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## Commentary

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One of the key challenges for central bankers today concerns the regulation and operation of the payments system. Faced with rapid innovation in information-processing and communications technologies, central banks are struggling to understand what role, if any, they should play in the payments system of the future. These fundamental questions have prompted researchers to examine how payments systems evolved in the period before central bank control, seeking insights into how private alternatives might operate (e.g., Mullineaux 1987; Gorton and Mullineaux 1987; Cowen and Kroszner 1989, 1990, and 1994; Selgin and White 1994; Calomiris and Kahn 1996; and Kroszner 1996 and 1997). In this spirit, Rolnick, Smith, and Weber's article in this issue (RSW) evaluates the Suffolk System, which is perhaps the most important private clearing arrangement to have developed in antebellum America.

RSW challenges the sanguine view that the Suffolk System demonstrates how the unregulated market will provide an efficient payments system. It provides new evidence that the profitability of the Suffolk Bank was greater than that of other banks in Boston and Massachusetts and that Suffolk Bank had a dominant role in the interbank borrowing and lending market. The authors then raise the possibility that this evidence suggests that the market would provide a "natural" monopoly in payment services. While I will question whether the Suffolk experience can address the monopoly issue, I believe that RSW has given us a new and important direction in historical research on payments systems, namely understanding the link between clearing arrange-

ments and liquidity provision through the interbank lending market.

### RETURNS AND THE RELATIONSHIP OF CLEARING AND LIQUIDITY

To make the case about natural monopoly, RSW begins by observing that for more than two decades, no competitor emerged to challenge the Suffolk Bank's note-clearing business in New England (see also Lake 1947). Next, the article examines the profitability of the Suffolk Bank for evidence of monopoly rents. Since the data that would allow us to calculate returns on assets or equity do not exist, RSW uses data on dividend payments relative to capital as a proxy for profitability. Calomiris and Kahn (1996) used dividend payment rates to compare the average profitability of banks in Boston with those in other cities during this period and found that banks in Boston did not pay higher dividends than banks elsewhere. On average, these banks do not appear to have enjoyed supernormal profits. RSW examines the profitability of individual banks in detail and finds that, from 1834 until 1858, the dividend rate for the Suffolk Bank was consistently higher than for other banks in Boston as well as for the smaller banks in the rest of Massachusetts.

The authors then investigate what might account for the relatively high dividends for the Suffolk Bank. In doing so, they provide an extremely important and original contribution to the literature. They document the dominant role of the Suffolk Bank in the interbank borrowing and lending market. The Suffolk Bank was not only the largest holder of interbank deposits, as might naturally be expected of the note-clearing agent, but also the largest interbank lender, as the authors have shown in an earlier work (Rolnick, Smith, and Weber 1997). The Suffolk Bank thus appears to have been more than simply a note-clearing agent; it also

appears to have been a major source of liquidity in New England. The increase in Suffolk's profits coincided with the expansion of its interbank lending role.

This evidence, RSW argues, suggests that there are economies of scope in the provision of clearing and liquidity services. Suffolk's detailed information about the health and activities of member banks, gleaned from operating the note-clearing system, may have reduced its costs of monitoring loans to other banks. The information advantage Suffolk gained from note clearing led to its dominant role in the interbank funds market. Recently, a number of authors have argued that this complementarity is theoretically important (e.g., Gilbert 1993, and Rajan forthcoming), but RSW provides the first empirical documentation of such a linkage. Scope economies can be used as an efficiency rationale for having the lender of last resort operate the payments system.

It would be extremely valuable to know whether Suffolk was effectively acting as a lender of last resort. During the Suffolk System era, banks in New England were more stable than in other parts of the country (Calomiris and Kahn 1996): Bank failure rates and loss rates to depositors were lower in New England, in both normal times and during the bank panics of the late 1830s and 1857. As the authors documented in Rolnick, Smith, and Weber (1997), interbank lending by the Suffolk Bank rose during the crises. Were the interbank activities of Suffolk a key contributor to the stability of banking in New England? To whom did Suffolk lend during the crises, and on what terms? What risk exposure was the Suffolk Bank willing to incur? Could higher average returns be related to the insurance role that Suffolk may have been playing?<sup>1</sup> A fascinating possibility to explore in future research is whether and how well the markets provided stability through a clearinghouse that was acting as a lender of last resort.

## MONOPOLY: NATURAL OR UNNATURAL?

While RSW's inquiry has shed new light on the relationship between

payments and liquidity services, the evidence does not necessarily imply that Suffolk enjoyed a "natural" monopoly or that there is a tendency for the market to produce such a monopoly. A monopoly is "natural" if, for a given market size, economies of scale (and possibly scope) are sufficiently strong that production costs are minimized when there is a single producer. That producer then can drive out all competitors in the market and obtain a monopoly. As RSW acknowledges, natural monopolies do not necessarily result in socially inefficient use of resources, but they raise that possibility (see Edlin, Epelbaum, and Heller 1996).

The Suffolk System, however, did not operate in a completely unregulated environment, and regulation may have increased the costs to potential competitors and the heights of entry barriers. The difficult task is to untangle which regulations, if any, are relevant to the development of the Suffolk System and what impact they had on its operation. Although I will not attempt such a full-scale evaluation here, I will mention some potentially important considerations.

First, the Suffolk System received some special legislative support. As RSW notes, Vermont gave tax breaks to banks that joined the Suffolk System. In addition, Massachusetts did not permit banks to pay out to their customers' notes of other banks, thereby providing an incentive for banks to use the Suffolk System for note clearing. Such government encouragement may have helped to increase the profitability of the Suffolk Bank and deter new entrants.

Second, despite the frequent use of the term "free banking" to describe mid-nineteenth century banking in the United States, entry into the banking industry was far from free. Bank charters required an act of the state legislature. By 1850, only Rhode Island had passed a "free banking" statute. This statute eased, but did not make "free," entry into banking in that state. Only after Massachusetts passed its free banking statute in 1851 was a coalition of banks able to obtain a charter for what became the Bank for Mutual Redemption (BMR), the bank that triumphed over Suffolk in 1858.

<sup>1</sup> RSW argues that Suffolk's apparently high return was not compensation for risk because dividend rates did not drop below those of other Boston banks in any year throughout the period. We do not have direct data on the annual profits, losses, and cash flows. The relatively steady and high dividend rate, however, might mask underlying volatility, since dividends can be paid out of a surplus accumulated precisely to smooth returns to shareholders.

RSW argues that the key to the BMR's success is that, unlike other challengers to Suffolk, it was owned by its member banks, and this cooperative structure helped to reduce the obstacles to coordinating a competing network of member banks. Twenty years earlier, however, a group of country banks had tried to obtain a charter from the Massachusetts state legislature for a banker's bank that would provide a competitor to the Suffolk System (Lake 1947). The proponents of the Suffolk Bank killed the bill, and no bank owned by other banks was permitted a charter until the BMR. Suffolk was long protected from mutual organizational forms with different cost structures that might have undercut Suffolk's monopoly. Politics, not just economics, thus appears to play an important role in preventing the emergence of rivals to Suffolk (Kroszner 1996, and Kroszner and Strattmann forthcoming).

Third, and perhaps most important, were the restrictions on intrastate and interstate branching (Kroszner and Strahan 1998). If no such prohibitions on the geographic expansion of banks existed, the payments system might have developed very differently during this period. Some banks may have chosen to operate branches in major cities and towns throughout a region or, perhaps, throughout the country (much like the Second Bank of the United States). Each branch of a single bank is likely to have accepted its own notes and checks at par, regardless of the location of an individual branch. These notes would have achieved par circulation without reliance on a common clearinghouse. One or more of the widely branched banks might then have provided clearing services for other banks' notes to compete with the Suffolk System.

The branching restrictions thus may have had an important effect on the cost of producing payment services. Without branching, only one par clearing operation may have been feasible in New England. With branching, however, other banks may have faced lower costs of entering the note-clearing business, so the market may have been able to sustain multiple clearing operations. Also, geographically diversi-

fied banks may have had less demand for an interbank lending market. Rather than rely on other banks for liquidity, well-branched banks might have been able to substitute an internal interbranch funds market for the interbank market.

## FUTURE RESEARCH

RSW concludes by proposing a comparative study of payments systems that developed in different parts of the United States during the nineteenth century. Given the state-by-state variation in regulation, such an investigation may shed light on the role of regulation in shaping the Suffolk System as well as other payments systems. The authors' work on the linkage between liquidity and payments systems continues to break new ground (Rolnick, Smith, and Weber 1997).

Historical payments system research also might fruitfully extend beyond the United States and banking for insights into what the market might produce. During the eighteenth and nineteenth centuries, many clearing systems emerged in European countries that had little or no financial regulation (Cowen and Kroszner 1990 and 1994; Kroszner 1990). One of the earliest examples, which has received some attention, is the note-exchange system that developed in Scotland during the 1760s (e.g., Munn 1975; White 1984; Cowen and Kroszner 1992; Kroszner 1997). In addition, commodities futures exchanges developed private clearing and settlement arrangements during the nineteenth and early twentieth centuries (Edwards 1984; Williams 1986; Moser 1994; Kroszner 1998). These systems often adopted the mutual or cooperative form that the BMR had used successfully against the Suffolk Bank, so further study of these arrangements might help us to understand how private payments systems of the future might evolve.

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