

Federal Reserve Bank of Atlanta

# FINANCIAL MARKET REFORMS

## TAKING STOCK

2008 Financial Markets Conference

An Executive Summary  
of Conference Papers

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2008 Financial Markets Conference

May 12-14, 2008

Sea Island, Georgia

This booklet provides an overview of the conference themes along with summaries of the four policy papers that formed the core of the conference sessions.

The enclosed CD contains the complete text of the four policy papers highlighted here, two academic papers presented at the academic preconference on May 12, keynote speeches, and discussant presentations.

Or visit [frbatlanta.org](http://frbatlanta.org) to see the conference agenda, papers, and presentations. Click “News & Events” on the navigation bar and then “Conferences.”

## A Conference Overview

### Financial Market Reforms: Taking Stock

Change is a feature of all markets, and none more so than financial markets. Prices change by the minute or even the second; financial firms innovate to create new products; corporations access capital markets to finance strategic plans and investments; and investors engage in a constant search for information in the news, on the Web, and buried in Securities and Exchange Commission financial disclosures.

All of this activity results in a perpetual cycle of valuation, information acquisition, analysis, and decision-making that begets more valuation and so on. The shape of the larger market created by all of these individual actions also morphs, sometimes drastically, and often because of the actions of regulators and legislators.

The theme of the Atlanta Fed's 2008 Financial Markets Conference, "Financial Market Reforms: Taking Stock," was envisioned as a broad umbrella under which conference participants could explore and assess several forces that are shaping both current and future financial markets. Now that the United States has had several years of experience with these regulatory reforms, it

seemed timely to discuss whether the reforms have achieved their stated purpose, to examine the extent of the unintended consequences or costs, and to consider what lessons these experiences offer for future regulatory debate.

#### **Mixed reviews on SOX**

Arguably the most far-reaching financial market regulation of the past seventy years is the Sarbanes-Oxley Act (SOX) of 2002. SOX was quickly enacted by Congress on the heels of several high-profile corporate scandals, the most prominent involving Enron. In the fall of 2001 Enron's slow stock price decline became precipitous as investors began to learn about "special purpose

vehicles” used by firm management to keep some losses off of Enron’s books. On December 2, 2001, Enron filed for bankruptcy, and a parade of lawsuits, both criminal and civil, began. At the root of the Enron’s collapse was the existence of agency problems between shareholders and firm management. Firm management was accused of taking actions to benefit themselves rather than maximize profit for the shareholders. In addition, Enron’s board, in its oversight role, had not been successful at monitoring management and preventing such behavior.

The motivation, then, underlying SOX was to strengthen corporate disclosure and governance by expanding the responsibilities of independent members of the board of directors and increasing the liability of firm management. The thought was that placing more personal liability on officers and directors would result in more intense monitoring of firm activities and financing and better alignment of management’s incentives with shareholders’. In addition, the law specifically mandated evaluation and disclosure

of internal accounting and financial controls to deter malfeasance and assure capital markets of the integrity of accounting statements.

SOX was greeted with both cheers and jeers. Supporters had high hopes that these reforms would prevent future corporate scandals and strengthen investor confidence, while critics were concerned that the one-size-fits-all nature of the legislation would hinder investment and innovation and impose large costs on U.S. corporations. Six years into this reform, disagreements on the success of SOX continue.

In the conference session “SOX at Five Years: A Good Long-Term Investment?” Ken Lehn’s paper assesses the impact of SOX on U.S. capital markets by surveying twenty-three academic research papers on the legislation’s effect on corporate governance and performance. The academic evidence is mixed, but Lehn concludes that SOX creates more costs than benefits, at least for some firms, and is in need of further analysis and reform. In particular, Lehn proposes that firms undertaking an initial public offering

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be permitted to opt out of SOX and allow the market to individually evaluate the governance structures and potential benefits of SOX requirements for each firm. The information on market discipline that would result from such an experiment could potentially lead to a reform of SOX into a voluntary set of governance structures for all firms.

### **The impact of investor activism**

The contrast between regulation versus market discipline as effective mechanisms for resolving conflicts of interest between management and shareholders provided the context for the conference session “Investor Activism: Reshaping the Playing Field?” While the SOX session

examined an enacted regulatory reform, the session on investor activism focused on proposed reforms intended to strengthen shareholders’ ability to discipline firm management directly via nomination of

directors on the corporate proxy statement. This democratization of the proxy would lessen the separation of ownership and control in U.S. corporations by providing the shareholders (owners) an avenue through which to exert control over management positions and decisions (normally exerted by the board of directors). This market-based discipline, it can be argued, would act to deter manager malfeasance, strengthen corporate governance, and improve firm performance.

In his paper for this session, Stephen Bainbridge, however, argues that there are important economic reasons for the arms-length relationship between management and the board of the directors when it

comes to overseeing management decisions. Surely the separation of ownership and control gives rise to agency problems, such as those that occurred in the Enron case, but there are also information asymmetries between shareholders and firm management. Bainbridge contends that these asymmetries give precedence to authority over consensus. In particular, he asserts that “the chief economic virtue of the public corporation is not that it permits the aggregation of large capital pools, but rather that it provides a hierarchical decision-making structure well-suited to the problem of operating a large business enterprise with numerous employees, managers, shareholders, creditors and other inputs. In such a firm, someone must be in charge.”

From this viewpoint, better outcomes might not be achieved when institutional shareholders can actively influence a corporation’s board and management. Beyond the concern about shareholders’ informational disadvantages, a perhaps greater concern is the differing objectives of activist shareholders who pursue change in the name of

social responsibility. Indeed, Bainbridge cites surveys of research on institutional activism that show no significant relation between activism and firm performance. Thus he concludes that the current system of corporate governance works quite well and should not be reformed.

### **Fair disclosure versus informational advantage**

Informational asymmetries among groups of investors, rather than between investors and management, took center stage in the session “Fair Disclosure: Leveling the Playing Field?” This session reflected on two recent reforms, Regulation Fair Disclosure (Reg FD) (2000) and the Global Research Analyst Settlement involving investment banks (2003). These reforms attempted to level the playing field across investors with regard to corporations’ disclosure of information and the analysis of this information via research and analyst recommendations.

Reg FD prohibits corporate management from disclosing material information regarding the firm to particular investors or analysts and

not to others. On the surface this regulation would seem to erase any informational advantages possessed by hedge funds, private equity investors, or prominent analysts and would place individual investors on the same footing when it comes to making investment decisions. Even at the time of its enactment, however, concerns existed about the potential for unintended and undesirable consequences. In particular, it was feared that Reg FD could lead corporations to release even less information since managers might be unclear on what constitutes material information and thus limit their interactions with various groups of investors. Less corporate information would then translate into less informative security prices, less efficient allocation of investment capital, and, potentially, a threat to real economic growth.

The Global Research Analyst Settlement was similar in intention and agreed to after investigations into the degree to which analysts' recommendations were influenced by their investment bank employer's relationship with the corporation under evaluation. The claim was

made that individual investors had made investment decisions based on inaccurate or biased analyst reports. In addition to prescribing actions to separate the investment banking and analysis functions of ten major banks, the settlement also required these banks to establish a \$432.5 million fund for the provision of independent research. This independent research was intended to provide individual investors with the same information available to sophisticated institutional investors.

The session asked the question, What have we learned? In particular, did Reg FD and the Global Research Analyst Settlement result in more and better information being delivered to all investors? Paul Healy's paper surveys the academic research on the various effects of Reg FD and provides some preliminary evidence on the changes wrought by the Global Research Analyst Settlement. Studying the effects of Reg FD in particular is very difficult because of the potentially confounding effects of the bursting of the dot-com bubble, the failures of Enron and Worldcom, SOX, and uncertainty following 9/11.

Nonetheless, Healy concludes that information disclosure did increase after Reg FD, contrary to the concerns of the regulation's critics.

The effect of these reforms on research and analysts was much more interesting and nuanced. Reg FD effectively wiped out the advantage some analysts derived from having close and near-exclusive contacts with corporate managers. As a result, analysts and investors have increased their demand for alternative research, including expert networks and channel checking (research on a firm's supply chain). This shift is not surprising since an analyst's value resides in access to information that other market participants do not yet have or in a method of analyzing and piecing together information that other analysts cannot copy. Thus the goal of a level playing field goes against the inherent economics of the business of investment research and is unlikely to be attained through regulation or otherwise.

### **Getting to a global exchange**

The ability of markets to change and adapt over time figured prominently

in the last session, "The Market That Never Sleeps: How Do We Get There?" This session used the recent experience with consolidation and globalization among equity and derivative exchanges to ask, What next? In particular, the panel illuminated the increasing complexity of securities and derivatives markets around the world and the challenges associated with regulation as exchanges, institutions, corporations, and traders merge, cross-list, and operate in a 24-7 marketplace.

Foremost among the difficult questions considered was, How will exchanges themselves evolve and compete? Citing the trend toward consolidation and demutualization of exchanges, Albert Kyle outlines several predictions on how the business model for exchanges might change over time. Just as analysts sought a new competitive edge in assessing corporations after Reg FD, exchanges are seeking new ways to compete for market share as the former advantage of geographical location disappears. Kyle's presentation highlights the role that development of new stock listings, futures

contracts, and index construction will likely have in influencing exchange competition. This observation, of course, implies that government policies regarding intellectual property will be just as influential as other

Traditionally pushed into the background when markets are functioning well, clearing and settlement regulations and their international coordination or lack thereof are the skeleton on which the markets are built and are a necessary part of any reasonable forecast of the future of trading.

sorts of more targeted financial regulation. Another angle, discussed by all participants in this session, was the extent to which the back-office details of clearing and settlement are key components of the future of equity and derivatives trading. Traditionally pushed into the background when markets are functioning well, clearing and settlement regulations and their international coordination or lack thereof are the skeleton on which the markets are built and are

a necessary part of any reasonable forecast of the future of trading.

One market that has not been functioning well over the past year is the credit market, and, as we have seen, back-office details have indeed

been in the spotlight during the crisis. While this year's Financial Markets Conference was unrelated to credit markets per se, the current experience with turmoil in those markets provided a subtext that ran

throughout discussions both in sessions and more informally. Federal Reserve Chairman Bernanke chose to use his keynote address to the conference to discuss recent events in detail, specifically the Federal Reserve's multipronged and innovative approach to providing liquidity to financial markets during turbulent times. He discussed the various lending facilities known best by their acronyms—TAF, TSLE, PDCF.

In keeping with the theme of the

conference, Bernanke's remarks looked back to history for some perspective on the role of a central bank in supplying liquidity and forward to the ever-present concern about fostering moral hazard as the Fed seeks to promote financial stability.

Two broad lessons from the conference will be especially helpful as policymakers debate the specifics of future financial regulatory reform over the next year:

- While the intent behind a policy or regulation may be clear—to improve corporate governance as with Sarbanes-Oxley or to increase individual investors' access to information as in Reg FD—the effects of a broad regulation are quite difficult to characterize because they are felt differently across different firms. For example, Sarbanes-Oxley has had

demonstrably different effects on large firms versus small firms and public firms versus private firms. All policies have unintended consequences. SOX has demonstrated quite vividly how complex and varied these consequences can be in the case of one-size-fits-all regulation.

- At the heart of these varying effects is the dynamic nature of financial markets. Firms are continually changing, adapting to regulation, forming and reforming partnerships and business models. As new forces such as investor activism or globalization take form, policymakers need to be keenly aware that the market they are regulating or the problem they seek to correct is constantly changing shape. Regulation that is designed too superficially or too specifically is doomed to be irrelevant or ineffective very quickly.

This overview was written by Paula Tkac, a financial economist and associate policy adviser in the research department of the Federal Reserve Bank of Atlanta.

# Sarbanes-Oxley:

## A Review of the Empirical Evidence and a Proposal for Reform

### KENNETH M. LEHN

Samuel A. McCullough Professor of Finance in the Joseph M. Katz Graduate School of Business at the University of Pittsburgh

Passed in 2002 in response to corporate accounting scandals in the late 1990s, the Sarbanes-Oxley Act (SOX) was put forth as a reform to strengthen corporate governance. Specifically, SOX enacted rules and processes affecting the internal functioning of corporations and their boards of directors. At the time of SOX's passage, critics argued that the law would impose large costs on corporations without effectively deterring abuses.

In the years since SOX became law, numerous commentators, from Alan Greenspan to Senator Charles Schumer to former Securities and Exchange

Commission  
Chairman  
William  
Donaldson,  
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that the  
Sarbanes-

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Oxley Act needs repair. The general conclusion among those observers appears to be that SOX has saddled corporations with heavy costs and chilled risk taking and innovation without the intended benefit of discouraging abuses.

Yet, as Lehn reports in this paper, no ironclad consensus on the specific effects of the law has emerged from the academic literature. Nevertheless, he concludes that, on the whole, the evidence from the literature "is consistent with the view that, at least for some firms, SOX has resulted in more costs than benefits."

Lehn's paper investigates the literature, which has explored topics including whether SOX has affected corporate risk taking and the stock prices of companies bound by its regulations and whether SOX has encouraged publicly traded companies to go private. He also recaps the major provisions of SOX. He concludes with a proposal that firms holding initial public stock offerings

in the United States be allowed to choose whether to comply with SOX.

The academic literature on SOX paints a mixed picture, according to Lehn. For example, one group of papers explores the connections between events related to the adoption of SOX and the stock prices of U.S. companies affected by the law. The studies employ different samples and methodologies and produce conflicting results.

The results of two such studies show that SOX helped lift the value of some companies, but the effects differed for companies

of different sizes. In particular, the evidence suggests that small companies that did not comply with SOX lost value. The results of Wintoki (2007) align with the view that SOX and the changes in stock market listing standards hurt young, small, high-growth companies more than larger, established firms. Engel,

Hayes, and Wang (2007) analyze numerous companies that converted from publicly traded ownership to private ownership from 1998 through May 2005. Those authors document a quarterly increase in going private activity after SOX, which, Lehn notes, “is broadly consistent with the view that SOX increased the incentive to go private.” However, Bartlett (2008) suggests that, except perhaps for

**Academic papers have produced contradictory evidence regarding the impact of SOX in various areas, including stock prices, the premium foreign companies enjoy when they cross-list their shares in the United States, and companies going private.**

smaller companies, the costs of SOX played only a limited role in firms’ decisions to go private.

Lehn concludes that academic papers have produced contradictory evidence regarding the impact of SOX in various areas, including stock prices, the premium foreign companies enjoy when they cross-list

their shares in the United States, and companies going private.

At the same time, the research findings thus far are more uniform on other topics. The existing research shows, for instance, that U.S. companies are taking fewer risks after SOX, and two studies indicate that SOX is one of the reasons. Findings so far also suggest that SOX has encouraged small companies, at least, to go private or “go dark,” deregistering shares but continuing to trade.

Noting that empirical evidence suggests that SOX is not cost effective for at least some companies, Lehn proposes that firms having

initial public offerings of shares be allowed to opt in or out of SOX. He reasons that companies would determine whether choosing SOX would boost or hurt their share price and act accordingly.

“The proposal has the virtue of allowing SOX to apply to firms only when it is cost effective as opposed to the SOX’s existing ‘one size fits all’ nature,” Lehn writes. “In addition, the proposal offers the potential of providing data that can inform the broader debate over the efficacy of SOX and whether a more wide-ranging reform of the legislation is warranted.”

# Investor Activism: Reshaping the Playing Field?

## STEPHEN M. BAINBRIDGE

William D. Warren Professor of Law at the University of California at Los Angeles

Recent years have brought an increase in activism by both institutional and private investors. However, institutional investor activism remains rare, practiced mainly by union and public employee pension funds, and often takes the form of securities fraud litigation and not corporate governance activities, according to this paper.

The author explores several questions: What are the arguments for and against “democratization” of the proxy? How would activist investors use such power to affect the structure of corporate governance and the strategic operations of the corporation? To what extent do activist investors’ aims differ from those of passive investors—for example, social responsibility versus profit maximization—and how will this difference affect corporate performance and economic efficiency and growth?

Despite some high-profile examples, institutional investor activism remains rare, the author concludes, and he sees no signs of a dramatic change in that pattern any time soon. Finally, he argues that U.S. financial markets generally have functioned quite well without shareholders having a great deal of authority to steer corporate governance and operations.

Before delving into recent events, Bainbridge recaps the roots of the principle of separating ownership and control of corporations in America. Research suggests that this separation began very early in the history of publicly traded corporations in the United States and is, in fact, “an essential economic characteristic of such corporations.” The need for the separation arises from the so-called agency costs problem: Without oversight, management might allocate resources in ways that do not maximize shareholder value. Traditionally, examples of this sort of allocation would include lavish offices or perquisites for executives.

The divide between owners and those who oversee the corporation has worked mainly because in large publicly traded firms, the access to information and the interests of various constituencies—investors, employees,

customers, and management—often diverge. “Under such conditions,” Bainbridge writes, “efficient decision making demands an authority-based governance structure.”

That structure has tended to work. And so investors generally

### Monitoring a company is expensive, and therefore institutional activism is likely to concentrate on crisis management.

do not insert themselves into the decision-making process through activism because, put simply, it is not worth the trouble to them, Bainbridge concludes.

Monitoring a company is expensive, and therefore institutional activism is likely to concentrate on crisis management. Even when it does, such activism probably will not produce much in the way of results. And only a fraction of whatever gains might be made—a rise in the share price, for instance—would accrue to the activist institution.

Thus, the gains become a sort of public good. “As with any other public

good, the temptation arises for shareholders to free ride on the efforts of those who produce the good,” Bainbridge notes.

Because the benefits are spread while the costs of activism are borne by the activist institution alone,

activism is not generally a favorable proposition.

If stock is increasingly concentrated in the hands of a few large institu-

tions, benefits would marginally rise while costs marginally fall. Still, because activism rarely produces gains and those gains are enjoyed by the active and the passive investors, “it makes little sense for cost-conscious money managers to incur the expense entailed in shareholder activism.” Therefore, Bainbridge predicts that a large increase in shareholder activism is unlikely.

In addition to those concerns, some institutions are otherwise constrained from activism. Bank trust departments, insurance companies, and mutual fund firms, all important institutional investors,

often have lucrative business relationships they would like to maintain with publicly traded corporations. In those scenarios, “corporate managers are well-positioned to buy off most institutional investors that attempt to act as monitors,” Bainbridge notes.

Yet another facet of investor activism that detracts from its usefulness involves what Bainbridge describes as self dealing. For instance, public employee and union pension funds, the most activist class of institutional investor, are most likely to employ activism to achieve benefits not shared with other investors. Union fund managers often push corporations for more favorable labor arrangements, while public sector fund managers might seek to enhance their political reputations or to advance social or political goals.

Bainbridge cites the example of the pension fund for Safeway

grocery chain workers. As a Safeway shareholder, the fund tried to oust directors who opposed the union in collective bargaining negotiations.

For all the reasons discussed, the author believes it is not at all certain that more institutional investor

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activism would solve the problem of the separation of ownership and control. Indeed, he thinks it is far from clear that the separation is a problem at all.

“As we have seen,” he concludes, “the system of corporate governance is designed to function largely without shareholder input and, despite the bad press corporate capitalism has gotten in recent years, the system works pretty well.”

# How Did Regulation Fair Disclosure Affect the U.S. Capital Market?

## A Review of the Evidence

### **PAUL M. HEALY**

James R. Williston Professor of Business Administration at Harvard Business School

Regulation Fair Disclosure, commonly called Reg FD, was enacted by the U.S. Securities and Exchange Commission (SEC) in October 2000. The rules prohibit publicly traded companies from disclosing material information privately to particular analysts or investors. If a company's management unintentionally discloses such information, it is required to publicly release the information within twenty-four hours.

This paper examines research that has been conducted on the effects of Reg FD. The author also briefly reviews the impact on sell-side equity research of the Global Research Analyst Settlement between the SEC and the twelve largest investment banks.

The SEC devised Reg FD to address concerns that some investors might lose confidence in the integrity of capital markets because of companies selectively giving valuable information on future earnings and business conditions to favored Wall Street analysts and large investors. The SEC argued that such selective disclosure allowed some investors to profit or avoid losses "at the expense of those kept in the dark," Healy notes. Further, the SEC viewed Reg FD as a means to discourage company managers from using private information as a tool—either to reward favored analysts for positive reports and forecasts or to penalize analysts who published negative reports.

At the same time, opponents of Reg FD, including the Securities Industry Association and the Association for Investment Management and Research, argued that the rule would muddy the definition of "material" information and lead corporate executives to end all informal communications. Critics predicted that this information gap would not be filled by more frequent public disclosures.

Healy surveys the academic papers' findings in an effort to determine to what degree Reg FD has accomplished the SEC's stated purposes or proved the critics right.

Overall, the research results suggest that since Reg FD was enacted, managers have increased public disclosure, and the value of sell-side analyst information has declined. “However, there was little discernible change in investor behavior,” Healy reports. “The findings therefore suggest that regulator concerns about weakened

investor confidence from selective management disclosure and critics concerns about the

impact of the new rules on market information were both over-stated.”

Reg FD’s effects on capital markets, Healy finds, depend largely on how corporate executives and research analysts respond to the new disclosure rules. Studies of management responses have examined whether managers issued more frequent earnings forecasts and opened up formerly private conference calls after Reg FD took effect.

The results indicate that there was an increase in voluntary disclosure post-Reg FD.

However, Healy offers a caveat. The papers published thus far have not accounted for changes unrelated to Reg FD that might affect information disclosures. For one, Healy points out, the Internet and better

The SEC viewed Reg FD as a means to discourage company managers from using private information as a tool—either to reward favored analysts for positive reports and forecasts or to penalize analysts who published negative reports.

conference call technology have made management disclosures easier and less expensive, likely boosting voluntary disclosure even before Reg FD. Indeed Bailey, Li, and Zhong (2003) show that companies made 38 percent more earnings forecasts in the three quarters before Reg FD. “As a result,” Healy notes, “it is unclear whether the increase in management forecast frequency can be attributable solely to Reg FD.”

It would seem intuitive that greater disclosure would reduce both the information advantage enjoyed by financial analysts and the value of their earnings forecasts. Research on Reg FD reveals that, indeed, greater management disclosure was accompanied by a decline in the value of earnings forecasts and stock recommendations.

**So far at least, both the proponents and critics of Reg FD seem to have overstated their predictions of the rules' effects.**

The effects on market liquidity or trading volume are less clear. Healy notes that there is little evidence of any related change in liquidity or volume besides a slight increase in retail trading volume during newly opened conference calls. Research

also shows no change in the accuracy or timing of analysts' forecasts, indicating that public information available to analysts after Reg FD, coupled with their own independent searches for information, was comparable to the private information they had received before Reg FD.

So far at least, Healy concludes, both the proponents and critics

of Reg FD seem to have overstated their predictions of the rules'

effects. "Overall," he notes, "Reg FD appears to have been neither as onerous as its critics feared, nor as beneficial in increasing investor confidence as regulators anticipated."

# International Consolidation of Stock and Derivatives Exchanges

## **ALBERT S. (PETE) KYLE**

Samuel A. McCullough Professor of Finance in the Joseph M. Katz Graduate School of Business at the University of Pittsburgh

Stocks and derivatives exchanges worldwide face profound changes in their traditional structures, ownership models, and business practices. The “peculiar economics of the industry,” as Kyle terms them, and other forces including technology are producing consolidation, demutualization, and greater competition. Kyle’s presentation examines these forces and the future of exchanges.

In recent years, exchanges in various countries have consolidated across international borders. Investors have taken advantage of the ability to trade on exchanges in different countries by increasing the international diversification of their portfolios. While grabbing few headlines compared to cross-border exchange mergers, the settlement of transactions between counterparties in different countries has become an important issue.

Kyle’s presentation revolved around a central question: If exchanges lose their traditional monopoly power, what might they do to remain viable and profitable?

Exchanges were traditionally geographically defined. Parties wanting to trade on an exchange had to be physically present at the exchange or electronically linked to it. But those restrictions are disappearing. As a result, markets have consolidated: In multibillion-dollar deals, the New York Stock Exchange acquired Euronext, and the Chicago Mercantile Exchange bought the Chicago Board of Trade and the New York Mercantile Exchange. Meanwhile, exchanges that were historically “private clubs” owned by members have increasingly become publicly traded for-profit corporations, Kyle points out.

As the exchanges increasingly compete with one another, their fate depends on an array of factors that Kyle surveys. Those factors include questions surrounding intellectual property, the clearing of contracts, and new products and directions the exchanges might develop.

Intellectual property concerns could well be at the heart of how exchanges in the future will try to carve niches that rivals cannot easily invade. The degree to which an exchange could safeguard a new product—its intellectual

property—could be an important determinant of the exchange's long-term business prospects.

For instance, perhaps exchanges could patent a type of trading mecha-

**Intellectual property concerns could well be at the heart of how exchanges in the future will try to carve niches that rivals cannot easily invade.**

nism. Or exchanges might devise new stock indices that mimic a particular trading strategy. An exchange, for example, might compile a dynamic index of shares that pay the highest dividends or have a price to earnings ratio within a prescribed range. But how would it prevent other exchanges from simply duplicating its index?

Likewise, an exchange might implement trading strategies for clients. And an exchange could conceivably create and attempt to patent or otherwise protect complex trading algorithms to underlie an automated system of executing a trade if a set of circumstances occurs, Kyle suggests.

The method used to clear trades is also an important consideration.

Especially in trades of futures contracts, a mechanism must be in place to ensure that all parties receive their payments—of money or a commodity or security—when the contract

comes due. Kyle believes that the question of whom or what entity clears transactions

will be critical as complex transactions across multiple exchanges in different countries become more common. Clearing could become more of a business in itself as exchanges increasingly cross borders and business lines. Kyle predicts that monopolistic clearing by exchanges will become a competitive advantage.

He also thinks cash settlement will be an increasingly important form of competition among exchanges. He predicts three-way competition among derivatives exchanges, stock exchanges, and over-the-counter dealers, and he forecasts that twenty-four-hour trading will respect business hours but favor London over New York.

## OTHER CONFERENCE HIGHLIGHTS

In addition to the papers summarized in this booklet, the conference featured the following:

### KEYNOTE SPEECHES

#### **Liquidity Provision by the Federal Reserve**

Ben S. Bernanke

#### **Remarks on the Transformation of Financial Services and the Consequences for Risk Management**

Lord John Eatwell

### ACADEMIC PAPERS

(presented at the academic preconference May 12)

#### **Institutional Investors and Proxy Voting:**

The Impact of the 2003 Mutual Fund  
Voting Disclosure Regulation

Martijn Cremers and Roberta Romano

#### **Returns to Shareholder Activism:**

Evidence from a Clinical Study of the  
Hermes U.K. Focus Fund

Marco Becht, Julian Franks, Colin Mayer,  
and Stefano Rossi

See the full text of the speeches and  
academic papers at [frbatlanta.org](http://frbatlanta.org).  
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