PRIVATE INTERBANK DISCIPLINE

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I. INTRODUCTION

Banking law has long languished in a purgatory, trapped by its overseers' preoccupation with whether government should switch "on" or "off" as a classical regulator. As lawmakers have tried to strike the perfect balance in banking between public restraint and private autonomy,[1] banking law over the past

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1. Concentrating almost exclusively on the extent to which governmental intervention in banking is, or is not, desirable, lawmakers have regularly charted and re-charted possible future directions for bank regulation. *See* PRESIDENT'S COUNCIL ON COMPETITIVENESS, THE LEGACY OF REGULATORY REFORM: RESTORING AMERICA'S COMPETITIVENESS (1992)("Quayle Commission" report recommending narrower deposit insurance, risk-based premiums, higher capital requirements, improved supervision, and possible reliance on private insurance); U.S. DEPT. OF TREASURY, MODERNIZING THE FINANCIAL SYSTEM: RECOMMENDATIONS FOR SAFER, MORE COMPETITIVE BANKS (1991)(the so-called "Treasury Proposal" advocating nation-wide branching, abolition of Glass-Steagall barriers, limits on deposit insurance, activity restrictions based on capital adequacy, and establishment of a federal superagency); TASK GROUP ON REGULATION OF FINANCIAL SERVICES, BLUEPRINT FOR REFORM (1984)(the so-called "Bush Task Force Report" recommending consolidated, streamlined regulatory oversight and stiffer capital adequacy and reserve requirements); REPORT OF THE PRESIDENT'S COMMISSION ON FINAN-

twenty years has shuttled back and forth between the poles of intervention and laissez-faire.[2] Most lawyers and analysts seem to have equated laissez-faire with no regulation, while supposing that government monopolizes the supply of regulatory discipline.

Meanwhile, a few legal scholars have strayed afield in search of non-governmental alternatives to banking regulation. At first, these scholars explored the regulatory potential of diffuse economic forces.[3] In the swath of deregulation and the banking blowdowns of the 1980s, however, "market discipline" seemed

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CIAL STRUCTURE & REGULATION (1971)(advocating the elimination of most interest rate ceilings on time deposits and expansion of the permissible activities of thrift institutions, in particular, granting permission to lend and invest directly in commercial real estate ventures); *see also* Charles E. Schumer, *Drafting a New Regulatory Scheme: A Congressional Perspective*, 31 N.Y.L. SCH. L. REV. 295 (1986).

2. In the 1970s and early 1980s, for instance, Congress relieved banks and thrifts of many traditional regulatory strictures. *See* Garn-St. Germain Depository Institutions Act of 1982, Pub. L. No. 97-320, 96 Stat. 1469 (codified in 11 U.S.C. § 109, 15 U.S.C. §§ 1602-03, 20 U.S.C. § 1099, 42 U.S.C. §§ 8103, 8105, and scattered sections of 12 U.S.C.)(continuing deregulation by permitting banks and thrifts to hold equity positions in real estate ventures; also facilitated mergers and reorganizations, and began the process, later pursued throughout the rest of the decade, of expanding the supervisory powers of the Federal Deposit Insurance Corporation ("FDIC") and the Federal Savings and Loan Insurance Corporation ("FSLIC")); Depository Institutions Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 132 (codified in scattered sections of 12 and 15 U.S.C.)(setting uniform but generally lower reserve requirements, eliminating interest rate ceilings, and lessening the differentiation in powers among the various financial institutions); Financial Institutions Regulatory and Interest Rate Control Act of 1978, Pub. L. No. 95-630, 92 Stat. 3641 (codified in scattered sections of 5, 12, 15, 18, 31, and 42 U.S.C.)(commencing the deregulatory process by broadening the loan and investment powers of federal savings and loan (S&L) institutions and lifting some interest rate ceilings).

As troubles among thrifts and banks then became notorious, however, Congress reregulated. *See* Federal Deposit Insurance Corporation Improvement Act of 1991, Pub. L. No. 102-242, 105 Stat. 2236 (codified in scattered sections of 5, 12, and 15 U.S.C.)(mandating close regulatory scrutiny of undercapitalized institutions, prodding regulators to tighten supervision of banks and thrifts, restricting regulatory discretion to insure deposits over $100,000, and mandating the adoption of risk-based deposit insurance premiums); Comprehensive Thrift and Bank Fraud Prosecution Act, 18 U.S.C. § 1001 (1990)(enacting increased criminal penalties for bank fraud); Financial Institutions Reform, Recovery, and Enforcement Act of 1989 ("FIRREA"), Pub. L. No. 101-73, 103 Stat. 183, (codified in scattered sections of 5, 12, 18, 26, 28, 31, 40, 42 and 44 U.S.C.)(bailing out FSLIC, restructuring oversight of bank and thrift regulation, and providing bank regulators with enhanced supervisory authority); Competitive Equality Banking Act of 1987 ("CEBA"), Pub. L. No. 100-86, 101 Stat. 552 (codified in 2 U.S.C. §§ 905-906, 15 U.S.C. §§ 45, 46 and 57a, 31 U.S.C. § 3334, and scattered sections of 12 and 31 U.S.C.)(providing for the recapitalization of FSLIC, imposing a moratorium on bank expansion into securities, real estate and insurance activities, and closing the "nonbank bank" loophole).

3. *See, e.g.*, Jonathan R. Macey & Elizabeth H. Garrett, *Market Discipline by Depositors: A Summary of the Theoretical and Empirical Arguments*, 5 YALE J. ON REG. 215 (1988)(suggesting that depositors may be able to regulate a bank's risk).

alarmingly deficient as a regulatory substitute.[4] The faint trail of scholarship toward extra-governmental regulation, which might then have been obliterated, turned instead to the clearing habited by the banks themselves. There it has recently opened onto an examination of various private regulatory systems, primarily within individual banks, that either exist already or readily may be developed.[5] The search for regulatory alternatives in banking has also drawn theoretical support from kindred spirits outside the banking domain.[6]

This article widens the search for a new approach to bank regulation. It surveys six anomalous regulatory systems that have succeeded in imposing private, non-governmental disciplines among and between banks. Each system regulates (or regulated) its banking subject so effectively that a casual ob-

4. *See, e.g.*, Helen A. Garten, *Banking on the Market: Relying on Depositors to Control Bank Risk*, 4 YALE J. ON REG. 129 (1987)(arguing that no empirical evidence supports the proposition that depositors can regulate the banking market and ensure that risks are minimized); Helen A. Garten, *Still Banking on the Market: A Comment on the Failure of Market Discipline*, 5 YALE J. ON REG. 241 (1988)(responding to Macey & Garrett); Helen A. Garten, *Whatever Happened to Market Discipline of Banks?* 1991 ANN. SURV. AM. L. 749 (1992).

5. *See, e.g.*, EDWARD J. KANE, THE S&L MESS: HOW DID IT HAPPEN? (1989)(arguing for private reinsurance of federally insured deposits, competition between federal deposit insurers and private syndicates, insurance coverage rollbacks, and increased stockholder discipline); Bert Ely, *Deposit Insurance Reform: 100% Cross Guarantees are the Only Answer*, 45 CONSUMER FIN. L. Q. REP. 148 (1991)(outlining the banking business's collective ability to self-insure deposits); Helen A. Garten, *The Perils of Regulatory Reform*, 49 MD. L. REV. 314 (1990)(discussing the capabilities and limitations of bank management as a potential failsafe in a deregulated banking environment); Jonathan R. Macey & Geoffrey P. Miller, *Double Liability of Bank Shareholders: History and Implications*, 27 WAKE FOREST L. REV. 31 (1992)(suggesting that reliance on shareholder monitoring may serve as a useful regulatory device to control excessive risk-taking by bank management); Jonathan R. Macey & Geoffrey P. Miller, *Nondeposit Deposits and the Future of Bank Regulation*, 91 MICH. L. REV. 237 (1992)(exploring the technical innovations, market forces, and private legal discipline that has led to the blistering growth of substitutes for the traditional bank deposit); Jonathan R. Macey & Geoffrey P. Miller, *Toward Enhanced Consumer Choice in Banking: Uninsured Deposit Facilities as Financial Intermediaries for the 1990's*, 1991 ANN. SURV. AM. L. 865 (1992)(exploring the practical advantages and disadvantages that "consumer choice banks" might experience from declining to partake of federal deposit insurance); Kenneth E. Scott, *Never Again: The S&L Bailout Bill*, 45 BUS. LAW. 1883 (1990)(arguing for the imposition of co-insurance and deductibles by deposit insurers).

6. *See, e.g.*, IAN AYERS & JOHN BRAITHWAITE, RESPONSIVE REGULATION 101 (1992) ("[T]here is no such thing as an historical optimal regulatory strategy. There are just different strategies that have a mix of strengths and weaknesses. The appropriateness of a particular strategy is contingent on the legal, constitutional, and cultural context and the history of its invocation."); Alfred E. Kahn, *Deregulation: Looking Backward and Looking Forward*, 7 YALE J. ON REG. 325 (1990); Larry E. Ribstein, *Efficiency, Regulation and Competition: A Comment on Easterbrook & Fischel's* Economic Structure of Corporate Law, 87 NW. U. L. REV. 254, 284 (1992)(surveying contexts, banking among them, in which "law can promote private ordering by reducing regulatory and tax barriers to innovation").

server would fully have expected its regulatory rigor to have been fostered through a scheme of extensive governmental control. But each discipline has flourished in another garden. Together, these six cases reveal a stunning, vital variety of regulation that will be termed, for lack of existing phraseology, "private interbank discipline."[7]

Private interbank discipline, a spontaneously occurring alternative to governmental regulation, is characterized by vigorous, adaptable forms of mutually agreeable disciplines among diverse banks, usually imposed through the vehicle of a formally separate interbank entity. The disciplinary missions of these interbank entities arise out of the dictates of particular financial transactions or instruments that are of practical use to the regulatee banks.

Admittedly, private interbank discipline is a rare phenomenon in the United States. Of the six cases collected here, two have been drawn from the ancient history of American banking—paper currency before 1863 and checking before 1913. Four other cases have been drawn from more contemporary but similarly exotic spheres of vigorous financial activity—credit cards, electronic fund transfers ("EFTs"), interest rate swaps, and the secondary mortgage market.

These disciplines function (or have functioned) to remove many of the traditional purposes of public regulators:[8] that is,

7. "Private interbank discipline" reflects a range of empirical phenomena in banking, not a wholly tidy category. It specifically refers to successful attempts by private financial institutions to impose prudential strictures on institutions in their shared markets. Under the appellation of private interbank discipline, this article focuses on some regulatory enterprises that are not precisely "private" in the commercial sense of the word, like non-profit semi-private trade associations, and quasi-public government agencies that operate in part but not completely as private enterprises. Similarly, not all the agents of self-regulation touched on in this article are technically banks or interbank associations; they also include corporations and government agencies that conduct semi-private banking businesses while simultaneously advancing discipline among a broader array of private institutions. Even the term "discipline" is not entirely apt to the extent that it refers to a rigid system of rules (or the sanctions that enforce such a system); the term is adopted nonetheless in light of its related meaning as a form of internalized control in service of an externally desirable end.

8. Many scholars assume the need for regulation without elaboration. However, when justifications are offered, several sometimes inconsistent rationales recur.

First is the threat of monopoly. Although the stunning multiplicity of banks in the United States suggests that Americans should have no serious concern with monopolization in the banking business, in fact the issue of monopolization (or more accurately, cartelization) has never lurked far from the surface. *See, e.g.*, LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT (Richard M. Abrams ed., Harper & Row 1967)(1914)(alleging anti-competitive interlocks among banks and big business, and reflecting sentiments that were memorialized in such legislation as the Federal Reserve

to ensure the integrity of the subject interbank operations; to check the monopolistic abuses that tend to arise in connection with large centralized ventures; to protect the interbank ventures from free riders and moral hazard; and to avoid negative externalities that might invite governmental regulation of the interbank disciplinarians.[9]

The case studies also reveal the circumstances that have

Act of 1913). Attacks on the bank-supported merger mania of the 1980s, and on the longstanding record of reluctance by banks to lend to minorities, provide modern analogues to Brandeis's 1913 polemic.

A second and related economic justification for bank regulation is the possibility that banks extract excessive economic rents, that is, derive revenue solely because of their privileged access to the unique resources of governmental loans and charters.

A third rationale for regulation is the alleviation of negative externalities. The primary externality traditionally associated with banking is the possibility of causing financial disruption in the wider economy. Commonly cited examples of such disruptions include loss of depositor savings, bank runs, reduced consumer confidence, tight lending, and increased taxation attributable to bank-related expenditures like the thrift bailout.

A fourth justification for regulation is excessive competition among banks, which often has been presumed to weaken the banking system. This rationale helps explain such laws as 12 U.S.C. § 1816(6)(1950), which obliges the Federal Deposit Insurance Corporation ("FDIC") to consider "[t]he convenience and needs of the community to be served by such depository institution" before extending deposit insurance, and which has been interpreted to state a concern about overcompetition. *See* Kenneth E. Scott, *In Quest of Reason: The Licensing Decisions of the Federal Banking Agencies*, 42 U. CHI. L. REV. 235 (1975).

A final economic rationale for bank regulation is the presumed need for a policing device against moral hazard. "Moral hazard" is the situation posed when an actor (a bank, for example) expects to shift losses stemming from its activity to another party (such as an insurer like the FDIC), while simultaneously expecting to realize any gains flowing from that same action. The thrift crisis of the 1980s is widely presumed to have been caused in part by moral hazard. *See, e.g.*, Michael C. Keeley, *Deposit Insurance, Risk, and Market Power in Banking*, 80 AM. ECON. REV. 1183 (1990); Kenneth E. Scott, *Deposit Insurance— The Appropriate Roles for State and Federal Governments*, 53 BROOKLYN L. REV. 27 (1987); Harris Weinstein, *Moral Hazard Deposit Insurance and Banking Regulation*, 77 CORNELL L. REV. 1099 (1992).

9. For instance, much as governmental regulators attempt to rationalize the terms of deposit-taking and lending, the ISDA swap code helps to rationalize interest rate swap procedure. While legislation specifies allocations of risk in consumer EFTs, the financial services industry has sponsored uniform laws like the new Article 4A to standardize risk allocation in wholesale wire transfers. Bank examiners ferret out operational irregularities using techniques patterned on those employed by private clearinghouse examiners. When Congress prodded the Fed to modernize check collection, the purveyors of credit cards and EFTs already had cultivated model technological innovations in their own settings.

The government now imposes reserve requirements like those implemented long ago by the Suffolk Bank. Public regulators mandate limits on bank lending to minimize excessive risk-taking, much as swap dealers willingly hedge their positions and credit card companies voluntarily set consumer credit limits. The Fed today intervenes in stock market panics with "circuit breakers" and cash infusions, as the check clearinghouses developed loan certificates to break analogous financial panics of that earlier era. In short, the formal legal requirements of the public regulators are often matched, and even in context surpassed, by the self-regulatory achievements of the private sector.

proven fertile for private interbank discipline;[10] explain the rarity of private interbank discipline;[11] uncover the tendency of private disciplinary systems to become expropriated by government;[12] test the limits of private interbank discipline;[13] and suggest the steps the government can take to facilitate private interbank discipline.[14]

This article is not meant to endorse an unthinking reliance on regulatory privatization as a panacea.[15] Its most general significance for public policy instead may be to outline a new alternative worthy of review by lawmakers considering whether to impose a conventional system of governmental regulation in a banking-related sector.[16]

Recognition of the regulatory potential of private interbank discipline may have immediate practical significance. With private interbank discipline in mind, for instance, the federal government might wisely withdraw from its tentative reregulation of the secondary mortgage market. In the Federal Housing Enterprises Financial Safety and Soundness Act of 1992[17] ("FHEFSSA"), the federal government not only reregulated the secondary mortgage market, but simultaneously expressed

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10. *See infra* part VIII.A.
11. *See infra* part VIII.B.
12. *See infra* part VIII.B.
13. *See infra* part VIII.C.
14. *See infra* part VIII.D.
15. Indeed, any switch to a scheme of predominantly private discipline might well require revitalized public regulation to protect consumer interests and police against abuses of monopoly powers.
16. Although the interjection of a non-governmental element in the regulatory calculus might at first glance appear to support calls for deregulation, the expansion of private interbank discipline would probably not wholly supplant classical regulation, and would furthermore actively invite new forms of regulation, for example, to control private disciplinary excess or omission. The ambiguous implications of private interbank discipline for governmental regulation call to mind Professor Kahn's ruminations on regulatory reform:

> In short, the lesson I take from recent history is that the evolution of regulatory policy will never come to an end. The path it takes—and we should make every effort to see that it takes—however, is the path not of a full circle or pendulum, which would take us back to where we started, but of a spiral, which has a direction. This is in a sense only an expression of a preference for seeking consistently to move in the direction of the first-best functioning of a market economy, rather than the second- or third-best world of centralized command and control.

Alfred E. Kahn, *Deregulation: Looking Backward and Looking Forward*, 7 YALE J. ON REG. 325, 353-54 (1990).

The general concept of enlisting private forces in the public interest is, of course, not new. *See, e.g.*, CHARLES L. SCHULTZE, THE PUBLIC USE OF PRIVATE INTEREST (1977).

17. Pub. L. No. 102-550, 106 Stat. 3672 (1992)(enacted as Title XIII of the Housing and Community Development Act of 1992).

a deep ambivalence about its re-intervention by providing for the submission to Congress of three studies on the privatization of the government-sponsored enterprises that regulate the market.[18] Private interbank discipline may furnish a way of defending the public's interest in the secondary mortgage market without intruding on the market.[19]

The viability of private interbank discipline also lends support to current suggestions that deposit insurance be wholly privatized using a collective interbank system of mutual guarantees.[20] An effective private alternative to government-backed deposit insurance might well have saved taxpayers tens of billions of dollars over the last decade. Reliance on the concept in this single arena could by itself have profound implications for banking.

In short, private interbank discipline poses a provocative alternative to clumsy governmental intervention in banking, without abandoning the public's interest in facilitating the safe operation of an elaborate national (and international) financial infrastructure.

II. Private Paper Currency

A. *Preliminary Experience with Governmental Issues*

Colonial governments experimented with paper currency before private banks even existed in America. Those early experiments met at best with marginally satisfactory results that pale in comparison with the relative success of private issues of paper currency during the first eighty years of the republic. Yet the initial public experimentation with paper currency in America helps explain the later preference for private currency, and provides a useful standard by which to gauge those private efforts.

Based on direct experience with the European economy, the first American colonists were thoroughly familiar with money as a standardized system of tokens that may readily be ex-

18. Section 1355(a) of both FHEFSSA and the Housing and Community Development Act of 1992 technically mandates the preparation of only a single government-sponsored report on the advisability of privatizing Fannie Mae and Freddie Mac, but because § 1355(d)(2) permits both of the subject GSEs to submit their own reports, Congress assured the generation of at least three perspectives on the question, albeit all from various vantage points within the governmental banking bureaucracy.

19. *See infra* part VII.

20. *See, e.g.*, Ely, *supra* note 5.

changed for goods and services. The colonists employed specie (money in the form of precious metals, usually struck as coins in the standard denominations of their sovereign issuers) to facilitate trade whenever specie was available. But until the demise of specie in the Twentieth Century,[21] specie remained chronically scarce in relation to the volume of market transactions in the American economy requiring the facility of money.[22]

The early colonists typically traded what little specie they had with merchants in Europe, leaving their local trade dependent on innovative alternatives to money, including staple commodities[23] and even Indian wampum.[24] But their experience with market economies in Europe left them keen to replicate a specie substitute in the New World that could facilitate a more substantial volume of complex trade, such as that which was

21. The redeemability of paper currency for gold ended with Franklin Roosevelt's proclamation of a bank holiday on March 6, 1933. Proclamation No. 2039 of March 6, 1933, 48 Stat. 1689 (1933), *ratified by* Emergency Banking Relief Act of Mar. 9, 1933, 12 U.S.C. § 95b (1933); *see also* Proclamation No. 2040 of March 9, 1933, 48 Stat. 1691 (1933). Primarily for reasons of international exchange, the United States from 1945 to 1971 adhered to the international Bretton Woods agreement, which pegged the relationship between gold and the dollar at about $35 per ounce of gold (though United States citizens still could not legally own gold, a vestige of the uncoupling of paper currency from gold in 1933). In 1968, the United States officially withdrew from its obligation under the Bretton Woods Agreement to sell gold to private foreigners, and in 1971, the United States withdrew from its obligation to sell gold to foreign central banks. Since then, the dollar has floated against other currencies, gold playing no formal role. *See* ROGER L. MILLER & ROBERT W. PULSINELLI, MODERN MONEY AND BANKING 578-88 (2d ed. 1989).

22. Even in the Nineteenth Century, although substantial specie reserves by then had been supplied by indigenous mining and collected from foreign investors eager to share ownership in the blossoming American economy, the nation's specie reserves could not keep pace with the demand for money. Across the nation in 1813, 1837, and 1873, for example, the demand for specie so threatened to outstrip supply that the banks collectively suspended their promises to redeem their respective notes in specie.

23. Tobacco served as currency in Virginia and Maryland, where it was accepted for public debts. Rice played a similar role in South Carolina, as did wheat, beef and pork in the northern colonies, and beaver skins in New York and Connecticut. Commercial centers like Boston even accepted payments of debts in "shillings of merchantable goods." Commodity-to-specie equivalencies, however, proved resistant to standardization. For instance, a 1758 Virginia law (c. VI, 7 Henning 240) that established a ratio of two shillings per pound of tobacco was later disallowed by the King partly in response to complaints from parsons whose effective wages were substantially reduced by the law. *See* ARTHUR NUSSBAUM, MONEY IN THE LAW—NATIONAL AND INTERNATIONAL—A COMPARATIVE STUDY IN THE BORDERLINE OF LAW AND ECONOMICS 554-55 (1950)(citing CURTIS P. NETTELS, THE MONEY SUPPLY OF THE AMERICAN COLONIES BEFORE 1720 (1934)).

24. The early colonial economy is sometimes questionably described as a "barter economy." *See, e.g.*, John Steele Gordon, *Understanding the S&L Mess*, AM. HERITAGE, Feb.-Mar. 1991, at 49, 51. The problem is that "barter" suggests the absence of a market intermediary. Market intermediaries, however, thrived throughout the colonial period, clearing trade with the creative use of commodities as a sort of currency.

being supported in European markets by specie.[25] Thus, the Massachusetts colony reported to Charles II in 1684 that the absence of specie had forced it "for some years" before 1652 to pass "paper bills . . . for payment of debts" within the colony.[26] Cotton Mather defended Massachusetts' bills of credit as "an abiding cash; for no man will carry it to another country, where it will not pass, but rather use it here, where it will, or at least ought."[27] On the other hand, "[s]ilver in New England" was to Mather "like the water of a swift running river; always coming and as fast going away."[28] In a later pamphlet published in Philadelphia in 1729, Benjamin Franklin joined Mather and others in reasoning passionately for paper currency.[29]

Whether or not Massachusetts's early use of paper bills represented "the first paper money in western civilization,"[30] it is undeniable that several colonies quickly recognized the potential usefulness of paper currency, and issued "bills" or "bills of credit" prior to the Revolution. The bills, which were paid to creditors of the issuer colonies and could be used by any bearer at least to pay taxes, met with fair success as a stable circulating medium of exchange when the issuer governments restrained themselves from flooding the market. Colonial and state legis-

25. Specie gravitated to the Old World apparently because of a longstanding trade imbalance. Old World capitalists, who monopolized industrial manufacture globally in the early Eighteenth Century, paid relatively competitive prices for New World raw materials. After adding value in Old World factories, finished goods were shipped back to the New World and sold at monopolistic prices.

26. 1 WILLIAM GRAHAM SUMNER, A HISTORY OF BANKING IN ALL THE LEADING NATIONS 1 (reprint 1971)(1896).

27. *Id.* at 4.

28. *Id.*

29. BENJAMIN FRANKLIN, THE NATURE AND NECESSITY OF A PAPER-CURRENCY (1729), *reprinted in* I PAPERS OF BENJAMIN FRANKLIN 139 (Leonard W. Labaree ed., 1959). This pamphlet was among the first published by the fledgling "Printing-Office" of Franklin and Meredith in Philadelphia.

30. NUSSBAUM, *supra* note 23, at 558. In fact, Florence and London each have a surer claim to that distinction. During the Renaissance, Florentine goldsmiths who held gold for others in relatively secure conditions issued documents to the true owners memorializing the bailments. Those notes were sometimes used in lieu of specie. *See* MILLER & PULSINELLI, *supra* note 21, at 60-61, 63 n.7. London goldsmiths on Lombard Street had similar practices in the 1600s. Nevertheless, Nussbaum may not have been so far from the mark because Europe continued to rely primarily on specie until the Nineteenth Century. Thus, although Europeans technically invented paper money, the "European experience with paper currency was slight" in comparison with the American experience, at least by the Nineteenth Century. WILLIAM J. SHULTZ AND M. R. CAINE, FINANCIAL DEVELOPMENT OF THE UNITED STATES 12 (1937). In 1819, for instance, Alexander Baring testified before a committee of the English House of Commons that "the system of a paper currency has been carried to a greater extent in America than in any other part of the world." BRAY HAMMOND, BANKS AND POLITICS IN AMERICA FROM THE REVOLUTION TO THE CIVIL WAR 189 (1957).

latures, however, found themselves increasingly incapable of such restraint, tempted as they were at each new legislative session to repeat the "successes" of prior issues. Thus, in the later colonial period and during the first years of the republic under the Articles of Confederation, over-issues of government paper produced feverish inflation and cultivated widespread public suspicion about the ability of governments to supervise paper currency.[31]

B. *The Constitutional Bias Against Governmental Issue*

Private development of paper currency flourished in a vacuum created by a presumed constitutional prohibition against governmental issuance of paper currency. Only when the Civil War invited extraordinary readings of the Constitution did the federal government finally nationalize the business of paper currency.

This early constitutional gloss grew out of the nation's experience during the first years of the republic. Shortly after the Declaration of Independence in 1776, the Continental Congress itself began to issue bills of credit, to be redeemed by any bearer at some unspecified future time for "Spanish milled dollars, or the value thereof in gold or silver."[32] Although the "Continentals" (as the bills became known) technically were not legal tender (a power denied to the Continental Congress by the Articles of Confederation), the Congress did attempt circuitously to effect the same purpose by outlawing anyone who failed to accept the bills "from all trade and intercourse with the inhabitants of these colonies."[33] By 1777, however, a relentless, war-driven increase in the issue of Continentals, without any corresponding increase in the reserves of the issuer, resulted in precipitous depreciation of the bills, until by 1780 they had been rendered almost worthless, hence the phrase,

31. *See* MARGARET G. MYERS, A FINANCIAL HISTORY OF THE UNITED STATES 38-40 (1970). For example, eight pounds worth of bills issued by Rhode Island in 1741 had depreciated 96% by 1771, when they brought just six shillings. *See also* NUSSBAUM, *supra* note 23, at 561.

32. The Spanish "dollar" coin was the most widely circulated currency at the time. English-issued specie was regularly stripped from circulation by (1) English merchants who repatriated the specie in the course of their substantial trade with the colonies, and (2) colonists who reasonably felt that it represented the safest possible repository of value.

33. Continental Congress Resolution of July 1, 1776.

"not worth a Continental."[34] As a result, the public was intensely dissatisfied with the central government's early role in the issue of money, a bias that was compounded by the increasingly chaotic valuation of many state issues of bills before and after the peace.[35]

These perceptions contrasted sharply with the nation's relatively felicitous experience between 1781 and 1787 with circulating bank notes that had been issued by the three semi-private banks then in existence, the Bank of North America,[36] the Bank of New York[37] and the Massachusetts Bank.[38] The notes of the banks promised payment of the face value in specie to any bearer on demand, and were issued to investors, borrowers, and depositors, supposedly to the limits of their respective private commitments to the banks, whether in specie or some other security-like merchantable goods or land. The investors, borrowers, and depositors then used the notes in third-party transactions to buy goods and services, thereby injecting the notes into circulation.

One indication of the solid success of the Bank of North America's notes is that, during the repeated attacks against that bank by agrarian representatives who dominated the Pennsylvania legislature in Philadelphia from 1785 to 1787, no one alleged that the bank's notes had depreciated.[39] On the contrary, complaints arose *because* of the bank's stability, as evidenced in part by its notes' steady value. To many agrarians,

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34. In a mostly symbolic gesture, given the fact that they had been flushed from circulation for many years, Continentals were finally redeemed at one percent of their face value in 1790. Act of August 4, 1790, 1 Stat. 138 (1790).

35. MYERS, *supra* note 31, at 39-40.

36. The bank was approved by the Continental Congress on May 26, 1781, incorporated on December 31, 1781, and independently incorporated under state laws by Pennsylvania, New York, and Massachusetts.

37. Although the Bank of New York was not chartered until 1791, it operated as a private association beginning June 9, 1784. *See* HAMMOND, *supra* note 30, at 48-64; SUMNER, *supra* note 26, at 18.

38. The Massachusetts Bank was chartered in February, 1784, by the Massachusetts legislature. For a discussion of the early operation of these banks, see HAMMOND, *supra* note 30, at 65-88.

39. *See id.* at 53-64:

> The case of the 'gentlemen of the country' against the bank included charges of usury, favoritism, 'comity with commerce,' interference with the state's prerogative of monetary issue, refusal to lend on the long terms thought necessary for honest borrowers, discrimination against husbandmen and mechanics, insistence upon punctuality in paying debts, admission of foreigners to investment in America, and other miscellaneous mischiefs.

Id. at 53.

any concentration of monetary might recalled past exploitation by the English crown, the Bank of England, and the English trading companies. That experience in turn suggested that current concentrations, even if home-grown, might evolve into future forms of exploitation.

The nagging agrarian distrust of monetary concentrations, coupled with the discouraging collective experience in the fledgling republic with many state and national bills of credit, militated strongly against inviting governmental domination of the monetary system. Thus, although a draft of the Constitution (following the Articles of Confederation) proposed that Congress have the power to "emit bills on the credit of the United States," that clause was struck by a nine-to-two vote at the Constitutional Convention in August, 1787. During the debate, James Wilson apparently asserted that "paper money . . . can never succeed whilst its mischiefs are remembered,"[40] a theme echoed in James Madison's defense of the proposed Constitution in *The Federalist Number 44*.[41]

The Framers' distrust of direct governmental control of the monetary system was further reflected in three constitutional restraints, one outlawing state coinage, another prohibiting issuance by states of bills of credit, and a third short-circuiting any state attempts to specify a legal tender other than specie.[42] At the same time, the Constitution's explicit terms granted the federal government power only to mint coins and "regulate the value" of money,[43] which probably just meant standardizing the metallic content of coins.[44] In light of the general hostility to governmental tinkering with money, the Constitution's si-

40. 5 DEBATES ON THE ADOPTION OF THE FEDERAL CONSTITUTION 435 (Jonathan Elliot ed., 1987)(1888).

41. The extension of the prohibition to bills of credit must give pleasure to every citizen in proportion to his love of justice and his knowledge of the true springs of public prosperity. The loss which America has sustained since the peace, from the pestilent effects of paper money on the necessary confidence between man and man, on the necessary confidence in the public councils, on the industry and morals of the people, and on the character of republican government, constitutes an enormous debt against the States chargeable with this unadvised measure, which must long remain unsatisfied; or rather an accumulation of guilt, which can be expiated no otherwise than by a voluntary sacrifice on the altar of justice of the power which has been the instrument of it.

THE FEDERALIST No. 44, at 281-82 (James Madison)(Clinton Rossiter ed., 1961).

42. U.S. CONST. art. I, § 10.

43. *Id.* § 8.

44. JAMES W. HURST, A LEGAL HISTORY OF MONEY IN THE UNITED STATES, 1774-1970 13 (1973).

lence on national bank chartering and on the ability to specify legal tender represented a latent victory for the Federalists. All branches of government ultimately joined the Federalists in reading the Constitution liberally in both respects.[45] Nevertheless, the Constitution remains a striking testament to the Framers' intense discomfort with any significant public intervention in the American monetary and banking system. It was a testament that survived virtually intact for eighty years, clearing the field for the robust development of private paper currency.

C. *The Paper Paradox: Private Issue, Public Currency*

The Constitution's paucity of explicit support for government regulation of money and banking set the tone for American financial law throughout the first major stage of economic development in the United States, that is, from the Revolution to the Civil War—a period that remained largely bare of public monetary and banking regulation. The only significant forays into federal intervention during the period involved the chartering in 1791 for twenty years of the semi-private First Bank of the United States;[46] the establishment of a mint in 1792;[47] a brief attempt to float war debt in the nature of a circulating medium in 1815;[48] the chartering in 1816 for twenty years of the semi-private Second Bank of the United States; an apparently limited attempt in 1837 after the expiration of the Second Bank's charter to authorize replacement of that bank's notes with government-issued bearer notes;[49] and the adoption of

45. Alexander Hamilton's proposal while Treasurer of the United States for a national bank, followed by Secretary of State Thomas Jefferson's constitutional objections and Hamilton's rebuttal to President George Washington, are conveniently included in MICHAEL MALLOY, REGULATION OF BANKING 8-15 (1992).

46. Washington initially agreed with Hamilton on the need for a national bank, and although debate was repeatedly revived in later years during the re-charter battles and later in the context of the National Bank Act of 1864, Hamilton's reading ultimately prevailed.

47. An Act Establishing a Mint and Regulating the Coins of the United States, 1 Stat. 246 (1792).

48. Act of Feb. 24, 1815, 3 Stat. 213 (1815). This issue was quickly refunded and hence its legality was never challenged despite the doubtful nature of the government's constitutional authority to emit bills of credit.

49. Congress in 1837 passed an act permitting the issue of circulating notes by the federal government bearing a nominal (.001 percent) interest, thereby arguably avoiding a direct conflict with the presumed constitutional prohibition against issuing bills of credit. Act of Oct. 12, 1837, 5 Stat. 201 (1837). The Treasury did not test its authority under that act until 1843, when a limited issue was released and quickly declared unconstitutional by the House of Representatives. H.R. REP. No. 379, 28th Cong., 1st Sess. (1843); CONG. GLOBE, 28th Cong., 1st Sess. 454, 460 (1843).

the Independent Treasury System in 1846,[50] mandating the withdrawal of federal deposits from private banks and the payment of all debts to the Treasury in specie. The only Congressional proposal before the Civil War to establish any paper as legal tender was "decisively voted down by the House" in 1814.[51] These few early public forays into bank and currency regulation undeniably have drawn enormous attention (both contemporaneously and historically), but more for their constitutional, jurisprudential, and political significance than for their importance in helping shape the early American financial infrastructure.

Meanwhile, during this period of governmental abstention from the direct control of money and credit,[52] the nation was engaged in a long state of private "bancomania."[53] Only six banks existed by 1791, but the number ballooned to twenty-nine by 1800,[54] 246 by 1816,[55] and 568 in 1835.[56]

The single most important characteristic of the early privately chartered banks was their ability collectively to maintain and expand the burgeoning money supply required by the increasingly commercial economy. Their primary building blocks for this purpose were the various bank-notes that each issued individually. Although the states directly financed many large quasi-public projects (for example, road, canal, and railroad construction), private banks established themselves at the financial crossroads of the rapidly expanding general economy by providing merchants, farmers, and individuals with credit and depositary services. In the course of making loans, taking

50. Act of Aug. 6, 1846, 9 Stat. 59 (1846). This resurrected the earlier Act of July 4, 1840, 5 Stat. 385 (1840), which had been repealed by Act of Aug. 13, 1841, 5 Stat. 439 (1841).

51. HURST, *supra* note 44, at 137.

52. This laissez-faire attitude contrasted noticeably with England's relatively interventionist use of the Bank of England as its agent of policy.

53. HAMMOND, *supra* note 30, at 72.

54. *Id.* at 144-45.

55. *Id.* at 146.

56. *Id.* at 453. In a footnote, Professor Hammond mentions some of the discrepancies that he discovered in attempting to compile statistics on the numbers of banks chartered before the Civil War. Subsequently, Professor Fenstermaker conducted a more detailed comparison of the various slightly conflicting accounts of the number of chartered banks operating from 1782 through 1818. J. Van Fenstermaker, *The Statistics of American Commercial Banking, 1782-1818*, 25 J. ECON. HIST. 400 (1965). The discrepancies appear linked mostly to whether one includes private non-chartered banks and bank branches. In any event, the discrepancies rarely exceed 10% of the lowest estimate, and hence appear insignificant to the general observation of rapid bank growth throughout the period.

deposits, and facilitating exchange, the banks inserted their respective stocks of bank-notes into everyday circulation.

Over-issuances of bank-notes occasionally plagued the antebellum economy, to which state and federal lawmakers reacted by facilitating even more rapid expansion and privatization of the banking business. Andrew Jackson's vigorous campaign against the Second Bank of the United States resulted in both Jackson's re-election as president in 1832 and the expiration of the Second Bank's charter in 1836. Michigan in 1837 and New York in 1838 then passed "free banking" laws, which were open invitations to any citizens seeking to incorporate as banks. By 1860, eighteen of thirty-three states had adopted free banking.[57] The so-called free banking era (1836-1863) represents one high-water mark in the conception of banking as a relatively private affair. It was a characterization that had been questioned at least since the nation's founding, when banks were considered by many to be rarified, semi-private agents of public interests, coveting near-monopoly powers and the public trust.[58]

The nation's experience with free banking often has been characterized in retrospect as undisciplined and chaotic, an alarming example "of what would happen if banking were unregulated."[59] Indeed, among the banks that were chartered during the period, an unusually large number failed.[60] But the wave of free banking continued to spread, and public regulation remained restrained. Professor Hurst has noted that, throughout the period, "strong currents of interest and of pol-

57. Michigan, New York, Georgia, Alabama, New Jersey, Illinois, Massachusetts, Ohio, Vermont, Connecticut, Indiana, Tennessee, Wisconsin, Florida, Louisiana, Iowa, Minnesota, and Pennsylvania all adopted free banking by 1860. Arthur J. Rolnick & Warren E. Weber, *Inherent Instability in Banking: The Free Banking Experience*, 5 CATO J. 877, 879 (1986).

58. Indeed, it was apparently the initial understanding that the first bank charters would provide *exclusive* monopolies in their respective locales. *See* HAMMOND, *supra* note 30, at 68. Thus, the charter of New York City's second bank, the Manhattan Company, was wrapped by Aaron Burr in the disarming package of a water development proposal of substantial civic importance, to which the banking powers were appended as if they were merely financing vehicles for the water project. *Id.* at 149-61. Burr enlisted Alexander Hamilton's support in his successful drive to secure that charter for the Manhattan Company in 1799. Hamilton later deeply regretted his key assistance after realizing Burr's intention to use the Manhattan Company as a competitor to the Bank of New York, which Hamilton personally had conceived as the sole agent for New York City's financial interest. The incident helped transform the political differences between the men into a bitter personal rift. In 1804, they dueled to Hamilton's death.

59. Rolnick & Weber, *supra* note 57, at 877.

60. *See* MILLER & PULSINELLI, *supra* note 21, at 216-17.

icy inclined lawmakers to leave in private hands substantial areas of banking decisions affecting money policy."[61] The question naturally arises, why did these sentiments prevail over legitimate concerns about the potential for over-issuance of currency and dangerous levels of bank failure?

As a threshold matter, it appears unsatisfactory to conclude that the government simply could not conceive of regulating banking, because, as Professor Hurst has observed, in some respects "legal regulation [of banks] bulked large" during exactly the same era,[62] especially in the chartering process and with respect to note issue. Another plausible explanation, that bank-charter applicants captured the legislative process, has never been historically demonstrated. In any event, it seems unlikely that an unvested interest group (those seeking bank charters) could easily have bested a powerful vested interest (those with charters seeking to limit further entry to the field) in a subterranean political battle such as is commonly alleged today to infect the modern bank regulatory process.

A more promising explanation may lie in a willingness during that period to rely on a rude sort of market discipline. Amid a contemporary cacophony of bank paper and fraud, Michigan and New York apparently wagered that a populist market discipline would prevail among the banks in the wake of free banking, shaking out the fraudulent and shoring up the honest among them. Revisionist historians have tended to support the view that bank failures during the era were keyed to bank-specific weaknesses, and were not based on systemic instabilities.[63] Indeed, Professor White has suggested that the failures may even have been properly attributable to the limited regulatory accompaniments of free banking, specifically, a typical requirement that new banks post particular kinds of bonds with state authorities to cover their note issues, and to limitations on the ability of banks to branch out.[64]

Thus, whatever the cause of increased rates of bank failure during the free banking era, the mere evidence of increased failure does not necessarily indicate a lack of all discipline. Because free banking laws also obliged banks to fold upon the

61. HURST, *supra* note 44, at 151.
62. *Id.*
63. Rolnick & Weber, *supra* note 57, at 887.
64. Lawrence H. White, *Regulatory Sources of Instability in Banking*, 5 CATO J. 891 (1986).

first sign of insolvency and tap a sequestered capital reserve, the evidence of bank failure is actually evidence of a simple sort of discipline that is curiously absent from modern banking. In recent years we have seen hosts of insolvent "zombie" banks that have been prevented from failing by federal regulators, either because their agencies lacked sufficient funding to cover depositor claims or because the regulators succumbed to the insolvent banks' ever-rosy turnaround stratagems.

But the legislators of the free banking era presumably were not just relying on rough market discipline to justify their reliance on private controls. Plenty of contemporary evidence suggested that private banks could willingly and intentionally regulate themselves and one another.

First, until the 1830s and continuing thereafter, almost all American banks had voluntarily bound themselves by the laws of their charters to sensible capital and reserve requirements. Based on their studies of early bank charters, both Sumner and Hammond agree that the majority were expressly patterned on the innovative, financially sound charters of the First Bank of the United States and the Bank of New York, both written by Alexander Hamilton, who in turn relied on the Bank of England's 1694 charter.[65] Thus, the private landscape of American banking, which was littered with miniature quasi-public banks all with express legal restrictions in their public charters, grew wholly distinct from European private banking, in which, by contrast, the organizational schemes were primarily secret and nonbinding.

Second, equipped with "bank-note detectors" prepared by banking industry insiders, bank customers showed themselves reasonably capable of picking their own paths through the confusion naturally generated by the circulation of hundreds of types of bank notes.[66] Bank-note detectors were pamphlets that estimated the relative worth of individual issues, evaluations predicated on actual market transactions in the issues as well as on predictions about the soundness of each issuer. The pamphlets also described counterfeit issues. Merchants, bankers, and ordinary citizens all avidly used the bank-note detectors as essential references to assist in facilitating fair exchanges. The

65. HAMMOND, *supra* note 30, at 128-43, 188.
66. *See* SUMNER, *supra* note 26.

widespread use of the detectors indirectly imposed discipline on the issuers to maintain sound bank conditions.

Third, banks imposed discipline *on each other*, regularly presenting collections of notes for redemption, especially when the presenting bank had reason to mistrust the viability of the issuer bank. The Suffolk Bank system provides the most striking example of that early form of private interbank discipline.

D. *Interbank Currency Control: The Suffolk Bank System*

The entirely private Suffolk Bank system provides an especially well-known example of bank-to-bank discipline in the early Nineteenth Century that succeeded for a longer period than any regulatory foray of the First or Second Banks of the United States.

As alluded to above, some banks over-extended themselves in their issues despite charter provisions to the contrary. A prime example of this phenomenon was the excessive issue of notes by so-called "country" banks in the late Seventeenth and early Eighteenth Centuries. By about 1800, notes issued by the outlying country banks began to swamp commercial centers like Boston.[67] Country banks typically issued their notes to agrarian borrowers, who needed currency to finance purchases for their farming operations and could offer only property as security. The commercial banks in the cities at that time did not fund distant farmers, but instead generally lent only to merchants for periods shorter than a growing season on easily marketable security other than real property.

The country-bank notes eventually penetrated the commercial centers, whether in trade for dry goods or out of purposeful arrangements by the country banks to exchange their notes with distant correspondent banks closer to or in the cities. Whatever the vehicle, the outlying banks found it advantageous that their notes gravitated to distant locales, because the distance increased the chance of a longer time between issue and possible redemption in specie.

With those "foreign" notes often trading for less in the commercial centers than comparable notes of the local city commercial banks, the public in the cities tended either to redeem immediately or hoard the commercial banks' more valuable

67. 1 FRITZ REDLICH, THE MOLDING OF AMERICAN BANKING 67 (1968).

notes. To redeem the notes of a country bank, the holder was obliged to travel to the country location (a prohibitively elaborate, expensive, and time-consuming project), or attempt to present the notes at a local bank for redemption, which might not accept the notes at all or might do so only at a price below face value.

The Massachusetts Bank, together with the Boston branch of the First Bank of the United States, by 1796 clearly recognized and attempted to address the plethora of country issues and the crowding out of city-bank notes.[68] Yet despite the quasi-public nature of their charters, which supposedly should have obliged them to help ensure the integrity of the banking system in the public interest, neither of those institutions together or separately was able to stabilize the market for country-bank notes.

With commercial banks regularly refusing to honor the notes of the country banks,[69] in 1804 a group of smaller Boston merchants, who apparently traded regularly with people in the countryside and hence had an incentive to bolster the market for country-bank notes, applied for and was granted a charter under the name of the Boston Exchange Office to operate as a sort of clearing house for country issues. The major banks reacted to this at least theoretically promising scheme (and competitor) by beginning to honor the notes of the country banks themselves, and then by presenting pools of such notes for redemption. In defense, the Boston Exchange Office in 1805 applied for an application for a monopoly, which was denied.

Whether because of that denial or because its charter prohibited it from buying notes for less than face value, the Boston Exchange Office soon disappeared from view. But the seed was planted, and individual money brokers in succeeding years pur-

68. *Id.*

69. *Id.* at 68. The commercial banks distrusted the country notes for two reasons. First, a commercial bank in the city could not easily be certain of the solvency of the country issuers. Second, redemption of the country notes by the city banks, even if possible, was expensive due to the distance involved. Furthermore, the commercial banks had a special competitive incentive to discourage the market for country issues in the cities, where those issues seemed to overwhelm the city issues. This was the natural result of the fact that anyone in a city contemplating a redemption of a note for specie would pluck a city note rather than a country note from circulation because of the ease and relative certainty that the city bank would redeem it. Any issuer of a convertible currency naturally prefers to minimize redemptions. The city banks, therefore, found it galling that the country banks gained the advantage of currency not because of special strength, but special weakness.

sued the business successfully, albeit without the benefit of corporate form. By 1813, the New England Bank was chartered by Massachusetts for the primary purpose of joining in pursuit of this market-making enterprise, and it soon succeeded in fixing a standard discount rate of one percent on all New England country-bank notes, thereby steadying the erratic, sometimes exorbitant rates that had been extracted by the money brokers, and securing the market in those notes for the benefit of both the country and city banks and their customers.[70] One of the nation's first private inter-bank markets, built on and imposing an emerging collective discipline, was in its initial stage of gestation.

Meanwhile, New York in the 1810s was experiencing its own glut of country money and handling it in a different, although equally private,[71] manner. The New York banks customarily agreed to honor the notes of country banks at par (face value) if the country banks maintained deposits with the honoring banks "equal to the redemption of all their paper."[72] A country bank would typically agree to such an arrangement with at least one city bank to facilitate a market for its notes within the city. The New York system succeeded at controlling the country note issues until about 1817, when the system fractured, apparently because the rechartered Bank of the United States (the Second Bank) temporarily offered more attractive terms to many of the country banks.

The New York system was re-created and expanded upon in the Boston market by the Suffolk Bank, which was chartered by Massachusetts in 1818 and in 1819 began operating in this "foreign money business."[73] The Suffolk Bank differed from its major Boston competitor by requiring a deposit from the country banks, as did the New York banks. In return, the Suffolk Bank passed through to the country bank any discount that the

70. The New England Bank also played another role as a private analyst of foreign banks by studying the condition of New York banks, collecting notes issued by those banks, making regular redemption trips to New York, and returning to Boston with specie. *Id.* at 70.

71. The New York branch of the Bank of the United States ran into serious political difficulties in its attempt to discipline the country banks by collecting and redeeming the country bank notes. Redlich, citing MYERS, *supra* note 31, reports that the Bank was "bitterly assailed" for such an "unreasonable practice," a charge that the politically vulnerable institution could not withstand. *Id.* at 70 n.18.

72. *Id.* at 70.

73. *Id.* at 71.

Suffolk Bank had secured while honoring the note (initially about one percent[74]). Moreover, the Suffolk Bank implemented four key innovations that ensured its success despite the emergence of the Second Bank. First, the Suffolk Bank enlisted six other Boston banks in an agreement to honor and pool country notes, using the Suffolk Bank as the common clearing house. Second, the Suffolk Bank permitted the country banks to meet Suffolk's redemption requests with the bills of other New England banks rather than in specie. Third, the Suffolk Bank provided credit to the country banks when their deposits with the Suffolk Bank were exhausted and they were unable or unwilling to pay in the notes of other New England banks or specie.

Finally, the Suffolk Bank assumed the role of a private bank supervisor, "regulating the extension of bank credit, supporting the country banks, on occasion tightening the curb on them, and responsibly advising them on what they should do and what [they should] not."[75] By shutting off further credit and refusing to honor the notes of banks that had over-extended themselves, the Suffolk Bank succeeded in setting terms for sound bank operations that were accepted, if grudgingly, even by the wayward institutions. As a result, the Suffolk Bank system "imposed a salutary discipline on note issue [among New England banks] for nearly half a century."[76]

As late as 1858, the Suffolk system was succeeding as a centralized private supervisor of over 450 New England banks[77] while contemporary public supervisors in that and other markets floundered. Both the First and Second Banks of the United States, for instance, repeatedly bent to political pressures after attempting to impose discipline on issuers of unsound notes.[78] Likewise, the Safety Fund, which was established by the New York legislature in 1829 as a bank note insurance system (the governing commission of which acted as the first official state regulator of banks) "inspired its opponents to denounce its interference with enterprise, its encouragement to careless banking, and its subjection of banks to 'inquisitors.'"[79] As it

74. In 1825, as the system improved the reliability of collection throughout New England, the discount on country notes was abandoned outright.

75. HAMMOND, *supra* note 30, at 554.

76. *Id.* at 555.

77. 1 REDLICH, *supra* note 67, at 84.

78. HAMMOND, *supra* note 30, at 555.

79. *Id.* at 559.

buckled under such public pressures, the Safety Fund commission's relatively ineffectual supervision of New York banking was rued by at least one New Yorker who in 1858 wrote, "[E]ven with aid of statutes and revised statutes, [New York's bank supervision remains] far inferior to that created by the voluntary Suffolk Bank system."[80]

The Suffolk system was not without its detractors, of course, chief among them being the country banks who chafed at the restrictions imposed by this unprecedented interloper, and the apparently haughty manner of imposition. As the profitability of the Suffolk Bank became more obvious, the country banks also grew to resent the Suffolk Bank's dominance. Nevertheless, an attempt from 1824 to 1826 by some of the country bankers to withdraw from the system failed to garner sufficient support.[81] Furthermore, although a nationwide suspension of specie payments from 1837 to 1838 gave the country banks an attractive opportunity to separate themselves from the system, they chose not to exercise it. Only after a competitor of the Suffolk Bank appeared in 1847 and began successfully to challenge the Suffolk Bank's position in the market did the country banks in 1855 finally form their own collective, the Bank of Mutual Redemption, which by 1860 had forced the Suffolk Bank from this line of business altogether.[82]

Despite its anti-competitive tendencies, the Suffolk Bank system succeeded in creatively identifying, rationalizing, and nurturing a novel interbank market that barely had been conceived of at the level of public policy, yet which after its discovery was universally acknowledged to have resulted in enormous advantages for bank customers and the New England economy as a whole. Furthermore, the widely acclaimed success of the Suffolk Bank system provided banks throughout the country with a prominent early example of the potential for and desirability of voluntary self-regulation.

E. *The First and Second Banks as Disciplinarians*

The same basic technique of interbank discipline used by the

80. *Id.* at 556.

81. 1 REDLICH, *supra* note 67, at 73.

82. The Bank of Mutual Redemption's victory over the Suffolk Bank system was short-lived, however, because the issuance of a national currency during the Civil War, discussed *infra*, undercut its *raison d'etre*, and the Bank of Mutual Redemption soon closed its doors.

Suffolk Bank system was also employed, although less systematically and effectively, by the quasi-central First and Second Banks of the United States. The modest regulatory experiences of the First and Second Banks have been detailed elsewhere, and will not be recounted here.[83] However, it warrants observation that the general vitality of banking from the Revolution to the Civil War does not seem attributable to the occasional regulatory forays of these two banks.

Indeed, the First and Second Banks were never even intended to play anything like the disciplinary role assumed by the Suffolk Bank system or by the Federal Reserve Bank today. As Hamilton described his plan for the First Bank,

> To attach full confidence to an institution of this nature, it appears to be an essential ingredient in its structure, that it shall be under a *private* not a *public* direction—under the policy of *individual interest*, not of *public policy*; which would be supposed to be, and, in certain emergencies, under a feeble or too sanguine administration, would really be liable to being too much influenced by *public necessity*.[84]

In execution, as in Hamilton's plan, the First and Second Banks of the United States disciplined other banks not much more than any large but solitary private bank would do, and occasionally with much less verve due to the special susceptibility of the First and Second Banks to political pressure.

The First and Second Banks also hamstrung themselves as regulators by their unimaginative use of the regulatory tools available. According to Albert Gallatin in 1841, "a regular exchange of notes and checks [among banks]" was the sole basis by which "a Bank of the United States has ever acted or been supposed to act as a regulator of the currency."[85] Hurst notes that even Nicholas Biddle, the most ambitious would-be regulator among the presidents of the First and Second Banks, overlooked such basic regulatory vehicles as centralized rediscounting of bank notes, "fixing reserve requirements,

83. *See, e.g.*, HAMMOND, *supra* note 30, at 197-226, 251-450; 1 REDLICH, *supra* note 67, at 96-186; SUMNER, *supra* note 26, at 22-57, 183-224. Circulation of state bank notes was rendered completely obsolete by the federal government's monetary machinations during the Civil War.

84. Alexander Hamilton, *Treasury Report on a National Bank, December 13, 1790*, *in* MALLOY, *supra* note 45, at 10 (emphasis in original).

85. ALBERT GALLATIN, Suggestions on the Banks and Currency of the Several United States in Reference Principally to the Suspension of Specie Payments, *in* 3 WRITINGS OF ALBERT GALLATIN 424, *excerpted in* 2 FRITZ REDLICH, THE MOLDING OF AMERICAN BANKING 47-48 (1968).

[and] using regional or national clearinghouse procedures to manage the rising volume of deposit-check money."[86] "Nor did [Biddle] grasp the possibilities of developing cooperative relations with state banks as his correspondents," or act as a lender of last resort in times of crisis.[87]

Daniel Webster effectively summed up the most common contemporary sentiment about the performance of the First and Second Banks in a debate on the Second Bank's unsuccessful bid for re-charter:

> The credit of banks has generally been very much in proportion to their independence of government control. The real safety to the public lies in the restraints and liabilities imposed by law, and in the interests which the proprietors themselves have in a judicious management of the affairs of their corporations.[88]

III. CHECKING

A. *Prologue: Nationalization of the Currency Business*

During the Civil War, the federal government experienced substantially increased requirements for revenue, exacerbated by the simultaneous loss of revenue from the seceding states. Thus, although the traditional vehicles of borrowing and taxation provided a substantial share of the revenue required for the Union's war effort,[89] the federal government, fighting for its very life, was forced to issue its own paper money despite the apparent constitutional problems.

The need to finance part of the war effort through an issue of paper not immediately redeemable for specie, a need that had become apparent to Treasury Department personnel by the end of 1861, required selection of an appropriate vehicle for the issuance of the bills. In a surprising development, the technical details of the proposed issue came to rival in political and historical importance the basic question of whether a nationally sponsored paper issue should be authorized at all.

Guided by an ingenious complex of proposals that evolved

86. HURST, *supra* note 44, at 165.

87. *Id.*

88. *Quoted in Argument Submitted to the Senate Finance Committee by Theodore Gilman, of New York in* A BILL TO INCORPORATE CLEARING HOUSES: SENATE BILL No. 108 3 (1908)(on file in the Widener Library of Harvard University).

89. *See* MILLER & PULSINELLI, *supra* note 21, at 232-33; MYERS, *supra* note 31, at 157-162.

from 1861 through 1865,[90] the Treasury under Salmon Chase secured passage of several measures that together raised over $300 million[91] in "greenbacks" (as the circulating paper bills became known) for the war effort. The legislation also ultimately rendered all state bank notes obsolete through prohibitive taxation, and established a system for the "free" chartering by the federal government of an open number of private national banks that met a few basic requirements drawn from the New York and Massachusetts free banking laws.[92] The requirements to be imposed on the new national banks were viewed as baseline measures that "embodied in the law what good bankers had always observed, voluntarily."[93]

Besides the goal of providing revenue for the war effort, the basic purposes of the legal reforms were twofold: (1) to provide a simplified, uniform national currency, and (2) to absorb all state banks into a competitive network of federal institutions with similar capital and reserve characteristics. Overall, the two-part plan was intended to minimize the costs of the greenbacks to the general public by replacing the old state bank note currency with a new currency that foreclosed avenues for fraud and abuse. The goals were linked. Under the new regime as finally amended, only a national charter would permit a bank to issue the new uniform bank notes. Because bank notes had been the lifeblood of the state banks, it was assumed that the loss of power to issue such notes would force state banks to convert to federal charters.

Thus it was startling to many when most state banks retained

90. Redlich and Hammond have each provided intriguing accounts of the genesis of the Civil War legislation. BRAY HAMMOND, SOVEREIGNTY AND AN EMPTY PURSE (1970); 2 REDLICH, *supra* note 85, at 99-157.

91. Although $450 million in greenbacks were authorized for issue by Congress during the Civil War, apparently only $330 million had been issued during the war years. MILLER & PULSINELLI, *supra* note 21, at 233.

92. The two most significant banking laws passed during the Civil War were the Act of Feb. 25, 1863, 12 Stat. 665 (the National Currency Act), and the Act of June 3, 1864, 13 Stat. 99 (the National Bank Act, replacing the initial Act of Feb. 25, 1863, 12 Stat. 665). Other relevant acts of the period include acts authorizing issues of greenbacks (Acts of Feb. 25, 1862, 12 Stat. 345; Mar. 17, 1862, 12 Stat. 370; July 11, 1862, 12 Stat. 532; Jan. 17, 1863, 12 Stat. 822, 823; Mar. 3, 1863, 12 Stat. 709, 710; June 30, 1864, 13 Stat. 218); acts attempting to make postage stamps currency (Acts of July 17, 1862, 12 Stat. 592; March 3, 1863, 12 Stat. 709, 711); an act repealing the initial plan to make greenbacks convertible to gold bonds (Act of Mar. 3, 1863, 12 Stat. 709); an act squelching speculation in gold futures and foreign exchange futures (Act of June 17, 1864, 13 Stat. 132), and a quick repeal of the latter act regulating futures (Act of July 2, 1864, 13 Stat. 344).

93. HAMMOND, *supra* note 30, at 731.

their charters and thrived, despite the complete cessation of state bank note circulation. In short, without a fight, the state banks let the federal government effectively nationalize the paper currency business. Instead, the state banks embarked on a new business that had been incubating relatively unnoticed for twenty years.

Chase and his group of banking law reformers miscalculated by failing to recognize the ability of the state banks rapidly to adopt an innovative private currency substitute, the check, outside the ambit of the supposedly comprehensive new scheme of federal regulatory control. It was neither the first nor the last time that federal policymakers overestimated the soundness of a comprehensive bank regulatory program, or underestimated the ability of state banks voluntarily and quickly to maintain competitive vitality through private disciplines in the wake of a governmental usurpation of a traditionally private domain in the banking business.

B. *The Private Origins of the Check*

The ability of the state banks to switch exclusively to the check as a medium of exchange was based on the increasingly robust nature of the deposit side of American banking. As suggested by Dunbar,[94] and then by Hammond,[95] the popular Nineteenth-Century political preoccupation with how to control paper money was quietly accompanied by a trend among many bank customers to avoid traffic in bank notes altogether. When an initial loan was made, for example, banks could avoid issuing notes simply by crediting the borrower's account on its ledger. Transactions among a single bank's borrowers could then be reflected solely on that bank's ledger, and transactions among customers of different banks could also be settled by ledger reconciliations rather than by cash payment. Banks may have preferred book entries because they were largely beyond the reach of the early capital and reserve requirements, which then usually applied only to issuances of bank notes.

Thus, even before the Civil War, most American businesses and a burgeoning pool of individuals maintained demand deposit accounts to gain the convenience of payment by check.[96]

94. CHARLES FRANKLIN DUNBAR, ECONOMIC ESSAYS (1904).
95. HAMMOND, *supra* note 30, at 80-85.
96. PAUL B. TRESCOTT, FINANCING AMERICAN ENTERPRISE 145 (1963).

In New York state, a forerunner of the general trend, circulation of paper money only grew from $24 million in 1837 to $26 million in 1847 and $32 million in 1857, but deposits leaped from $19 million in 1837 to $35 million in 1847 and $104 million in 1857.[97] New York's banking superintendent still remained "unwilling to accede to the proposition that bank credits were currency," but he acknowledged that deposits were indeed being used in exchange.[98] The Massachusetts banking commissioners forthrightly began classifying deposits as currency in 1851.[99]

The pattern of rapid checking growth before the Civil War in the money-center states spread to virtually all states during and after the Civil War. Checking was thoroughly popularized by 1909, when 11 million checking accounts existed nationally and checks comprised three-fourths of daily deposits by retailers.[100] Wholesale use of checking also predominated by 1914, when 90 percent of recorded payments by businesses were in check form.[101]

C. *Check Clearinghouses and Private Discipline*

Largely without governmental intervention, banks implemented and thereafter largely self-supervised the development of checking into an extraordinarily successful monetary vehicle. But the banks could not possibly have sustained the check payment system acting independently of one another. To become broadly effective, the innovation of the check required a separate innovation, the clearinghouse, to facilitate speedy, inexpensive, and reliable settlements of checks through the establishment of a collective discipline among member institutions. Each day, implementing a mutually acceptable system, clearinghouses reconciled the various claims by member banks to credit at other member institutions based on checks that the presenting banks had honored and the drawee banks had originally issued to their drawer-customers. The system greatly minimized the need to exchange cash among the banks, and established regular terms for the presentment and honoring of

97. 2 REDLICH, *supra* note 85, at 3.
98. *Id.* at 4.
99. *Id.*
100. TRESCOTT, *supra* note 96, at 145.
101. *Id.*

checks—terms that were essential to the success of the check as a currency substitute.

Like the Suffolk Bank system in the analogous context of paper currency, the check clearinghouses provide a model of effective private discipline in the banking business. Unlike the Suffolk Bank system, however, the check clearinghouses have survived to this day.

Clearinghouses for checks sprang up in every major commercial center beginning with the formation of a clearing house by fifty-two New York banks in 1853,[102] followed by analogues in Boston in 1856, and in Philadelphia and Baltimore in 1858.[103] The Suffolk Bank's system for clearing bank notes provided the model on which the first check clearinghouses formed.[104] The early clearinghouses even openly helped in the formation of clearinghouses in other locales.

The voluntary cooperation that facilitated the creation of clearinghouses was not surprising. Banks from virtually every corner of the country, even those that did not participate in the Suffolk Bank system or bank-note clearing systems like it, typically had at least three precedents for inter-bank collective action before the advent of the check clearinghouses.

First, local banks regularly exchanged notes and checks, and participated in local and national banking organizations like the American Bankers' Association. Second, individual banks often cultivated correspondent relationships with distant banks, pursuant to which each partner maintained deposits in the correspondent and agreed to represent the other in their respective locales. The correspondents thereby eliminated any need for the distant bank to send a representative afield to redeem notes and checks, or to engage in other disfavored collection techniques.[105] Third, after several crises during the Nineteenth

102. Fletcher R. Andrews, *The Operation of the City Clearing House*, 51 YALE L.J. 582, 587 n.24 (1942).

103. 2 REDLICH, *supra* note 85, at 47-54.

104. The members of the check clearing associations generally established independent, mutually owned agencies to effect clearing rather than elevating one of their own number to the position of exchange-maker. Baltimore's system proved the exception. One of the local banks, the Union Bank of Maryland, served as Baltimore's check clearing house similar to Suffolk Bank's serving as the clearing house in the system that bore its name.

105. Professor Hal Scott has carefully explained two reasons why direct presentment to a distant bank was disfavored. First, the remitting bank charged "exchange" on such transactions, that is, a discount from face value, while items presented over the counter were traditionally paid at par. Second, any presenting bank that initiated such a trans-

Century when the redemption of bank notes for specie had been suspended, banks worked in concert to resume their redemption obligations simultaneously without relying on a legislative mandate.

Collective private discipline was a prerequisite to the development of the check as an effective money substitute not only because of the need for speedy, inexpensive settlement, but also because the crediting of demand deposit accounts, like the issuance of bank notes in the first part of the Nineteenth Century, was ripe for potential abuse. By requiring that their members submit to standard clearing practices, check clearing associations effectively forced member banks to limit the extension of their credits to borrowers to levels that could be serviced. Professor Hurst, whose history generally emphasizes only public rather than private law contributions to the development of money and banking, still concedes that "clearinghouses grew to apply sharp discipline on their members' lending to insure that they would be able to settle their balances."[106]

Clearinghouse self-regulation improved upon the supervisory techniques that the governmental regulators had been able to apply. For instance, the Chicago clearinghouse pioneered the use of probing bank examination in 1904—an enviable measure of discipline from the viewpoint of a contemporary Comptroller of the Currency,[107] who deplored his own staff's examinations of national banks as "illogical and unscientific and simply impossible under the present National Banking law."[108] By 1913, twenty clearinghouses had followed Chicago's example of sponsoring rigorous examination of member banks.

The clearinghouses also developed the innovation of "loan certificates" in reaction to financial crisis. In 1857, during the first panic following the founding of the New York Clearing

action would be held in a disputed case to be presumptively negligent, because it put the remitting bank in the inherently awkward position of collecting from itself. Hal S. Scott, *The Risk Fixers*, 91 HARV. L. REV. 737 (1978)[hereinafter Scott I].

106. HURST, *supra* note 44, at 58. However, Hurst still attempts to deprecate the significance of the clearing houses by writing, "The[clearinghouses'] exceptional concerns with the liquidity of deposit-check money were important within their time and scope. Nonetheless, they were so limited, and so much the product of private action as to emphasize the general deficiency of public policy." *Id.* at 51.

107. Primary federal regulator of national banks.

108. 2 REDLICH, *supra* note 85, at 286.

House, banks in most regions suspended specie payments after the failure of an Ohio insurance company, the sinking of the ship *Central America* on its way from California to New York with $2 million in gold, and a general decline in specie reserves. But the New York Clearing House, which at the time normally required that inter-bank settlements be made in specie or coin certificates,[109] agreed during the crisis to accept in lieu of cash from endangered member banks their "loan certificates," that is, paper promises pledging "good" bank assets (for example, government securities or obligations from strong country banks to repay the endangered bank for having honored the country bank's notes). The Boston clearinghouse made similar provisions in 1857. The acceptance of these certificates by clearinghouses, and the subsequent limited circulation of loan certificates among the banks, were accompanied by the compelled agreement of all members to honor the certificates and, when necessary to reduce the likelihood of calling on members to face a default, to apportion specie among the membership.

The loan certificates amounted to a voluntary mutual commitment by clearinghouse members to share the risk of any member's possible default on an inter-bank obligation. As such, the system resembled a wholly private variation on New York's Safety Fund insurance scheme, legislatively prescribed in 1829 to spread the risk of loss from bank failures among all New York banks. But even though the publicly mandated Safety Fund system failed to survive the financial depression of 1837-43, the private use of clearinghouse loan certificates helped avert a suspension of specie payments in 1860, and better enabled the commercial banking centers to weather the Civil War's monetary chaos. The increasingly routine operation of loan certificates in the effective stabilization of the banking system during crises was characterized by Redlich as "first in importance" among the developments in American banking from the Civil War to 1913.[110]

D. *The Early Demise of Self-Regulation in Checking*

In 1913 the federal government invaded the niche carved out by the clearinghouses in the check clearing business. Further-

109. Coin certificates were issued by the clearing houses to minimize the need for hefting coin to and from the various banks.

110. 2 REDLICH, *supra* note 85, at 158.

more, only five years earlier, the federal government deprived the clearinghouses of the right to use their own innovative stabilizing super-currency, loan certificates. The scene was strikingly reminiscent of the federal government's nationalization of the paper currency business during the Civil War.

Events surrounding the financial panic of 1907 precipitated the demise of the clearinghouse loan certificates. The need among most banks for a degree of liquidity during that crisis was used by some clearinghouses as a reason to pay non-member banks with loan certificates in small denominations, a sort of private issue of circulating currency that was probably illegal.[111] It also appeared that country banks during the panic of 1907 may have been unfairly forced to pay premiums to secure payment from some clearinghouses.[112] These abuses resulted in the passage in 1908 of the Aldrich-Vreeland Act,[113] which prohibited clearinghouses from issuing any loan certificates, to avoid a "dangerous" concentration of banking power.[114]

But the Act's passage was no rejection of the fundamental innovation of loan certificates. On the contrary, while the Aldrich-Vreeland Act stripped the clearinghouses of their power voluntarily to provide liquidity in a crisis, the act also allowed in each city of "national currency associations" the creation of national banks that, like the clearinghouses, could function in a crisis to expand the issue of paper money "under the direction and control of the Secretary of the Treasury."[115]

This substitution of national currency associations for private check clearinghouses as the primary source of monetary stability during financial panic was not justified by the fact that issuers of currency were better vehicles for injecting liquidity into the financial system in a crisis than were issuers of checks. In fact, currency provided a decidedly inferior vehicle, because circulation of currency had slipped to 15 percent of total deposits by 1907.[116]

Nor was the sudden outlawing of clearinghouse loan certificates based on prior difficulties in regulating the clearinghouses. Instead, the Act seems to have been an election-year

111. 2 REDLICH, *supra* note 85, at 167.
112. MILLER & PULSINELLI, *supra* note 21, at 228-29.
113. Aldrich-Vreeland Act, ch. 229, 35 Stat. 546 (1908).
114. *See* 2 REDLICH, *supra* note 85, at 158-74.
115. *Id.* at 3.
116. MILLER & PULSINELLI, *supra* note 21, at 229 n.2.

reflection of the prevailing popular anti-private-bank sentiment. Some evidence of this is provided in the series of articles that Louis D. Brandeis wrote for *Harper's Magazine* in 1913-14 demanding extensive regulation of banking almost as a matter of abstract principle because of the centrality of banking in the economic life of the nation: "Receiving deposits and making loans . . . should be treated by the law not as a private business, but as one of the public services."[117]

A companion regulatory intervention was undertaken in 1913 when the Congressional Money Trust Inquiry culminated in passage of the Federal Reserve Act.[118] In addition to authorizing the creation of twelve Federal Reserve Banks, each to operate as a sort of updated, centrally-controlled Suffolk Bank system, the Federal Reserve Act ordered the Reserve Banks to act as regional clearinghouses for member banks and gave the Board of Governors of the Federal Reserve System (the "Fed") discretion to establish an inter-district national clearinghouse.[119] However, the Federal Reserve Act stopped short of outlawing private clearinghouses outright, as the Aldrich Vreeland Act had outlawed loan certificates.

The forcible entry of government into the clearinghouse business, ostensibly to combat price fixing among the clearinghouses,[120] was accompanied and followed by the awarding of subsidies within the Fed check clearing system in order to facilitate the adoption throughout the country of a par collection system funnelling through a governmental switch.[121]

Professor Hal Scott has described the subsequent successful effort by the banking industry to secure legislative adoption of the American Bankers' Association Code on check collection (later codified in Articles 4 and 3 of the Uniform Commercial Code) as a reaction to the Fed's intervention in the check clearing market.[122] That code left customers shouldering more risks in the bank collection process than they had borne under traditional common law rules and the Uniform Negotiable Instruments Law.[123] Professor Hal Scott has described the code as an

117. BRANDEIS, *supra* note 8, at 43.
118. Federal Reserve Act, ch. 6, 38 Stat. 251 (1913).
119. *Id.* § 16.
120. Scott I, *supra* note 105, at 748.
121. *Id.* at 749-55.
122. *Id.* at 761-76.
123. *Id.* at 772-75.

effort by banks—both inside and outside the Fed collection system—to level (at the consumer's expense) the playing field that had been disrupted by the Fed's displacement of private competition in check collection.[124] Thus, the Fed's intervention in check clearing had the ironic effect of working to the detriment of consumers, at least in terms of the rules apportioning risk of loss in collection.

In view of the enormous efforts the Fed undertook to dominate the check clearing business and transform it in its image, it is remarkable that many private clearinghouses remain intact. This suggests that the Fed's entry into check clearing, even when buoyed by public subsidies, did not result in substantial economies of scale, and is not a natural monopoly. Such a conclusion was confirmed in a 1982 Fed study of the economies of scale of payments mechanisms, in which rising marginal costs were found to afflict the Fed's check-clearing operations.[125]

In 1980 during one of its fitful deregulatory modes, Congress required for the first time that the Fed endeavor to charge its true costs for check clearing.[126] Predictably, the Fed promptly lost a significant share of the check-clearing market.[127] However, Congress in 1987 renewed the Fed's mandate to exercise broad control over check clearing,[128] tending to foreclose again the freedom of the private clearinghouses to pursue their own forms of discipline.[129]

In sum, as Professor Hurst concluded, "The clearinghouse developments showed that there was considerable potential for using private agreements to impose organized controls on otherwise unplanned credit markets."[130] Like the cultivation

124. *Id.* at 762-71, 786.

125. BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, COSTS, SCALE ECONOMIES, COMPETITION, AND PRODUCT MIX IN THE U.S. PAYMENTS MECHANISM (1982)(Staff Paper written by David G. Humphrey).

126. 12 U.S.C. § 248 (1988)(codifying the relevant portion of the Depository Institution Deregulation and Monetary Control Act of 1980), *amended by* 12 U.S.C. § 248(a) (1989).

127. *See* Robert Trigaux, *Fed Payments Role Defended Anew; Its Efforts to Speed Availability Called in Public Interest*, AM. BANKER, Oct. 5, 1982, at 1.

128. 12 U.S.C. § 4008 (1988)(codifying the relevant portion of the Expedited Funds Availability Act of 1987).

129. *See* Edward L. Rubin, *Uniformity, Regulation, and the Federalization of State Law: Some Lessons from the Payment System*, 49 OHIO ST. L.J. 1251 (1989).

130. Hurst, *supra* note 44, at 193. Professor Hal Scott, however, declined to reach the same conclusion: "The entry of the Fed, partly in response to the monopoly power of private clearinghouses, prevented private banks from developing general rules for a system of check collection. We therefore have no experience with the ability of private associations to provide an acceptable legal structure for collection." Scott, *supra* note

and control of a burgeoning supply of paper currency by private banks and associations of private banks prior to the Civil War, the innovation of checks and the related clearinghouse apparati after the Civil War provide a provocative example of self-imposed private discipline within the banking industry. The experience was not unblemished, but the record at least suggests that private discipline in checking served as a viable alternative to the pervasive governmental regulation that followed.

IV. Credit Cards

A. *Order in the Private Domain of Credit Cards*

After the federal government invaded the domain of the check clearinghouses beginning in 1913, and following the adoption of uniform state legislation fixing the character of checking transactions, checks remained the dominant substitute for paper currency. But the nationalization of most clearinghouse activity, the calcification of rules governing checking transactions, the paucity of consumer pressure for reform, and the entrenchment of the various institutions in the check-clearing system,[131] combined to discourage private innovation among banks that might otherwise have improved the speed, convenience, and reliability of checking transactions. As a result, the nature of the checking transaction in banking has remained fundamentally static from the 1930s until today, except for occasional legislative prods to advance the concerns of consumers (whose interests largely had been neglected in the initial legislative and regulatory calculus) and to reflect some of the most inevitable technological changes.[132]

Throughout the Twentieth Century, the pace of consumer economic activity quickened for reasons independent of the banking business itself. Consumers and merchants sought

105, at 786. This appears to ignore 55 years of successful clearinghouse experience before the Fed was ushered onto the scene in 1913.

131. The conservatism of both the governmental and private clearinghouses probably contributed to the stasis. It is possible that the absence of a governmental interloper would still have led to static conditions in check clearing. Any monopoly, public or private, tends not to pursue innovation as enthusiastically as firms in an open market. In general, although private interbank discipline may have benefits, it is not without its own peculiar costs.

132. *See, e.g.*, Expedited Funds Availability Act, Pub. L. No. 100-86, 101 Stat. 635 (1987)(enacted as Title VI of the Competitive Equality Banking Act of 1987, 12 U.S.C. §§ 4001-10 (1987)(fixing shorter limits to check-hold periods)).

faster, cheaper, and more reliable payment mechanisms. By the 1950s, it had become apparent within the banking business that the slow, cumbersome, and uncertain check payment process was inadequate to satisfy a growing segment of the payment transactions market—the sub-market for consumer-merchant transactions in which the consumer is not known to the merchant or requires credit. Credit cards evolved to address such needs.[133]

Large retailers like Sears issued the earliest type of credit card in the 1920s as a method of extending credit to facilitate retail sales. These "proprietary cards" proliferated after World War II. Their success was followed in the 1950s by "travel and entertainment cards," issued by creditworthy, widely dispersed organizations like Standard Oil and American Express to facilitate purchases by card holders in the many places where the holders' personal checks might be unwelcome.

The stunning popularity of these new payment vehicles unveiled a pent-up demand for quicker, more convenient methods of payment and credit. Private banks like the Bank of America, developer of the predecessor to the Visa card, aggressively pursued this latent market in the 1960s by investing in the creation of extensive merchant networks in which bank-issued credit cards would enjoy broad acceptability.

Probably to avoid the threat of competitive interference from banks in other states and regulatory interference from bank regulators, as well as simply to speed and solidify the development of a monopoly in its innovative payment network, Bank of America during the early 1960s enlisted one bank in each area to participate as merchant recruiters and issuers of these "universal" cards.

Despite the increasingly prohibitive investment required to compete in the market for universal payment networks, a group of banks formed MasterCard in 1967 as an open-ended collective enterprise. Expanding upon Bank of America's concept of recruiting other banks to join in the payment network, MasterCard sought as many other banks as possible to participate—

133. Professors Rubin and Cooter have compiled the most lucid and comprehensive rendition of the legal history and status of credit cards to date, based in part on an account by Ken Larkin, who headed Bank of America's credit card division. EDWARD L. RUBIN & ROBERT COOTER, THE PAYMENT SYSTEM—CASES, MATERIALS & ISSUES 606-735 (1989). Much of the material in this section relies on their work.

but as joint venturers rather than franchisees or customers. This strategy proved extraordinarily successful, and temporarily catapulted MasterCard past the Bank of America. Under competitive pressure, Bank of America's credit card arm in 1970 reorganized as Visa, a non-banking corporation cooperatively owned, like MasterCard, by banks in the network.

Operating thereafter under similar structures as member-owned corporate umbrellas,[134] Visa and MasterCard split the blooming market for credit cards issued by traditional banks. They simultaneously reduced incentives for individual banks to pursue alternative arrangements. Today, most federally insured banks can participate in either cooperative according to standard arrangements that permit competition at the level of the participant banks in such matters as interest rates, loan limits, and card fees.[135]

From barely perceptible significance as a payment vehicle in 1950, the credit card industry had by 1980 become a major facilitator of payments, especially in consumer transactions. A private study estimated that $49 billion in payments were channeled through credit cards annually in 1980.[136] Although the checking system still handled a far larger volume of raw funds than did the credit card system,[137] credit cards had begun to play an increasingly critical role in small-volume transactions between consumers and merchants.[138]

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134. Both Visa and MasterCard index voting power and profits to the total value of the payments that a member bank collects, rather than to finite, preallocated shares held by shareholders, as in the typical corporation. Votes are distributed in Visa and MasterCard on a one-vote-per-dollar basis. This gives an added incentive for the member banks to issue cards and sign merchants, and insures control of the joint ventures by those most active in the business.

135. One exception has involved resistance by Visa to Sears' recent efforts to participate, through a bank it owned, in the Visa network while simultaneously operating the competitive Discover Card through another wholly-owned bank. *See* Yvette D. Kantrow, *Sears Wins Court Battle to Start Issuing Visa Cards*, AM. BANKER, Nov. 6, 1992, at 98 (reporting on Sears' victory in a jury trial contesting Visa's ability under antitrust law to enact by-laws prohibiting "direct competitors" from becoming members of the Visa network; appeal is anticipated); SCFC ILC, Inc. v. VISA U.S.A. Inc., 801 F. Supp 517 (D. Utah 1992)(ruling of trial court dismissing cross-motions for summary judgment in the above-referenced antitrust action between Sears and Visa).

136. ARTHUR D. LITTLE, INC., ISSUES AND NEEDS IN THE NATION'S PAYMENT SYSTEM 12 (1982)(presenting report prepared for the Association of Reserve City Bankers and discussed in Hal S. Scott, *Corporate Wire Transfers and the Uniform New Payments Code*, 83 COLUM. L. REV. 1664 (1983)[hereinafter Scott II]).

137. In 1980, checking accounted for $19 trillion in transfers, dwarfing the $49 billion in credit card transfers. Scott II, *supra* note 136.

138. For instance, while the average size of a checking transaction was $570 in 1980, the average size of a credit card transaction was $38. *Id.*

Throughout the relatively short history of the credit card, the corporate umbrellas have cultivated private forms of intra-network discipline that help ensure quick, sure, predictable clearance and settlement through card use. The disciplinary systems adopted in these networks not only rely on an innovative, efficient, evolving process of collection,[139] but also on "highly complex" sets of private operating "Regulations."[140] These guidelines, which help steer conduct within the system and resolve controversies that occasionally arise among members, "resemble the UCC in that rules are formulated in technical language and arranged by numbered section. But . . . they are management rules, instructing participants how to use the collections system, rather than liability rules that state the consequences of wrongful action."[141] The rules are even further distinguished from the UCC by virtue of their self-correcting plasticity. Unlike public financial regulations that tend to envelop their subjects in an airless embrace, the procedures of Visa and MasterCard are reviewed by member banks twice annually for possible change. The similar procedural principles of the new proprietary entrants to the market, like those of Sears, are even easier to modify as a result of centralized corporate control.

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139. Although the credit card collection process initially mirrored the check collection process, a rapid and steady stream of innovations in credit card collection soon rendered the techniques dissimilar. In the typical contemporary credit card transaction, the merchant first electronically checks the card's eligibility for the anticipated transaction. After a centralized computer clears the anticipated transaction and the transaction is effected, the merchant presents the paper receipt to its participating member bank. The merchant's bank immediately credits the merchant for the paper, less a contractually prearranged discount (typically two to six percent). The merchant bank (or, more likely, its agent processor) then either directly bills the card-holder (if the merchant bank is also the card-issuing bank), or submits the charge electronically through a network of clearing banks supervised by the umbrella corporation. (In theory but rarely in practice, the merchant bank is also free to negotiate directly with the issuing bank for payment.) If the item is presented through the clearing network, a small computer processing fee is charged to compensate the network, and an "interchange fee" is charged to compensate the card-issuing bank. Accounts of all banks in the credit card network are settled en masse daily, resulting in a single net payment or credit at day's end. Free from the stasis imposed by governmental market interventions and uniform laws on the check collection process, the mechanics of credit card collection are more streamlined and rationally priced than are the mechanics of check collection. "The reason for the difference is not the difference in types of accounts, but the fact that checks are encumbered with a vast array of centuries-old legal rules, and the institutions that offer checks are encumbered by a similarly impressive range of regulatory restrictions." RUBIN & COOTER, *supra* note 133, at 653.

140. National Bancard Corp. v. Visa USA, 596 F. Supp. 1231 (S.D. Fla.), *aff'd*, 779 F.2d 592 (11th Cir.), *cert. denied*, 479 U.S. 1923 (1986).

141. RUBIN & COOTER, *supra* note 133, at 673.

One result of the internal review process at Visa and MasterCard, and the competitive alternatives provided by the newer card schemes, has been to improve efficiencies in the payment system, and apportion costs relatively rationally among the participants (except consumers). Visa, for instance, has developed a variety of rules that permit the card-issuing banks to "charge back" or dishonor transactions for which those banks should not reasonably bear responsibility, given the current state of technology.[142] More importantly, Visa and MasterCard have been able, through flexible pricing arrangements, to allocate revenues from card operations to those segments of the network that have incurred the most costs (merchants, merchant banks, and card holder banks, for example, get compensated in rough proportion to their costs and risk assumption). Sears and other new competitors, by having a single captive bank to act as both issuer and merchant recruiter, have gone one step further and internalized more of the cost centers, thereby avoiding the additional transaction costs associated with fairly allocating revenues among the system's sub-parts.[143]

These innovations in pricing contrast sharply with the static, occasionally illogical rules of the atomized check collection system. Since the federal government has asserted its dominance in that arena, banks in the check collection business have been restrained from charging interbank fees that would fairly reflect the true value added to the collection process by their respective contributions to the process. Although the uniformity of check-collection pricing imposed by the federal government has not driven banks from the check-collection business (given

142. As in any payment system, principals in the credit card payment system may in the wake of problematic transactions compensate for losses suffered by other participants, including card-holders, merchants, banks, and their agents. Although federal legislation compels the credit card network to reimburse consumer losses beyond a $50 threshold, credit card companies promulgate additional voluntary, contractually binding rules that allocate such losses to one of the other participating entities. For example, if a rule requires merchants to ensure the potential viability of a proposed transaction by consulting a stolen card list, failure to do so will result in merchant liability through a "charge back," rather than imposition of liability on relatively innocent parties like the merchant's or card-issuer's bank. Likewise, merchant banks may bear responsibility for providing their member merchants with access to transaction authorization; faulty provision of such service may result in merchant bank liability. When contested cases arise, discrepancies are usually resolved by an arbitrator applying the network's operational rules. As a result, credit card collection cases do not appear in the courts, and the system retains its privacy not only from the legislative and administrative branches, but from judicial intervention as well.

143. *See* RONALD H. COASE, THE NATURE OF THE FIRM (1988).

their ability under the system to extract profits at the depositor's expense), the forced pricing has simultaneously invited banks not to innovate.

The success of cost- and revenue-sharing through price allocation in the credit card business has prompted Professors Cooter and Rubin to propose revising check collection rules accordingly. They would discard the par collection system and adopt a system of flexible incentives in check collection very much like those cultivated by the credit card industry.[144] Whatever the applicability of those techniques in the check collection process, it appears that the efficiency and soundness of the credit card payment system has saved the credit card networks from substantial governmental intervention, at least in the technical operation of the system. Although the issuing banks are subject to regulation as FDIC-insured institutions, the networks themselves have been cautiously allowed to operate in the interstices of banking law as simple corporations, "as untouched by regulation as any financial institutions in America."[145]

The freedom from regulation enjoyed by umbrella credit card corporations is even more remarkable when one notes that they have at times trammeled consumer interests in an apparent passion for extracting monopolistic profits and concessions, like inflated interest rates[146] and fees for late payment charges, that plainly favor the member banks. Likewise, merchants have had little standing to negotiate fair terms from the credit card networks, and thus have shouldered far more than their share of the system's costs.

Consumer protection concerns have launched the most explicit governmental regulation to date of the credit card industry. A parade of federal laws designed to protect consumers from banking excesses has directly affected the credit card industry. That parade includes, for example, the Truth-in-Lending Act of 1970, the Fair Billing Credit Act of 1974,[147] the

144. Robert D. Cooter & Edward L. Rubin, *Orders and Incentives as Regulatory Methods: The Expedited Funds Availability Act of 1987*, 35 U.C.L.A. L. REV. 1115, 1157-86 (1988); *see also* RUBIN & COOTER, *supra* note 133, at 675 n.4.

145. RUBIN & COOTER, *supra* note 133, at 653.

146. When prime commercial lending rates plummeted during the 1980s and 1990s, credit card interest rates stuck at remarkably high levels.

147. The Truth-in-Lending Act and the Fair Credit Billing Act are currently joined under the umbrella of the Consumer Credit Protection Act, 15 U.S.C. § 1601 (Truth-

Truth-in-Lending Simplification Act of 1980,[148] and the Fair Credit and Charge Card Disclosure Act of 1988.[149] Credit cards are also subject to state usury limits.

Meanwhile, the credit card corporate umbrellas have not only acted internally to consolidate, justify, and retain control over their systems; they have lobbied legislatures and waged adjudicatory battles to protect their respective domains from creeping regulatory encroachment. A recent example is the skirmish between Sears (joined by both Visa and MasterCard as amici) and Massachusetts (joined by amici representing nineteen other states and the District of Columbia). Massachusetts sought unsuccessfully to declare credit card late payment charges presumptively unfair as a matter of state consumer protection law.[150]

Although antitrust law has not proven especially effective at promoting price competition among the credit card networks, classical economic forces appear to be working slowly in the same direction. Most notably, the monopolistic profit levels enjoyed within the industry attracted new entrants during the 1980s and 1990s, despite the enormous barriers to entry posed by recruiting hundreds of thousands of merchants and millions of card holders. Sears and American Express both have introduced competitive bank cards since the mid-1980s. Rates and terms throughout the industry have simultaneously begun to moderate, and the industry has experienced significant declines in profitability.[151]

In short, one can trace the success of the credit card payment system to two interrelated factors. First, the regulation by public law of the check-payment process discouraged innovation by banks in that adjacent market. Then, partly in order to avoid the publicly regulated system of checking, associations of banks ingeniously facilitated the creation and operation of credit card payment networks as private substitutes for checks and cur-

in-Lending Act constitutes Title I of the Act, §§ 101-186, with the Fair Credit Billing Act in §§ 166-171).

148. Part of the Depository Institutions Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 132 (codified in scattered sections of 12 and 15 U.S.C.).

149. Act of Nov. 3, 1988, Pub. L. No. 100-583, 102 Stat. 2960 (1988).

150. *See* Greenwood Trust Co. v. Commonwealth of Massachusetts, 971 F.2d 818 (1st Cir. 1992)(holding that federal law preempts Massachusetts's attempts to outlaw late payment fees charged by the Discover card).

151. *See Credit Cards: Plastic profits go pop*, ECONOMIST, Sept. 12, 1992, at 92.

rency. The limitation of government intervention to issues of consumer protection also has facilitated the growth of the credit card industry.

V. Electronic Fund Transfers

A. *Artificial Restraints on Bank Technology*

The advent of reliable electronic modes of communication in the Twentieth Century unleashed many opportunities for innovation in money and banking. For the most part, however, the promise of technological modernization of financial services has proven disappointing. In an era when telegraphs, telephones, and computers revolutionized and pioneered basic business practices; the automobile delivered suburbia; and broadcasting recast world culture, banking dully resigned itself to confinement within an industry controlled by long-established institutions, practices, laws and regulations that have deterred innovation and investment. Thus, although Twentieth-Century technological developments and economic logic have long invited creative applications in financial services, American banking during the last years of the century remains remarkably reminiscent of American banking in the first half of the century.

The sluggish pace of change in American banking practice stems largely from the huge barriers posed by the present system. Practices, laws, interventions, bureaucracies, banks, and political pressure groups all tend—either through inertia or outright resistance—to deter the investments necessary for massive restructuring of the basic banking business. For example, uniform state laws that tend to fix collection times in accord with obsolete technologies, combined with the vested interests of most of the various bureaucracies engaged in the check collection process, continue to militate against aggressive bank exploitation of new technologies that could quicken check collection.[152] Even among those banks that for special reasons might be more inclined to exploit new technologies in check collection, regulatory restrictions on the scope of their business[153] make it difficult to justify substantial capital invest-

152. *See* Emma Coleman Jordan, *Ending the Floating Check Game: The Policy Argument for Delayed Availability Reform*, 36 Hastings L.J. 515 (1985).

153. The McFadden Act and state bank-chartering provisions place a presumptive one-state limit on geographic expansion of banks, while various activity restrictions like

ments like those typically required in the start-up phase of a comprehensive new technological application.

The inertial forces in banking, however, have not led to a complete lack of innovation. Article 4 of the U.C.C., which addresses check collection, was drafted in the early 1950s in accord with traditional manual techniques of check collection. Soon after its adoption, however, magnetic ink character recognition ("MICR") technology still managed to emerge and overtake traditional check collection techniques throughout the industry.[154] Check truncation techniques[155] more recently have garnered a growing share of the check collection market. The success of MICR technology, and the potential success of check truncation technology, suggest that banks retain incentives to exploit new technologies despite the U.C.C., clearinghouse practices, and massive Fed intervention.

Banks apparently have restricted their use of new technology to narrow subjects that do not upset the basic structure of incentives in bank operations. In check collection, for instance, while banks have incentives as depositaries to collect more quickly,[156] banks have countervailing incentives in their payor role to delay payment, because payor banks typically provide a below-market rate of interest on checking account deposits. Meanwhile, intermediary banks, clearinghouse associations, and the Fed-as-clearinghouse all occupy positions in the current process that could well be eliminated under a comprehensive immediate-payment checking scheme supported by national on-line computer networks. To the extent that consumers also remain largely content with the current system (in which the opportunity for consumer manipulation of the float[157] is accepted as an accommodation for low returns on checking account deposits[158]), the net result is a system lacking

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the Glass-Steagall Act limit the acceptable types of activities in which banks may engage (excluding, for example, participation in investment banking). The result is a fragmented array of slightly differentiated financial service providers.

154. *See* Donald W. Garland, *A New Law of Deposits and Collections: Revised Article 4 of the UCC*, 110 BANKING L.J. 51 (1993).

155. Check truncation refers to the process that permits the drawee's bank or its agent either electronically or by microfilm to communicate evidence of the cashed check to the drawer's bank, rather than by returning the actual check for payment.

156. A bank that honors a check written on an account at another banks has an incentive to present and receive payment for that check as soon as possible.

157. The period from the time a check is written until the drawer's account is formally charged.

158. This trend was barely evident until an aberrational surge of consumer discon-

incentives for aggressive applications of available technology.

Four prominent exceptions to this tendency of technological complacency have emerged in specialized banking settings on the outskirts of traditional bank practice. These narrow but substantial developments, all involving the use of electronics to facilitate speedier transfers of funds, have typically been lumped together under the rubric of "electronic funds transfers" ("EFTs"). They include[159] wire transfers (electronic instructions to credit or debit a recipient's account in keeping with a mirror debit or credit on the sender's account), automated clearing house ("ACH") batch transfers, automated teller machine ("ATM") transactions, and the use of debit cards to effect point-of-sale ("POS") payments. Despite their special theoretical significance, however, these developments remain relatively insignificant as an empirical matter in the overall scope of the American payment system, in which remaining cash and check transactions continue overwhelmingly to dominate.

B. *Wire Transfers*

Acting primarily in its operating capacity rather than as a regulator, and hence more as a private monopolist than as a public lawmaker, the Fed implemented wire transfer techniques soon after its founding in order to link Reserve Banks in different cities and attempt to offer faster collection than clearinghouses

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tent resulted in passage of the Expedited Funds Availability Act in 1987. Still, however, consumers have appreciated the ability to play variations on "the float game." *See, e.g.*, Peter H. Schuck, *Electronic Funds Transfer: A Technology in Search of a Market*, 35 MD. L. REV. 74 (1975)(containing statement from director of the Washington office of Consumers Union explaining that most consumers will not willingly opt for EFT because, in part, the value of "playing the float" exceeds any likely value of speedier settlement). Indeed, consumers may value playing the float game more than any other group in banking, assuming that personal financial positions are more likely to be marginal than institutional financial positions. Although the absence of market rates of return on checking account deposits may be fair compensation for occasional consumer use of the float, a more likely scenario is that consumers assume that banks will deprive them of fair rates of return on their checking deposits, and thus feel fortunate to have any opportunity to recoup those losses. It is intriguing to consider whether consumers would endorse EFT in daily payment transactions if they could simultaneously be assured of receiving market rates of return on their deposits. In the present environment, however, payors' reliance on legally enshrined rights to pay slowly without direct cost leaves little incentive for banks or the Fed to invest in more streamlined, technologically sophisticated payment alternatives for consumers.

159. Typically excluded from this category are credit card charges, despite the fact that the merchant in a credit card transaction is essentially insulated from default in settlement if the merchant processes the charge according to network rules by securing prior electronic confirmation of the card's viability for the prospective charge.

did.[160] This application of telegraph technology in the financial setting enabled the Fed to provide unique services to member banks in partial exchange for their membership and maintenance of balances in the reserve system.[161] If member banks had been unable to gain access to excesses in their reserve accounts except by costly shipments of gold or currency (the accepted method of interbank transfers at the time), membership would have been even less attractive than it was.[162]

In lieu of currency or specie, the Fed issued "transfer drafts" to payee member banks, guaranteed their negotiability at any Reserve Bank, and supervised an electronic method of communicating immediately the transfer draft to any other Reserve Bank in the country.[163] Member banks used the quick-transfer capabilities of the Fed's wire network not only to tap their reserves on short notice, but also to extract speedier payments from their distant bank debtors.

The Fed's system of wire transfer, now known as Fedwire, has succeeded in speeding certain payments among banks, corporations, and the government, but has failed markedly to attract consumer use or be adopted as a model for revision of the

160. In the long-distance domestic check collection market, the Fed ultimately succeeded in cementing an unshakable monopoly. One of the battles in the Fed's campaign was the par collection controversy of the 1910s and 1920s, a long, bitter struggle by the Fed to discourage correspondent check collection and the practice of charging "exchange" (a fee for the service of collecting locally on behalf of a distant correspondent). At least on technological grounds, it seems somewhat doubtful that the Fed's position in the long-distance check collection market was justified as a natural monopoly, for the Fed was able to avoid any substantial initial investment in wire transfer technology—it could and did rely on Western Union.

161. *See The Role of the Federal Reserve in Check Clearing and the Nation's Payment System, Joint Hearings Before the Committee on Government Operations and the Committee on Banking, Finance and Urban Affairs*, 98th Cong., 1st Sess. 343, 402-08 (June 16, 1983)(containing background materials to the Statement of E. Gerald Corrigan) *in* RUBIN & COOTER, *supra* note 133, at 767.

162. Although the Federal Reserve Act required the national banks to join the Federal Reserve System, state-chartered institutions remained free to choose whether to affiliate.

> Only 17 state-chartered banks entered the system in its first year; and although by 1922, 1,648 state banks had joined, 19,566 state banks remained outside. After 1922, state bank membership declined again, falling to 1,177 in 1929. Thus the Federal Reserve System was unable to achieve effective control over the vast majority of smaller banks.

JONATHAN R. MACEY & GEOFFREY P. MILLER, BANKING LAW AND REGULATION 17 (1992).

163. The Fed initially used Western Union to effect interbank transfers, but volume soon became unmanageable, and the Fed in 1918 established a captive electric relay system among the Reserve Banks that utilized Morse Code. By 1937, the system graduated to teletype machines. Technical improvements were made in 1940 and again in 1953. By 1970, the Fed instituted on-line computer links with any interested member bank. *The Role of the Federal Reserve*, *supra* note 161, at 405-06.

check clearing process. As a result, wire transfers account for a greater daily dollar *volume* than any other payment vehicle,[164] yet make up less than one-half of one percent of the *number* of payment transactions.[165]

Individuals can and do use wire transfers through banks participating in Fedwire, but two symbiotic factors discourage their use. First, neither the Fed nor member banks ever have made serious efforts to extend the technology to the consumer market (or to the related task of check collection). Second, consumers themselves have lacked interest either in gaining easy access to the wire transfer system or applying electronic power to check clearing, despite evidence that access to wire transfers could be made available at low cost[166] and check clearing could be substantially speeded by common technologies.

In the "wholesale" (inter-institutional) market for wire transfers, meanwhile, the Fed was not the only example of an innovator, despite several factors that made any forays by wholly private competitors in the wire transfer business seem unlikely. Those factors included the Fed's demonstrated willingness to underwrite the substantial initial investment in the technology necessary to establish a wire transfer network; its centralized position in interbank relationships; its willingness to forego full-value pricing for its services; and its unique ability to further its position as a government-sponsored enterprise by virtue of its separate power to regulate.

The advantages enjoyed by the Fed, however, have not crowded out all competition. Networks of private banks have spawned additional wire transfer systems. In particular, the

164. In 1987, for instance, the Fed calculated that wire transfers moved $281 trillion dollars while checks moved $56 trillion. BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, MARKET FAILURE AND RESOURCE USE: ECONOMIC INTENTIONS TO USE DIFFERENT PAYMENT INSTRUMENTS (July 1988)(staff paper writen by David Humphrey & Allen Berger), *in* RUBIN & COOTER, *supra* note 133, at 739. A similar ratio, $117 trillion in wire transfers and $19 trillion in checks, was reported for 1980 in an Arthur D. Little, Inc. report prepared for the Association of Reserve City Bankers, entitled *Issues and Needs in the Nation's Payment System*. *See* Scott II, *supra* note 136, at 1664.

165. *See* BOARD OF GOVERNORS OF THE FEDERAL RESERVE, *supra* note 164, at 739 (showing table, "Volume, Value, and Growth of Different Payment Instruments, 1987"). In 1987, 47 billion checks were written with an average value of $1,188, while only 0.084 billion (84 million) wire transfers were effected with an average value of $3,300,000. *Id.*

166. Expanding access to the wire transfer system would necessitate significant investments in localized electronic technologies, but probably not prohibitively high investments. The credit card industry and the ATM movement have shown that widespread local access to centralized computer networks may be available at reasonable cost.

New York Clearing House Interbank Payment System ("CHIPS") was formed and is operated as a local low-cost substitute for Fedwire by about 120 New York area banks. Moreover, the Society for Worldwide Interbank Financial Telecommunications ("SWIFT") assists in assuring the framework for international funds transfers among a group of about 1200 participating financial institutions around the world.[167] The success of these two enterprises demonstrates that the private sector can effectively design and operate advanced systems of payment in a collective, disciplined, voluntary, and private manner.

CHIPS and SWIFT operate largely outside the context of domestic bank regulation. SWIFT, for example, sidesteps regulation in part by requiring member banks to settle their own transactions, while providing only technical communication links and no independent settlement functions.[168] However, SWIFT has adopted private rules that participants in the network are contractually obliged to adopt, addressing such matters as the allocation of risk of loss from problematic transactions.[169] The rules impose a level of certainty in the system that invites reasoned participation and self-supervision in accordance with the standard risk allocation.

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167. *See* RUBIN & COOTER, *supra* note 133; Peter A. Alces, *A Jurisprudential Perspective for the True Codification of Payments Law*, 53 FORDHAM L. REV. 83 (1984); Steven B. Dow & Nan S. Ellis, *The Payor Bank's Right To Recover Mistaken Payments: Survival of Common Law Restitution Under Proposed Revisions to Uniform Commercial Code Articles 3 and 4*, 65 IND. L.J. 779 (1990); Carl Felsenfeld, *The Compatibility of the Uncitrtal Model Law on International Credit Transfers with Article 4A of the UCC*, 60 FORDHAM L. REV. 53 (1992); Ronald D. Greenberg, *The Eurodollar Market: The Case for Disclosure*, 71 CAL. L. REV. 1492 (1983); Sarah Jane Hughs, *Policing Money Laundering Through Funds Transfers: A Critique of Regulation under the Bank Secrecy Act*, 67 IND. L.J. 283 (1992); Michael Rowe, *SWIFT: A Million Messages a Day*, AM. BANKER, Feb. 27, 1989, at 8; Scott II, *supra* note 136; Michael I. Spak, *A Case to Be Made for Proposed Article 4A of the Uniform Commercial Code: What's a Trillion Dollars Between Friends?*, 80 KY. L.J. 167 (1992); Note, *Consumer Protection and Payments Systems: Regulatory Policy for the Technological Era*, 98 HARV. L. REV. 1870 (1985).

168. Herbert F. Lingl, Comment, *Risk Allocation In International Interbank Electronic Fund Transfers*, 22 HARV. INT'L L.J. 621, 624 (1981).

169. *See id.* at 621; Scott I, *supra* note 105, at 737; Scott II, *supra* note 136, at 1664. For example, in the event of failure by a SWIFT member or its correspondent to settle, the parties agree that the institution extending credit will bear the loss and accept the right of action against the delinquent. SWIFT itself assumes risks of principal losses only when they constitute a "direct loss or damage sustained by a member or resulting from a claim duly established against a user or member due to [a] negligent act, error or omission by SWIFT in failing to perform the services as set forth in the User Handbook." SWIFT also assumes responsibility for certain interest losses, including losses caused by "SWIFT system or personnel failure." SWIFT has incidentally established an interest loss contingency fund, and imposes heavy penalties for the assertion of invalid claims. Lingl, *supra* note 168, at 634-35.

Congress in 1980 attempted to facilitate further private involvement in the wire transfer market by requiring the Fed to raise its prices on wire transfers (as well as on check collection) to reflect true cost, thereby inviting competition.[170] As a result, several attempts were made during the 1980s to break into the interbank wire transfer business, but the early ventures failed[171] and others have not been tendered, apparently out of respect for the Fed's hulking presence. Even after 1980, the Fed probably failed to price Fedwire services high enough to reflect true costs, including, in particular, the value of the federal government's unique settlement guarantee and the fixed costs of network-building. Moreover, the Fed balked at accommodating its fledgling competitors, who found themselves practically obliged to effect settlements through Fedwire on the Fed's rigid terms.[172] Thus, at this writing, the Fed still retains a virtual monopoly on individual domestic wire transfers outside New York, despite occasional predictions of increased privatization in Fed-dominated sectors of the payments system.[173]

Given the longstanding, high-volume nature of the wholesale wire transfer market, banks within that market have regulated wire transfer transactions by private contracts and "gentlemen's agreements"[174] with remarkable smoothness. Although the Fed has traditionally regulated some aspects of the wholesale market in connection with its operational role,[175] regulation of the broader market has been minimal. Only in 1990, after more than 70 years of wire transfer transactions, did the industry elect to codify its practices under the new Article 4A of the U.C.C.[176] Because the Electronic Fund Transfer Act was already in place to protect consumers,[177] the industry's self-directed decision finally to design and seek state approval of

170. Depository Institution Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 132 (relevant provisions currently codified at 12 U.S.C. § 248a (1988)).

171. For example, BankWire, which was established by about 200 commercial banks to provide several alternatives to Fed services, ultimately failed.

172. *See* RUBIN & COOTER, *supra* note 133, at 775, 778.

173. *See, e.g.*, Jeanne Iida, *Fed Planning to Privatize Funds-Transfer Operations*, AM. BANKER, May 3, 1990, at 1 (discussing Fed's announcement of plans to relinquish firm control over Fedwire and ACH services).

174. Scott II, *supra* note 136, at 1715.

175. 12 C.F.R. §§ 210.25-210.38B (1990).

176. *See* Frederick H. Miller & William B. Davenport, *Introduction to the Special Issue on the Uniform Commercial Code*, 45 BUS. LAW. 1389 (1990).

177. Title XX of the Financial Institutions Regulatory and Interest Rate Control Act of 1978, Pub. L. No. 95-630, 92 Stat. 3641, 3728 (1978)(codified at 15 U.S.C. §§ 1693-

proposed Article 4A provides another example of the American banking industry's willingness to undergo a self-imposed form of commercial discipline.[178]

C. *Automated Clearing House Transactions*

Private entities and collectives of banks have not successfully challenged the Fed's monopoly over the wire transfer switching process in single long-distance domestic transactions; but private collectives have arisen throughout the country to effect interbank agreements to facilitate the speedy processing and settlement of batches of local disbursements (like payroll instructions from an employer and mass transfer payments from the government)—a segment of the market that Fedwire might have accommodated, but did not. Beginning in the late 1960s and early 1970s, banks in local regions grouped together into associations known as "automated clearing houses" ("ACHs") to foster such batch transactions, thereby avoiding the costs and inconveniences associated with the negotiation and processing of checks. At least in the case of payroll and government check processing, the batch systems provide significant savings.[179] Further benefits of ACH transactions are derived from application of the Fed's complementary net settlement service, pursuant to which the respective positions of participating institutions are "netted out," that is, cross-charges are cancelled before final settlement.[180]

The ACHs, which were closely modeled on the check clearinghouses, relied even in the gestational phase during the 1970s on substantial technical support from a very willing Fed.[181] Those early decisions by the various local ACHs not to sink much of their own resources into the ACH enterprise, and instead to rely heavily on Fed funding and technical expertise, were probably shaped in part by the Fed's unforgettable inva-

93r (1982) as an amendment adding Title IX to the Consumer Credit Protection Act, 15 U.S.C. §§ 1601-92 (1982)).

178. As of the spring of 1992, Article 4A had been adopted by 32 states. Michael D. Sabbath, *Introduction—U.C.C. Revisions: Promises and Pitfalls*, 43 MERCER L. REV. 789, 790 (1992).

179. It is not surprising that payroll deposits constitute the first and still major application of ACH techniques. Employers, who find it productive to minimize the time their employees spend in negotiating paychecks, are better positioned than consumers to encourage reluctant banks to adopt more efficient settlement techniques.

180. *See The Role of the Federal Reserve*, *supra* note 161, at 412-15.

181. *Id.*

sion of the check clearing business after 1913. If the Fed, whether by self-appointment or congressional directive, is anointed or appears likely to be anointed as the royal commander of a new payment facility industry, one is understandably inclined to get out of the way.

But the Fed's role as the automated clearinghouse is not based only on fiat. The Fed may also reasonably claim that its service as a centralized automated clearinghouse is justified by its pre-sunk costs in centralized check clearing technology and expertise and such complementary functions as net settlement. To the extent that the ACHs would have duplicated existing over-capacity and expertise, investments in them may have proven wasteful. Thus, the absence of an operational role for ACHs may in fact have provided a legitimate explanation of federal dominance in that particular context, at least during the start-up phase.

The ACHs played a continuing role in the nurture of the ACH system. After the founding of the first ACHs, the American Bankers Association convened an Automated Clearing House Task Force to develop rules and standards for the governance of inter-ACH exchanges. That effort led in 1974 to the founding of the National Clearing House Association ("NACHA") by the individual regional ACHs. Like the EFTA and the Fed's Regulation E[182] that both regulate consumer EFTs, and the Fed's Regulation J[183] that addresses participation in the Fedwire service, NACHA's rules govern diverse aspects (including risk allocation) of the relations among the originating bank, the intermediary bank or switch, and the receiving bank. The NACHA rules, however, more closely resemble the operating procedures maintained by the credit card umbrella networks in terms of the sensitivity of NACHA's rules to the operational requirements of the member ACHs.[184] Moreover, the rules may be altered freely by NACHA as conditions in the ACH system evolve.

D. *Automated Teller Machine ("ATM") Transactions*

From a consumer's vantage point, ATMs represent by far the most successful application of technology in modern American

182. 12 C.F.R. § 205 (1993).
183. *Id.* § 210.
184. *See* RUBIN & COOTER, *supra* note 133, at 804-05.

banking, freeing consumers from bankers' hours and inconvenient locales. Rather than belabor the merits of their operation or the ubiquity of their presence, this subsection considers why technology has been applied with such concentration in this particular arena of banking, when technology has languished in others.

Banks, like any profit-seeking enterprises, naturally hesitate to invest when they cannot realistically expect a profit. Technological innovation, the costs of which are sometimes daunting and unpredictable, may be problematic investments in any industry. But in banking, the problems of technical investment are often compounded by the regulatory environment, which must often be altered before any new technology or affiliation is permitted. In short, classical bank regulation adds substantially to the burden of justifying innovation.

This helps explain the relatively minimal efforts among banks to foster on-line home banking; to provide customers with ways to collect all banking, payment, securities investment, accounting, and tax-reporting information in one convenient computerized structure; and generally to serve as electronic financial supermarkets. Because banking operations have for the most part been legally limited to narrow activities and locales, the costs of breaking down legal and institutional barriers to change simply have been too high for the individual members of this atomized industry to incur.

On the other hand, banks continue to spend heavily on mortar and brick. Though of marginal potential return in the context of today's over-saturated market for branch banking, investments in new or enhanced branches are still a relatively predictable traditional investment that necessitates few satellite expenses (assuming, of course, that the new branch is sited within a clearly permissible locale).

Likewise, very few banks have foregone the opportunity to invest in ATMs; as a group they have sunk large sums in the core technology, and, more recently, into highly successful interbank networking capabilities.[185] The ATM project advanced, when other consumer-related technological projects stalled, initially because ATMs provided a cost-effective substitute for

185. Professors Rubin and Cooter have provided an interesting collection of materials delineating the more precise outlines of the networking discipline that has emerged in the ATM arena. *See* RUBIN & COOTER, *supra* note 133.

discrete teller functions that had been recognized universally as necessary incidents to the business of banking. Banks, for which personnel costs usually comprise the largest category of operational expense, could expect direct savings from successful implementation of ATM technology, largely free of the expense required to remove legal or institutional barriers to implementation. Unlike the wholly speculative character of other conceivable investments in technology, investments in ATM technology promised immediate contributions to the bottom line.

The teller-substitute rationale might have sufficed as the sole seed that led to the blooming of the ATM movement, but incidental advantages were discovered in the course of the initial phases of ATM application that further cultivated growth.

First, ATMs provided not only a substitute for tellers, but also, when sited apart from existing facilities, a vastly cheaper substitute for the classic subject of massive bank investment—additional branches. Although some legal expenses were incurred by pioneers seeking to exploit ATMs as branches while regulators and courts pondered how ATM technology dovetailed with branching regulation, law did not in the end prove to be a significant bar to development.

Second, after ATMs had become fairly widespread, and, coincidentally, credit cards had overcome checking as the preferred means of consumer payment at least in distant retail transactions, ATMs suggested an opportunity for banks to avoid geographical restraints and fend off the credit card surge. By linking remote banks via a computer network, each participant institution could provide those of its customers holding standardized plastic bank cards with access to the ATMs of other network banks. Despite the formidable challenges posed by assembling diverse and remote institutions into such collective networks, and the difficulties encountered in sharing the expenses of the service, ATM networks have sprung up around the country, held together by private contract informed by collective interbank discipline.

E. *Debit Card Transactions at the Point of Sale*

The cards banks issue to facilitate ATM transactions are among a wider genre of payment facilitators known as debit cards, which, when interfaced with a bank's computer network

through a card-reading arrangement, provide immediate access to the card-holder's bank account, and can be used to credit the accounts of other participants in the network while debiting the card-holder's account. When such cards are used pursuant to pre-arrangements with retailers to effect consumer transactions at the point of sale, the transaction is known as a "POS" or "EFTPOS" transfer.[186]

Debit card transfers generally provide significant advantages over credit cards or checks, from the payee's perspective, as well as in terms of efficiencies. In the credit card transaction, the payee is credited by its participating bank at a relatively substantial discount. In a check transaction, the payee invariably suffers a delay in settlement, and the item is subject to dishonor for insufficient funds. Payees would naturally prefer the immediate, certain payment provided by debit cards. Moreover, as a matter of efficiency, debit cards seem preferable to checks, because the debit card transaction network would likely prove easier to maintain than the elaborate check collection system, notwithstanding the high capital investment costs associated with computer hardware and software, and the significant variable costs connected with information transfer. With such advantages in mind, observers in the 1960s and 1970s predicted rapid development of debit card networks.[187]

Indeed, "giro" payment networks (a foreign counterpart to debit card networks) have gained wide acceptance throughout Europe and Japan because of their ability to ensure quicker, surer payment than pursuant to checks.[188] Like debit card payment systems, giro systems permit the payor by written or telephonic instruction (albeit to a bank or post office rather than only to a bank) immediately to debit the payor's account, and

186. Electronic fund transfer at the point of sale.

187. ALLAN H. ANDERSON ET AL., AN ELECTRONIC CASH AND CREDIT SYSTEM 123-25 (1966); Eric E. Bergsten, *Credit Cards — A Prelude to the Cashless Society*, 8 B.C. IND. COM. L. REV. 485 (1968); William B. Davenport, *Bank Credit Cards and The Uniform Commercial Code*, 85 BANKING L.J. 941 (1968); Gerald T. Dunne, *Variation on a Theme by Parkinson or Some Proposals for the Uniform Commercial Code and a Checkless Society*, 75 YALE L.J. 788 (1966); Robert L. Kramer & W. Putnam Livingston, *Cashing in on the Checkless Society*, HARV. BUS. REV., Sept.-Oct. 1967, at 141, 142-43; Richard S. Odom, Note, *Alternatives to the Present Check-Collection System*, 20 STAN. L. REV. 571 (1968); Survey, *Toward the Less-Check Society*, 47 NOTRE DAME L. REV. 1163 (1972).

188. Based on a 1979 report by the Bank for International Settlements on the payment systems overseen by eleven central banks, and a 1977 report from the U.S. National Commission on Electronic Funds Transfer in the G-12 nations, the Fed compiled an overview of the payments systems throughout Europe and Japan. *See* Corrigan, *supra* note 161, at 442-50. Giros figure prominently in the survey.

cause a credit to appear on the account of a participating payee. Giro systems wholly avoid the two major afflictions imposed on payees under checking systems: the float and the threat of dishonor.

In most European countries, giro transfers constitute the primary means of effecting noncash payments. Although the central bankers of many of the giro nations assist in facilitating the giro web, private aspects of these systems are also often evident. More recently, POS extensions of the giro systems have been successfully developed by local private bank networks in Europe, while at least one attempt to facilitate a national POS system has apparently failed.[189]

Given the theoretical advantages of debit card payment systems, and the practical success of similar systems in Europe, puzzled commentators have for many years noted the lack of widespread debit-card success in the United States.[190] Several factors may have contributed to that slow start. First, because the credit card industry evolved in the United States by recruiting all banks, banks were already able to piggyback onto and profit from an on-line payment system more in step with the quickened pace of modern commerce than the checking system. Second, the banking industry's preoccupation with improving the profitability of the credit card business beginning in about 1970 may have left little energy for investing in partly competitive debit card payment networks. Third, the development of an active credit card business probably relieved merchants of some of their own natural incentives actively to encourage the development of speedier payment facilities. Fourth, to the extent that American banks were already profiting from the checking system, they were probably reluctant to invest heavily in a partly competitive system that might have undercut their abilities to profit from traditional arrangements. Fifth, geographically restricted by federal banking law, even the largest banks could not quickly have assembled the kinds of merchant networks that would have been necessary to compete effectively with the massive credit card networks. Sixth, and

189. *See* Blanche Petre, *Network Providers*, 7 COMPUTER LAW & PRACTICE, Sept.-Oct. 1990, at 10 (noting the failure of the national EFTPOS network in the United Kingdom).

190. Isaiah Baker, *What Ever Happened to the 'Checkless Society'*, MICH. J.L. REF. 481 (1974); Edwin B. Cox & Paul E. Geise, *Now It's the 'Less-Check Society,'* HARV. BUS. REV., Nov.-Dec. 1972, at 6.

perhaps most important, the consumers in the United States have succeeded better at using the apparatus of the state to protect perceived consumer benefits.

Despite these powerful disincentives to EFTPOS transaction networks, they have proceeded to operate well in narrow, state-bound markets, facilitated almost exclusively by private banks and groups of private banks in association with merchants.[191] They provide an important aggregate efficiency in transactions for which credit is not required. In fact, debit card POS transfers are continuing to garner the most rapidly increasing, if still minuscule, share of payment transactions in the United States.[192]

The regulation of debit card POS transactions largely has been confined to private contract and informal intra-network discipline, although the federal government has attempted to protect consumer interests pursuant to the Electronic Funds Transfer Act ("EFTA") of 1978[193] (enacted as a subsection of the Consumer Protection Act[194]). In particular, the EFTA extended to consumers engaged in EFTs certain privileges including limited consumer liability, documentation standards, partial stop-payment privileges, and special error-resolution privileges.[195]

In sum, POS transfers have succeeded in limited private contexts despite strong disincentives to their development, largely stemming from regulations and interventions that favor other payment methods. The POS systems that have evolved owe their vitality almost exclusively to private systems of development and control.

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191. *See* Olujoke F.A.E. Longe, *Electronic fund transfers at point of sale in the USA*, 7 COMPUTER LAW & PRACTICE, Sept.-Oct. 1990, at 24.

192. POS transactions grew at a 59% pace between 1986 and 1987 alone, and were the fastest growing payment mechanism in the United States. However, they still represented only 0.02% of the total volume of payment transactions in the United States in 1987. BOARD OF GOVERNORS OF THE FEDERAL RESERVE, *supra* note 164, at 739.

193. For background on the act, see Symposium, *A Primer on Electronic Funds Transfer Systems*, 37 U. PITT. L. REV. 613 (1976); Symposium, *Computers in Law and Society: Government Regulation in the Computer Industry: Electronic Funds Transfer*, 1977 WASH. U.L.Q. 499 (1977); Symposium, *Electronic Funds Transfer*, 35 MD. L. REV. 3 (1975); Symposium, *Electronic Funds Transfer Systems*, 25 CATH. U.L. REV. 687 (1976); Symposium, *Legislating EFT*, 13 U.S.F. L. REV. 225 (1979).

194. Title XX of the Financial Institutions Regulatory and Interest Rate Control Act of 1978, Pub. L. No. 95-630, 92 Stat. 3641, 3728 (1978)(codified at 15 U.S.C. §§ 1693-93r (Supp. 1978) as an amendment adding Title IX to the Consumer Credit Protection Act, 15 U.S.C. §§ 1601-92 (Supp. 1978)).

195. Roland E. Brandel & Eustace A. Olliff III, *The Electronic Fund Transfer Act: A Primer*, 40 OHIO ST. L.J. 531, 566 (1979).

VI. Interest Rate Swaps

A. *Swaps as Innovative Tools of Self-Regulation*

Interest rate swaps, the keystone among a relatively new family of financial instruments known as derivatives[196] or off-balance-sheet transactions, enable large-scale[197] debtors (for example, banks, thrifts, corporations, government agencies, brokerage houses, and other institutions) to unbundle, trade, and reconfigure some aspects of their borrowings.[198] In particular, interest rate swaps represent trades of variable-rate payment obligations for fixed-rate payment obligations. In a simple interest rate swap transaction, a borrower exchanges an obligation to pay interest at a fixed rate for a counterparty's obligation to pay interest at a variable rate on hypothetical "notional" amounts of equal size (that is, the principal amount that would hypothetically underlie such a payment stream). If a party to a swap has entered the swap transaction to reconfigure its exposure to risks associated with a real debt payable to a third party creditor (and thus has not entered the swap based on an entirely hypothetical notional debt), the swap still does not affect the companion debt: a swap is a bilateral contract that, by its explicit terms, is intended to affect only the two contracting parties.[199]

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196. Other derivatives include: caps (pursuant to which the writer for an upfront fee agrees to make specified payments to the counterparty when interest rates climb over a specified strike level); floors (pursuant to which the writer for an upfront fee agrees to make specified payments when interest rates fall below a specified strike level); collars (combinations of caps and floors), swap options or "swaptions" (pursuant to which the writer for an upfront fee agrees to enter into a simple interest rate swap at a later date on prearranged terms); future rate agreements (pursuant to which the parties agree to make a single payment to one another based on the prevailing rates of interest in the future); and currency swaps (in which a party with a payment obligation or right in one currency trades for a counterparty's analogous obligation or right in another currency). *See* Schuyler K. Henderson, *Swap Credit Risk: A Multi-Perspective Analysis*, 44 Bus. Law. 365, 365 n.2 (1989).

197. By 1987 the principal or "notional" amount of debt in swaps ranged from $10 million to $50 million, with liquidity periods stretching from one to twelve years. Initially, swaps required an even greater financial stake. More recently, swap transactions have covered liquidity periods of up to 30 years, and spanned both smaller and larger notional amounts.

198. Explaining the popularity of swaps, Mark Brickell, vice president of J.P. Morgan & Co. and a former chairman of the International Swap Dealers Association, stated: "What swaps have allowed us to do is tear apart different sorts of risk, isolate them and manage them independently." Saul Hansell & Kevin Muehring, *Why Derivatives Rattle the Regulators*, Institutional Investor, Sept. 1992, at 49, 53.

199. Individual swap contracts are normally governed by one master swap agreement between the swap dealer and the counterparty, pursuant to which the payments due under all swaps between the two parties are netted. Master swap agreements also

Swaps provide a novel means of tapping inter-institutional synergies. In an economic sense, interest rate swaps permit borrowers that are perceived as attractive in particular financial markets to lease their prime positions in those markets, while permitting less-favorably-positioned entities to piggyback into more desirable slots. The very existence of a robust market for interest rate swaps suggests the presence of significant anomalies and imperfections in the respective lending markets: the swap normally would not be sought out except for the fact that one or both of the parties operates in a lending market that has either over- or undervalued that party's risk. As a result of the global reach of the swap market, such anomalous or imperfect conditions are sufficiently prevalent to support interest rate swaps reflecting almost $2 trillion in notional value. Swap dealers have become adept at detecting arbitrage opportunities and facilitating swaps across a wide variety of markets and currencies.[200]

The history of the swap innovation is not well documented. Based in part on the few sketchy histories that have been offered to date,[201] and in part on contemporaneous descriptions of swaps in the financial press,[202] the following scenario seems most likely. Swaps originated in large part as a voluntary, private means of improving the safety and soundness of those banks, thrifts, and other entities that by the late 1970s and early 1980s had come to rely heavily on variable-rate funding sources.[203] Tracing the history of the swap thus requires a review of the conditions that forced rapid changes in the banking industry during the late 1970s and early 1980s.[204] By that time, American interest rates had shot up to unprecedented levels, apparently because of large prior expenses from the Vietnam

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entail specific options in the event of a default. *See* Daniel Cunningham, *Swaps: Codes, Problems and Regulation*, INT'L. FIN. L. REV., Aug. 1986, at 26.

200. Swap dealers serve legally as principals in most swap transactions, while functioning in an economic sense as intermediaries. *See* Henderson, *supra* note 196, at 371.

201. *See* Henry T.C. Hu, *Swaps, The Modern Process of Financial Innovation and the Vulnerability of a Regulatory Paradigm*, 138 U. PA. L. REV. 333, 363-66 (1989); Christopher D. Olander & Cynthia L. Spell, *Interest Rate Swaps: Status Under Federal Tax and Securities Laws*, 45 MD. L. REV. 21, 21 n.5 (1986).

202. *See* Beth McGoldrick, *The Interest Rate Swap Comes of Age*, INSTITUTIONAL INVESTOR, Aug. 1983, at 83; David Shirreff, *The Fearsome Growth of Swaps*, EUROMONEY, Oct. 1985, at 247.

203. *See FSLIC Searches for Solutions to Insolvent Thrifts While Congress and Industry Grapple with Policy Questions*, 45 WASH. FIN. REP. (BNA) No. 8, Aug. 19, 1985, at 277.

204. *See generally* LAWRENCE J. WHITE, THE S&L DEBACLE 53-81 (1991).

War and other public projects. Those high rates triggered in turn a financial process known as "disintermediation," which refers generally to the erosion of the abilities of banks and thrifts to attract depositors and borrowers. Banks and thrifts widely have been presumed to add economic value by functioning as intermediaries between sources of funds (for example, depositors) and users of funds (borrowers).[205]

Federal regulations had long capped the rates that depositors could secure from their depositary institutions, but until the 1970s those ceilings had never capped depositary rates so far below market rates that depositors and borrowers had been willing to invest substantial resources in exploring alternative methods of financial intermediation. With the rapid escalation of interest rates in the 1970s, however, non-traditional financial intermediaries like Merrill Lynch attracted large funds by offering substantially higher rates of return to investor-depositors than the banks and thrifts could offer by law. The corresponding reduction in deposits at banks and thrifts, and a consequential reduction in bank and thrift lending, was termed disintermediation. Disintermediation eventually led banks and thrifts to seek and rely on variable-rate funding sources to sustain or surpass traditional levels of lending. Under intense political pressure from banks and thrifts, Congress by 1980 largely uncapped the rates that banks and thrifts could pay to depositors. The rapid deregulation of deposit rates provided banks and thrifts with a means of restoring lost deposits. This in turn destabilized the balance sheets of banks and thrifts.

Before 1980, banks and thrifts usually secured funding at rates effectively fixed by the mandatory ceilings on deposit rates and by the rates available to banks and thrifts borrowing through the Fed's discount window. Meanwhile, banks and thrifts normally lent money to borrowers also at fixed rates. Thus, the fixed rates of any bank or thrift's assets (for example, its loan portfolio) were easily and predictably matched with the fixed rates of its liabilities. Under these circumstances, the soundness of a bank's or thrift's financial condition was fairly simple to estimate and assure.

After Congress uncapped interest rates on deposits, however, banks and thrifts confronted a new uncertainty—mis-

205. *See* Robert C. Clark, *The Federal Income Taxation of Financial Intermediaries*, 84 YALE L.J. 1603, 1605-08 (1975).

matches between the nature of their assets (for example, their loan portfolios) and their liabilities (including their own obligations to repay their sources of funds); variable-rate liabilities often were paired with fixed-rate assets.[206] This situation primed some banks and thrifts for failure when they borrowed at variable rates that, after counting expenses, plainly exceeded the rates at which the institutions could then lend. Such practices could be justified only as pure speculation that interest rates would soon fall significantly. Despite the riskiness of the endeavor, such speculation was surprisingly widespread, at least in part because deposit insurance seemed to act as a moral hazard that invited bankers to disregard the consequences of a losing speculation. The uncapping of interest rates even destabilized the more prudent institutions that only borrowed at variable rates to fund fixed-rate loans at currently profitable spreads. If market rates rose significantly, the steady income flowing from fixed-rate assets might well have proved inadequate to service the rising liabilities.

To minimize such risks, banks and thrifts pursued two general methods of reducing their vulnerability to future interest rate fluctuations. Both initiatives began without government support, yet in most cases effectively contributed to the safety and soundness of the participating institutions. The first method was to cultivate variable-rate assets; the second technique was to swap out of variable-rate liabilities.

Departing from the traditional banking practice of lending solely at fixed rates, many financial institutions during this period escaped from a traditional regulatory prohibition against making adjustable-rate mortgages.[207] Keying on hesitation among borrowers to accept the risks of borrowing at fixed rates during a period of historically high interest rates, banks and thrifts began to make a market in variable-rate loans.[208] The

206. It may be helpful to recall that banks and thrifts have a somewhat counterintuitive perspective on the accounting of deposits, which appear on their balance sheets as liabilities. Meanwhile, loans from banks appear on their balance sheets as assets.

207. Thrifts were first regulatorily permitted to offer adjustable-rate mortgages in 1979. *See* WHITE, *supra* note 204, at 72.

208. Fixed-rate loans impose upon borrowers the risks and rewards associated with speculation on future changes in the prevailing rate of interest. A future rise in market rates provides the fixed-rate borrower with the opportunity to enjoy a relatively light burden of payment as gauged by the rates of return that prevail at the time of the loan. On the other hand, the possibility of a substantial decline in interest rates represents a risk to the fixed-rate borrower that the rate set in its lending agreement will subsequently be rendered more onerous than originally anticipated. Thus, the fixed-rate

prospect of making variable-rate loans was equally attractive to the banks and thrifts because it provided a simple way to hedge against their own vulnerability to rises in interest rates occasioned by holding an excess of variable-rate liabilities. Nevertheless, banks and thrifts typically could not generate enough variable-rate lending to counterbalance their primary reliance on variable-rate sources of funds. Thus, mismatches in the portfolios of many banks and thrifts persisted even after the advent of variable-rate loans.

Unwilling merely to accept the remaining mismatches among assets and liabilities as inherent risks of modern banking, banks and thrifts, with the assistance of other financial intermediaries, mounted a separate attack on the mismatch problem from the liability side. This approach posed a special challenge because banks and thrifts could not simply change the market's fundamental resistance to fixed-rate funding of most banks and thrifts. Nonetheless, the effort among banks and thrifts to minimize variable-rate liabilities was substantially facilitated by the ingenious development of the interest rate swap, which in essence empowered banks, thrifts, and similarly positioned entities to reduce their overexposure to variable-rate liabilities without changing their traditional funding sources.

In short, by their key participation in spawning and popularizing the interest rate swap, banks and thrifts voluntarily helped pioneer a hedging strategy that far surpassed in sophistication and efficacy any existing or subsequent proposal by the government's bank regulators to minimize the rapidly increasing risk from asset-liability mismatches. The role of banking institutions in the evolution of the interest rate swap thus provides a further example of creative private discipline in American banking.

B. *The Rapid Spread of Swaps*

Interest rate swaps publicly debuted in about 1982,[209] and

loan permits the borrower to speculate on the future direction of interest rates. However, the borrower who seeks funding for a project typically does not occupy the best financial position voluntarily to assume such a speculative risk. Moreover, the lender usually enjoys better information about the likely future direction of interest rates because it normally engages in more lending transactions than does the borrower. For both reasons, the fixed-rate loan may pose an inefficient allocation of risk between borrowers and lenders.

209. Currency swaps predated the public emergence of interest rate swaps in 1982. It seems likely that both currency and interest rate swaps occurred during the 1970s,

quickly garnered widespread recognition among American and foreign[210] banking institutions and corporations as a promising tool in institutional portfolio management.[211] As more entities learned about swaps, as the safety of the basic transaction grew plainer, and as transaction costs fell, swap volume swelled. By the end of the first quarter of 1992, commercial banks held interest rate swap contracts covering $1.8 dollars in underlying notional debts.[212]

Much of the growth in the swap market is attributable in substantial part to the tendency among banks and thrifts to hedge interest rate risk by exploiting inter-institutional synergies. Yet one should not necessarily attribute the quick growth in the swap market solely to demand for an effective hedge in the modern multi-rate funding environment. At least two other uses of swaps are conceivable, and both appear likely to have driven some portion of the swap market's growth.

First, swaps can give both variable- and fixed-rate borrowers cheaper borrowing costs by providing each type of borrower with terms more favorable than either party would have been able to secure alone. For instance, a borrower that finds itself blessed with the ability to tap attractive fixed rates, but for other reasons seeks variable-rate financing, might enter a swap transaction with a counterparty that seeks fixed-rate financing. Meanwhile, because the market for variable-rate financing is typically less sensitive to the credit ratings of borrowers, the potential swap partners are more equally matched in their access to attractive variable-rate financing. By engaging in a swap

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but were kept confidential by the parties "to protect the proprietary nature of the product." Hu, *supra* note 201, at 363 n.73.

210. Although American participants probably accounted for the bulk of the early trading in swaps, interest rate swaps since their inception have been linked closely with international financial trading, especially in the context of currency swaps and exchanges. *See* Tanya Arnold, *How to Do Interest Rate Swaps*, HARV. BUS. REV., Sept.-Oct. 1984, at 96. More recently, the swap market has attained a truly global character and the American element of the market, while still very important, has declined in overall significance.

211. Thus, the swap markets today are international in scope, and can even accommodate cross-currency transactions. *See* Cunningham, *supra* note 194, at 26; *see also* McGoldrick, *supra* note 202, at 83. The swap market involved notional amounts of $20 billion by 1983. *See* Thomas W. Jasper & Daniel R. Ross, *The Economics of Interest Rate Swaps*, *in* INTEREST RATE AND CURRENCY SWAPS PROGRAM 12 (PLI Corp. Series No. 505, 1985). This sum rocketed to an estimated $200 billion in underlying notional amounts by 1985. *See* Shirreff, *supra* note 202, at 247.

212. *See Greenspan Reassuring on Derivative Holdings*, MORTGAGE MARKETPLACE, Sept. 21, 1992, at 3 (reporting Sept. 11, 1992 letter from Fed Chairman Alan Greenspan to Sen. Donald W. Riegle (D. Mich.)).

transaction at the outset, each party can secure cheaper overall financing than it could by working independently. This purpose is not necessarily at odds with the hedging function, especially insofar as one or both parties is attracted to the transaction in part to foster a good match of assets and liabilities. Yet a hedging function need not be presumed.

Second, a swap can represent a bet on the future direction of interest rates.[213] Although such a purpose could conceivably motivate the parties to a simple interest rate swap,[214] hybrid varieties of swaps are more plainly rooted in speculation. Parties to a swap option or "swaption," for instance, agree that one party at will pay a fee in exchange for the right to consummate a swap with another at a later time on prearranged terms. Parties to a forward-rate agreement, likewise, agree to be liable to one another for a single payment in the future based on the calculated value of a pre-specified swap at that future time. In either case, the single-fee-based, contingent, short-term nature of the contracts suggests that they may be undertaken for reasons that remain unrelated to any classic hedging strategy.[215] In short, it is theoretically conceivable that "swaps and [related] financial innovations can also be used to place huge bets on the markets."[216]

Because the records of swaps do not reveal the purposes of the parties, it is currently difficult to gauge the extent to which participants in the various portions of the swap market seek primarily to remedy mismatches between assets and liabilities in their portfolios. Nevertheless, just as anecdotal and circumstantial evidence suggests that a hedging rationale almost certainly animated the initial growth in the industry, additional evidence suggests that the speculative aspect of the swap market continues to be relatively insignificant. First and foremost, the swap market has been remarkably free of notorious defaults based on apparent speculative excess. Not surprisingly, therefore, an independent commentator recently opined without discussion that hedging rather than speculation drives the mar-

213. *See* Hu, *supra* note 201, at 347-48.

214. A classic example of a speculative simple interest rate swap is a "mirror" swap, in which a party enters a swap to reverse its position in a prior swap. *See* Olander & Spell, *supra* note 201, at 29.

215. This is not meant to deny that parties may enter formally identical hybrid swaps as defensive hedges to avoid aggregate interest rate risk in their portfolios.

216. Floyd Norris, *Swapping Woes: A Fed Official Sees Problems*, N.Y. TIMES, Feb. 9, 1992, at C1.

ket for swaptions and forward rate agreements.[217] Further corroboration that risk aversion rather than risk-seeking dominates the swap market was provided in 1991 when swaps began to be traded through the Chicago Board of Trade, yet failed to "draw broad interest" compared with the customized swaps offered over-the-counter by swaps dealers.[218]

In short, prudential tendencies among banks and thrifts appear largely to have fueled the swap market's quick growth and subsequent activity. The rapidity of the growth in swaps represents not a speculative fad but a proclivity among financial institutions to adopt effective tools for prudent financial management, even when the public regulatory community remains frozen by the sheer novelty of the facility.

C. *The Awkwardness of Public Regulation of Swaps*

Swaps never fit smoothly into preexisting regulatory categories. For example, although swaps appear to meet the definition of a security, swap participants have avoided registration under the Securities Act of 1933 because of the private nature of the transaction within the meaning of § 4(2).[219] Meanwhile, reporting requirements under the Securities Exchange Act of 1934 presumably reach swap dealing activities by broker-dealers, but broker-dealers have, until recently,[220] sidestepped reporting because swap dealing typically has been split off into separate affiliates.[221]

Regulation of interest rate swaps might arguably come within the ambit of the Commodity Futures Trading Commission ("CFTC"). The CFTC, however, has long been viewed as an agency more appropriately intended to regulate futures instruments sold to the public. Intending to limit CFTC responsibility with respect to the currency swap (a precursor to the interest rate swap), Congress in 1974 amended the Commodity

217. For instance, in a recent article describing currency swaps, the same commentator stated (albeit anonymously and without further reference) that those entities that "hedge actively . . . mainly us[e] forward contracts and options." *Lost in a Maze of Hedges*, THE ECONOMIST, Oct. 3, 1992, at 84.

218. Nailene C. Wiest, *U.S. Swap Dealers Hail CFTC Reauthorization Bill*, Reuter, Oct. 9, 1992, *available in* LEXIS, Nexis Library, Reuter File.

219. *See* Olander & Spell, *supra* note 201, at 52-59.

220. *See supra* note 201.

221. On several basic questions about the applicability of securities laws to swaps, see Stuart Somer, *A Survey of Legal and Regulatory Issues Relevant to Interest Rate Swaps*, 4 DEPAUL BUS. L.J. 385 (1992).

Exchange Act (CEA) to exempt "transactions in foreign currency" from the CEA's substantial licensing and reporting requirements.[222] Likewise, after several years of ambiguity about the CFTC's potential role in the regulation of interest rate swaps, Congress recently has given the CFTC authority to exempt interest rate swaps from its purview "[i]n order to promote responsible economic or financial innovation and fair competition."[223]

Meanwhile, regulation based on the form of the regulated entity provides an unsatisfying regulatory fit in the swaps arena because swaps occur across institutional lines, between banks, broker-dealer affiliates, corporations, and even municipalities. Swaps have even proved awkward simply to account for and tax. Accounting principles have left swaps in a residual category off the balance sheet, which in turn has helped the largest category of swap participants—banking institutions—justify minimal regulatory scrutiny. Tax law, likewise, has had significant trouble even conceptualizing the gains and losses related to the swap transaction.[224]

Yet the awkwardness of traditional regulatory vehicles has not stopped regulators and commentators, especially in the banking field, from voicing suspicions about swaps. As early as 1983, for example, a report by the Bank for International Set-

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222. 7 U.S.C. § 2 (1993). As two commentators noted:

> The reason for the exemption is that the interbank currency market, which consists primarily of large banks, had proved highly efficient in serving the needs of international business and hedging the risks that stem from foreign exchange rate movements. The participants in this market are sophisticated and informed institutions, unlike the participants of organized exchanges, such that the protections of the CEA need not be extended to participants in the interbank market.

Jerry W. Markham & David Gilberg, *Federal Regulation of Bank Activities in the Commodities Markets*, 39 BUS. LAW. 1719, 1763 (1984)(citing CFTC v. Sterling Capital Co. [1980-1982 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶ 21,169 at 24,783-84 (N.D. Ga. 1981)).

223. H.R. 707, 102nd Cong., 2d Sess. § 502 (1992)(enacted)(amending 7 U.S.C. § 6 (1992)). According to the CFTC's general counsel, the CFTC expects "expeditiously" to exempt interest rate swaps from its regulatory control. Vicky Stamas, *Federal Regulators Want to Write Rules Enforcing New Law for Swaps Trading*, THE BOND BUYER, Oct. 12, 1992, at 1. Prior to this legislation, swaps had been challenged in court as futures contracts that are invalid unless traded on a futures exchange. Thus, though the CFTC had not attempted to exercise jurisdiction over swaps, the legislation removed a pall over American swaps dealers. *See* West, *supra* note 218.

224. *See* Edward D. Kleinbard, *Equity Derivative Products: Financial Innovation's Newest Challenge to the Tax System*, 69 TEX. L. REV. 1319 (1991); Note, *Tax Treatment of Notional Principal Contracts*, 103 HARV. L. REV. 1951 (1990); Note, *Tax-Exempt Entities, Notional Principal Contracts, and the Unrelated Business Income Tax*, 105 HARV. L. REV. 1265 (1992).

tlements ("BIS") expressed general reservations about the soundness of free-form interbank exchanges like swaps.[225] By 1986, it was not surprising for a commentator to note with alarm that "there are no supervisory mechanisms to insure that banks treat the credit risk, mismatch risk and interest risk presented by the interbank market with due caution."[226] Thus, the BIS targeted off-balance-sheet transactions such as rate swaps, stating that their unregulated growth "[m]akes it far more difficult to determine the risk exposures of various sectors of the economic structure."[227]

Bank regulators always had the inherent authority to consider interest rate swaps as a subjective factor when calculating capital adequacy ratios, although it seems likely that, in practice, examiners made few if any evaluations of interest rate swap contracts when setting capital requirements. More formal regulation was initiated in 1986 when the Fed first proposed objective risk-based capital adequacy guidelines.[228] Swaps were excluded from the Fed's first set of proposed guidelines. By 1987, however, the Fed and the Bank of England had reached a mutual understanding that off-balance-sheet risk should be reflected in capital requirements, and the Fed's proposed rules were soon expanded to account explicitly for the interest rate swap risk.[229] Even so, bank regulators in the United States and abroad to date have largely confined their regulation of swaps to considerations of capital adequacy, despite occasional threats to the contrary.[230]

The strongest argument for any regulation of swaps so far relates to the apparent dearth of reliable information in the public domain about the swap market. Regulation could at least reveal the workings, size, and breadth of the market. Anecdotal observations and conclusory remarks by industry insiders have so far remained among the best sources of information about

225. *See* BIS, *Recent Innovations in International Banking* (Apr. 1986), *reported in* Robert Lenzner, *New Mobility of Capital Is Altering Market*, BOSTON GLOBE, July 5, 1986, at 1, 20.

226. BIS Monetary and Economic Department, *The International Interbank Market: A Descriptive Study*, BIS ECONOMIC PAPERS, No. 8, July 1983, at 34.

227. *Id.*

228. *See* 51 Fed. Reg. 3976 (presenting guidelines proposed Jan. 31, 1986). The Fed proposed "to modify its capital policies to be more explicitly and systematically sensitive to the risk exposure of individual banking organizations." *See also* Cunningham, *supra* note 199, at 33.

229. *See* 52 Fed. Reg. 9304 (containing guidelines proposed Mar. 24, 1987).

230. Norris, *supra* note 211, at § 3 p. 1.

the contemporary swap market. Obviously, such information provides dubious grounds on which to base long-run regulatory decisions. Concerned about the current lack of reliable information in the public domain, the SEC has begun to mandate that swap dealers affiliated with broker-dealers report quarterly, under *Statement of Financial Accounting Standards Number 105*,[231] on their involvement with interest rate swaps and other financial instruments that bear off-balance-sheet risk.[232] While regulation solely to provide information has succeeded in the securities industry, banking regulation has traditionally been of a more pervasive type. It remains difficult to imagine that banking regulators would be content to end any regulatory enterprise in the swap arena after ensuring the dissemination of accurate information.

In brief, traditional governmental regulators have slowly but grudgingly accepted the presence of swaps in modern finance, but for the most part have themselves still failed to harness (and perhaps even comprehend) the substantial value of swaps as a regulatory tool.[233] The growth of swaps thus represents a modest triumph of private regulatory ingenuity in the teeth of governmental skepticism, but one that rèmains threatened by the specter of governmental regulation.

D. *The Status of Inter-Institutional Swap Discipline*

Whether or not swaps warrant additional governmental regulation, the swap market could not have grown so large so fast without a fairly strict informal regime of private discipline. Although the swap instruments take the legal form of private contracts between the individual swap partners, and some terms necessarily vary from agreement to agreement and party to party,[234] the basic swap transaction has assumed a common structure based on the experience of those most heavily in-

231. Statement of Financial Accounting Standards No. 105 (Fin. Accounting Standards Bd.).

232. *See* 17 C.F.R. § 240.17h-1T (1992)(regulating maintenance and preservation or records), 17 C.F.R. § 240.17h-2T (1992)(reporting). Before the rules went into effect September 30, 1992, the SEC defended its decision by noting that "much of this activity is being booked outside the registered broker-dealer. This area may be a source of concern in the future, as complex and risky financial products are developed and become more prevalent in the securities industry." 57 Fed. Reg. 32159, 32166 (1992).

233. *See* Hu, *supra* note 201, at 335 (arguing that the international regulatory apparatus must be rendered more accommodating to financial innovation).

234. *See* Cunningham, *supra* note 199, at 26.

volved in the market (that is, the swap dealers and their affiliates).[235]

Two organizations representing swap dealers have established closely analogous standard terms for swaps in their respective locales. The New York-based International Swap Dealers Association ("ISDA") in 1985 first issued a code of practice and definitions that grew out of the substantial swap experience of the New York law firm of Cravath, Swaine & Moore.[236] The ISDA Code was quite similar to the terms recommended contemporaneously by the British Bankers' Association for swaps in the London interbank market.[237] The ISDA has subsequently refined its code, published several generations of a printed form swap contract, and invited the adoption of model legislation, all to help rationalize and systematize the market.[238] The ISDA also has overseen the creation and modification of a standard form of master swap agreement governing relations among parties that engage in multiple swaps. Although these various forms and agreements may well tend to "fix the risk" in favor of the dealers in a manner reminiscent of the uniform laws governing checking earlier in the century,[239] they also have helped swap parties and dealers avoid stumbling into unfortunate arrangements that might threaten the safety and soundness of the parties and the market.

The swap dealers also have acted informally to regulate the market, albeit, again, not solely or even primarily for the purpose of furthering public interests. Early on, swap savants remained so close-mouthed about the very existence of swap theory and practice that only a few extremely creditworthy and knowledgeable institutions were able to participate. More recently, the swap market has broadened, swap dealers have pro-

235. These dealers comprise about 100 financial intermediaries or their affiliates, most located in either New York or London.

236. *See* Cunningham, *supra* note 199, at 29.

237. *See id.* at 28.

238. For example, the ISDA recently proposed model legislation for the United Kingdom that would permit swap dealers to sue municipalities for breach whenever the municipalities lack proper approval to enter into the subject swaps. *See* Lynn S. Hume, *Model Bill for Municipalities to Enter Swaps Would Put Issuers at Risk, GFOA Adviser Says*, THE BOND BUYER, Feb. 6, 1992, at 2. An ISDA representative attempted to justify the legislation by arguing that many local governments have begun the dubious practice of engaging in swaps for purely speculative purposes. *See id.* However, the swap dealers, not the relatively inexperienced municipalities, probably occupy a better position to understand the risks of speculation, and hence would be the more likely candidates to suffer liability for restricting access to swaps.

239. *See* Scott I, *supra* note 105, at 758.

liferated, and marketing has become more aggressive. The self-regulatory challenge has grown in step with the burgeoning size and internal competitiveness of the dealer group.

But, by virtue of their forced economic interdependency, the swap dealers have apparently found new opportunities to preserve safety and soundness in their industry beyond the promulgation of standard forms and definitions. Most swap dealers, like bookies, must maintain substantial portfolios of swaps with one another to protect themselves from becoming caught in their own over-exposures to particular interest rate risks. When the dealer seeking relief from an imbalance of interest rate risk is obliged to deal with its fellow dealers, that dealer must also expose itself to the terms, conditions, and informal suasion that its fellow dealers might "offer."

Detailed evidence of informal discipline among swap dealers is by nature not easily accessible to the public, and even if available might require the deciphering skills of a cultural anthropologist. However, some circumstantial evidence of informal discipline exists. A former chairman and present director of the ISDA, for instance, has repeatedly called attention to an apparent ethic of prudence among swap dealers:[240] commentary that appears to be based at least in part on genuine conditions, rather than merely on a defensive effort to forestall potential regulation. One prominent British regulator, for example, has noted:

> [T]hose financial firms that are most heavily involved in the OTC [over-the-counter] derivatives market tend to be the most cautious. They have the most trading expertise, and they control their risks using the most advanced risk-management systems and techniques.[241]

Yet the swap dealers have not entirely succeeded in disciplining their own market. According to the same regulator,

> behind these big guns [*i.e.*, the larger swap dealers] is a rap-

240. He stated:

> The plain fact is that the credit quality of swap portfolios tends to be relatively high compared to other banking activities. . . . It is our business to identify the risks in a transaction, to isolate those risks and to manage them. . . . You have more triple-A-rated swap dealers than there are triple-A-rated banks and securities firms combined. Swap dealers think a good deal like their regulators do. We are extremely mindful of the risks. . . .

Mark C. Brickell, *quoted in* Victor F. Zonana, *Boom in Swaps Is Welcome to Some But Worries Others*, L.A. TIMES, June 21, 1992, at D1; *see also* Hansell & Muehring, *supra* note 198.

241. Hansell & Muehring, *supra* note 198, at 6.

> idly growing number of smaller outfits anxious not to miss the boat, who cobble together OTC derivatives and capabilities in an attempt to keep up with the play and get their share of the market with limited regard to the dangers.[242]

By failing to control the aggressive "renegades" in their midst—perhaps out of an understandable wariness of antitrust law—the swap dealers as a group may have reached the limits of their abilities to impose self-discipline, at least with regard to price and marketing. One potential remedy for this problem would be to impose a limit on the number of dealers that could enter the industry, and encourage the remaining dealers to increase the rigor of their mutual discipline. Although this option might entail some exemption from antitrust law, the benefits could well outweigh the costs, provided the cartel's more undesirable monopolistic tendencies were simultaneously checked, perhaps through the oversight of an independent regulator of private interbank disciplinarians.[243]

However, over-competition[244] among dealers is not the only cause for concern about the level of discipline in the swap industry. Other threats to systemic soundness from swaps involve factors that lie at least partly outside the current ability or willingness of the dealers to self-regulate. For instance, Hansell and Muehring have cited the following concerns:[245] (1) a single party or dealer could make a huge wrong bet;[246] (2) mathematical errors by swap dealers or customers could unwittingly expose parties to dangerous levels of interest rate risks;[247] (3) a

242. *Id.*

243. *See infra* part VIII.D.

244. *See* STEPHEN G. BREYER, REGULATION AND ITS REFORM 29-32 (1982) (discussing the concept of excessive competition as a justification for regulation).

245. These four scenarios are listed and discussed briefly in Saul Hansell & Kevin Muehring, *Disaster Scenarios*, INSTITUTIONAL INVESTOR, Sept. 1992, at 52-53.

246. In this regard, one commentator has noted a possible analogy between interest rate swap risks and Merrill Lynch's $377 million loss in 1987 pursuant to the trading of certain mortgage-backed bonds that had been severed into their interest and principal elements. However, Merrill Lynch's trading losses in connection with making a mass market in a new financial commodity bear little resemblance to the losses that have so far been occasioned by speculative exposure to interest rate risks by parties to interest rate swaps. Losses from speculation in swaps appear to have been comparatively minimal. The largest speculative loss so far apparently has been that of TCF Financial Corp., which was reported to have charged $100 million against ill-advised interest rate swaps. *See* NATIONAL MORTGAGE NEWS, Sept. 21, 1992, at 41.

247. Felix Rohatyn, a prominent investment banker, has been quoted as worrying that "26-year-olds with computers are creating financial hydrogen bombs." Hansell & Muehring, *supra* note 245, at 51. Nevertheless, although errors of inaccurate modeling appear inevitable, it also seems likely that any un-caught errors would be of sufficiently marginal significance not to constitute a systemic risk. Adams reports only one instance

strong move in interest rates might make it practically impossible for dealers to hedge their own risks, thereby drying up the swap market itself;[248] and (4) swap parties might default on their swap contracts—the so-called "credit risk" of swapping—in a large chain reaction.[249]

Although these four concerns may as a factual matter pose only minor risks,[250] it is also true that the swap dealers have not yet moved to deal with them effectively despite being well-positioned to address each concern. With pressure mounting on the industry to impose even more self discipline,[251] there remains a reason to believe that the major participants will act collectively, possibly through the ISDA.

For instance, in response to concern about colossal losses by speculators, the swap dealers could mandate that each customer disclose its current exposure to interest rate risk before entering any swap, giving the dealers an opportunity to discover instances of potential over-exposure before compounding the problem with an additional swap. Standards could be developed that would identify abnormal exposures. To guard against unwitting miscalculation, the ISDA could design, operate, and require customers to use an independent, confidential computer modeling service to provide mathematical models of the effects of proposed swaps, thereby checking the modeling of the individual customers, dealers, or both. By being able to tap the expertise of highly paid market partici-

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of a modeling error, and even though it was a dealer's (Chemical Bank's) error, the result was predictably modest: only $33 million. *See* NATIONAL MORTGAGE NEWS, *supra* note 246.

248. Loosely analogous "dynamic" hedging strategies in the equities and stock-index-futures markets helped contribute to the stock-market meltdown in October, 1987. *See* Lewis D. Solomon & Howard B. Dicker, *The Crash of 1987: A Legal and Public Policy Analysis*, 57 FORDHAM L. REV. 191 (1988). Yet because swaps are not re-traded, as equities are, a temporary illiquidity in the swap market appears unlikely to hurt existing holders of swaps. It will only prevent further swapping. Those parties who might be unable to effect new swaps during a period of illiquidity would be in no worse position than they would occupy if the swap market had never existed.

249. The recent demise of a heavy user of swaps, Olympia & York Developments Ltd., netted just $78.2 million in swap credit exposure to its counterparties, in contrast with over $18 billion in O&Y's total debts. *See* Victor F. Zonana, *supra* note 240, at D1. Although some feared that the O&Y bankruptcy might cause multiple defaults in the swap markets, the event passed without incident.

250. *See* Hansell & Muehring, *supra* note 245, at 52-53.

251. *See* James R. Kraus, *Corrigan Warns Banks to Gauge Hidden Risks*, AM. BANKER, Jan. 31, 1992, at 1 (reporting on New York Fed President E. Gerald Corrigan's stern warning that self-supervision of the swap business must improve). On the other hand, SEC Chairman Richard E. Breeden has indicated that he distrusts the alarmist perspective on the derivatives market.

pants, the ISDA actually is in a far better position than governmental regulators to analyze and verify the transactions in the market. To short-circuit possible breaks in the market, the swap dealers could develop an action plan for financial calamities pursuant to which swap dealers would agree in advance to pool their resources to acquit any kind of market-making responsibilities deemed essential. Furthermore, to maintain the present minimal levels of credit risk from swap defaults, the swap dealers could mandate that parties entering swaps maintain certain credit ratings before gaining access to the swap market.

In short, swap dealers may feasibly regulate the swap market more aggressively than they have so far. If they fail to act decisively and quickly, government regulation will likely fill the vacuum.

VII. THE SECONDARY MORTGAGE MARKET

The Federal Housing Enterprises Financial Safety and Soundness Act of 1992[252] ("FHEFSSA") created a new federal agency[253] to supervise two government-sponsored enterprises ("GSEs") that have galvanized the secondary mortgage market: the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac"). FHEFSSA represents only the most recent contortion in a history of ambivalence about the government's proper role as a regulator of the secondary mortgage market.[254] The confusion is longstanding.[255]

From the secondary mortgage market's roots in the private

252. Pub. L. No. 102-550, 106 Stat. 3941 (1992)(enacted as Title XIII of the Housing and Community Development Act of 1992).

253. The Office of Federal Housing Enterprise Oversight.

254. Section 1355(a) of both FHEFSSA and the Housing and Community Development Act of 1992 mandates the preparation of a government-sponsored report on the advisability of privatizing Fannie Mae and Freddie Mac. *See* Pub. L. No. 102-550, § 1355(a), 106 Stat. 3941, 3970 (1992). Section 1355(d)(2) further allows both of the subject GSEs to submit their own reports. *See id.* § 1355(d)(2), 106 Stat. 3941, 3971 (1992). Thus, Congress has assured the generation of at least three perspectives on the question, albeit all from various vantage points within the governmental banking bureaucracy.

255. The history of the secondary mortgage market can be pieced together on the strength of the following works: CONG. RES. SERV., CRS REP. CONG., FEDERAL AND RELATED AGENCIES SUPPORTING HOME MORTGAGE MARKETS 306 (1988); LANCE E. DAVIS & DOUGLAS C. NORTH, INSTITUTIONAL CHANGE AND AMERICAN ECONOMIC GROWTH (1971); OLIVER JONES & LEO GREBLER, THE SECONDARY MORTGAGE MARKET—ITS PURPOSE, PERFORMANCE, AND POTENTIAL (1961); Richard W. Bartke, *Fannie Mae and the Secondary Mortgage Market*, 66 NW. U.L. REV. 1 (1971); Jo Anne Bradner, *The Secondary Mortgage Market and State Regulation of Real Estate Financing*, 36 EMORY L.J. 971 (1987); Robin P. Malloy,

sector, to its seeding with GSEs during the Depression emergency, through several half-hearted privatization efforts in the 1950s and 1960s, to the redoubling of government sponsorship in the 1970s, through partial privatization in the 1980s, and most recently in the guise of FHEFSSA, the secondary mortgage market has been relegated by its governmental intervenors to an uncertain status: neither reliably private nor reliably public. Its general health, however, stems from a scheme of interbank discipline not unlike the other systems of private interbank discipline reviewed here.

In the late Nineteenth Century, mortgage companies in the western United States attracted substantial eastern investments on the strength of relatively high western interest rates. Despite initial success, bad management and regional disasters (such as drought) brought these rates down. In the 1920s, several forms of mortgage-backed securities were developed by mortgage bond companies and insurers, but few issues weathered the Depression. Experimentation temporarily halted in the heat of the financial melt-down.

Today's governmental dominance of the secondary mortgage market descends directly from a brief window of time during the height of the Depression when the private secondary mortgage market, like many economic sectors, had stalled. In 1934, Congress first facilitated the operation of a secondary mortgage market by passing the National Housing Act.[256] The federal government's role initially was intended merely to facilitate the chartering of private "national mortgage associations." No applications for such charters were immediately forthcoming from the ravaged private banking industry. Rather than pursue efforts to foster private investment in national mortgage associations, however, the Reconstruction Finance Corporation ("RFC") itself immediately plunged into the market by chartering its own entity, the RFC Mortgage Company, in March 1935, ostensibly for the main purpose of facilitating a secondary market for mortgages on commercial real estate. In fact, the RFC Mortgage Company quickly became far more actively involved in facilitating a secondary market for mortgages

The Secondary Mortgage Market — A Catalyst for Change in Real Estate Transactions, 39 Sw. L.J. 991 (1986).

256. Ch. 847, 48 Stat. 1246 (1934)(codified as amended at scattered sections of 12 U.S.C.).

on residential real estate, which it did by purchasing and reselling mortgages insured by the Federal Housing Administration ("FHA"), and, later, mortgages guaranteed by the Veterans Administration ("VA"). As a further catalyst to residential lending, the RFC used the broad language of the National Housing Act to create another quasi-public subsidiary, the Federal National Mortgage Association, or Fannie Mae,[257] on February 10, 1938.

Unlike the RFC Mortgage Company, the explicit purpose of the new agency was in keeping with the actual practice of purchasing eligible FHA-insured (and, later, VA-guaranteed) mortgages. Both entities continued in overlapping operation until the redundancy ended in 1947 when the RFC shut down the RFC Mortgage Company, consolidating secondary mortgage market operations in Fannie Mae. In short, a temporary public boost to the secondary mortgage market in 1934 had mutated by 1947 into a full-fledged governmental monopoly.

Despite the obvious passing of the economic emergency that in the 1930s had given rise to federal intervention in the secondary mortgage market, Fannie Mae continued to dominate the market long after World War II, relying on the U.S. Treasury to finance large purchases of loans that had been made to returning veterans and others in the post-war boom. As in the wire transfer business, the presence of an apparently omnipotent governmental monopolist, reacting to non-economic political pressures, repelled all potential entrants. Yet the President and Congress, after observing Fannie Mae's increasingly noticeable pressure on governmental finances, recalled the earlier, original understanding that the secondary mortgage market be conducted by private entities. In 1954, pursuant to Fannie Mae's recharter, Congress provided for the progressive retirement of Fannie Mae's preferred debt "in order that [Fannie Mae's secondary mortgage market] operations may thereafter be carried out by a privately owned and privately financed corporation."[258]

Fannie Mae soon began issuing stock to private investors, but never entirely escaped from its status as a politically sensi-

257. Fannie Mae was re-established under present name on April 5, 1938, and Congressionally re-chartered on July 1, 1948. *See* Bradner, *supra* note 255, at 976; Jones & Grebler, *supra* note 255, at 117-19; Malloy, *supra* note 255, at 993.

258. Act of Aug 2, 1954, ch. 649, 68 Stat. 612 (1954), *quoted in* Bartke, *supra* note 255, at 22 n.78.

tive governmental instrumentality. In the following years, it continued to provide "special assistance functions" in support of below-market-rate governmental loan programs, and to offer competitive private mortgage originators with a ready market for their FHA-insured and VA-guaranteed loans. Meanwhile, Fannie Mae remained restrained from buying mortgages not insured or guaranteed by the government.

The next move to privatize Fannie Mae was even more ambivalent than the (broken) promise of the 1954 Act. In a February 22, 1968 speech to Congress charting what later became the Housing and Urban Development Act of 1968, President Johnson declared:

> Through the Federal National Mortgage Association, the Federal Government has helped to keep mortgage funds flowing by buying mortgages when credit was tight and selling them when money was plentiful.
> Today, [Fannie Mae] is a hybrid, owned in part by private shareholders, in part by the government, but managed by government officials.
> This secondary market operation is largely a private function, which ought to be performed by the private sector—as the Congress has always intended.
> *I propose legislation to transfer the secondary market operation of the Federal National Mortgage Association on an orderly basis to completely private ownership.*
> This new FNMA, concerned exclusively with providing an increasing and continuous flow of funds into residential financing, will close an important gap in the existing network of financial institutions.

Yet as Professor Bartke has shown, Johnson's declarations were probably predicated more on the desire to conceal the true costs of his urban development program than on any principled discomfort with Fannie Mae's ambiguous quasi-public status.[259]

Congress did promptly segregate Fannie Mae's special assistance functions into a new entity—the Government National Mortgage Association ("Ginnie Mae")—while rendering Fannie Mae, in Professor Bartke's words, "quasi-private," and expanding Fannie Mae's powers to permit securitization of its mortgage portfolio. However, still supported by an implicit governmental guarantee and susceptible to political pressure

259. Bartke, *supra* note 255, at 30-32.

to endorse below-market lending, Fannie Mae remained wholly dominant in its field. In the end, as Professors Jones, Grebler, and Bartke have all concluded, the Housing and Urban Development Act on balance probably did more to discourage competition in the secondary mortgage market than to fan it.[260]

President Johnson's half-hearted "privatization" of Fannie Mae did not stop the thrift industry shortly thereafter from actually extending the government's reach in the secondary mortgage market. In 1970, concerned that Fannie Mae had been captured by mortgage originators and that its incursion into the conventional mortgage market would conflict with the interests of savings and loan institutions, the thrift industry lobbied for and was awarded its "own" governmental market-maker in mortgage resales—the Federal Home Loan Mortgage Corporation ("Freddie Mac"). Not coincidentally, Freddie Mac was created at the same time Congress granted permission to Fannie Mae to deal in mortgages not guaranteed or insured by the government. Freddie Mac's charter paralleled Fannie Mae's in most respects, except that control of Freddie Mac was lodged in the Home Loan Bank network. Congress then again expanded the scale of its secondary mortgage market intervention by allowing Ginnie Mae to issue mortgage-based securities backed by the full faith and credit of the United States government.[261]

Apparently concerned about the governmental restraints on opportunities for potential competitors in the secondary mortgage market and sluggishness in financial innovation, and having issued a standing invitation to moral hazard, Congress reversed field with the enactment in 1985 of the Secondary Mortgage Market Enhancement Act of 1984 ("SMMEA").[262] This bill "broaden[ed] . . . the market for mortgage-backed securities by encouraging more extensive involvement of the private sector in the formation of conduits for the flow of mortgage capital from investors to lenders and homebuyers."[263] Indeed, since SMMEA's adoption in 1985, new truly private entrants to the secondary mortgage market have emerged, and the market for mortgage-backed securi-

260. *See id.* at 36; Jones & Grebler, *supra* note 255, at ch. 11.
261. *See* 12 U.S.C. § 1721(g)(1)(1982); Bradner, *supra* note 255, at 979.
262. Pub. L. No. 98-440, 98 Stat. 1689 (1984).
263. S. REP. No. 293, 98th Cong., 2nd Sess. 3 (1984).

ties—an innovation in the secondary mortgage market that enables individuals to participate as mortgage buyers—has mushroomed. From the 1984 to 1988, for example, new issues of private mortgage securities increased annually from 10 to 71 billion dollars.[264] Nevertheless, Fannie Mae and Freddie Mac retain a dominant bread-and-butter role as the central clearing houses for secondary mortgage transactions among institutions.

The reregulatory thrust of FHEFSSA reflects continuing Congressional skittishness about relinquishing control over the secondary mortgage market, this time ostensibly to avoid any replication of the thrift fiasco of the 1980s. Critics note that the GSEs, which operate under an implicit governmental guarantee, might one day cash in on that implication, much as the savings and loan industry backed the federal government into rescuing its insurer in 1989, despite the absence of a legal obligation to do so.[265] One logical response to such a concern about moral hazard would be immediately to withdraw the government's implicit guarantee of the GSEs' obligations, an idea that was included in the National Commission on Housing's 1990 recommendation that Fannie Mae and Freddie Mac be privatized.[266] Instead, Congress enacted FHEFSSA, choosing the classical regulatory route while remaining slave to the false dichotomy of governmental regulation or no regulation.[267]

The secondary mortgage market presents a case in which the principles of private interbank discipline could bear fruit. Centralized clearing entities, Fannie Mae and Freddie Mac, are already engaged in the types of functionally discrete interbank financial transactions that typically invite private interbank discipline. The disciplinary function could be further facilitated if

264. *See* Edward L. Pittman, *Economic and Regulatory Developments Affecting Mortgage Related Securities*, 64 NOTRE DAME L. REV. 497 (1989).

265. *See* Financial Institutions Reform, Recovery, and Enforcement Act of 1989 ("FIRREA"), Pub. L. No. 101-73, 103 Stat. 183 (1989)(codified in scattered sections of 5, 12, 18, 26, 28, 31, 40, 42 and 44 U.S.C.).

266. *See* Martin Mayer, *Another Favor for Fannie Mae and Freddie Mac*, WALL. ST. J., Oct. 21, 1991, at A20 (discussing the Commission's recommendations as supportive of "freeing Fannie and Freddie from all constraint and making them ordinary stockholder-owned companies, without tax breaks, presidential appointees on their board, or supervision by HUD").

267. *See* Andrew Taylor, *Bill Establishing New Overseer for Fannie, Freddie Clears*, CONG. Q., Oct. 10, 1992, at 3138 (suggesting that the primary debate pursuant to FHEFSSA's enactment was limited to the narrow question of how much governmental oversight is "needed" to supervise the level of risk represented by Fannie Mae and Freddie Mac).

Fannie Mae and Freddie Mac were transformed into mutual companies, and were thereafter owned by participant institutions much as participants owned (or own) the Suffolk Bank system, the check clearinghouses, and the credit card umbrella corporations.

The application of private interbank discipline could resolve 60 years of nagging ambivalence about the propriety of the federal government's role as a dominant figure in the secondary mortgage market. Had Congress fully considered the regulatory potential of private interbank discipline, FHEFSSA might have advanced the secondary mortgage market toward a measured system of interbank regulation, in which private entities are encouraged—and if necessary, assisted—in the elaboration of formal networks of mutual restraint and control.

VIII. Conclusion

A. *What Conditions Foster Private Interbank Discipline?*

Although the six cases of non-public regulation surveyed here reveal a proven alternative to governmental regulation, private interbank discipline remains relatively rare. This survey suggests that at least six conditions are necessary or helpful for the development of private interbank discipline.

First, private interbank discipline appears to arise only in the *absence of formal public regulation*, when governmental encroachment on the subject is neither threatened nor anticipated. Because the substantial investment in a private regulatory scheme might well be wasted, usurped, or made redundant by companion governmental efforts, banks naturally lack an incentive to regulate privately when public regulation looms. Private discipline enjoys virtually no opportunity to develop in a setting of aggressive public regulation.

Second, private interbank discipline develops in the context of a *joint interbank venture* that involves the pooling of resources, and the sharing of risks and rewards, between different banks that then transact business among themselves. The interchange between separate institutions provides the opportunity for sharing regulatorily significant information in a manner that a merely collective enterprise need not. Thus, for instance, although lobbying undertaken by the Independent Bankers Association of America ("IBAA") may qualify as a useful collec-

tive venture relatively unencumbered by governmental regulation, the IBAA in its lobbying capacity has comparatively little power as a regulator of member institutions.

Third, the joint interbank venture must provide a *discrete, useful service* to participant institutions. A bank's voluntary submission to an occasionally onerous disciplinary regime depends on a close link to a financial incentive. The functional clarity of the occasion for discipline may also assist the interbank disciplinarian in justifying disciplinary measures. The coincidence of private interbank discipline and particular interbank services further suggests that the most natural, self-germinating style of regulation roughly corresponds to the formal control strategy known in bank regulatory theory as functional regulation—not the "command and control" strategy of pervasive institutional regulation that American governmental policymakers and analysts traditionally have favored in banking.[268]

Fourth, private interbank discipline seems best spearheaded by *quasi-independent hybrid associations*, such as interbank associations and joint ventures, or mutual stock companies that may themselves enjoy a reduced concern for profit-making, like the ISDA, check clearinghouses, and the VISA and MasterCard umbrella organizations—whose profits are distributed proportionally to member banks. Discipline is harder to maintain if the disciplinarian's motives are suspect, and easier to enforce if the disciplinarian is perceived as above the fray.[269] A centralized entity serves more effectively as a disciplinarian of participating institutions because it is less tainted by the appearance of self-interest. Organizational separateness also helps the joint

268. *See* Marilyn B. Cane, *Non-Broker Brokers and Other Anomalies in the Regulation of Financial Services*, 11 HARV. J.L. & PUB. POL'Y 111 (1988)("Regulation by institutional type, as contrasted with regulation by function, is the primary basis of the complex system of regulation of financial institutions.").

269. There are exceptional cases of proprietary discipline in banking also occurring, driven by the pressures of direct profitability as registered by the disciplinarian. Cases in this category include: the Suffolk Bank system, *see supra* notes 67-82 and accompanying text; the credit card business, especially as spearheaded by single corporations, (for example, the Discover Card), *see supra* notes 131-45 and accompanying text; intra-bank ATM development, *see supra* note 185 and accompanying text; and local POS debit card systems, *see supra* notes 186-95 and accompanying text. In each of these settings, a private proprietor or joint venture demonstrates or has demonstrated a special internal drive to impose discipline in its own sphere and, at interfaces, on the activities of related financial institutions. Extraordinary degrees of disciplinary force may be generated in such isolated settings, but the broader significance of this mode of private discipline is inherently restricted by the natural limits on the market power of the disciplinarian proprietors.

venture focus objectively on the disciplinary process; in the alternative, it would be difficult for the institution or institutions to impose discipline on themselves. In general, organizational formality is preferable to diffuse market forces in the process of ensuring that discipline is consistent and sustained.

Fifth, private interbank discipline appears to be most rigorous when the disciplinary enterprise enjoys an effective *monopoly* over its subject of interbank activity. Several complementary reasons produce this result. Most importantly, a monopolist has more power to discipline. Meanwhile, user-participants in a centralized interbank venture may be more willing to submit to rigorous disciplinary rules because the explication of a formal disciplinary logic simultaneously tends to reduce the centralized venture's power to extract unfair terms, rents, and monopoly profits, or to funnel proceeds from the joint venture to "pet" participants. A separate reason for the connection between monopoly and interbank discipline may be that the monopoly permits the centralized disciplinarian to undercut interlopers and free riders who might attempt to compete by offering the same interbank service without the disciplinary requirements.

Sixth, private interbank discipline is often most effectively pursued by organizations with an independent *operational* role in the subject of discipline. Examples of such entities include the private check clearinghouses, interbank credit card operations like VISA and MasterCard, CHIPS and SWIFT, ACHs, and ATM networks. Fedwire and the Fed's check clearing operations present analogous cases in which a government agency has roughly performed as a substitute for an interbank cooperative. Non-operational disciplinarians, such as various subcommittees of the American Bankers' Association, have comparatively little success in enforcing discipline unless they succeed in securing the passage of public legislation. Simply put, regulation is better if you have hands-on experience with what you regulate.

In summary, private interbank discipline usually occurs in the absence of competitive governmental regulation, and in the presence of joint interbank ventures that provide discrete interbank services found useful by participant banks. Private interbank discipline is typically facilitated by quasi-independent

hybrid associations that wield monopoly-like powers and are directly involved in the operation of the interbank service.

B. *Why Is Private Interbank Discipline Rare?*

Difficulty in finding the first-mentioned condition for private interbank discipline—the absence of a competitive governmental regulator—largely accounts for the scarcity of private interbank discipline. In contemporary banking, there remain few areas of organized financial activity over which the government does not hover. Only in pre-regulatory history, or in financial backwaters away from public view (for example, among merchants and banks in the credit card business, or in the esoteric laboratories of swap science), can banks organize with any sense of security from immediate governmental intrusion.

A related reason for the scarcity of private interbank discipline is suggested by the nature of the demise of private check clearing in 1913, and by the threatened demise of the contemporary disciplinary system governing swaps: governmental expropriation. When private regulatory systems develop characteristics reminiscent of governmental regulatory modes, the performance of the two types of regulation becomes easily comparable. Any perceived slip in the effectiveness of the private system (such as occurred in the check clearing business during the panic of 1907) provides an opening for a public counterpart to propose that governmental regulation—or subsidized governmental provision of the service—supplant the private scheme. The reciprocal situation, however, generally does not occur; private disciplinary bureaucracies rarely if ever capitalize on missteps in governmental regulation. Thus, governmental bureaucracies gradually creep into disciplinary situations to expropriate valuable disciplinary schemes, and private facilitators get crowded out.

The main predicate for private interbank discipline—a joint interbank venture providing a particular useful service—poses some additional limitation on the potential reach of private interbank discipline as a regulatory substitute. But that limitation may be less than what one might imagine at first glance. In the modern setting, banks find themselves increasingly engaged in interbank transactions that are highly amenable to interbank control. Even the provision of retail banking services to a simple consumer is inconceivable today without a full panoply of

interbank services, any one of which could be subject to private interbank discipline. In the context of private interbank discipline, the fragmentary decentralization of American banking thus becomes not an insane liability, but an asset, because it engenders interbank relations that then become amenable to private regulatory control.

It is true that some governmental regulation of banking is relatively vague, highly generalized, and institution-specific, such as, for example, regulations that provide for the "safety and soundness" of banks and banking. Indeed, it seems doubtful that any private scheme of interbank discipline could be developed as a surrogate for such a mission. This limitation on private interbank discipline may not represent a failing, however, and may on the contrary point out entire areas of governmental regulation that lack defensible purposes, are not amenable to evaluation, and are perpetuated by sheer dint of bureaucratic inertia or capture.

Nor does the need to entice the regulatee with a financial incentive in exchange for submitting to discipline pose a significant barrier to the operation of private interbank discipline. If a subject is worth regulating, it seems safe to assume that a profit motive lurks somewhere in the equation. With creative organization, such incentives may be structured to provide participating entities with incentives to submit to the discipline. Assuming that monopolistic power constitutes an important ingredient in the advancement of private systems of interbank discipline, an obvious tension emerges between private interbank discipline and antitrust law. Where the operation of the two disciplinary regimes are inherently antithetical, amendments to antitrust law may be warranted to facilitate the salutary regulatory objectives of private interbank discipline. On the other hand, the fact that antitrust law has lived alongside a few cases of private interbank discipline (in the credit card business, for example) suggests that explicit antitrust reform may be unnecessary.

C. *What Are the Limits of Private Interbank Discipline?*

It is also important to note what private interbank discipline does *not* do well. Most importantly, private regulation fails either to organize the interests or control the behavior of atom-

ized individuals. Private discipline in banking is an inter-*institutional* phenomenon, not a consumer phenomenon.

The tens of millions of private individuals who engage in transactions with banks cannot easily or cheaply combine their forces in discrete comprehensive organizations, even though individuals have clear collective incentives to discipline banks engaged in economically exploitive conduct, such as charging high consumer interest rates or failing to lend at appropriate levels. The transaction costs associated with organizing individuals seem especially high in comparison with the easy access of individuals to a ready-made, partially effective organizer of consumer interests: the government. Thus, individual consumers and other diffuse groups probably remain best advised to continue to facilitate governmental regulation on issues of special concern.

Nor does private interbank discipline extend so far as to permit the reciprocal regulation by banks of consumer behavior. Any individual's transactions with banks are normally not so frequent as to warrant private investment by banks in a disciplinary regimen designed to improve the economic characteristics of consumer behavior. Thus, for instance, no serious attempt has been made by banks to encourage consumers to share in the discounts paid by merchants for credit card usage, or to minimize consumer manipulation of the float in checking. Besides, even if economies could be realized from private regulation of consumer-related inefficiencies, consumers would most certainly enlist governmental intervention for protection.

D. *Can Government Facilitate Private Interbank Discipline?*

The pervasiveness of governmental regulation stands as the single greatest impediment to private interbank discipline. Therefore, government could best cultivate private interbank discipline by restraining itself from traditional regulation. Governmental restraint in regulation can take several forms. The first, most obvious step is for government to halt its current oversight of discrete interbank ventures, like the GSEs in the secondary mortgage market, that have immediate potential as systems of private interbank discipline. Furthermore, the government ideally should communicate a firm commitment to refrain from future intervention in contexts most appropriate for private interbank discipline. Government has shown a tendency

to leap into permanent regulatory projects at the first sign of difficulty in a private scheme of interbank discipline. Bankers must be convinced that this phenomenon will not recur, or the mere threat of governmental intervention will stymie regulatory innovation at the private level.

The existing governmental banking bureaucracy may pose a formidable barrier to the expansion of private interbank discipline as well. Regardless of the merits of the competing regulatory methods, the established banking bureaucracy may naturally oppose the relinquishment of its regulatory job to private analogues. Yet even in this regard, at least two accommodations are imaginable. First, the governmental bureaucracies could themselves be privatized as interbank disciplinarians in their particular areas of expertise. Second, for those governmental bureaucracies that have little prospect of privatization, a substituted target of regulation could be identified: the private interbank regulators themselves. Public regulation of the new private regulators would formalize the continuing public interest in the integrity of the banking infrastructure, assist and monitor the private regulators based on substantial public regulatory experience, and occupy extant governmental bureaucracies in constructive ways.

Government can also help generate private interbank discipline by facilitating the creation of hybrid interbank associations in fertile areas, as it did in the wire transfer business and the secondary mortgage market during the first half of the Twentieth Century. Competitive individual banks initially may be reluctant to cooperate with one another and invest the staggering start-up capital often necessary to launch the kinds of centralized joint ventures that are the primary conduits of private interbank discipline. Government occupies an especially good position to corral resources for the application of costly new technologies. For instance, government played a central role in facilitating the application of wire transfer technology to bank payments, and computer technology to ACH batch transactions.

Once the government has successfully launched such an endeavor, it would then be best advised promptly to privatize the facilitative organization. This path would permit the full flowering of its private regulatory potential—which may exceed the regulatory potential of a governmental regulator—without in-

curring the numerous costs that are likely to mount alongside overblown, over-intrusive, and ineffective governmental regulation. The federal government's "start-up" role in the secondary mortgage market has been ongoing for 60 years, while its fertilization of the wire transfer business has continued for 75 years. Privatization in both cases is overdue.

In the final analysis, however, government cannot bear sole responsibility for facilitating private interbank discipline, which by definition is a non-governmental phenomenon germinated, cultivated, and harvested *by banks*. To the extent that private interbank discipline has been and remains aberrational, even a regulation-happy government should properly share blame with the regulated banks. Ultimately, private interbank discipline remains for the banks to design, finance, impose, justify, maintain, and change. Private interbank discipline requires ingenuity, initiative, and resolve among and between groups of private banks. It is not an easy goal. The past and future failures of private interbank discipline, therefore, like the past and future successes of private interbank discipline, must ultimately reflect the character of the banks themselves.