

Commentary: The Supply of and Demand for Financial Regulation: Public and Private Competition Around the Globe

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Introduction

The forces driving globalization of the markets are also leading to greater competition among public and private sources of international financial regulation. As barriers to the flow of financial products and services across national borders erode, market participants have greater choices for where and how they wish to transact. In some cases, changes in laws such as those in Europe have explicitly allowed for greater competition among public regulators. A French bank, for example, can operate under French regulation in German territory. In other cases, technological innovation has reduced the costs of avoiding domestic regulators, as well as domestic markets. Computer technology has permitted the creation of electronic communication networks (ECNs) and “over-the-counter” (OTC) markets with no physical presence. Similarly, the costs of undertaking financial activity in off-shore centers also is lower. Such innovations pose challenges to both public regulators and private self-regulatory organizations.

Does globalization then imply an inexorable movement of financial activity into a realm without regulation? I will argue an emphatic “No.” There is an important and ongoing demand from the private sector for various forms of regulation, and I see no forces tending to eliminate such demand. The demand for regulation, however, is not

necessarily for regulation supplied by the public sector. Long before official regulatory agencies were conceived or laws regulating financial activities were written by government officials, markets had developed sophisticated mechanisms to regulate themselves. As it becomes easier to sidestep traditional public regulation, the supply of regulation in financial markets today is increasingly coming from private sources. Globalization does not imply a retreat from regulation but increased competition among suppliers, that is, among public regulators as well as between public and private regulators.

In order to analyze this increased regulatory competition, I will use a simple supply and demand framework. While in many circumstances this would seem trivial, most discussions of the regulatory challenges posed by globalization have tended to focus on the role of government supply of regulation and have given little weight to the private demand for and supply of financial regulation. To try to redress this imbalance, my remarks will emphasize how the private sector has responded historically, as well as how it is responding today to regulatory challenges in the international financial markets. At the end, I will touch briefly upon the political influences on the implementation and enforcement of public regulation that contrast with private regulation.

An example of the private demand for regulation

To illustrate the private demand for various forms of regulation, consider the case of international bonds. According to the 2000 Bank for International Settlements (BIS) annual report, less than 2 percent of the net international bond issuances are from off-shore centers, and there has been no tendency for an increase in the use of off-shore centers for this purpose. Why? A key reason is that the value of contracts involving commitments over time, such as most securities and derivatives contracts, is affected importantly by the ability to enforce those commitments

Although, in some situations, concerns about maintaining a good reputation may be sufficient to ensure contractual performance (as I will discuss in more detail below), market participants often rely on

contract enforcement through a government judicial system. The stability, predictability, efficiency, and honesty/incorruptibility of the system are of paramount importance. Securities governed by the laws of a country with a weak legal system and courts that may be subject to influence by powerful parties carry a high risk premium.

To reduce interest costs, and in some cases, simply to make the sale of the instrument feasible globally, most bonds sold in international markets are issued under U.S. or UK law, rather than under the laws of the country in which the issuer is domiciled (Kroszner 2000). Even though the issuance and compliance costs are higher by using U.S. or UK law rather than domestic law, the net effect on the issuer is positive: The market rewards reduced uncertainty of enforcement with lower risk premia. Such benefits drive the demand for this type of regulation. The efficiency and credibility of the legal environment is an important element in the competition among public regulators and in their competition with private regulators.

Four forms of private supply

The private markets have taken various approaches to regulatory supply, both historically and in the markets today. I will put these approaches into four categories:

- “Members-only” organizations, such as exchanges and clearinghouses.
- Voluntary standard-setting bodies.
- Innovative firm structures, such as special purpose vehicles, Chinese walls, and firewalls.
- Third-party monitors, such as ratings agencies.

I will briefly illustrate how each type of private regulatory supply operates using particular examples from derivatives and banking markets. I include derivatives in my discussion for a number of reasons. Large international banks are heavily involved in the deriva-

tives markets, and the concerns raised by bank regulators about the collapse of Long-Term Capital Management (LTCM) suggest the extent of interlinkage of banking and derivatives. The Financial Supervisory Authority (FSA) in the UK regulates all things financial, so the regulation of banking and derivatives occurs under one roof. Technology, as well as legal change, such as the Gramm-Leach-Bliley Financial Services Modernization Act in the United States, is erasing the lines distinguishing different types of financial services firms (see Kroszner forthcoming). In addition, there are close historical parallels between the development of futures exchanges and private bank clearing systems that have largely been neglected but help to illustrate the role of the private sector in supplying financial regulation (see Kroszner 1999).

In discussing private-sector supply, it is particularly important to understand their historical origins in addition to contemporary examples. Some modern private regulatory supply may have developed as an attempt to pre-empt or build upon government regulation. Looking back into history into the origins of private regulatory supply helps to mitigate such a concern. The broader historical perspective also allows us to explore the origins and long-term evolution of various private sector responses to understand in what circumstance such supply arises and whether it is sustainable.

Historical and contemporary examples from derivatives and banking markets

The first form of private sector supply of regulation is the “members-only” club in which rules for membership and conduct are established and enforced by the organization (Gorton and Mullineaux 1987 and Kroszner 1999). Securities and derivatives exchanges and bank clearinghouses historically evolved such structures. The Clearing House Inter-bank Payments System (CHIPS) is a modern example of a private organization of member banks that provides large-value electronic funds transfers.

In markets with only a few large players that are likely to continue to operate in the markets for long periods into the future, reputation

can be sufficient to ensure that contracts will be enforced (e.g., Darby and Karni 1973 and Klein 1997). Repeat dealing gives firms and individuals opportunities to develop credible reputations for honest dealing and simultaneously provides a mechanism for punishment of those who cheat — banishment from participating in future trading in the market. This type of private enforcement mechanism goes back to at least medieval trading arrangements (e.g., Milgrom, North, and Weingast 1990 and Greif 1993).

The futures exchanges and bank clearinghouse systems that developed during the 19th century formalized such a private enforcement scheme (Kroszner 1999). Controlling the riskiness of the systems was a key motivation that gave rise to this private regulatory response. Nonperformance risk in futures contracts, for example, is particularly acute due to the potentially long time between entering the contract and the delivery date. Losses can accumulate over time. Also, a party in financial distress may have an incentive to increase risk-taking behavior, due to limited liability, possibly exacerbating losses. In a simple futures contract, counterparties have no recourse to prevent the cumulation of losses and risky behavior until the contract expires and legally actionable nonperformance occurs.

Paralleling the traditional monitoring role of bank clearinghouses, organized futures exchanges developed a number of formal rules to attempt to control credit risk for those who traded on the exchange (Andreas 1894, Taylor 1917, and Moser 1998): margin or collateral requirements; the ability to examine the accounts of a member if its solvency is questioned; and the right to bar from the trading floor parties that default. In the mid-19th century, the Chicago Board of Trade created a committee of the Board to enforce the rules and adjudicate disputes among its members (Cronon 1991).

Although these rules and institutions did help to limit and make more homogeneous the credit risks involved in trading on the exchange, credit risk continued to vary with the individual counterparties. In the late 19th century, a number of European coffee and grain exchanges took the next step in the development of the clearinghouse to make it effectively the counterparty in all transac-

tions (Emery 1896). These organizations would make full payment to the aggrieved party, collecting as much as possible from the defaulting party and drawing on an assessment fund to which members of the exchange had contributed. In 1925, the Chicago Board of Trade created the Board of Trade Clearing Corporation (BOTCC), which became a counterparty to all transactions on the exchange (for details on how clearinghouses operate today, see BIS 1997, and Kroszner 1999).¹

The clearinghouse acts as a credible high-quality counterparty. The homogenization and limitation of credit risk thus improves the interchangeability of the contracts and liquidity of the market. In addition, this credit risk structure helps to reduce the likelihood of a failure of one party causing failures among others, thereby addressing public regulators' concerns about "system-wide" risk. As guarantor of the contracts, the clearinghouse has to be concerned about adverse selection and moral hazard and thus takes on a regulatory role (Edwards 1984 and Bernanke 1990). The clearinghouse can and does impose requirements concerning the liquidity, capital, and activities of its members. Today, all futures exchanges have adopted some form of a clearinghouse as counterparty to reap these advantages.

Futures clearinghouses have been extremely successful in risk control and management. They have weathered the Great Depression, the Second World War, failures of major players such as Barings, and high levels of volatility in the last decade without a collapse. In addition, the failure of clearing members has been relatively rare during this time period. Competition between the different exchanges does not appear to have caused a race to the bottom, in terms of risk management and control, but, if anything, a race to the top.²

While the clearinghouse mechanism has been quite successful in managing and controlling risk, exchange-based trading has been facing increasing competition from the over-the-counter (OTC) markets. The OTC markets have grown rapidly and now the total notional amount of OTC derivatives outstanding is more than double

the notional amount of exchange-based derivatives. The technological forces driving globalization have made the rise of the OTC markets possible. To build the confidence necessary for the OTC to have experienced such rapid growth, market participants have developed innovative ways to try to reproduce the benefits of the exchange and clearinghouse, described above, but at lower costs and in a decentralized way. To do so, the markets have relied upon the other three forms of regulatory supply: voluntary standard-setting bodies, innovative firm structures, and rating agencies.

An important factor behind the growth of the OTC markets has been the development of a private standard-setting body, the International Swap Dealers Association (ISDA). This organization has developed a “master agreement” that provides standard definitions of terms used in OTC derivatives and guidelines for the formulation of contracts. Contracting parties in these markets agree to abide by the definitions even though the contracts are individually tailored. In this way, standardization of the terms are achieved but specific contracts can be more flexible than those traded on an exchange.

Such standard-setting bodies have many historical precedents. In the mid-19th century, for example, the Chicago Board of Trade created a system for consistent grading of the quality commodities to permit standardization of the futures contracts. This innovation “restructured Chicago’s grain markets in ways that would forever transform the grain trade of the world” (Cronon 1991, p. 116).

Another form of private regulatory response, innovative firm structures, also have played a significant role in the evolution of the OTC markets.³ Unlike on an exchange with a clearinghouse as guarantor, each OTC transactor is exposed to the credit risks unique to each counterparty. The Derivatives Product Company (DPC) was invented as means to respond to concerns about credit quality in the OTC market. This special purpose vehicle was conceived to achieve a high credit rating and its development also demonstrates the role of the final type of private regulatory supply, that is, the role of third parties monitors such as credit rating agencies. In the OTC markets, the rating agencies play a particularly important certification role.

The rating agencies, however, do not “put their money where their mouth is” and do not play the guarantor role that a clearinghouse does. Instead, their reputation is on the line. Credit rating agencies become the effective regulators in setting standards for capital, collateral, and conduct, much like clearinghouses and government regulators, but do not have a direct financial stake in the transactions.

This regulatory role is illustrated by how the markets responded to concerns about increased credit risk following a number of large failures in the OTC derivatives market roughly a decade ago (see Remolona, Basset, and Geonum 1996). Participants worked with credit rating agencies to devise a new vehicle that would permit firms with relatively weak overall credit ratings to continue to participate in the OTC markets by creating a DPC that could achieve a triple-A rating.

Rather than provide a specific formula, Moody’s and Standard & Poor’s provided general guidelines for how such an entity could obtain its top rating and then analyzed each on a case-by-case basis. The resulting DPCs have an innovative combination of approaches to control risks: the complete hedging of market risk through back-to-back or mirrored transactions with the parent firm; dynamic allocation of capital as risks faced by the DPC and its counterparties change; pre-packaging of bankruptcy workout procedures to reduce uncertainty about how counterparties will be treated if the first two risk management procedures fail.⁴ This is yet another example of how private demand for the “regulation” of high credit ratings brought forth private regulatory supply through the interaction of third party monitors and novel firm structures.

Political economy and public regulation

After providing some concrete examples of how the private supply of and demand for regulation in the financial market operates, I now would like to mention briefly some issues in public supply and demand. One response of public regulators to globalization has been to develop codes of best practices for financial markets and promote their adoption around the world. Groups such as the Financial Stabil-

ity Forum provide much valuable analysis of key regulatory issues and sensible guidelines for best practice. It would be extremely useful to devote the next step to analyzing implementation in more detail. In particular, much would be gained by recognizing the political pressures that exist in different political contexts and trying to take those into account when providing guidelines for the structure of government regulatory policies.

Government regulation may be inspired by the highest of public interest ideals but must, in practice, be filtered through a political process in its codification and implementation. Rival interest groups have incentives to try to influence the outcomes for their own benefit. In the U.S. for example, the long battle over financial modernization legislation resulted in the financial services sector being the leading contributor of money to politicians through Political Action Committees (see Kroszner and Stratmann 1998). The relative size of the contributions by rival banking and insurance sectors, for example, help to explain congressional voting patterns on amendments related to the 1991 Federal Deposit Insurance Corporation Improvement Act (FDICIA), which fundamentally restructured the bank supervisory system in the U.S. (Kroszner and Strahan forthcoming).

Policies such as government deposit insurance can, in principle, serve the public interest but, in practice, can become complex battlegrounds for subsidies to different parts of the banking sector and to certain targeted groups that receive credit from the banking system. When other objectives and interests compete with the public interest, the resulting policies can undermine private market discipline. Consider a key element of the modern safety net, namely government deposit insurance. A recent study by Demirguc-Kunt and Huizinga (2000) finds that riskier banks in countries with explicit government deposit insurance do not pay higher interest rates, whereas riskier banks in countries without deposit insurance do. Certain features of the government deposit insurance system, such as co-insurance, can mitigate the effects of the deposit insurance and help to reintroduce market discipline.

An important fact to note is how few government deposit insur-

ance schemes around the world involve some form of co-insurance. Demirguc-Kunt and Huizinga found only two. The value of co-insurance (and deductibles) in reducing moral hazard problems, however, has long been understood. Why then do so few systems adopt features common in private insurance contracts that would mitigate the moral hazard problems?⁵ Political economy considerations play a role, and it would be useful to take account of such a role when developing codes of best supervisory practices and guidelines for government supply of financial regulation (see, e.g., Kane 1987, Romano 1997, Kroszner 1997, 1998, and forthcoming).

Concluding remarks

The technological innovations that have been driving globalization have been increasing the competition among and between private and public financial regulators. Market participants have more choice in where and how to undertake transactions. Regulation to a greater degree than in the past thus must meet a “market” test in the market for financial regulation. In choosing where to transact and to structure a contract, participants weigh the costs and benefits of different regulatory and legal enforcement systems. Certainly, many types of regulation survive the cost-benefit test. Because various types of public and private regulation can and do produce the benefit of confidence and stability in financial institutions and markets, the private sector has demand for regulation and enforcement that will not disappear with globalization.

Globalization, however, does help to make more feasible greater use of private sources of regulation rather than public regulation. The market has been and will continue to be a significant source of the supply of financial regulation in a variety of forms that address important monitoring and risk control issues of great concern to public regulators. A successful response to the regulatory challenges of globalization involves two elements: deeper analysis of the robustness of the private sources of regulation to achieve desirable outcomes, and further understanding of how political economy forces shape the implementation and enforcement of public regulation.

Endnotes

¹ Pirrong (1997) argues that the relative tardiness for the Board of Trade to adopt this structure can be attributed to financially strong members who were resistance to giving up the advantage of their high credit quality and implicitly subsidizing weaker members. There also may have been concerns about moral hazard given the difficulty of evaluating and monitoring creditworthiness in the late 19th and early 20th centuries. Moody's-style credit rating systems, for example, became widely accepted only after WWI. The poor performance of most state deposit insurance systems due to moral hazard problems during this period (see White 1983) also may have made exchange members wary of agreeing to a guarantee scheme.

² Competition among exchanges might lead the clearinghouses to adopt excessive risk protection, hence an inefficiently low level of default relative to the social optimum (see Fenn and Kupiec 1993, and Santos and Scheinkman forthcoming).

³ Another area in which innovative financial firm structures evolved prior to mandates from public regulators concerns conflicts of interest. On the development and effectiveness of internal "Chinese walls" and "firewalls" at banks in the early 20th century, see Kroszner and Rajan (1997).

⁴ See Remolona et al. (1996) and Kroszner (1999) for details. The innovations in these workout procedures have led to revisions of the relevant U.S. bankruptcy codes, integrating in ideas such as close-out netting. See revisions to 11 USC Sec. 362(b)(17).

⁵ Many other types of bank regulation, such as the recently eliminated restrictions on banking branching in the U.S., have weak if any public interest rationales but can generate benefits to particular parts of the financial services sector (see Kroszner and Strahan 1999).

References

- Andreas, A.T. *History of Chicago from the Earliest Time to the Present Time*. Chicago: A. T. Andreas Company, 1894
- Bank for International Settlements (BIS). *Clearing Arrangements for Exchange-Traded Derivatives*, prepared by the Committee on Payment and Settlement Systems of the Central Banks of the Group of Ten Countries. Basle, Switzerland, March 1997.
- Bank for International Settlements (BIS). *Annual Report*. Basle, Switzerland, 2000.
- Bernanke, Ben. "Clearing and Settlement during the Crash" *Review of Financial Studies* 3 (1990), 133-51.
- Cronon, William. *Nature's Metropolis: Chicago and the Great West*. New York: Norton, 1991.
- Darby, Michael and Edi Karni. "Free Competition and the Optimal Amount of Fraud." *Journal of Law and Economics* 16 (August 1973), 67-88.
- Demirguc-Kunt, Asli and Harry Huizinga. "Market Discipline and Financial Safety Net Design," working paper, The World Bank, May 2000.
- Edwards, Franklin. "The Clearing Association in Futures Markets: Guarantor and Regulator." *In The Industrial Organization of Futures Markets*, edited by Ronald W. Anderson, pp. 225-254. Lexington, MA: D. C. Heath, 1984.
- Emery, Henry Crosby. *Speculation on the Stock and Produce Exchanges of the United States*,

- New York: Columbia University Press, 1896.
- Fenn, George W. and Paul Kupiec. "Prudential Margin Policy in a Futures-Style Settlement System." *Journal of Futures Markets* 13 (June 1993), 389-408.
- Gorton, Gary and Donald Mullineaux. "The Joint Production of Confidence: Endogenous Regulation and 19th Century Commercial-Bank Clearinghouses," *Journal of Money, Credit, and Banking* 19 (November 1987), 457-68.
- Greif, Avner. "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders? Coalition," *American Economic Review* 83 (June 1993), 525-45.
- Kane, Edward. "Competitive Financial Reregulation: An International Perspective." *In Threats to International Financial Stability*, edited by Richard Portes and Alexander Swoboda, pp. 111-45. New York: Cambridge University Press, 1987.
- Klein, Daniel, ed. *Reputation: Studies in the Voluntary Elicitation of Good Conduct*. Ann Arbor: University of Michigan Press, 1997.
- Kroszner, Randall S. "The Political Economy of Banking and Financial Regulation in the United States." *In Integrating Economies: Banking and Finance in the NAFTA Countries and Chile*, edited by George M. von Furstenberg, pp. 200-13. Boston: Kluwer Academic Publishers, 1997.
- Kroszner, Randall S. "On the Political Economy of Banking and Financial Regulatory Reform in Emerging Markets," *Research in Financial Services* 10 (1998), 33-51 (b).
- Kroszner, Randall S. "Can the Financial Markets Privately Regulate Risk? The Development of Derivatives Clearinghouses and Recent Over-the-Counter Innovations," *Journal of Money, Credit, and Banking* 31 (August 1999, part 2), 596-618.
- Kroszner, Randall S. "Is It Better to Forgive than to Receive? Evidence from the Abrogation of Gold Indexation Clauses in Long-Term Debt during the Great Depression," working paper, revised 2000.
- Kroszner Randall S. "The Political Economy of Financial Modernization," Federal Reserve Bank of New York *Economic Policy Review*, forthcoming.
- Kroszner, Randall S. and Raghuram G. Rajan. "Organization Structure and Credibility: Evidence from Commercial Bank Securities Activities before the Glass-Steagall Act." *Journal of Monetary Economics* (August 1997), 475-516.
- Kroszner, Randall S. and Philip Strahan. "What Drives Deregulation? Economics and Politics of the Relaxation of Bank Branching Restrictions in the United States." *Quarterly Journal of Economics* 114 (1999), 1437-67.
- Kroszner, Randall S. and Philip Strahan. "Obstacles to Optimal Policy," forthcoming in Frederick S. Mishkin, ed., *Prudential Supervision*, University of Chicago Press and NBER.
- Kroszner, Randall S. and Thomas Stratmann. "Interest Group Competition and the Organization of Congress: Theory and Evidence from Financial Services Political Action Committees," *American Economic Review* 88 (December 1998), 1163-87.
- Milgrom, Paul R., Douglass C North and Barry R. Weingast. "The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges and the Champagne Fairs." *Economics and Politics* 2 (1990), 1-23.
- Moser, James T. "Contracting Innovations and the Evolution of Clearing and Settlement Methods at Futures Exchanges." Working Paper, Federal Reserve Bank of Chicago, Research Department, August 1998.
- Pirrong, Craig. "A Positive Theory of Financial Exchange Organization with Normative Implications for Financial Market Regulation." Working Paper, Olin School of Business, Washington University, St. Louis, 1997.
- Remolona, Eli, William Bassett, and In Sun Geonum. "Risk Management by Structured Derivative Product Companies," *FRBNY Economic Policy Review* (April 1996), 16-37.
- Romano, Roberta. "The Political Dynamics of Derivative Securities Regulation." *Yale Journal on Regulation* 14 (Spring 1997), 279-406.
- Santos, Tano and Jose Scheinkman. "Competition among Exchanges." *Quarterly Journal of*

Economics, forthcoming.

Taylor, Charles H. *History of the Board of Trade of the City of Chicago*. Chicago: Robert O. Law, 1917.

White, Eugene. *The Regulation and Reform of the American Banking System, 1900-1929*. Princeton: Princeton University Press, 1983.