

NBER WORKING PAPER SERIES

REGULATORY STRUCTURE IN FUTURES MARKETS:
JURISDICTIONAL COMPETITION AMONG THE
SEC, THE CFTC, AND OTHER AGENCIES

Edward J. Kane

Working Paper No. 1331

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
April 1984

The research reported here is part of the NBER's research program in Financial Markets and Monetary Economics. Any opinions expressed are those of the author and not those of the National Bureau of Economic Research.

Regulatory Structure in Futures Markets:
Jurisdictional Competition Among The
SEC, The CFTC, and Other Agencies

ABSTRACT

This paper studies competition among alternative regulatory bodies for authority over innovative financial contracts. In the United States, this rivalry embraces not only the Commodity Futures Trading Commission and the Securities and Exchange Commission, but state and federal deposit-institution regulators and various private regulatory cooperatives. From a political perspective, multiple regulators develop as a way of formally providing ongoing protection for the interests of diverse political constituencies. But from an economic perspective, competition resulting from overlaps in regulatory responsibility establishes an evolutionary mechanism for adapting regulatory structures to technological and regulation-induced innovation. Using both perspectives, this paper explains how interaction between governmental regulatory agencies and self-regulatory cooperatives produces more-efficient regulatory structures over time.

The study also seeks to catalog the particular costs and benefits that may be associated with the regulatory tools used to control futures and securities markets (e.g., broker and trader registration, disclosure requirements, margin requirements, and contract-approval processes) and with changes in the distribution of jurisdiction over these tools. The analysis seeks to clarify the tradeoff between the perceived probability of various problems of market performance (e.g., contract nonperformance, widespread financial instability, and activities such as price manipulation by which corrupt or sophisticated operators separate naive investors from their wealth) and the implicit and explicit cost of reducing this probability.

Prof. Edward J. Kane
Department of Economics
Ohio State University
Columbus, Ohio 43210
(614)-422-8708

Revised: April 2, 1984

Regulatory Structure in Futures Markets:
Jurisdictional Competition Among The
SEC, The CFTC, and Other Agencies

Edward J. Kane*

In its quest for investor dollars, the financial-services industry encompasses four distinct layers of competition. Some of these layers are more visible than others. The two most-obvious layers occur in output and input markets, as private firms compete against each other for retail and wholesale customers and for factors of production. Two more-subtle layers comprise competition for jurisdiction among and between private and governmental suppliers of regulatory services.

In the retail sector of finance, firms compete with each other to perform transactional, safekeeping, insurance, and advisory services for investors. This competition focuses on both the quality and the cost of service. On the quality side, a firm tries to build volume by establishing a reputation for honest and reliable service and by maintaining a product line regularly readapted to the evolving needs of its targeted base of customers. On the cost side, a firm seeks to build profits by installing production processes and organizational structures capable of producing and delivering front-office and back-office services at high efficiency.

Few retail firms find it efficient to produce all of their back-office services in-house. Most of them establish links with firms that wholesale back-office services of various kinds. For brokerage activities, back-office services are provided by clearing firms (many of which also have extensive front-office departments) that are members of one or more of the nation's various securities,

*The author is Everett D. Reese Professor of Banking and Monetary Economics, The Ohio State University, and Research Associate, National Bureau of Economic Research. He wishes to thank the Center for the Study of Futures Markets at Columbia University for financial support and to thank Richard Aspinwall, Benson Hart, Frank Rose, Roger Rutz, and participants in the Center's Conference on Futures Market Regulation for helpful comments. The views expressed in this paper are the author's and should not be construed as representing those of the NBER.

options, and futures exchanges. At the same time that back-office firms compete with each other for institutional and retail business, exchanges compete for the chance to execute and settle associated trades for back-office firms. Because transactions on different exchanges may be structured to have similar effects on portfolio risks and returns, securities, options, and futures exchanges may be regarded as generalized substitutes for one another. Like firms, exchanges compete on the basis of quality and cost, too. Exchanges regularly adjust the line of contracts they trade to accommodate shifts in investment tastes and technology. As cooperatives of clearing firms, they have a clear interest in enhancing the exchange's reputation for honest and reliable service. This leads them to impose and to enforce rules designed to protect investors against unscrupulous traders, issuers, brokers, and clearing firms and to undertake programs to educate investors about the advantages of trading the contracts they list. The process of setting and enforcing exchange rules exemplifies the concept of industry self-regulation.

Incumbent politicians cannot afford to be indifferent to the quality and quantity of financial-services regulation. In exchange for past and future constituent services, their election confers on them a series of duties and collective monopoly rights in the regulation market. For at least two reasons, politicians face incentives to assign an additional layer of regulation to governmental bodies. One reason is the public's lack of confidence in the process of self-regulation, a lack of confidence that gains special urgency when it is renewed and reinforced by an unfolding scandal or crisis. Precisely because an exchange is a cooperative, individual members may disagree as to how perfect a set of safeguards the exchange should erect against abuses of different kinds. As a device for resolving such disagreements, industry self-regulation is suspect politically because investor interests are represented only indirectly. Investors fear that industry self-

regulatory entities routinely permit regulatees to levy excessive transactions charges and that they may otherwise underweight investor interests at critical junctures. In addition, recognized and unrecognized gaps in coverage inevitably create loopholes that permit some types of financial-services firms to operate outside the framework of industry self-regulation.

The second reason is the opportunity that government regulation affords incumbent politicians and their parties for collecting implicit tax revenue and extracting campaign contributions from regulatees. Whether or not the government has a comparative advantage in the production of at least a few regulatory services, nationalizing regulatory activities fosters the impression that politicians have financial markets under control and improves their ability to shake down industry participants for campaign funds and to reward supporters with jobs or specially tailored amendments to pending legislation.

Recognized boundaries between the jurisdictions of alternative regulators overlap in important ways. This overlap makes it hard for individual regulators to regard the joint task of investor protection as a strictly cooperative game. Instead, although different regulatory bodies cooperate with each other on some dimensions, they compete for clients and budget resources on others. This paper contends that both the cooperative and the competitive behaviors of overlapping regulatory entities conform to standard economic principles. Managers of these enterprises seek to maximize some index of their and their institution's welfare, subject to constraints imposed on their behavior by technological, market, and political forces.

In choosing their internally optimal pattern of regulation, governmental and industry regulators have different goals and face different constraints. Especially in the short run, industry regulators tend to be guided by industry opinions as to what problems need to be addressed and as to which of several proposed solutions

could prove viable. The set of problems and solutions on which the industry is prepared to act tend to be a small subset of those about which public agitation exists. Of course, over longer periods, industry attitudes must respond to public opinion, especially when a developing consensus begins to press politicians and government regulators to push the frontiers of governmental regulation into new territory. Typically, heads of governmental agencies are concerned with promoting their agency's and their own political standing. This standing is served by trying to increase their agency's fiscal resources, while producing constituent services, avoiding actions that displease elected politicians, and shielding these higher authorities from public criticism concerning whatever problems emerge. This translates into trying to increase an agency's regulatory dominion and to decrease the chances that a crisis or scandal occurs in any manager's bailiwick during his own particular term in office. Given that agency heads seldom hold office very long, the desire to conduct a trouble-free watch imparts a myopically over-regulatory bias to agency decision making.

1. Costs and Benefits of Regulatory Competition

This paper's particular focus is competition (carried on primarily through regulatory adjustments and processes of entry and exit), not among autonomous private entities, but among self-interested federal and state governmental regulatory agencies and private regulatory cooperatives. In studying the multilayered pattern of competition for investor trading dollars, it is convenient to treat regulation as an excise tax on trading activity. Like any other excise tax, the regulatory tax tends to reduce the equilibrium output of the taxed commodity. The higher the level of the tax, the larger is the output reduction. Investors, financial firms, and regulators all fight over the level and structure of the regulatory tax, while governmental and industry regulators fight also about the distribution of the

proceeds. To simplify the pattern of regulatory competition, the roles played by trade associations and state regulators are deliberately left out of the analysis.

The argument develops the hypothesis that, in the long run, competition among financial regulators lowers the level of the regulatory tax by fostering efficiency in the production of regulatory services. Much as in other kinds of competition, regulatory competition is guided by an invisible hand to produce subtle and long-run benefits that are imperceptible to uncritical observers. Even though regulatory overlaps impose avoidable short-run costs, they facilitate a generalized form of market entry and exit that promotes dynamic or evolutionary optimality. Duplicate regulatory functions and overlapping administrative boundaries provide opportunities for the entry and exit of regulatees. Regulated firms (especially new entrants into regulated and substitute markets) shrink the domains (and therefore the budget resources) of regulators whose response to the evolving needs of the marketplace proves short-sighted or inflexible.

Opportunities for regulatees to switch regulators and for regulators to enroll additional classes of regulatees protect investors from experiencing the over-regulation to which a monopoly supplier would tend. Especially when ongoing technological and regulation-induced change impel regulators and market participants endlessly to learn new behaviors, regulatory competition induces more timely and economically better-adapted adjustments in regulatory structures than monopoly regulators would choose to make. It encourages regulators to adopt regulatory strategies that are attractive to new forms of business organization and to producers of innovative products. In addition, interregulator rivalry tends to smooth out "over-regulation bubbles" that might occur in response to financial-market crises (such as the speculative boom and bust in silver prices in 1979-80) and scandals (such as the 1976 manipulation of potato futures) if financial-regulation "barriers to entry" were more significant.

Bureaucratic competition for regulatory jurisdiction is imbedded in the federal system of government. It is part of the American way. Although it makes

in the short run for messy organization charts and an overabundance of government agencies, this competition improves the long-run adaptive efficiency of government regulation. It is part of the constitutional system of checks and balances that restrains the arbitrary exercise of political power in the United States. Although regulated entities' ability to switch regulatory affiliations is constrained by various legal obstacles, opportunities for regulators to extend their dominion to new types of institution and the existence of even greatly constrained options for regulatees to switch regulators create incentives for efficient regulator adaptation. Potential loss of domain undermines agency goals and brings economic pressure on bureaucrats to alleviate many of the burdens that in a changing marketplace an inherited system of regulation would otherwise impose on regulated firms and their customers.

To focus the argument, it is helpful to define an investor's anticipated true return from entering a representative financial contract. For a given horizon of investment, this opportunity return may be decomposed into the following components, some of which may not be paid explicitly by the investor himself:

$$E(R_n) = E(R) - C_e - C_g - C_i - m, \text{ where}$$

$E(\dots)$ is the expected-value operator,

R_n is the net return per dollar of a financial contract,

R is the percentage return on a contract whose performance is costlessly guaranteed and for which all intermediary parties (i.e., brokers and guarantors) are costlessly known to be perfectly honest,

C_e is the average per-dollar cost of executing a roundtrip futures transaction,

C_g is the average per-dollar cost of effecting performance guarantees, including the opportunity cost of accepting residual imperfections in the quality of the guarantee,

C_i is the average per-dollar cost of investigating the integrity and competence of counterparties, brokers, and guarantors, including the opportunity cost of accepting residual exposure to fraud and manipulation,

m is the average per-dollar monopoly profit earned by guarantors and brokers.

In principle, the ideal regulatory system is the one that, without adversely affecting the stability of the financial system (i.e., raising the risk of scandal or crisis), minimizes the value of the sum, $C_e + C_g + C_i + m$. Regulation seeks to minimize the average costs of trading, of guaranteeing contract performance, and of certifying broker and guarantor integrity and competence, while inhibiting the development of either monopoly profits or financial instability. In practice, loopholes in the guarantee and certification system exist and regulatory restrictions on entry permit profits to exceed competitive levels. Under a system of industry self-regulation, incentives exist to produce performance guarantees and centralized certifications of system integrity at minimum cost, but in cartel-like ways that tend to maximize the industry's aggregate profits. Pressures that may lead to monopoly-level commission charges are analyzed in detail by Saloner (1984) and by Anderson (1984). Although pricing decisions made by an exchange may be reviewed under the antitrust laws, these laws cannot tightly constrain cooperative behavior that occurs in the context of a coordinating clearing organization such as an exchange.

When regulatory services are supplied by governmental bodies, the incentive to minimize execution costs remains, but the incentive to minimize guarantee and investigation costs is lessened and political incentives develop to hold profit margins below the cartel level. We may call the increase in contracting costs that occurs under government operation, the "regulatory tax rate," t :

$$t = C_g(G) + C_i(G) - [C_g(I) + C_i(I)].$$

Whether governmental regulation or industry self-regulation is better for investors depends on whether or not this tax rate exceeds $m(I)-m(G)$, the reduction in monopoly profits close governmental supervision might occasion.

Of course, as emphasized by Baumol, Panzar, and Willig (1983), excess profits act as a magnet for entry. Hence, the evils of cartel-like self-regulation tend to prove self-correcting over time. Monopoly profits in any product line encourage unregulated firms to develop and to broker substitute contracts. Inefficiencies in governmental regulation of any product line tend to draw entry, too. The cost disadvantage that inefficient regulation imposes on traditional competitors creates profit opportunities for differentially regulated firms to conceive and to market less-regulated substitute products. Whether attracted by excessive industry profits or excessive governmental regulation, entry by nontraditional competitors disturbs the preexisting equilibrium distribution of regulatory authority. Regulators' economic interest in maximizing their client base leads them to fight to win jurisdiction over substitute activities.

During the correction process, other largely temporary costs are incurred. The integrity of less-regulated brokers and the performance of less-regulated contracts are typically less credibly guaranteed than the firms and products they displace. This exposes investors to a greater risk of fraud and manipulation. The permanent costs consist mainly of redundant facilities and staff and of duplicate reporting burdens. These permanent costs may be interpreted as insurance premiums that the polity pays to reduce its exposure to the threat of over-regulation.

In markets for financial contracts, dynamic efficiency is served by opportunities for the set of substitute products and regulators to expand at low cost. In the short run, although perfect self-regulation would minimize the average costs of

contracting in existing financial instruments, it would push industry profit margins above the competitive level. These profit margins would tempt less-regulated operators into substitute businesses and increase the risk of scandal and crisis. Whether experienced merely as rising threats or as actualities, scandal and crisis tend to educe governmental intervention in the form of the nationalization of at least some regulatory services. But governmental production of such services is inherently inefficient. It places a tax on trading activity. On the hypothesis that any agency's regulatory operation tends to grow increasingly inefficient the longer it is in place, secular increases in this tax tend to produce political agitation for regulatory reform and to foster the development of less-regulated firms and contracts. On the bureaucratic level, agitation for reform and expansion in less-regulated entities encourage competition from other regulators for the right to regulate the innovative as well as the traditional traders and contracts.

The existence of these dialectical forces make it unlikely that an unchanging pattern of financial contracting and centralized regulation could remain optimal over time. Rather, tension between alternative regulators and between regulated and less-regulated purveyors of substitute financial contracts is needed to keep the costs of regulation and industry profit margins in the vicinity of their long-run optimal levels. Concern for dynamic efficiency creates a presumption against imposing substantial barriers to entry into the financial-services game either for new contracts or for additional regulators.

2. Analogies to Competition for Regulatory Jurisdiction

Argued conversely, unless the invisible hand is at work in regulatory competition, it is hard to explain the continued survival of bureaucratic overlaps in function that are in other respects a source of avoidable budgetary expense and administrative embarrassment. It may clarify my perspective to point out that most of us grew up under a complex and adaptive system of divided regulatory authority: a mother and a father. As children, we learned and relearned to exploit differences in regulatory styles and goals to lighten the burden that parental

regulation placed upon us. At the same time, our parents discovered the importance of regularly exchanging information about our avoidance behaviors and learned to revise their own rules, goals, and enforcement procedures to our evolving capacity for independent action.

Like parents, financial regulators simultaneously cooperate with each other on some issues and compete with each other for authority and for the respect of those whose activities they oversee. This competition serves a combination of idealistic and self-serving ends. The palpable objects of regulatory competition are implicit and explicit tax revenues, agency budgets, and private and public employment opportunities. In securities, options, and futures markets, we might hypothesize (at least as a first approximation) that palpable regulator benefits are all proportional to the aggregate volume of trading controlled. Less-measurable objectives include promotion of broad social goals (such as investor protection and financial stability) and enhancement of the individual careers of regulators and elected politicians.

In securities and futures markets, regulatory competition is even more complex than it is in the intact family, both because of the multiplicity of governmental players and because of opportunities for the free entry and exit of industry-controlled entities for cooperative self-regulation. The hierarchical levels of regulatory competition look very much like those we observe in the sports industry. Exchanges behave like sports leagues that work simultaneously to secure the allegiance of franchise owners and fans. To protect the entertainment value and integrity of its game, a league sets rules for management and players and assigns referees and off-the-field investigators to enforce them. At the same time, state and federal agencies and courts monitor the business practices of both the leagues and the franchises. In addition, in localities such as Nevada where gambling on team performance is legal, government agencies (gaming commissions) regulate the performance of offices that book the bets of fans who seek to "invest" in the performance of individual teams.

3. Differences in the Quality of Regulatory Services Supplied by Industry and Governmental Bodies

A major difference between industry and governmental regulators is in their differential capacity for proactive as opposed to reactive decisionmaking. Securities, options, and commodity exchanges, affiliated clearing associations, and industry standard-setting associations exist partly to make the day-to-day work of governmental regulators easier and partly to make it harder for government regulators to impose forms of regulation that damage the markets they oversee. They offer government regulators the chance to control budget funds and jobs without having to accept day-to-day responsibility for proactively enforcing the spirit of ethical, solvency, or competency requirements for brokers and floor traders. Private regulatory cooperatives negotiate with government regulators to shape rules on which self-regulators, brokers and floor traders have a substantial community of interest. Self-regulators and the networks of rules and procedures they enforce also stand ready to serve as political scapegoats for both politicians and government regulators in the event that a financial-instability crisis or a investor-exploitation scandal develops.

Crises and scandals occasion discontinuous and reactive interventions into the structure of regulation by elected politicians and the courts. These interventions generally extend and reallocate existing regulatory authority. Typically, in response to crisis or scandal, politicians introduce one or more new agencies rather than consolidate existing ones. When the need for reregulation is perceived as urgent, new agencies are attractive because they allow politicians to develop an administrative remedy without having to confront directly the constituencies that stand behind the existing regulatory players. At the same time, the unpleasant budgetary implications of creating new government agencies and the thrust of political activity (contributions of time, expertise, and funds) undertaken by

coalitions of regulated firms create a preference for adopting a self-regulatory solution whenever this is feasible. Feasibility requires that self-regulatory bodies have sufficient credibility to let elected politicians and the electorate rationally anticipate a high quality of market performance in the future.

Reactive politics evoke cyclical expansions in the number of regulatory bodies. In crisis-free and scandal-free times, the expansive effects of past crises and scandals tend to be brought under control by two countervailing forces: the interest of private parties in minimizing the net burdens of regulation and the defensive responses of regulators whose turf has been impaired, curtailed, or threatened. These forces express themselves as a political constituency for streamlining the structure of governmental regulation. The latest manifestation of the continuing pressure for merging governmental regulatory bodies may be seen in the interagency Task Group on Regulation of Financial Services chaired by Vice President George Bush. The Bush Task Group was used by federal deposit-institution regulators as a way to thwart SEC designs on their territory. Its express mission was to develop a plan for reducing conflict and regulatory overlap in federal arrangements for regulating and supervising banking and other financial-services markets and institutions (Breden, 1983). Before the Task Group issued its final report, it considered numerous proposals for consolidating federal regulatory authority over financial-services firms. However, it ended up recommending a redistribution of authority rather than a consolidation of individual agencies.

Efficiency in regulation is also the goal of governmentally constrained systems for self-regulation. This hybrid form of regulation develops when a government agency farms out the production of investor-protection and confidence-building services to an industry-sponsored self-regulatory organization such as the National Association of Securities Dealers (NASD) or the National Futures Association (NFA). These organizations are governmentally mandated membership associations composed of private firms in the securities and futures industry,

respectively. Each entity sets and enforces professional standards of ethics aimed at preventing fraudulent and manipulative acts and practices, particularly with respect to audit, trading, and sales procedures. Each is also responsible for investigating and settling grievances between member firms and between member firms and the investing public. Each was designed as a way to bring firms operating outside the framework of exchange sanctions under explicit regulatory control. Finally, each is under the close oversight of the federal agency responsible for regulating the corresponding area of financial activity.

Differences in the regulatory styles of the federal agencies -- the Securities and Exchange Commission (the SEC) and the Commodity Futures Trading Commission (The CFTC) -- that respectively oversee NASD and NFA operations influence the character of their regulatory behavior. Differences in SEC and CFTC rules and requirements are analyzed in careful detail by Russo (1983). In general, the SEC style of regulation takes a more interventionist approach than the CFTC. Whereas critics of the SEC accuse it of "regulatory overkill," most critics of the CFTC claim that it leaves too much to market discipline.

Systems of joint regulation have the potential to be more efficient than unadulterated forms of government or industry-sponsored regulation. Members of cooperative self-regulatory organizations may be counted upon to push association management to minimize certification and guarantee costs. At the same time, governmental agencies retain ultimate political responsibility for avoiding excess charges, crisis, and scandal and may even (as in the case of the Securities Investor Protection Corporation) be financially responsible for guaranteeing integrity and performance. This responsibility serves to rationalize the limited transfer of binding legal authority from government to these entities. Without this authority, they could not require financial-services firms that operate outside of an exchange

framework to join, or at least to register with, these associations, nor effect the acceptance of centralized and uniform certification for competency and integrity that membership and registration carry with them.

As compared to members of a securities, options, or futures exchange, off-exchange and other association members tend to have a wide dispersion of interests. This dispersion makes it hard for the association to develop and enforce cartel-like exclusionary rules that could effectively support sizeable monopoly profits. However, these blanket associations may improve their membership's ability to express its political interests. They serve simultaneously as forums in which to hammer out industry-wide lobbying positions and as agents to represent industry interests to legislators and government regulators.

4. Disintegration of Inherited Patterns of Regulatory Segmentation

Because the institutional structure of United States financial regulation is shaped by the interplay of conflicting economic and lobbying pressures, different pieces of it have accommodated themselves sanctimoniously to a series of contradictory principles of regulation: for self-regulation over government regulation; for state regulation of local activities and federal regulation of national ones; for parallel regulation of all institutions involved in a given functional activity; and for parallel regulation of all institutions of a given type. In futures markets, functional regulation was exercised first by private commodities exchanges. The Grain Futures Act of 1922 and the Commodity Exchange Act of 1934 subjected trading on the existing system of futures exchanges for agricultural commodities to federal oversight by entities affiliated with the U.S. Department of Agriculture. In 1974, resisting SEC requests for regulatory dominion over emerging financial-instrument futures, Congress transferred federal authority over futures transactions exclusively to the Commodities Futures Trading Commission (the CFTC). Finally, the National Futures Association came into operation in 1982.

With the advent of pooled investments in forward and futures contracts, of futures contracts on financial instruments, and of options on these and on stock-index futures, the potential domain of futures regulators spilled over out of the commodities markets into the bailiwicks of traditional federal and state securities regulators. Private stock exchanges and the Securities and Exchange Commission (the SEC) disputed the claims of commodities exchanges and of the CFTC to exclusive jurisdiction over options on financial futures instruments. Jurisdiction over options was to some extent settled by 1982 legislation which ratified a SEC-CFTC agreement negotiated in 1981. In this accord, the CFTC dropped its claim to exclusive jurisdiction over foreign-currency and debt-securities options and its rights to regulate a few specific futures contracts in exchange for SEC recognition of CFTC authority over derivative contracts not exempted by the accord.

However, ink on the 1982 Act had hardly had time to dry before the two agencies began to clash again. In June, 1983, the SEC put before the Bush Task Group a proposal to merge the two agencies. Moreover, the SEC and CFTC continued to clash about the desirability of authorizing new contracts on stock-index futures and options on such futures contracts. The SEC-CFTC accord legislation attempted to settle the jurisdictional battle over stock-index futures by giving the SEC effective veto power over CFTC approval of stock-index futures contracts for which application was made after December 9, 1982. For contracts for which CFTC approval had been sought prior to this date, the SEC's right to object is more limited. Although the CFTC may approve such a contract over the objection of the SEC, the SEC may compel a judicial review of the CFTC action. CFTC approval of contracts for stock-index futures to which the SEC had objected was repeatedly postponed to avoid litigation.

On January 11, 1984, the logjam was broken by CFTC approval over the formal opposition of the SEC of a Chicago Mercantile Exchange contract on the

Standard & Poor's Energy Index. Far from provoking a court battle, this action was followed one week later by the two agencies jointly publishing a set of five "minimum criteria for applications by boards of trade [i.e., futures exchanges] for designation as a contract market for futures contracts on a non-diversified stock index." Because these criteria surrender stock-index opportunities for futures exchanges that had been reserved in the 1982 legislation, the Chicago Board of Trade is suing both agencies in U.S. District Court over both the substance of the new agreement and the informal nature of the administrative procedures by which it was promulgated. In effect, the CFTC's regulatory clientele is asking the courts to force the agency to protect its statutory turf.

In turn, the development and success of the earliest stock-index futures contracts brought the Board of Governors of the Federal Reserve System into the act. The Board's reasons were twofold. First, authority over futures contracts in stocks and stock options is a natural extension of the Board's statutory authority over margins on stocks and stock options themselves. Second, as lender of last resort, the Board presumes that in any financial crisis it would be expected to "pick up the pieces." As financial instruments proliferate, it claims that speculation on futures markets is becoming inordinately easy and fears that the possibility of unbridled speculation in these markets increases the probability of financial instability. Hence, it wants to develop a set of regulatory tools with which it could attack what it might see as destabilizing speculation in any markets in which it might develop. In May, 1983, the Board asserted that its existing authority over stock-market margin requirements allows it to set margins on options on stock-index futures, foreign currencies, and CDs. Roughly a year earlier, it had asserted similar authority over stock-index futures contracts. However, on each occasion, the Board stated that it would accept (at least for the present) the margin requirements set by the exchanges on which these contracts trade.

As these controversies make clear, collisions occur not only between the bureaucratic interests of alternative providers of functional regulation but between these interests and the interests of specialized regulators of deposit institutions. As long as the liabilities of deposit institutions are backed up by a combination of opportunities to borrow in crisis from the Federal Reserve and a system of federal deposit insurance that does not explicitly price asset and leverage risk, institutional regulators must concern themselves with limiting risk-taking by insured firms. This concern leads federal regulators of deposit institutions to constrain and to monitor their clients' positions in futures contracts and their exposure via lines of credit to backstop losses futures brokers might suffer in the event of widespread nonperformance in these markets (Kane, 1984). At the same time, cross-industry merger activity and product-line expansion by brokerage and deposit firms is sweeping the activities of deposit institutions into the orbits of securities and futures-market regulators and the activities of securities and futures-market firms into the orbits of deposit-institution regulators. Deposit institutions that add futures brokerage or advisory services on hedging and trading strategies to their product lines must register the corporate unit involved (usually either a subsidiary or a holding-company affiliate) with CFTC. If they exercise designated functions (including that of futures commission merchant), they must also join the NFA. While the SEC and NASD currently exempt deposit institutions (and their subsidiaries and affiliates) that offer discount-brokerage services from having to register as securities brokers, both bodies have proposed eliminating this exemption.

A final force undermining the pre-existing segmentation of financial regulation is a sharply competitive effort by individual state legislatures to rewrite the rules under which state-chartered banks and holding-company affiliates play. At the state level, banking lobbies are able to promise jobs, tax revenue, and

opportunities for crisis-free absorption of failing institutions in exchange for securities, commodities, and insurance powers that Congress has not yet given them. At this writing, several states have permitted deposit institutions to offer brokerage services, South Dakota has authorized insurance activities, and legislatures in Delaware and Minnesota are considering bills to allow banks to underwrite securities, including the power to own and to vote any stock shares underwritten.

5. Differences in Individual Regulators' Span of Control

To interpret regulator behavior, it is necessary to specify the goals and constraints that apply to this behavior. In this paper, we assume that, whatever other goals a government regulatory bureau may worry about, its perceived capacity to accomplish its primary bureaucratic mission is paramount. This leads agency heads to maximize what we may term the agency's span of control. An agency's span of control comprises the set of institutions and markets over which it has formal regulatory dominion (its "turf") and the framework of policy instruments the agency has established for use in shepherding these institutions and markets in directions it deems appropriate.

In maximizing its span of control, an agency faces a threefold set of constraints. These constraints are imposed by statutory limits on its authority, opportunities for regulatee avoidance activity, and action undertaken by competing regulators.

In any skirmish over regulatory turf, the Fed is strategically positioned. As financial regulator and stabilizer of last resort, the Fed's span of control far exceeds that of any other financial regulator. The agency's responsibilities for macroeconomic stability and its willingness to accept the blame for unfavorable macroeconomic events whenever these occur make the Fed Chairman a political force to be reckoned with. Incumbent politicians' overriding need to blame Fed

officials for any problems in the economy confers on these officials an implicit right to exact bureaucratic compensation from a grateful President and Congress.

Part of the unspoken mission of every regulatory agency includes the task of reducing pressure on elected officials by diverting criticism of public policies accepted by these officials onto the shoulders of the agency's top management. The greater an agency's span of control, the better it can fulfill this shielding function and the more political clout it accumulates.

Because they have narrower policy missions than the Fed, the SEC and CFTC have narrower spans of control. In responding to actions taken by the Fed to defend what it views as its own span of control, these agencies' narrower turfs and control frameworks put them at a distinct disadvantage. Measured against each other, however, the CFTC and SEC seem pretty evenly matched. On many issues, the SEC's greater age and higher standing with the electorate as a whole is more or less offset by the CFTC's ability to mobilize House and Senate agricultural committees and the politically powerful farm lobby in support of its interests.

It is important to recognize that the current regulatory conflict is a derivative phenomenon. The impetus for change is economic, not political. It is driven not by acts of bureaucratic imperialism, but by structural changes undertaken by regulatees. Political friction experienced along the borders of the various regulators' traditional turfs results from exogenous changes in the avoidance opportunities facing differentially regulated institutions. These opportunities were created less by administrative action than by longstanding upward trends in interest rates and in statutory rates of tax on inflation-adjusted personal incomes and a downward trend in financial transactions costs. Rapid overlap in the product lines and geographic market areas of different classes of financial institutions is being brought about by efforts to lower the cost of producing and delivering

financial services. The dominant forms of cost reduction appear to be scope economies: opportunities for firms to produce and deliver an array of financial products at a lower cost than they could produce the same products on a stand-alone basis. If the scope economies that are driving product-line and geographic-market extension did not include unintended subsidies flowing from the improper pricing of risk by federal deposit-insurance agencies, the new market structures and accompanying efforts at competitive reregulation would be unambiguously resource-saving events.

6. Specific Controversies Over Regulatory Turf

Regulatory goals may be partitioned into three broad categories:

1. Protecting investors against monopoly power conferred on brokers and counterparties by either superior information or financial-market barriers to entry;
2. Monitoring and certifying the integrity and ability to perform of brokers and counterparties;
3. Enhancing the stability of individual markets and of the financial system as a whole.

Although our presentation has so far stressed effects of regulatory action on the attainment of the first and second goals, the rhetoric of current disputes between the CFTC and the SEC and Fed each center on stability. While the SEC concerns itself with disruptions in specific stock-market segments, the Fed is responsible for preventing system-wide disruptions in financial markets.

The SEC-CFTC Dispute over Stock-Index Futures. SEC objections to CFTC approval of stock-index futures contracts have prevented futures exchanges from beginning trading in several instruments. In filing formal objections, the SEC claimed specific violations of two of three criteria that the 1982 SEC-CFTC

accord legislation requires CFTC-approved stock-index contracts to meet. The relevant criteria are:

1. Antimanipulation Criterion: trading in the futures contract should not be readily susceptible to manipulation, nor to causing or being used in the manipulation of the price of any underlying security, an option on such securities, or an option on a group or index including such securities;
2. Wide-Publication and Substantial-Segment Criterion: the index or group of securities should be a widely published measure of, and should reflect, the market for all publicly traded equity or debt securities, or a substantial segment thereof, or be comparable to such a measure.

Although the SEC interpreted the first criterion straightforwardly, it interpreted the words "substantial segment" very severely. It maintained that Congress intended the second criterion to "prevent trading in the futures market from disrupting the securities markets and undermining the scheme of regulation in place under federal securities laws" (Fitzsimmons 1983, underscoring added). Because the SEC had approved trading in sub-index options for stock exchanges, as long as a sub-index's components show a substantial capitalization, it was awkward for the SEC to maintain either that the prices of instruments based on the sub-index could be manipulated or that such trading would threaten to disrupt securities markets.

Except for focusing attention on the issue of how much capitalization might be sufficient to prevent manipulation, this left the SEC's only substantive objection the assertion that it saw these instruments as undermining the inherited scheme of regulation. But if broad-based stock-index futures and sub-index options don't undermine regulatory effectiveness, it is doubtful that sub-index futures would. In this connection, the SEC raised two points:

1. differences in customer-protection and surveillance systems between securities and futures markets, and
2. the possibility that trading in sub-index options could be used to circumvent prohibitions against trading on inside information contained in federal securities laws.

Neither objection truly supports withholding approval of sub-index futures contracts. On the first point, if destabilizing differences exist in customer-protection and surveillance systems between the two types of markets -- as opposed to mere differences in regulatory style -- these differences should be identified carefully and the potential for destabilization removed. Such adjustments should occur whether or not a particular set of futures contracts is approved or denied. On the second point, the SEC could not establish that futures trading in stock-index futures based on inside information would in fact be legal. Because the courts have already held trading in stock options to be illegal when it is based on inside information, odds are good that the courts might find stock-index futures trading based on corporate inside information illegal, too. The possibility of such a ruling and the fact that inside information on any one firm would affect only a fraction of any high-capitalization sub-index make sub-index futures a less-than-optimal way for a sharp operator to take advantage of whatever inside information might happen into his possession. A would-be perpetrator's interests would be better and more reliably served by undertaking transactions in other, more-hidden ways.

The SEC identified its major concern as the potential use of single-industry futures contracts as "surrogates" for trading in individual stocks and stock options. Clearly, positions in sub-index futures and options on such futures can be constructed to be virtually equivalent to positions in the underlying portfolio of

sub-index stocks. But in contending that 1982 SEC-CFTC accord legislation was intended to minimize surrogate trading, the SEC put forth the view that Congress sought tightly to constrain the ability of futures exchanges to produce substitutes for stock-exchange products. Such an intention would be blatantly anticompetitive, since it would tend to protect the profit margins and trading volumes of stock-exchange members from futures-market competition. A declaration to this effect is not an explicit part of the accord bill's legislative history. Given the procompetitive ideology by which our nation lives, if Congress wanted to enforce so anticompetitive a segmentation of financial markets, it ought to have said so explicitly.

These loose ends in the SEC's argument left the CFTC in a strong position to defend either in the courts or in Congressional hearings any stock-index contract approvals the SEC might choose to contest. However, in January, 1984, after the CFTC approved a controversial Chicago Mercantile Exchange sub-index contract, the CFTC and SEC provisionally resolved their dispute over sub-index futures by adopting a set of five numerical criteria that stock-index futures must meet before they can be designated for trading:

1. Minimum number of securities: the index must be composed of domestic securities of at least 25 issuers.
2. Index Capitalization: the aggregate capitalization of the component securities must be at least \$75 billion.
3. Percentage Weight Afforded the Largest Stock: no single security may comprise more than 25 percent of the index's aggregate capitalization.
4. Percentage Weight Afforded the Three Largest Stocks: no three stocks may account for more than 45 percent of the index.

5. Special Rules Linking Weights to Firm Capitalization for Non-Capitalization Weighted Indexes.

Although these criteria objectify a negotiated settlement of the interagency dispute, their enforceability remains to be seen. The SEC-CFTC settlement purchases bureaucratic peace at the expense of sectors that are not parties to the agreement. In particular, the agreement harms the jurisdictional interests of House and Senate agricultural committees relative to those of securities committees, the economic interests of the futures industry relative to securities and options firms, and, within the futures industry, the interests of the Chicago Board of Trade (whose longstanding applications for sub-index contracts had been tailored to the CFTC's previous reading of the 1982 legislation) relative to Chicago Mercantile Exchange. Parties adversely affected by SEC-CFTC adoption of these criteria must be expected to challenge the agreement both in the courts and before Congress.

Both substantively and procedurally, the agreement displays ample ground for challenge. It fails to develop a theory to link the designated numerical thresholds explicitly to the "antimanipulation" and "substantial-segment" criteria set forth in the 1982 accord legislation, nor can we find such a theory in the literature dealing with futures markets. Moreover, the criteria were adopted without benefit of public notice or opportunity for prior public comment. On both grounds, the Chicago Board of Trade filed on February 6, 1984 in U.S. District Court against the two agencies for injunctive relief.

Conflict Between the Fed and the CFTC Over Margin Requirements on Futures Contracts. Fed control of margin requirements on securities traces back to intuitive judgments as to what caused the depression of the 1930s and as to what policy tools could be used to prevent a recurrence. In the 1930s, the consensus view identified so-called "excessive speculation" in common stocks as the culprit

and supported a legislative search for policy levers by which Fed officials might be able to control such speculation in the future. The resolution hit upon was to give the Federal Reserve the right to limit the use of credit in securities transactions. For this purpose, the Board was given in 1934 the right to set and administer margin requirements on securities holdings. The requirements constrain investors' ability to use securities as collateral for loans as well as brokerage practices of account administration.

Russo (1983) contrasts margin-setting practices on securities and futures exchanges as follows:

Securities Exchanges

The Federal Reserve Board and the SEC both have pervasive authority over the margin requirements applicable to the options traded on the securities options exchanges, including options on debt securities, on foreign currencies, on stock indices and on stock groups. Because such options are defined as "securities" for purposes of the Federal securities laws, they are subject to the Federal Reserve Board's plenary margin authority, an authority that the Federal Reserve Board interprets to encompass not only the specific levels at which margin requirements are set, but also the manner in which margin obligations can be deemed satisfied and the manner in which options positions can be deemed "covered." Moreover, before they can be implemented, the margin rules applicable to the options products traded on the securities exchanges must be submitted to the SEC in a formal rule change filing, must be published in the Federal Register for public comment and must be approved by the SEC. The SEC also has broad authority to "abrogate, add to, and delete from" the rules of a securities exchange, including the margin rules of such an exchange. In the case of options on debt securities, foreign currencies and stock indices, the Federal Reserve Board has, as a general matter, agreed to defer to the views of the SEC.

Futures Exchanges

The CFTC has no authority to review the futures contract margin rules employed by the commodities exchanges. The CFTC does have authority, however, to establish "temporary emergency margin levels" for any futures contracts "whenever it has reason to believe that an emergency exists." The term "emergency" is defined to mean "in addition to threatened or actual market manipulations and corners, any act of the United States or a foreign government affecting a commodity or any other major market disturbance which prevents the market from accurately reflecting the forces of supply and demand" for a commodity. The Federal Reserve Board has asserted, but has not attempted to exercise, authority to prescribe margin requirements for futures on stock indices.

The CFTC is of the view that its broad authority to regulate commodity options gives it the ability to review and approve exchange rules pertaining to the establishment of commodity option margin levels. However, it has, to date, taken the position that exchange rules relating to the establishment of commodity option margin levels need not be submitted to it for its approval. Moreover, because commodity options are not deemed to be "securities," the Federal Reserve Board has no authority to prescribe margin requirements for such options. As a result, the margin requirements applicable to short option positions -- like the requirements applicable to futures contract positions -- are established solely by the commodities exchanges. The CFTC does review, however, exchange rules relating to the payment or collection of commodity option premiums.

Citing its mandate to curtail excessive speculation in financial markets, the Fed claims that its authority over margins extends to all forms of options and futures contracts and has asked its staff to conduct a formal study of margin regulation in financial markets. So far, however, it has allowed federal authority over margin requirements to be exercised by the SEC for stock options and by the CFTC for futures contracts and options on futures. Reflecting these agencies' differences in basic regulatory style, while the SEC closely oversees margin requirements on securities options, the CFTC possesses only emergency authority over margins for futures trading and has taken a relatively laissez-faire attitude toward margins on futures options.

The Fed's professed concern that opportunities for "excessive speculation" may exist in futures and futures-options trading foreshadows a possible move to extend its operative span of control into margins on transactions in futures and futures options. To clarify the efficiency costs of setting higher than micro-economically appropriate margin requirements, economic experts on futures trading emphasize that important differences exist between the roles that margin requirements play in futures and securities markets.

In securities markets, margin requirements mandate a minimum ratio of ownership equity to borrowed funds that an investor may employ in financing a

securities purchase. From a broker's point of view, a securities margin requirement establishes a minimum level of cash downpayment that he must collect in selling securities on credit. Because these requirements apply only to loans collateralized by securities holdings, they cannot prevent investors from borrowing their apparent equity in other ways. Lockett (1982) shows that, between January 1966 and December 1979, changes in the level of margin requirements set by the Fed tended to move stockholder equity in margin accounts by only about 15 to 20 percent of the announced change.

In futures markets, margin is posted and adjusted daily not to maintain an equity ratio, but to maintain a credible bond against contract nonperformance. This surety bond is designed to see that it remains in a contractor's self-interest to perform as promised even when adverse movements in the futures price impose substantial losses on his position. Rutz (1982) and Edwards (1983) point out that daily settlement of gains and losses on futures contracts keeps both sides of the contract even with the market, so that an investor accumulates no ownership interest in the futures contract itself.

However, the two types of margin accounts are alike in two ways. First, they limit the position that an investor can take in a specific opportunity by imposing additional transactions costs on investors who seek to hold larger and larger positions. Second, if securities or futures prices move precipitously, demands on the banking system associated with widespread margin calls could face the central bank with a potential crisis (Edwards, 1983b).

Under current regulatory arrangements, incentives exist for futures exchanges to minimize the costs of guaranteeing contract performance. If a government agency were to take over this function, bureaucratic incentives would

lead agency managers to set a higher level to reduce even further the odds of a near-term scandal or crisis to minimize potential criticism.

Excess guarantee costs would act as a tax on futures contracts: wasting investor and industry resources and redistributing some of investors' wealth-management activity away from futures trading. This would reduce the efficiency of risk-shifting opportunities and the degree of liquidity in these markets.

It is hard not to be skeptical of the ability of government officials to identify spates of destabilizing speculation in any market and to act in timely fashion against them. But given that the CFTC already possesses authority to set margin requirements for the duration of a financial emergency and that the Fed claims such authority as well, the desirability of standby position limits is not the issue. Benefits to offset the costs of excess margin requirements must be sought in ordinary, not extraordinary circumstances. To show that it is desirable to control destabilizing speculation on a nonemergency basis, it is necessary to demonstrate that the positions squeezed out of the market by higher margin requirements would be based on less-rational expectations than those that remain. This seems a most unlikely hypothesis. On the contrary, even if it were possible to identify a set of investors who could be usefully protected in futures transactions from their own ignorance, incompetence, or irrationality, it is doubtful that margin requirements would constitute the optimal way to accomplish this task.

Taken on their face, stabilization benefits from excess margin requirements on futures contracts seem too small and too unreliable to justify the harmful increase in generalized trading costs they would occasion. But, in the margin-requirement controversy, the operative issues are not economic, but political: how hard the Fed wants to campaign to place futures markets within its ordinary span

of control and how hard futures-market professionals are willing to campaign against them.

7. Summary

This paper treats regulation as an endogenous process. It models competition among regulators as a variant of competition among firms, one that is both constrained and encouraged by the larger goals pursued by members of federal and state legislatures, who are in turn constrained by their need to serve the constituencies on which their power is based. The paper identifies political and economic costs and benefits that accrue to the regulatory players and to society at large and constructs a framework for choosing among alternative regulatory patterns.

The study also seeks to catalog the particular costs and benefits that may be associated with the regulatory tools used to control U.S. futures and securities markets (e.g., broker and trader registration, disclosure requirements, margin requirements, and contract-approval processes) and in the distribution of jurisdiction over these tools. The analysis seeks to clarify the tradeoff between the perceived probability of various problems of market performance (e.g., contract nonperformance, widespread financial instability, and activities such as price manipulation by which corrupt or sophisticated operators separate naive investors from their wealth) and the implicit and explicit cost of reducing this probability.

An additional objective is to explain how taken over long periods of time a system of governmentally constrained self-regulation can prove economically more efficient than unadulterated forms of either government control or industry self-regulation. Buffered as they are by both regulated firms and government regulators, self-regulatory cooperatives have a unique opportunity to contribute to economic efficiency.

Governmental production of regulatory services is inherently inefficient. Moreover, if it were not checked by avoidance activity and competition from alternative regulators, the activity of a given regulatory bureau would tend to become increasingly more inefficient over time. Pressure from alternative regulators and from brokers and dealers in unregulated and differentially regulated contracts is needed to force the costs of regulation and industry profit margins to remain close to minimum efficient levels in the long run. Far from being merely bureaucratic duplication, rivalry between the SEC, the CFTC, and other regulators serves to promote dynamic efficiency in regulation. By reducing barriers to entry into the financial-services industry for new firms and new contracts, regulatory competition helps the American financial industry to adapt itself to the evolving needs of the real economy.

REFERENCES

- Anderson, Ronald W., "The Industrial Organization of Futures Markets," R.W. Anderson (ed.), The Industrial Organization of Futures Markets: Structure and Conduct, Lexington, MA: Lexington Books (forthcoming, 1984).
- Baumol, William, Panzar, John C., and Willig, Robert D., "On the Theory of Perfectly Contestable Markets," Bell Laboratories Discussion Paper No. 268 (June 1983).
- Breeden, Richard C., "Federal Regulation of Financial Services: Time for a Change," Federal Bar News and Journal, 1983, pp. 316-322.
- CFTC and SEC, "Designation Criteria for Futures Contracts and Options on Futures Contracts Involving Non-Diversified Stock Indexes of Domestic Issuers," Federal Register, Vol. 49, No. 16, January 24, 1984, pp. 2884-2886.
- Edwards, Franklin R., "Futures Markets in Transition: The Uneasy Balance Between Government and Self-Regulation," Center for the Study of Futures Markets, Columbia Business School, Working Paper No. CSFM-46, January 1983(a).
- _____, "The Clearing Association in Futures Markets: Guarantor and Regulator," Journal of Futures Markets, 3 [Winter 1983(b)], pp. 369-392.
- Fitzsimmons, George A., Secretary of the SEC, "Comment on the CME's Proposal to Trade Futures Contracts on Four S & P Sub-indices," November 29, 1983.
- Kane, Edward J., "Technological and Regulatory Forces in the Developing Fusion of Financial-Services Competition," Journal of Finance, 39 (forthcoming, May 1984).
- Luckett, Dudley G., "On the Effectiveness of the Federal Reserve's Margin Requirement," Journal of Finance, 37 (June 1982), pp. 783-795.
- Phillips, Susan M., "Regulation of Futures Markets -- Theory and Practice," Discussion Paper, Commodity Futures Trading Commission, September 15, 1983.
- Russo, Thomas A., "The SEC and CFTC in the Post Accord Era: Continued Autonomy or a Shotgun Marriage," New York: Cadwalader, Wickersham, & Taft, 1983.
- Rutz, Roger D., "Futures, Options and Securities Markets: A Treatise on the Economics of Federal Regulatory Jurisdiction," Unpublished manuscript, Chicago Board of Trade, March 30, 1982.
- Saloner, Garth, "Self-Regulating Commodity Futures Exchanges," in Anderson (ed.), The Industrial Organization of Futures Markets: Structure and Conduct, (forthcoming, 1984).