Rapid financial innovation over the past quarter-century is testing the traditional regulatory framework.

A Growing Market

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The past 25 years have seen an explosion in trading activity and innovation in financial markets. In 1977, trading volume on the New York Stock Exchange averaged about 21 million shares per day; in 2001, volume averaged 1.24 billion shares per day — a 60-fold increase. In 1977, NASDAQ daily volume averaged 7.7 million shares; in 2001 NASDAQ traded an average of 1.9 billion shares each day. Equity options trading began in 1973, and by 1977 options were traded on 227 stocks with daily average volume totaling157,000 contracts; by 2001, options were traded on 2,261 different stocks and average daily volume had reached 3.1 million contracts.

In 1977, financial derivatives were a novel concept. Futures contracts on currencies, Treasury Bills, and Treasury Bonds traded on organized exchanges in modest volumes, and the over-the-counter derivatives markets were just developing. In 2002, exchanges trade immense volumes of derivatives on currencies, interest rates, and equities from around the world, and the over-the-counter markets and financial derivatives markets (especially the interest-rate markets) have mushroomed, with tens of billions of notional value traded each day. In 1977, three energy derivatives contracts (propane, fuel oil, and heating oil) were traded on exchanges; in 2002, energy derivatives on oil, gasoline, heating oil, natural gas, and electricity dominate commodity derivatives trading both on exchange and over-the-counter.

Substantial innovation in trading technology and changes in market structure have accompanied the proliferation of financial instruments and the massive increase in trading volume. Electronic trading was a relatively new concept in 1977, and the first experiments in automation of trading were underway in the United States and Canada. In the intervening 25 years, electronic trading platforms for equities, fixed income, and derivative products have proliferated. Moreover, competitive conditions and market structures have evolved markedly over the last 25 years. In particular, the development of over-the-counter derivatives markets and overseas derivatives exchanges has reshaped the competitive landscape.

The sea changes have posed major challenges to financial market regulators in the United States. In response, there have been substantial regulatory developments during the last quarter-century. Regulation of derivatives markets has been particularly affected, but securities regulations have undergone substantial changes as well. In essence, the innovations in financial products and trading technologies rendered the regulatory structures erected in the 1920s (in derivatives) and 1930s (in securities) obsolete. The innovations have created new interests and eroded the importance of others. That has changed the regulatory calculus and led to substantial changes in financial market regulation

MARKET STRUCTURE REGULATION

Market structure issues pose serious difficulties to regulators. Securities and derivatives markets exhibit network effects; traders prefer to trade where others trade. The network effects exert a centripetal force that leads to centralization of trading and which makes it difficult for new markets to enter in competition with established exchanges.

As I argue in a forthcoming *Journal of Law, Economics, and Organization* article, exchanges can exploit entry barriers by adopting inefficient rules and pricing policies. Although market participants can act to mitigate the impact of such exchange efforts to exercise market power, entry barriers can persist for considerable periods of time. As a result, regulators can influence market efficiency by restricting (or not) exchange efforts to exercise market power. Such regulatory actions clearly have distributive as well as efficiency effects, and hence can lead to intense political conflicts. The past 25 years have seen many major regulatory battles over market structure issues, and the regulator scorecard is somewhat mixed.

Fixed commissions *Regulation* debuted two years after the passage of a major change to the Securities Exchange Act (origi-

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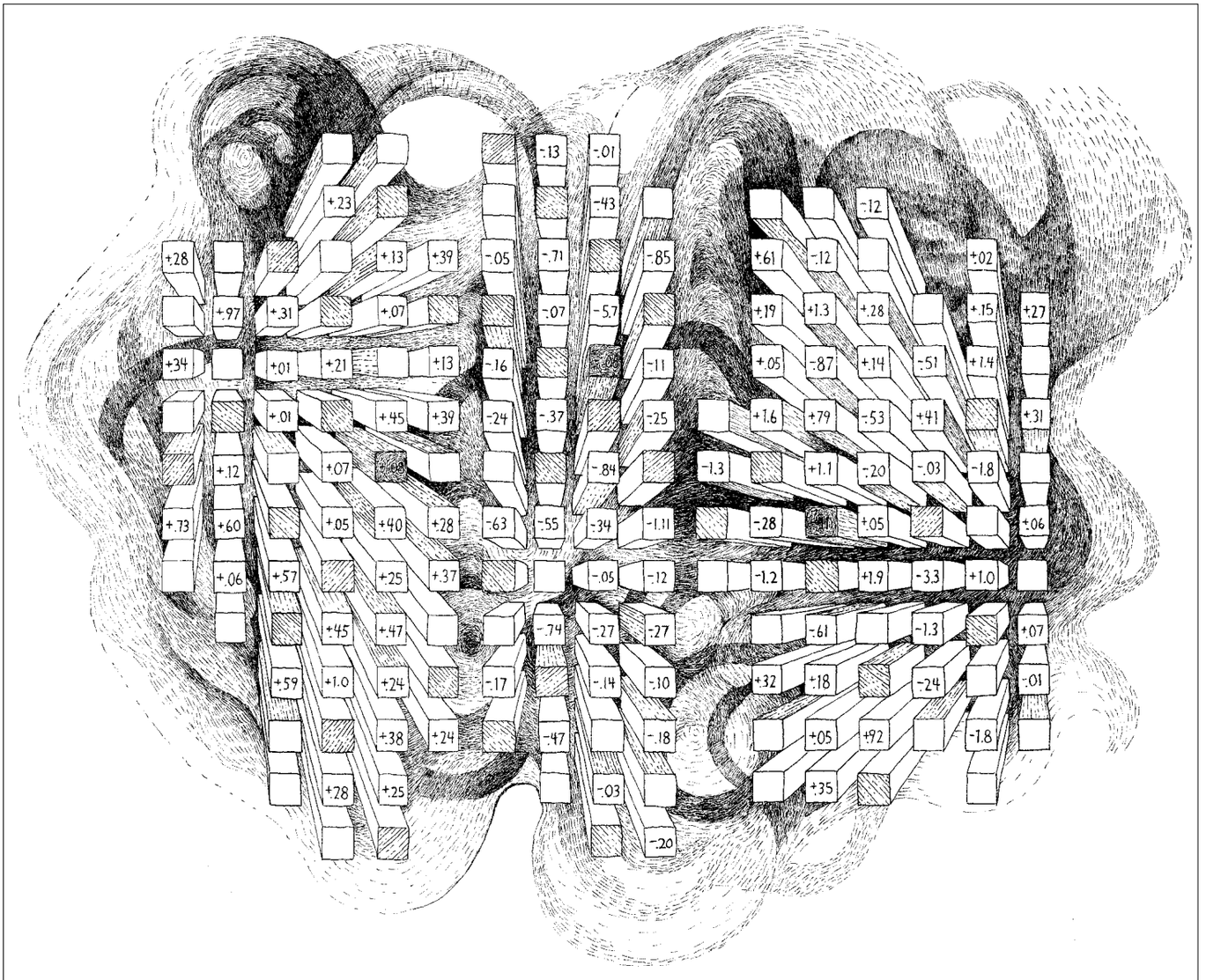

MORGAN BALLARD

nally adopted in 1934). The Securities Act Amendments of 1975 banned the longstanding practice of commission fixing on U.S. securities exchanges. The NYSE had operated a brokerage cartel since its founding, and both established the rates of commission its member-brokers could charge and enforced the cartel agreement. The cartel was the subject of substantial academic criticism, as was the Security and Exchange Commission's tolerance of the practice.

It was not academic scribbling that spelled the doom of the brokerage cartel, however. Instead, the development of institutional trading and "off-exchange" trading in so-called "third markets" undermined the power of the NYSE cartel. Institutional investors found that they could circumvent the fixed brokerage commissions by trading off-exchange. Although that imposed some costs on them (they could not take full advantage of the economies of trading on a centralized market), the costs were often smaller than the commission savings inherent in trading on the third market.

The defection of large and increasing volumes of business from the exchange reduced the benefits of maintaining the brokerage cartel, and hence undermined the political support for it. The increasing importance of institutional investors further eroded support for a practice that benefited exchange members. As large players with a large stake in reducing trading costs, institutional investors were a more effective political counterweight to the exchanges and their members than individual investors had ever been. Congress responded to the change in the political landscape by requiring the SEC to take action to eliminate the brokerage cartel.

Although institutional efforts to circumvent the fixed commission rule had eroded the NYSE's market power, it did not eliminate it prior to the abolition of the brokerage cartel. As a consequence, the elimination of fixed commissions in 1975 resulted in a substantial increase in exchange trading activity; if the brokerage cartel had been completely ineffective, such an increase in volume would not have occurred. It also resulted in substantial consolidation in the brokerage industry; small, inefficient firms that could survive under the commission structure could not last in a competitive environment. Moreover, brokerage firm profits as a whole fell substantially in the aftermath of the change. The main beneficiaries were investors who saw substantial declines in trading costs. Reducing trading costs also redounded to the benefit of firms that raise capital through the equity markets. The elimination of

fixed commissions, in sum, revolutionized Wall Street to the benefit of investors and those who rely on the equity markets to raise funds.

National Market System Other elements of the 1975 Amendments were far less successful. In particular, they mandated the creation of a National Market System, but that initiative was largely stymied by the opposition of the stock exchanges in general, and the NYSE in particular.

The idea behind the National Market System has some merit. In 1975, securities markets were "fragmented" — the same security was often traded on several exchanges as well as on the over-the-counter market. Part of that fragmentation was due to the fixed commission regime, but fragmentation also existed because traders could sometimes lower their trading costs by buying or selling in face-to-face trading venues rather than in the anonymous environment of the exchange floor.

Fragmentation raised concerns because of the possibility that investors would not receive the best possible price on their trade. If an investor submitted an order to the NYSE, it was possible that it would be executed there even though a better price was available at a regional exchange or in the over-the-counter market. Moreover, it was impossible to protect "time priority" with multiple trading venues; although securities markets are supposed to be "first-come, first-served," an investor submitting an order at a given price on one exchange might not have his order executed even though, on a different exchange, a later-entered order at the same price is traded.

The idea behind the National Market System was to link exchanges to eliminate fragmentation, thereby assuring investors that they would always transact at the best price and that time priority would be preserved. Implementation of that vision proved impossible, partially for technological reasons, but more for political ones.

CLOB Some visionaries recognized that computer and communications technology could make the National Market System ideal a reality. Through the creation of a "central limit order book" or "CLOB" on a computer, all investors' orders could be directed to a single central market, thereby assuring that each would get the best possible price and that time priority would be observed. Such a system also had the potential to dramatically increase the competitiveness of the securities markets.

As early as 1971, economist Fisher Black had recognized that a computerized securities market could rely on patient investors to supply liquidity; professional securities dealers were unnecessary in such a system. Moreover, a computerized marketplace could dispense with the services of floor brokers and others essential to the traditional floor-trading system. Furthermore, as the dominant exchange that attracted the bulk of the flow of investors' orders, the NYSE would be disadvantaged by the creation of a system that would make it easier for traders in other venues to compete to service that order flow.

In sum, the CLOB was a threat to the traditional exchanges, and especially to the dominant NYSE. Because of the concerted opposition of the NYSE, the SEC shied away from mandating fundamental changes in the securities-trading system. In lieu of a CLOB, the SEC approved the creation of the Consolidated Quotation System and the Consolidated Tape to ensure that quotes and transaction prices from all exchanges were reported together. The SEC also approved the Intermarket Trading System ("ITS"), which created a mechanism whereby orders in one exchange could be directed for execution on another exchange if a better price was available there. The ITS proved to be a weak link between markets and fell far short of creating a truly integrated system.

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Off-exchange trading The SEC also implemented only modest changes to another potentially anti-competitive feature of the securities markets, NYSE Rule 390. The rule proscribed NYSE members from trading NYSE stock off-exchange (in the third market) as principals. It prevented NYSE member firms from supplying market-making services in competition with the floor.

The NYSE defended Rule 390 by claiming that it prevented the "cream skimming" of uninformed investors' orders; such cream skimming could impair market liquidity. Although such arguments would have some merit if the NYSE floor were perfectly competitive, it is not at all clear that that is the case. As I argue in the *Journal of Law, Economics, and Organization* article, the network effects at work in financial markets can give the dominant market considerable market power. In those circumstances, off-exchange competition can improve welfare and reduce trading costs. Although the SEC mandated the elimination of Rule 390 for a subset of liquid stocks in 1979, it did not eliminate the rule altogether until 2000.

Options collusion The SEC did act more decisively to improve the competitiveness of the securities markets in other areas. In 1994, an academic study found quoting behavior on the NASDAQ market that could have resulted from collusion between

dealers. The study prompted a fierce academic debate, the filing of class action lawsuits against the dealers, and Justice Department and SEC investigations. Although the academic debate ended in a draw, recordings of conversations between dealers trumped the academics. NASDAQ dealers settled with the government and private litigants.

In 1997, the SEC implemented the "Order Handling Rules" intended to make it easier for investors to trade NASDAQ stocks using limit orders. That increased the competition to supply liquidity that NASDAQ dealers faced. Trading costs fell sharply after the implementation of the rules, and virtually the entire decline in costs was caused by a fall in the profit margins of NASDAQ dealers. Thus, the evidence suggests the new rules increased competition and welfare.

In 2000, the Justice Department and the SEC took action against the options exchanges that had refused to list options traded on other exchanges. The exchanges agreed to terminate that tacit division of the market, and began competing to list options. The increase in short-run competition is likely to lead to consolidation of options exchanges; some recent press accounts state that exchanges are exploring consolidation initiatives.

In sum, securities regulators' record in increasing the competitiveness of securities markets over the last 25 years is a mixed one. The elimination of fixed commissions was a major victory for competition, as was the reform of NASDAQ. In other areas, however, the SEC did not take aggressive action to increase competition in the securities markets.

DERIVATIVES REGULATION

From its genesis with the passage of the Grain Futures Act in 1922, regulation of derivatives markets was relatively static until the 1980s. The regulatory framework did not change in any fundamental way during that period. Since the late-1980s, however, the dramatic pace of innovation in derivatives markets has resulted in a major restructuring of derivatives regulation. The old regulatory framework survives, but its scope has been circumscribed sharply.

For most of the twentieth century, the most important derivatives were futures contracts on agricultural products, and derivatives regulation reflected that reality. Movements to subject futures markets to federal regulation waxed and waned with the fortunes of farmers in the late-nineteenth and early-twentieth centuries; movements to regulate coincided with depressed farm prices as many farmers and their political representatives attributed the low prices to speculative excesses on the Chicago Board of Trade and other grain exchanges. The agricultural depression that followed World War I resulted in the passage of the Grain Futures Act (GFA), which was intended to curb speculation in grain. The GFA was later replaced by the 1936 Commodity Exchange Act (CEA) that Congress passed in the depths of another agricultural depression.

The key provision of the GFA/CEA is the exchange-trading requirement that all trading in grain for future delivery take place on a "designated contract market" approved by a government regulator (eventually the Commodity Futures Trading Commission, or CFTC). That provision was aimed directly at so-called "bucket shops" — the futures-trading equivalent of off-track betting parlors where individuals could place bets on grain or cotton prices. Although framed as an anti-speculation/investor protection provision, the exchange-trading requirement also had a producer protection motivation in that it eliminated a competitive threat that traditional exchanges had fought for decades.

The regulation's effect, arguably, was small for the first 50 years of its existence. There is no strong economic argument for the exchange-trading requirement and it almost certainly imposed costs that exceeded any possible benefit, but the magnitude of the distortion was not oppressive.

OTC instruments The revolution in derivatives that began in the mid-1970s and early-1980s dramatically increased those costs. In particular, the regulation impaired the development of off-exchange "over-the-counter" (OTC) derivatives trading in instruments such as swaps and options.

Major financial institutions and non-financial firms had developed financial contracts that permitted an efficient shifting of various financial risks, including currency and interest rate risks. Whereas the futures contracts traded on traditional exchanges are standardized to facilitate liquidity, the OTC instruments could be customized to suit the particular needs of the parties. In addition, financial institutions attempted to create instruments such as bank deposits or securities with interest rates tied to commodity prices. The "hybrid" instruments combined elements of futures or options contracts with elements of deposits or securities.

The exchange-trading requirement of the CEA posed substantial legal risks for OTC derivatives and hybrid instruments. Because the instruments clearly had many futures-like characteristics, they arguably ran afoul of the exchange-trading requirement. In response to those problems, the CFTC at first attempted to address the relevant issues on a case-by-case basis using interpretive letters and no action letters. The proliferation of instruments and their increasing complexity eventually overwhelmed the process, however, and the CFTC recognized the need to address the issues in a systematic way.

Exemptions In 1989, the CFTC created a safe harbor from regulation for certain "qualifying agreements" based on a set of criteria. In essence, instruments were exempted from the exchange-trading requirement and certain other aspects of the CEA if they met the following criteria:

- They were customized, in contrast to the standardized products traded on exchanges.
- Commercial entities, rather than the general public, used them.
- They were not subject to offset and there was no "mutualization of credit risk," as there is in traditional futures markets through the clearinghouse mechanism).

The Futures Trading Practices Act of 1992 amended the CEA to authorize the commission to exempt transactions solely

between "appropriate persons" from regulation if that would be consistent with the public interest and the purposes of the CEA. Under that authority, in 1993 the CFTC exempted various swap and energy transactions from most regulation, with the exception of the antifraud and anti-manipulation provisions of the CEA.

Although a step in the right direction, some of the conditions for exemption were still problematic. In particular, the CFTC's refusal to exempt OTC transactions that were cleared or offset (as futures contracts traded on exchanges are) hampered the implementation of those beneficial risk-reducing mechanisms in OTC markets. Moreover, the development of the Internet resulted in the creation of trading platforms (such as Enron Online) that were similar to exchanges in some respects (e.g., they operated a centralized market mechanism) but differed in others (e.g., there was a single counterparty to all trades).

CFMA In response to those and other concerns, Congress passed the Commodity Futures Modernization Act (CFMA) of 2000. The act exempted most OTC transactions from the exchange-trading requirement and some other provisions of the CEA, permitted the creation of clearing mechanisms for OTC derivatives, and also exempted certain centralized trading platforms from certain regulations.

The changes are salutary for the most part. The basic regulatory framework of the CEA — which essentially involved the delegation of day-to-day regulatory oversight to government-approved exchanges — was made obsolete by the revolution in derivatives markets that reduced the importance of centralized marketplaces.

Interestingly, the regulatory changes have become the subject of intense controversy because of the Enron bankruptcy. Enron hired Wendy Gramm, the CFTC chair who oversaw the 1992-1993 changes, as a director. Moreover, Enron was a major supporter of the CFMA. In the aftermath of its stunning collapse, many critics have charged that the company was the beneficiary of special regulatory favors, and that deregulation contributed to its demise. It should be noted, however, that Enron was but one of many firms that favored the exemption of OTC derivatives from some provisions of the CEA. Moreover, to date, derivatives have been in no way implicated in Enron's collapse. The firm apparently lost money in old-fashioned ways — making bad investments in hard assets — rather than in newfangled derivatives.

SEC AND CFTC CONFLICTS

The development of innovative financial products also created conflicts between securities and derivatives regulators. Most notably, the introduction of stock options by derivatives and stock exchanges and stock index products by futures exchanges started a turf battle between the securities market regulator, the SEC, and the futures market regulator, the CFTC.

The earliest battles were fought over jurisdiction over equity options trading. Stock options are derivatives on corporate securities. The law in existence when those products were developed apparently gave the derivatives market regulator, the CFTC, jurisdiction over the products. The SEC found that an unacceptable constraint on its ability to regulate the securities markets. Several years of inter-regulator jostling over the issue resulted in the Shad-Johnson Accord between the chairmen of the SEC and CFTC, respectively. The accord, subsequently enacted into law as part of the Futures Trading Act of 1982, gave the CFTC exclusive jurisdiction over futures and futures options contracts, and recognized the SEC as the sole regulator of securities and currency options traded on national securities exchanges.

The 1982 Act also gave the SEC the right to object to a futures contract on a stock index. The SEC exercised that right the next year to object to stock index futures contracts introduced by the Chicago Mercantile Exchange. More interagency wrangling ensued, culminating in the promulgation of joint CFTC/SEC guidelines for approval of stock index futures and options. The SEC has subsequently litigated in attempts to block the introduction of index futures contracts.

Although the debates are cloaked in public interest terms, industry interest clearly has been a major force behind the SEC-CFTC conflicts. The securities industry (and the securities exchanges in particular) does not relish competition from the futures markets. The SEC's long-running battle against stock index products is clearly in the interest of the securities industry and lacks a plausible public interest rationale.

Other regulatory efforts The crash of 1987 precipitated the next big conflict over jurisdiction. Post-crash studies, including the influential Brady Report, implicated index-futures based strategies in the crash, and faulted poor coordination between futures, options, stock markets, and their regulators. The lower margins on stock futures transactions (as compared to stock transactions) were also the subject of considerable criticism.

In response to those perceived problems and regulatory failures, Congress considered proposals to create a single regulator for futures, options, and stock markets. Moreover, there were proposals to shift regulation of stock futures products to the SEC, or to shift margin-setting responsibilities for index futures to the SEC or Federal Reserve. Those proposals did not come to pass. Moreover, virtually every other difficulty in the derivatives markets has led to new calls for a single regulator, but as of yet the calls remain unanswered.

That is for the best. Single-regulator proposals are a solution in search of a problem at best, or a special interest wolf in public interest sheep's clothing at worst. There was no credible evidence that futures markets were responsible, in whole or in part, for the crash; they were just another institution swamped by the same wave that rolled over the NYSE and NASDAQ. Indeed, one shudders to think what would have happened if the futures and options markets and the risk-bearing capacity supplied by their members had not been present to absorb some of the order imbalances. There is no credible evidence that low futures margins encourage destabilizing speculation or result in higher volatility. Granted, some studies in the late 1980s purported to find such a relation, but they were plagued by fundamental statistical problems. Research that corrected the problems found no evidence that changes in margins are associated with changes

in volatility. Slow printers at the specialists' posts on the NYSE contributed more to the 1987 crash than did the futures markets. Moreover, although chaos and communications breakdowns between agencies and exchanges were manifest during the crash, there is no guarantee that a single regulator would have fared any better in those frenzied circumstances.

It should be noted that a "single regulator" is really a misnomer. In circumstances like those of 1987, banking regulators (the Fed, the comptroller of the currency) and foreign regulators all have information and responsibilities, and should be included in the decision-making process. Indeed, Alan Greenspan probably deserves the most credit for preventing things from getting worse in 1987. Short of a world financial government with responsibility for oversight of every financial activity everywhere, interagency coordination is inevitable during periods of stress. Merging securities and derivatives regulation is under-responsive to crises like the 1987 crash.

Merging regulation authority under one federal body would increase the potential for rent redistribution but likely not improve responsiveness in a crisis.

Moreover, merging regulatory functions would increase the potential for regulatory rent redistribution through the stifling of competition or other means. The competition between derivatives and securities markets over the last 25 years has had salutary effects, and the bifurcation of regulatory responsibilities has almost certainly encouraged that competition. "Unity of Command" is a maxim of war, not markets.

DISCLOSURE AND INSIDER-TRADING LAWS

Mandatory disclosure laws have always had a "mom-and-apple pie" reputation. As George Stigler noted in 1964, "It is doubtful whether any other public type of regulation of economic activity has been so widely admired as the regulation of the securities markets by the Securities and Exchange Commission. The purpose of this regulation is to increase the portion of truth in the world and to prevent or punish fraud, and who can defend ignorance or fraud?"

That said, the intellectual case for government mandated disclosure is less than clear-cut. Stigler and George Benston questioned on empirical grounds whether the introduction of mandatory disclosure laws had any effect on securities prices or the efficiency of securities markets. Their research touched off a spirited debate but, in the 40 years following Stigler's initial studies, it is difficult to say exactly how mandatory disclosure has affected the markets.

There has been considerable research on the economics of disclosure and insider trading, but no consensus has emerged. Some theoretical research suggests that firms may have an incentive to disclose too much; some suggests that they disclose too little. Theories have also been developed that suggest that insider trading is economically efficient under certain circumstances, and inefficient under others. Given the disparate theoretical results and the difficulties of measuring the key determinants of the efficient level of disclosure, it is not surprising that there is little consensus on the optimal disclosure and insider-trading policy.

Costs Disclosure and insider-trading laws affect trading costs. Trading costs are higher when some parties have more information than others. Those at an information disadvantage (a category that includes most individual investors and some institutional traders) lose money on average when they trade with those who have an information advantage. The losses are just as much a cost of trading as brokerage commissions and exchange fees.

If firms can disclose information at their discretion, their insiders (or others who ferret out information) can profit at the expense of less informed investors. Forcing firms to disclose reduces the potential scope of informational asymmetry and can reduce investors' trading costs. But one must be careful in evaluating the efficiency effect of the cost declines because some of the reduction in trading costs represents a transfer of wealth from the hitherto better informed to the hitherto ignorant.

Disclosure can also reduce the incentive for wasteful expenditures on information by outsiders. Similarly, allowing insiders to trade can crowd out rent seeking by outsiders who expend resources to gain information, with both distributive and efficiency consequences. Disclosure and insider-trading rules also influence the informativeness of securities prices, which can have important (but virtually impossible to measure) efficiency implications. Thus, disclosure and insider-trading rules have complex efficiency and distributive effects that complicate regulatory efforts.

Defining information Disclosure policies must also address the question, "What is information?" Is it merely "hard" information like accounting statements, or does it include "softer" information such as management forecasts? It also raises the issues of cost and benefit. More disclosure may reduce informational disparities and improve market liquidity, but it may also disseminate competitively sensitive information that reduces the incentive of firms to invest in new products or devise new strategies.

Regulation over the past 25 years has grappled with all of

those issues. In the 1970s and 1980s, there was considerable debate over disclosure of "soft" information such as management forecasts of future profitability. Prior to the 1970s, the SEC typically prohibited firms from releasing predictions of their financial performance because of their imprecision and subjectivity. The SEC's position was that firms should only disclose "hard" historical accounting information, which led some to quip that, because markets are forward looking, such rules were akin to forcing drivers to navigate looking only in the rear view mirror.

In response to those criticisms, the SEC slowly moved to a position 180 degrees from its original view. After studying the issue for several years, in 1979 the agency created a safe harbor encouraging firms to disclose "forward-looking" information regarding profits, sales, and so on. In 1982, the commission began requiring management discussion of trends. In a 1989 interpretive release, the SEC made clear that firms were required to disclose predictions, and subsequently took enforcement actions against firms that failed to do so. As with most disclosure rule changes, there is little understanding of the empirical effects of the changes.

Reg FD Distributive issues were central in other regulatory moves. Most important, the SEC' s "Regulation Fair Disclosure" (FD), announced in 2000, had a major impact on the distributive effects of disclosure. FD prohibited companies from disclosing information selectively to securities analysts; prior to the regulation, companies frequently disclosed important information to analysts prior to releasing it to the public. That practice presumably allowed those getting the early information to earn trading profits.

The regulation was — and still is — controversial. The initial empirical evidence suggests that FD has reduced public investors' trading costs, which is consistent with the view that it reduces information asymmetries. That would suggest that the regulation was beneficial, but it also raises some questions. Lower trading costs should translate into higher stock prices, so why would firms disclose selectively if that practice raises transactions costs and depresses their stock prices, unless there is some offsetting benefit? Were the analysts (or their firms) providing some other valuable service in exchange for the early peek at the information? Where is the externality that would distort managements' ability to trade off the costs and benefits when making their disclosure decisions? In light of those unanswered questions, the net effect of FD is difficult to determine.

Insider-trading laws are the flip side of the mandatory disclosure coin as each is a means of reducing the scope for liquidity-reducing trading by those with superior information. Mandatory disclosure works by forcing firms to disgorge the information, thereby reducing asymmetries; insider trading bans work by preventing the better informed from exploiting their information advantage.

SEC crusades Insider trading has been the focus of major regulatory actions and court cases over the past 25 years. Inasmuch as Henry Manne and Joseph Bial recently analyzed insider-trading regulation ("Questioning the SEC's Crusades," Winter 2001), I will not discuss the developments in detail. However, Manne and Bial's main point does deserve emphasis.

Much of the regulation of insider trading over the years has affected who has had information advantages rather than the overall level of information asymmetry in the markets. That is problematic for a variety of reasons. In particular, analysts who specialize in ferreting out information on which insiders cannot trade expend real resources to gain their information advantage. Insider-trading laws that shift information advantages from insiders to analysts may therefore have little impact on overall information asymmetry and market liquidity, but may encourage wasteful expenditures to obtain information.

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TAKEOVER REGULATION

Congress's passage of the 1968 Williams Act, which required increased disclosure and thus reduced the profitability of takeovers, dramatically reduced hostile takeover activity in the 1970s. But a combination of factors in the 1980s led to a boom in hostile acquisitions in the first half of that decade. Specifically, changes in antitrust enforcement under the Reagan administration, the development of new financing techniques, and fundamental economic changes that made it efficient to restructure certain industries led to an increase in the value of merger and acquisitions from $44 billion in 1980 to $226 billion in 1988. Moreover, the decade was highlighted by numerous high-profile hostile takeovers of well-known firms.

Hostile takeovers threatened some interest groups, most notably the managers of potential targets. In turn, those managers supported restrictions on corporate control transactions. A 1982 U.S. Supreme Court decision in the case *Edgar v. MITE* impeded the ability of states to implement anti-takeover statutes that tended to favor incumbent management. The persistence of the foes of hostile takeovers was rewarded in 1987, however, when the Court reversed field and upheld the Indiana Control Share Acquisitions Act in the case of *CTS Corp. v.*

Dynamics Corp. of America. In response, many states enacted laws that imposed moratoriums of 50 days (or more) on hostile takeovers. The laws were explicitly intended to give boards of directors of target firms much greater power in deciding whether to accept an unfriendly bid. Most notably, important states of incorporation, including Delaware and New York, passed such laws.

Also in the mid-to-late-1980s, a series of Delaware court decisions (beginning with *Moran v. Household International Inc.*) sanctioned a variety of defensive measures, including "poison pills" (which permitted shareholders of the target to purchase shares of the bidder at a fraction of their market price) and "staggered boards" (which ensured that an acquirer could not replace an entire incumbent board of directors).

Together, state anti-takeover laws and the Delaware decisions severely hampered hostile takeovers and served to entrench managers. Hostile takeover activity in the 1990s was a shadow of the levels observed in the 1980s.

Hostile takeovers are an important element of the market for corporate control. Although there are instances in which hostile takeovers likely were in part motivated by the possibility of extracting wealth from bondholders and employees, most hostile acquisitions were aimed at firms whose management was not acting in shareholders' best interests. As a result, the serious constraints imposed upon hostile acquisition in the 1980s likely favored professional managers at the expense of their shareholders.

THE FUTURE

Financial innovation continues apace, and will challenge the ability of regulators and legislators to keep up. What is more, the global nature of securities and derivatives markets constrains regulators even in a large market such as the United States. Furthermore, the ability of different institutions operating under different regulators to create highly substitutable financial instruments creates a great potential for regulatory competition. Finally, information technology will challenge any disclosure regime. All of those forces have constrained (though not eliminated) the ability of regulators to adopt wealth-reducing regulations and have been the catalyst for regulatory changes in the past. The forces will continue to perform those roles in the future.

Enron There is a wild card, however, that may have a huge impact on securities and derivatives regulation, especially in the short run. That wild card is Enron. The hysteria surrounding the collapse of the energy giant has led to numerous calls for increased regulation of securities and derivatives markets, including changes in disclosure and accounting regulation and the regulation of energy trading. Myriad interests with a pet regulatory agenda see Enron as a Trojan horse perfect for smuggling their wishes into law.

I hope that Congress will not act precipitously without waiting for a more complete understanding of the causes and effects of Enron's failure. As I write this article, there is precious little evidence that any change in securities or derivatives regulation would have prevented the Enron collapse, although the collapse may have occurred earlier under alternative disclosure regimes.

Recent press accounts and company disclosures show that Enron failed primarily because it made disastrous investments in bandwidth, water, and foreign energy facilities. The accounts and disclosures strongly suggest that the firm's management and its auditor used a variety of suspicious, and perhaps illegal, accounting and financing techniques to conceal the losses, presumably to buy time in the hope that they could be recouped. The eventual disclosure initiated a downward spiral that resulted in the company's bankruptcy.

It is plausible, and indeed likely, that the company would have collapsed earlier had it recognized its investment losses when they occurred instead of concealing them. Earlier revelation may have changed who bore the pain of the bankruptcy, but it is unlikely that it would have saved Enron from its ultimate fate. That fate was determined by its ill-starred investment decisions.

Moreover, there is no evidence that the firm's energy trading activities, which were in large part made possible by the deregulation of derivatives markets in the 1980s and 1990s, contributed to its bankruptcy. Indeed, the energy trading operations were apparently the one bright spot in the firm's fortunes. Furthermore, Enron's association with energy and derivatives markets should not taint the important role the markets have played in recent years. The markets have facilitated a far more efficient allocation of risk and capital, and Enron's failure does not gainsay that fact. The regulatory changes that have taken place since the late-1980s have contributed to that. The firm's failure does not discredit energy deregulation any more than the bankruptcy of K-Mart discredits discount retailing. R

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