Hans Stoll—who serves as co-director of Vanderbilt's Financial Markets Research Center, along with Mr. Whaley—and Veronika Krepely Pool, assistant professor in finance at Indiana University.

“The S&P 500 index was down 9.4% in the first quarter. Those kinds of declines are significant, but it is possible to reduce their impact on a portfolio through the use of index options contracts,” said Walter Sall, chairman of Gateway Advisers, which has \$8 billion in assets. “The traditional investment community is becoming more educated and sophisticated in the use of all those different derivatives tools in order to improve the risk/reward efficiency in their portfolios

8. PAUL TETLOCK

Harnessing the power of the press

Yalie's research found pessimistic news reports indicated downward market movements in the short term, followed by a return to fundamentals—and added 'noise' to stock prices

SOMETIMES THE NEWS IS JUST TOO GLOOMY.

Paul Tetlock, assistant professor of finance at the International Center for Finance in Yale University's School



of Management, studied the wording found in 3,700 daily market columns published in the Wall Street Journal from January 1984 to mid-September 1999, with the help of quantitative content analysis software.

In his paper, "Giving Content to Investor Sentiment: The Role of Media in the Stock Market," Mr. Tetlock asks whether the media's wording reflects prevalent pessimism or contains new information that could lead portfolio managers to rethink their allocations.

Mr. Tetlock found that pessimistic news reports indicated downward market movements in the short term, followed by a return to fundamentals. Those news reports added "noise" to stock prices, and thus could signal that managers might want to hold off on some trades for a day.

"Switching between long and short positions on the market based solely on the content of the market column is probably not a good idea because the transaction costs involved in this high-frequency trading strategy could well outweigh the potential profits.

"However, if an asset manager had originally planned to increase her stock holdings on a day in which a particularly gloomy column appears, she may benefit by postponing her purchase one day.

"Conversely, a manager initially planning on selling some of her stock holdings may want to wait one day if there were a particularly rosy column," Mr. Tetlock said.

The paper, published in the Journal of Finance in June 2007, won the Smith Breeden first prize last year.

"Paul's paper is extremely innovative. He's looking at the media, the Wall Street Journal column, and then using scientific techniques developed in other fields to see if a given sentiment in the market can predict what happens in the future," said Campbell Harvey, principal at the firm that offers the prize—Smith Breeden Associates, which has \$32 billion in assets under management.

"Paul is using highly quantitative programs to harvest this information. It's a style that we are going to see more of," added Mr. Harvey, who is also the editor of the Journal of Finance and is on a leave of absence as professor of international business at Duke University's Fuqua School of Business.

9. KAY GIESECKE

Quantifying and measuring credit risk



"This helps you monitor risk in a portfolio and spot names likely to default, early."

How to estimate expected loss of holding a corporate bond over a likely time horizon

KAY GIESECKE, ASSISTANT PROFESSOR IN STANFORD'S department of management science and engineering, works at quantifying and measuring credit risk.

His research group, called CreditLab, has been funded by grants from J.P. Morgan Chase, Moody's, Credit Suisse Group, American Express and the Global Association of Risk Professionals.

He has also helped MSCI Barra develop its risk modeling software, which cranks out probabilities of default for thousands of debt issuers on a daily basis.

"[Mr.] Giesecke is a leader in credit risk modeling with whom we have developed several credit models and co-authored several academic papers," said Lisa Goldberg, an executive director in research at MSCI Barra.

Mr. Giesecke ex-plaind: "I build mathematical and empirical models of credit risk and how it should be measured. Specifically, I estimate the expected loss of holding a corporate bond over an expected time horizon.

“From the perspective of an institutional fixed-income investor who holds hundreds or thousands of corporate bonds and is exposed to credit risk, the model helps monitor risk,” he said.

Essentially, he uses daily stock prices over many years, and balance sheet and other financial accounting data—including debt maturity structure—to assess and assign the probability of a corporation going bankrupt within a designated period of time.

“The model links stock price and maturity structure of debt to estimate the probability of bankruptcy,” Mr. Giesecke said. “This helps you monitor risk in a portfolio and spot names likely to default, early” as they begin to deteriorate. “You can put the names on a watch list.”

Investors, depending on their risk sensitivity, can adjust the model’s parameters to raise or lower the default probability for screening corporations.

Mr. Giesecke calls the model “I-squared,” for incomplete information model of credit risk.

The model can also be used to estimate the relative value of credit default swaps and the equity market. Investors can use it to identify opportunities for trading credit default swaps against the equity market, he said.

“If I believe the price of one market doesn’t reflect true risk, I can devise a trading strategy to profit from it,” he said, speaking hypothetically.

“In a loose sense, it is a statistical arbitrage—but not a true arbitrage, because an arbitrage is an opportunity to make a risk-free profit,” Mr. Giesecke said. “So this trade would not be risk free, but a bet on convergence of two markets.”

In addition, Mr. Giesecke has worked with J.P. Morgan officials on a new model that analyzes the risk of corporate collateralized debt obligations.

“For the past few years, most market participants used a simple model to analyze risk of CDOs,” he said. “That model has been too simplistic and systematically underestimated the risk of CDOs. For rating firms, it led to too high ratings and led investors to buy paper that was overoptimistically rated too high.” He calls the more complex model “the top-down CDO model.”

“I’m still working on refining the model for corporate CDOs,” Mr. Giesecke said.

10. FAN YU

How options, CDS spreads relate



Prof’s model helps determine when to buy and sell equity to better hedge credit default swaps

MANAGERS ARE ALWAYS LOOKING FOR A BETTER WAY OF

predicting stock market returns. Sometimes they have to look in some seemingly obscure places.

Fan Yu, an associate professor of finance at Michigan State University, has found a relationship between credit default swap spreads and implied volatilities on individual-stock options that can forecast stock returns.

This relationship is particularly strong for “firms with lower credit ratings, higher CDS volatilities, and more actively traded options,” according to a draft paper he co-wrote with Charles Cao, professor of finance, and Zhaodong Zhong, a Ph.D. candidate in finance, both at the Smeal College of Business at Penn State.

While changes in implied volatility “consistently forecast future CDS spread changes, the reverse does not hold. We interpret these findings as broadly consistent with informed traders preferentially using the options

market, and to some extent the CDS market, to exploit their information advantage,” the paper said.

“Fan Yu has contributed thoughtful ideas in the areas of credit risk, fixed income and derivatives after completing Ph.D.s in both physics and economics,” said Tanya Styblo Beder, chairman of SBCC Group, a consulting firm whose areas of focus include risk management and hedge funds.

In other research, Mr. Yu examined the risk and return of capital structure arbitrage, linking the mispricing of a company’s debt and equity. This research, too, connects a company’s equity price with its credit default spread.

In his paper, Mr. Yu writes that when the market spread is substantially larger than a predicted spread, an arbitrageur could consider two views: the price reflected in the equity market is a better assessment of the price of credit protection, a signal to sell credit protection, or “the market spread is right and the equity market is slow to react to relevant information,” and thus sell equity. “In practice, the arbitrageur is probably unsure, so that he does both and profits if the market spread and the model spread converge to each other,” the paper said.

Mr. Yu’s model helps calculate credit spreads and risk in the credit default market and helps determine when to buy and sell equity to hedge credit default swaps.

Mr. Yu doesn’t consult to money managers. He said he is focused on developing his academic career. “My priority is publishing, not consulting,” he said.

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