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## Competitive Banking, Bankers' Clubs, and Bank Regulation

THERE HAS BEEN CONSIDERABLE INTEREST recently in what might be called the microfoundations of banking regulation and central banking. Much of this interest is stimulated by the revival of the free banking school which sees government-supported (official) regulation as unnecessary and central banking as the damaging product of state intervention. Yet free banking is still a minority view, and most economists continue to believe that "official" regulation has a useful role to play. This latter view has been defended and developed in recent years by Gorton and Mullineaux (1987), Mullineaux (1987) and Goodhart (1987, 1988, 1991). In very different ways—Gorton and Mullineaux use a contractual approach and Goodhart the theory of clubs—these writers have argued that information asymmetries in financial markets posed problems that unregulated markets could not handle, and they argue that regulation arose "spontaneously" to meet these problems. According to this view, banking regulation and central banks should be seen, in part at least, as a "natural" response to problems inherent in financial markets, and the free bankers' view of them as no more than damaging intrusions should be rejected.

This paper sets out a contrary view. Information problems do play a large role in financial markets, and these problems might lead free banks to form "clubs" or comparable hierarchical structures that restrict (that is, regulate) the activities of member-banks. But this regulation does not justify the systems of financial regulation or central banking that arose historically because it differs from them in critical

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ways. Furthermore, since the benefits that regulation can bring are basically economies of scale, arguments for spontaneous regulation would appear to be tantamount to claims that banking is a natural monopoly and the empirical evidence indicates it is not. In any case, arguments for spontaneous regulation are also refuted by the evidence that the historical banking systems that were relatively close to laissez-faire developed little or none of it, and there is a plausible argument that the nineteenth-century U.S. cases often cited as examples of "private" regulation only developed such regulation as a response to branching and other restrictions that prevented a more explicit appropriation of economies of scale.

The focus of the paper is thus to dispute claims that regulation and central banking were a natural, spontaneous response to *inherent* market failures, and in doing so to suggest that they are not *economically* justified as improvements over a free market. The paper has less to say on the more difficult questions of *why* governments and central banks behaved as they did, and what *other* justifications they might (or might not) have had. While free bankers such as White (1984, 1989), Selgin (1988), Dowd (1989), and Glasner (1989) have claimed that interventions were often motivated by essentially political factors—to distribute favors, or to raise revenue—free bankers have never to my knowledge argued that they always were. What they have claimed is that even when governments intervened to sort out genuine banking problems, governments were actually trying to resolve problems stemming from their own earlier interventions, and not problems that could properly be ascribed to a free market.<sup>1</sup> Nor have free bankers denied that central banking to a considerable extent *evolved*, but they would insist that the evolutionary process itself was heavily influenced by the state. In short, the paper does not deny that governments might sometimes have felt they had legitimate reasons to intervene,<sup>2</sup> but it does dispute the claim that interventions were justified by failures inherent to a free market.

#### THE RATIONALE FOR BANKING CLUBS

Suppose that there is more than one bank in a relatively unregulated equilibrium. It is well understood by now that mutual interest will lead them to cooperate with each other to clear their notes and checks through a clearinghouse (see White 1984;

1. The most common case was where governments intervened to deal with bank weakness, but that weakness was itself the product of government intervention (see, for example, Dowd 1989, ch. 5.6). A good example is where state and federal governments in the United States set up liability insurance systems to protect banks that had already been weakened by branch-banking restrictions (Calomiris 1989).

2. Banking was of course a highly politicized business, and there was sometimes concern about the power of banks and about conflicts of interest between the commercial and central banking functions of privileged institutions like the Bank of England. The banking power was a major theme in U.S. populism and undoubtedly influenced American banking legislation, but how reasonable this concern was and whether federal and state governments responded appropriately are quite different matters. Nor is there much doubt about Goodhart's claim that there was pressure on institutions like the Bank of England to separate their commercial and central banking functions, and that this pressure eventually led to modern central banks that resolved this conflict by largely dropping their commercial activities, but this issue too is best discussed elsewhere (see Goodhart 1988 and Dowd 1991).

Selgin and White 1987), but banks will also want to deal with each other for purposes other than clearing (for example, to lend to each other) and we wish to investigate whether they would cooperate on an explicit “market” basis (that is, where each deal was done separately), or whether they would do so by forming a club to coordinate at least some interbank activity by command.<sup>3</sup> There are three reasons why they might conceivably prefer the latter:

#### *Reducing Transactions and Monitoring Costs for Interbank Loans*

One reason is to minimize the transactions and monitoring costs of banks’ lending to each other. Each bank faces a stochastic net demand for reserves from the public that implies its reserves will fluctuate randomly from day to day, and these reserve fluctuations will not be perfectly correlated. Some banks will experience reserve shortages at any given time and wish to borrow, and others will be flush with reserves and willing to lend. Banks will therefore participate in the market for reserves, and they might even form a special interbank reserve market if the transactions or information costs are lower for interbank transactions than for those involving other parties. It may be that bank cooperation goes no further than participation in the market for reserves—if banks’ demands for reserves are relatively small, or if there is only a small number of banks that know each other well and have an informal understanding to help each other out, there might be little scope for a mutually beneficial interbank organization and the unassisted market will suffice without any hierarchy to support it. It is conceivable, nonetheless, that the transactions and monitoring costs of arranging interbank loans might make a bankers’ bank an attractive option to the banks for much the same reasons that individual borrowers and lenders often prefer to deal with each other indirectly through an intermediary (see, for example, Chant 1992). In the absence of a bankers’ bank, each bank wanting a loan would have to transact with each of its potential lenders, and a bankers’ bank can cut down these transactions costs by arranging loans centrally. More importantly, perhaps, a bankers’ bank can also eliminate unnecessary monitoring costs where there are multiple lenders. If there is more than one lender and they do not coordinate with each other, then lenders can end up duplicating each other’s monitoring or trying to free-ride on each other’s (presumed) monitoring efforts, and a bankers’ bank can be a good way to coordinate their efforts and ensure that loans are properly monitored. Since it is both difficult and time-consuming to ascertain banks’ values, the bankers’ bank would not try to assess a bank’s value *de novo* each time it applied for a loan. Instead it would monitor borrowers on an ongoing basis to be able to handle loan applications quickly. Since they would hope to be able to obtain loans, its customers would have an interest in keeping it suitably informed, but much of this information would be commercially sensitive information that they might want kept secret from rivals. The banks’ sensitivity regarding their accounts

3. The term “command” is used as it is in the literature on the theory of the firm. “Command” is where people are contractually obliged to follow orders, and is what distinguishes firms (and, more generally, hierarchy) from pure markets in which the terms of every service are agreed separately.

therefore implies that an independent outfit would normally be better placed to monitor member-banks than one of their own number. A bankers' club run by its own independent management is therefore likely to be more effective than a club in which a member-bank takes on the monitoring and management roles. The effectiveness of the club can be further enhanced by officials accepting contracts that give them an incentive to preserve their independence and honor the confidentiality of their work, and which provide for penalties in the event of perceived lapses from duty.<sup>4</sup>

### *The Reserve Externality Argument*

It is sometimes claimed (for example, Cothren 1987; Goodhart 1988, pp. 53–5) that a banking club (or some other means of assisting bankers) is needed because banks have insufficient private incentive to hold the “socially optimal” level of reserves. According to this argument, each bank holds reserves to equate the marginal private benefits of reserve holdings to their marginal private costs—the former are the expected benefits of not having to go to market or declare bankruptcy in the event a customer demands redemption of bank liabilities, and the latter are the opportunity costs of having to hold redemption media that yield a lower return than some alternative assets—and the bank ignores the “external” benefits that its reserve holdings confer on other banks. These external benefits arise because the greater a bank's reserves, the more likely it is to be able and willing to lend to other banks should they desire a loan, and other banks derive the benefit that the reserves-supply curve they face has shifted to the right. The argument is that the outcome produced by the unassisted market could then be improved upon if all banks could be induced to hold more reserves than they would otherwise choose to hold, because they would all benefit from the external effects of the higher reserves held by the others. Banks could try to appropriate these external benefits by agreeing to hold higher reserves than they would otherwise choose to hold (for example, by agreeing to minimum reserve ratios), but if such an arrangement is to be viable, it is necessary to find some means of restricting the benefits that go to nonmembers—if nonmembers get the same benefits as members, each bank would prefer to free-ride on members' higher reserves and the scheme would never have any members. A solution would be for member-banks to pledge a certain proportion of their reserves to be loaned to each other, presumably on more favorable terms than could be obtained on the market, but to be loaned to nonmembers at a penalty rate of interest, if at all. This discrimination against nonmembers would give the latter the incentive to join that would otherwise be lacking, and the banks could make these arrangements operational by establishing a club to which they delegated the power to impose reserve requirements and lend member-banks' reserves.

4. If bankers are to delegate powers to a club, it would usually make sense to delegate those powers to the clearinghouse that already exists to clear their notes and checks. A clearinghouse can monitor (member) banks at less cost than an alternative club since the clearing process creates a by-product—information on banks' clearing gains and losses over time—that often provides advance warning of future difficulties. The text consequently uses the terms “club” and “clearinghouse” interchangeably.

### *Bank "Contagion"*

A third rationale for a banking club—and one that has received considerable emphasis in the literature (for example, Benston et al. 1986; Goodhart 1988) is the prospect of "contagious" bank runs, or contagion. There is a contagion problem when the observation that one bank is facing a run or some other serious difficulty leads those with notes or deposits at other banks to run as well. Since redemption imposes costs on note- and deposit-holders (it takes time and effort to go to the bank and line up there), an individual will usually demand redemption only if he is sufficiently apprehensive that his bank might default. If he were, he would demand redemption to avoid the losses that default would inflict on those who continued to hold its debt. Others would think like him, and the bank would face a run. A shock to one bank could then raise the public's apprehension about other banks to a level where they faced runs as well. Contagion is thus a negative externality that banks impose on each other, and the claim is that banks could reduce these externalities by forming a club.

The most obvious arrangement would be an emergency lending procedure designed to preempt any contagion. If a bank got into difficulties, a decision would be made whether to assist it. If the bank qualified for help, the resources of the other banks would be pledged to keep it open, the pledge should restore public confidence, and the run should subside without infecting the other banks. Alternatively, the bank could be refused assistance, and the club would try to prevent contagion by distancing its members from it. Refusal would then send a clear signal to the public that the club regarded the bank as unsound, and this signal would encourage the public to run on it and drive it out of business. The clearinghouse would therefore assist the healthy banks and throw sick ones to the wolves, and either way, ideally, it should ensure that there was no contagion from one bank to the rest.

### THE REGULATORY ROLE OF CLEARINGHOUSES

There are thus several reasons—the minimization of the transactions/monitoring costs of lending, "reserve externalities," and the possibility of contagion—why banks might want to establish a club that would provide a bank in difficulties with loans that would be more expensive or perhaps even unavailable on the unassisted market. However, the existence of the club creates a moral hazard problem for member-banks because they are now effectively coinsuring each other. A typical bank will have an incentive to take more risks on the grounds that it will get all the benefits if the risks pay off but it can offload some of the losses to other banks if they do not. The other banks will do likewise, and the consequence would be socially excessive risk-taking that would leave the typical bank worse off than it would have been if all the banks could somehow have agreed not to take the extra risks in the first place. The solution, if it is feasible, is for the clearinghouse to impose controls on excessive risk-taking by members-banks and ensure that it has the means to monitor compliance. These controls might include minimum capital ratios, restrictions

on the quality of assets that member-banks are allowed to hold, and restrictions on deposit rates to prevent the more aggressive banks bidding up deposit rates to obtain the funds with which to take additional risks, and member-banks would have to submit to the monitoring regime imposed by the clearinghouse. In a nutshell, the clearinghouse faces a moral hazard problem that might lead it to acquire extensive regulatory powers over member-banks and establish some form of hierarchy.

It is important to emphasize why an individual member-bank might rationally choose to submit itself to these regulations. Joining a club gives a bank access to emergency loans at rates below what it would otherwise pay, and this superior access to support increases public confidence that the bank's notes and deposits will be honored. This greater public confidence is not a free good that can be conjured out of thin air, but a rational response to the perceived safety represented by clearinghouse membership, and it depends to a considerable extent on the ability of the clearinghouse to protect the integrity of the banks by controlling the risks they take. If a clearinghouse could not control members' risk-taking at an acceptable cost, the underlying moral hazard could lead the more conservative banks to pull out to avoid liability for the risks being taken by their more aggressive competitors, and the clearinghouse itself could lose public confidence and collapse along with its remaining weak members. The irony is that while banks might not like obeying clearinghouse regulations, those very regulations help make clearinghouse regulation attractive in the first place by increasing public confidence in member-banks.

We need to be clear how this clearinghouse regulation compares with the "official" regulation we observe historically. Both types of regulation share one key feature—those to whom they apply (usually) perceive them as binding constraints that prevent them doing what they would otherwise prefer to do, and so resources have to be devoted to monitoring to make sure the rules are obeyed—but they differ in important respects:

- Clearinghouse regulations would be voluntary in a sense that official regulations are normally not. They would be part of the price of membership, but membership itself would be voluntary. While each bank would obviously prefer the benefits of membership and the freedom to do as it wished, the club can only be successful if members are forced to pay the membership price and obey the rules. The choice facing an individual bank is not whether it wants to follow the rules on an other-things-being-equal basis, but whether it wishes to be a member and accept the constraints that go with membership, or whether it wishes to retain its freedom of action and forego those benefits.<sup>5</sup>
- Clearinghouse regulations would be imposed by officials whose powers and contract structures would be determined by the banks whom they serve. Since they would not allow their own freedom of action to be restricted for no good reason, the banks would presumably ensure that clearinghouse powers were restricted to areas where a clear case had been established for them, and clearing-

5. This point is not to deny that banks might feel that they have little effective choice in practice but to join the club. Be this as it may, what matters here is banks cannot expect to enjoy the benefits of club membership without paying the membership "price."

house powers would be constrained as well by the need to get some kind of working majority of member-banks to approve them. The banks would also have an incentive to ensure that clearinghouse officials were effectively monitored and held to account since they would bear the consequences of clearinghouse actions. By contrast, “official” regulators have been typically accountable to government-sponsored monetary authorities rather than to commercial bankers, and their regulations have frequently reflected political considerations much more than clearinghouse regulations would. In addition, since their powers derived from the political process rather than a mandate from the commercial banks, these regulators have, perhaps, had less incentive to respond to bankers’ demands, and have frequently had greater powers and discretion than clearinghouse officials.

- Following from this last point, official regulation has generally had a much broader coverage. To anticipate our later discussion, the historical evidence indicates that under conditions close to *laissez-faire*, clearinghouse powers were usually confined to minor matters such as organizing clearing and dealing with counterfeits (see the following section). (U.S. banking clubs often had much broader powers, but for reasons explained later, there is reason to believe that they are not typical of *laissez-faire* clubs.) Official regulations were much wider ranging, even in the nineteenth century, and included, *inter alia*, restrictions on the issue of notes and deposits, restrictions on asset holdings, amalgamation restrictions, reserve requirements, and subjection to requisitions and “moral suasion.”<sup>6</sup>
- Since the system of regulation imposed by a particular clearinghouse would have to prove itself viable without the protection of legal restrictions against entry to exit, those regulations would have to satisfy certain obvious constraints. Member-banks that found clearinghouse rules too irksome could withdraw or set up or join a rival, and this threat of lost business would to some extent limit the degree to which the clearinghouse or its officials could “abuse” member-banks.<sup>7</sup> In the absence of legal barriers to entry, this threat would also have some impact even if the market for clearinghouse services could only support one clearinghouse in a region.<sup>8</sup> Apart from constraining it, competition would also provide a clearinghouse with information about the success or fail-

6. Examples of all but moral suasion are found in the antebellum United States (see Dowd 1992b, pp. 207–214, 223–224). A good example of moral suasion was the lifeboat operation launched by the Bank of England in 1890 to deal with the Baring Crisis.

7. The historical evidence apparently provides few instances of banks being sufficiently incensed about club rules that they decided to withdraw from the club, perhaps because club powers were so limited, but an important exception occurred with the demise of the Suffolk system in the late 1850s (see next footnote).

8. There would be costs to entering the market for clearinghouse services, but there is little reason to suppose that they would be so high as to make the market effectively uncontestible. A good example of banks’ “voting with their feet” even when the market could only support one clearinghouse is provided by the demise of the Suffolk system. The Suffolk system was a club managed by the Suffolk Bank of Boston, but some members found the club rules too constraining and there were complaints about the Suffolk’s high-handed attitude toward members. Discontent led to the founding of a rival, the Bank for Mutual Redemption (BMR), and when the latter opened in 1858 many of the Suffolk’s clients defected to it. A brief war followed, but in the end the Suffolk abandoned the market to its rival. The Suffolk system is discussed further by Trivoli (1979), Mullineaux (1987), Selgin and White (1988), and below.

ure of alternative product-price mixes as well as an incentive to experiment with new ones to obtain a competitive edge.<sup>9</sup> Official regulations, by contrast, have typically been shielded from competition by laws against banks switching to other jurisdictions or opting out altogether, and official regulators have had less incentive to innovate or adopt successful practices developed elsewhere.

#### BUT WOULD THERE BE A REGULATORY CLUB IN THE FIRST PLACE?

We have discussed why clubs might arise to regulate member-banks and what such regulations might look like if they did, but it is not obvious that such regulatory clubs would even arise in the first place. Unless there were a large number of banks, the transactions cost savings would be relatively low, and there are other ways around the monitoring problem (for example, loan syndicates). The historical evidence also suggests that banks did not form clubs for these reasons. Some banks established clubs for clearing purposes, and though some clearinghouses did lend to member-banks, at least on occasion, the fact that banks often never set up any multi-lateral outfit at all suggests that they perceived whatever gains could be obtained from doing so to be outweighed by their set-up and operating costs (Schuler 1992, p. 17).<sup>10</sup>

Nor is it clear that there would be large benefits from dealing with reserve externalities. Provided they are perceived to be sound, the empirical evidence suggests that free banks can operate safely on relatively low reserve ratios. For example, figures provided by Cameron (1967, pp. 87–88) indicate that Scottish banks of the late eighteenth and early nineteenth centuries usually operated with specie reserves less than 2 percent, and often less than 1 percent, of liabilities. The costs of holding reserves would be correspondingly low, and so too would the costs of any “lost” reserve externalities.<sup>11</sup>

That leaves the contagion argument, and it is not obvious that that would lead to a banking club either. Banks would be aware of the danger of runs, and they would have a clear incentive to invest in confidence-building measures to discourage them. These measures would include the maintenance of an adequate capital ratio and the pursuit of sound lending policies to reassure debt-holders that their holdings were safe. “Good” banks would also try to prevent contagion by distancing themselves from “bad” ones. While such measures could not normally provide perfect reassurance—depositors would normally still know less about the state of the bank’s finan-

9. The Suffolk experience also provides a useful example of how club competition can provide information about banks’ preferences for club services. The Suffolk provided a relatively hierarchical product mix that included loans and monitoring services as well as just note-clearing, but the BMR restricted itself primarily to clearing services, and its victory over the Suffolk suggests that banks preferred its more limited bundle to the Suffolk’s.

10. As Schuler notes, since free banking “often had just a handful of banks, so multilateral clearing had little advantage over bilateral clearing. The author of a handbook for Canadian bankers stated near the turn of the century that there was little gain to be had from establishing clearing-houses in cities with fewer than seven banks . . . Branch banking combined with regular bilateral exchange was often a satisfactory alternative to a clearing-house” (loc. cit.). However, see also n. 16.

cial health relative to management, and so on—the evidence nonetheless indicates that the public did look at factors such as these to discriminate in favor of well-capitalized, prudently managed banks (see, for example, Kaufman 1987, pp. 15–16; 1988, pp. 568–9). When financial crises occurred, the usual result was therefore a “flight to quality” in which the public would transfer their accounts from weaker to stronger banks,<sup>12</sup> and there is little convincing evidence of contagious runs in which the public ran indiscriminately against all banks regardless of their specific circumstances (see, for example, Benston et al. 1986, pp. 53–60 and 66; Dowd 1992b).<sup>13</sup> The evidence thus indicates that sound, reputable banks had little to fear from the difficulties of weaker competitors, and the contagion argument would appear to provide a doubtful basis for a banking club.

We can also think of banking clubs another way. The various factors isolated as possible reasons for forming a club can each be considered as economies of scale external to the firm but internal to the industry, and the point of a club is to internalize them. But one needs to explain why forming a club is the most appropriate way to internalize them when the banks could also have done so by merging into a single firm. Assuming that these economies were sufficiently large to have mattered, there is an argument that forming a single firm was the most natural way to appropriate them since the unified ownership of a single firm would have avoided the moral hazard that arises where separately owned firms coinsure each other through a club, and the cost of controlling that moral hazard presumably implies that a single firm

11. The reserve externality argument also suffers from another drawback, at least insofar as it is used to defend the imposition by banking clubs or central banks of reserve ratios on commercial banks. Reserve ratios can be self-defeating in a crisis because the obligation to hold them effectively freezes reserves and prevents them being used just when they are most needed (as happened, for example, in U.S. banking crises during the National Banking era). The logic of the reserve externality argument would appear to suggest that reserve holdings should be *subsidized*, and it is not clear how we can use it to defend reserve *requirements* which are effectively a tax on the banks.

12. Most major banking crises exhibited “flights to quality” rather than indiscriminate runs on all banks. Even in the Australian banking crisis of 1893—arguably the most severe crisis in any historical free banking system—the two biggest banks in Melbourne experienced deposit inflows so large they were embarrassing (Butlin 1961, p. 305; Dowd 1992a, p. 62). The banking crisis that most closely resembles the run-at-everything model is the English crisis of December 1825, but even so, the run-at-everything interpretation does not fit easily with the fact that the crisis hardly touched the Scottish free banking system. In any case, one could argue that this episode was due to some extent to Bank of England policy and the law that restricted other English banks to partnerships of no more than six partners (Dowd 1992).

13. The contagion issue has been most carefully examined in the context of the pre-1914 United States. Benston et al. found that bank failure rates were generally lower than for other firms, and that less than 1 percent of U.S. banks actually failed even in the severe crisis of 1907–8 (1986, pp. 58, 60). Rolnick and Weber (1985, pp. 5–8; 1986, pp. 885–87) looked for but found little evidence of contagion in New York, Indiana, Minnesota, and Wisconsin in the ante bellum period. They did find that failures were sometimes clustered, but these clusters were associated with shocks common to the banks involved, and there was little tendency for these problems to spread. Their conclusions were challenged by Hasan and Dwyer (1988), but their results are not conclusive. They model the probability of failure as depending on the value of bonds relative to capital, the remoteness of a bank’s location, and a dummy variable that takes the value 1 if another bank failed in that county, and zero otherwise, and they interpret the statistical significance of the dummy parameter as evidence of contagion. However, that parameter will also pick up any other factor that the other variables fail to pick up, but which is related to the failure of neighboring bank (for example, local conditions), and these alternative factors need to be ruled out first before we can say we have evidence of contagion.

14. This is not to deny that there can be substantial control problems within a natural monopoly. However, the argument considered in the text is that having the separated ownership implied by two or more

would have had the edge over a club.<sup>14</sup> It would seem to follow that if important economies had existed, we would expect banking to have been a natural monopoly, and the empirical evidence very much indicates it was not. None of the historical experiences of (relatively) free banking showed any tendency toward natural monopoly (Schuler 1992, p. 16), although there was evidence of some economies of scale. The conclusion that there are economies of scale but no natural monopoly is also supported by the extensive empirical literature on returns to scale in modern banking. Recent surveys by Gilbert (1984), Lewis and Davis (1987, pp. 202–7), and Clark (1988) between them looked at thirty-three separate studies, and not one presented any evidence that banking was a natural monopoly.<sup>15</sup>

The claim that there is little scope for clubs under *laissez-faire* seems to be borne out by the experience of less regulated banking systems in the past. The historical record of relatively unregulated banking systems outside the United States—in countries such as Australia, Canada, Ireland, France, Scotland, Sweden, Switzerland, and many others [see the readings in Dowd (ed.) (1992)]—indicates that (relatively) “free” banks had little use for banking clubs with extensive regulatory powers. In apparently all such cases, bank cooperation seemed to consist of little more than an arrangement for clearing notes and deposits with occasional *ad hoc* measures to deal with particular problems as they arose. Apart from clearing itself, clearinghouse policy dealt mainly with minor matters of mutual concern such as procedures to handle out-of-town checks and efforts to detect fraud (Schuler 1992, p. 18). Only relatively rarely did free banks cooperate for more ambitious purposes (for example, to provide emergency loans), and even then they did so with little formal power other than that to deny loans to applicants who did not cooperate.<sup>16</sup>

In the United States, on the other hand, banks did form private clubs which exercised quite extensive regulatory powers. One of these was the Suffolk system which arose out of the attempts of the Suffolk Bank of Boston to counter the Boston circu-

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firms adds to whatever agency problems already exist when the firms unite, and if the intraindustry benefits were large enough, it would therefore make sense for the firms to merge. The failure of firms to merge appears to suggest that the external benefits involved, if any, are not important.

15. Nor is there any strong evidence, populist views about banking power notwithstanding, that banks were able to cartelize the market successfully. In a variety of countries, the uniform interest rates that would-be cartels “set for their members gave way to rate wars as soon as any bank . . . spotted a competitive opportunity, and action to punish renegades was futile” (Schuler 1992, 18). That cartels were unsustainable is also suggested by the evidence that free-banking systems were highly competitive even when there was only a small number of big banks, as in Australia (Dowd 1992a, p. 58) or Scotland (White 1984, ch. 2).

16. One should mention, however, that even under conditions of relatively free banking, “big” banks occasionally made last-resort loans to smaller banks, and their managers sometimes regarded themselves as guardians of the system (Goodhart 1988). The Royal Bank of Scotland made such loans to the Scottish provincial banks, for example, and Bank of Scotland’s Alexander Blair was the Scottish system’s self-appointed “policeman” (Munn 1985, p. 341). I would argue, however, that it is natural for smaller banks to enter into a client relationship with a larger one in much the same way that a firm would enter into such a relationship with a bank, and to label distress loans as last-resort lending is to exaggerate the similarity between these loans and the last-resort lending of a genuine central bank. Be this as it may, the lending and supervisory functions of big banks under free banking were still constrained by the primary objective of maximizing profits, and the banks in question had few if any privileges, were heavily exposed to competition, and had no official regulatory status.

lation of the notes of out-of-town ("country") banks. Branch-banking restrictions had made it difficult to redeem these notes, and they consequently circulated at a discount. In 1819 the Suffolk started buying them at their Boston discount, and it gave the issuers the option to redeem them at the price the Suffolk paid for them provided they maintained (non-interest-bearing) deposits at the Suffolk. In 1824 the Suffolk began to allow participating banks the benefit of overdraft facilities, and since it was now extending credit, it started supervising them to ensure they were soundly run. Its position as manager of the system gave it the information to carry out that supervision effectively—any bank that followed a policy of systematic over-expansion would rapidly develop a persistent adverse clearing balance that would reveal what it was doing. The usual response of the Suffolk to a delinquent bank was moral suasion—lecturing offending banks on the importance of correcting their policies—but it could also limit its overdraft or send its notes for redemption. In the final analysis, it could also expel it from the system, and the threat of expulsion was a potent sanction because it provided a clear signal to the public that the well-informed Suffolk did not consider the bank to be a good credit risk. The Suffolk system was thus a banking club in which the Suffolk both set the rules and enforced them. The price of membership was the deposit that members were required to keep and the obligation to obey the club rules. In return, members enjoyed increased public confidence resulting from the widespread acceptance of their notes and the vetting and support services provided by the Suffolk. Its readiness to lend to member-banks made its vetting of their policies credible to the public, and the credibility of its assessment reduced the pressure on the public to vet a bank themselves. Since non-member-banks enjoyed less confidence, banks felt under pressure to join even though they found the Suffolk's conditions irksome.

The other U.S. clubs were the clearinghouse associations in the period from the mid-nineteenth century to 1914. They were first established to facilitate the return of notes to the banks that issued them, but in the 1850s the New York Clearinghouse Association began to issue certificates to member-banks which they could use to settle clearing debts, and which economized specie and relaxed the impact of legal restrictions against the note issue (Sprague 1910; Timberlake 1984). These benefits were especially useful during panics when notes and coins were scarce and legislative restrictions particularly binding. In later panics, clearinghouses issued certificates that banks could use to meet redemption demands by the public. These certificates were claims against the clearinghouse and enjoyed public confidence because they were free from the default risk attached to individual banks. (They thus offered banks a way to diversify risks when the most obvious way to do so—explicit merger—was hamstrung by legal restrictions). They were retired after each crisis and members of the public who accepted them suffered no losses. In the end, clearinghouses were effectively issuing hand-to-hand emergency currency that the public readily accepted even though it was issued illegally (Timberlake 1984, pp. 6–7). Clearinghouse associations also developed a formal apparatus to provide banks with last-resort lending, and they developed a regulatory apparatus to accompany it.

Banks had to satisfy capital requirements and submit to auditing and the requisitioning of their reserves when required to. Banks that failed to satisfy these conditions were disciplined, and the penalty for extreme violations was expulsion.

To summarize, the claim that there is little useful scope for clubs under *laissez-faire* appears to be broadly consistent with the historical evidence. Historical experiences outside the United States suggest that banks had little need for clubs other than to arrange clearing and settle minor issues of mutual concern. The U.S. experience is different, but there is reason to believe that the strong clubs that arose in the United States were a response to the unique legislative restrictions under which U.S. banks had to operate. These restrictions—the most significant being those against branch-banking—deprived U.S. banks of many scale economies that banks elsewhere appropriated by merging. Forming a strong club was therefore a means to appropriate scale economies where the most straightforward method was prohibited by law, and there is relatively little evidence of strong clubs in permissive legal environments.

#### GORTON AND MULLINEAUX'S ANALYSIS OF CLEARINGHOUSE ASSOCIATIONS

This analysis of banking clubs differs markedly from those found in recent literature. One of these is by Gorton and Mullineaux (1987) and Mullineaux (1987). Their argument goes as follows. The public use two types of bank liability in their everyday exchanges—bank notes, and deposits on which they can write checks—and these liabilities differ in an important respect. In deciding whether to accept a note, the public need information only on the bank that issues it. To be reasonably confident that they will not suffer any losses, it generally suffices for them to know that the bank that issues the note is in a position to honor it, but with checks they need to know not only that the bank has the resources to honor the check, but also that the agent on whom the check is drawn has sufficient funds in its account. Notes therefore require only bank-specific information, but checks require information on both banks and individual agents. Since all notes issued by a bank are effectively alike, a secondary note market can develop relatively easily, and this secondary market gives the public information about the underlying value of the bank, but a secondary market does not develop in checks because agents would need information on specific bank accounts as well as on the soundness of the bank on which the checks are drawn, and these information requirements make the operation of a secondary check market (typically) too expensive to be worthwhile to the agents who would be involved.

As the monetary system evolved, the public's desired note/deposit ratio gradually declined. Gorton and Mullineaux argue that the secondary note market became less informative about the value of the bank itself, and an information asymmetry developed that made the public more inclined to "run": In the past, a shock to a bank's value (for example, the revelation of a bad loan) would have been reflected in an increase in the discount on banks' notes in the secondary market, and the public

would have had a clear signal of the worth of their note holdings. But when deposits supplanted notes there was no longer any secondary check market on which the bank's value could be reflected. The public was consequently more inclined to panic and demand redemption because they were deprived of information about the bank's value that they would previously have had, and clearinghouses therefore arose to protect the banks against such panics. The clearinghouses would be delegated various powers over members—among these the powers to set minimum reserve and capital ratios, the rights to monitor their accounts, and the power to requisition member-banks' reserves—and the incentive to submit to these rules was the greater likelihood of clearinghouse support in an emergency. When a run occurred, the clearinghouse would assess whether the banks experiencing the runs were sound or not. If they were deemed to be sound, the clearinghouse would use the resources of other member-banks to guarantee their liabilities, and this measure would usually suffice to reassure the public and dissuade them from continuing to run. If the banks were considered bad risks, on the other hand, the clearinghouse would say so and give the public a clear signal to continue the run and put them out of business.

This analysis fails to explain why banks would prefer to appropriate external benefits by forming a club instead of by merging, but even if this difficulty is set aside, there are also a few others:

1. It ignores the role of the equity market in signaling a bank's net worth and protecting noteholders and depositors. One of the functions of equity holders is to provide a buffer stock to reassure debtholders that they have little reason to fear losses, and the credibility of this buffer-stock signal arises from the stockholders being residual claimants who only get paid after other creditors. If the stockmarket gives a bank a positive value, it indicates that the bank can pay off all its noteholders and depositors and still have resources left over, and so the latter should have little to fear. Instead of looking at discounts on a secondary note market, liability holders need only check that the bank has a sufficiently positive stock market evaluation to absorb any likely losses that the bank might suffer on its asset portfolio, and we would expect liability holders to run on a bank only if its stockmarket value had fallen to some danger level where there was some significant likelihood that losses would be passed on to them.

2. The argument exaggerates the information provided by the secondary note market. White (1984, 1989), Selgin (1988), and Selgin and White (1987) have argued forcefully that banks would agree to accept each other's notes at par, and par acceptance leaves little room for bank note discounts to deviate from zero. It follows, then, that under normal circumstances the only information provided by the secondary note market is that the bank is still considered to be of good standing, and (therefore) that its notes and deposits should continue to be redeemed at par. The corollary is that there should be no obvious difference in the information provided by notes and checks. Provided the bank keeps its good standing, good checks (that is, checks drawn on accounts with the funds to honor them) will trade at par for the same reasons that notes will trade at par, and the replacement of notes by deposits would make no significant difference to the public's information about the bank.

3. Even if notes and checks did convey different information about the bank on which they were drawn, the extra information provided by notes would still be publicly available as long as there were some demand for banknotes. It is not the size of the secondary note market that would matter, but the fact that it would still exist. A fall in the public's desired note/deposit ratio would not create an information gap unless that ratio went to zero, and it did not go to zero in the historical banking systems that Gorton and Mullineaux seek to explain.

4. Finally, the Gorton-Mullineaux analysis makes predictions that are empirically falsified. They deal with how a *laissez-faire* banking system would evolve a system of endogenous regulation to deal with a particular information asymmetry problem reflected in a declining currency/deposit ratio. As noted already, however, all relatively free historical banking systems apparently experienced falls in the currency/deposit ratio but none evolved endogenous regulation along the lines predicted by Gorton and Mullineaux. The case they emphasized—the late nineteenth century United States—was characterized by extensive legislative restrictions anyway. So relatively unregulated banking systems in the past did not experience the banking structures predicted by Gorton and Mullineaux, and the case that they focus on was not characterized by *laissez-faire* or anything reasonably close to it.

#### GOODHART'S ANALYSIS OF BANKING CLUBS

Charles Goodhart (1987, 1988, 1991) presents an alternative treatment of banking clubs. His analysis begins with an information asymmetry between banks and their liability holders. The management of a bank is better informed about the value of the bank than its liability holders, and there is no costless and credible way in which management can pass on their information. A situation can arise, therefore, where the bank is sound by the management cannot easily persuade its customers that they need not fear losses. A simple announcement that the bank is sound will be insufficient because the public would appreciate that the management has an incentive to lie. The management could presumably call in outside monitors (auditors) who could inspect the books and verify that the bank was sound, but such inspections can be expensive and time-consuming, and the public would need reassurance that they could believe the monitor. There can therefore be no guarantee that the monitor can provide the public with the reassurance they want in the time available. The public might choose to play safe and redeem their holdings of bank liabilities, and the bank would face a run.

The problem then is that bank runs cause real damage. When a bank redeems one of its liabilities, it must either reduce its asset holdings or issue more of some other liability. The bank will keep stocks of redemption media on hand to meet demands for redemption, and provided that these demands are relatively few it will have no great difficulty meeting them. It will also hold other assets that can be converted into redemption media at relatively low cost, and these stocks of marketable assets will provide it with further reassurance that it can meet redemption demands. The diffi-

culty, however, is that the bank will hold many nonmarketable assets (for example, consumer loans) which it cannot liquidate to meet demands for redemption, or can only liquidate at considerable cost. Alternatively, the bank can meet demands for redemption by issuing more liabilities, but it must be able to reassure its potential creditors that it is still sound. As it continues to borrow, potential creditors might come to doubt its soundness and the cost of further borrowing would rise. A bank thus faces increasing marginal redemption costs regardless of whether it tries to meet redemptions by running down assets or issuing more debt, and these redemption costs are the reason runs can impose real damage to the banks involved.

Goodhart then suggests that bankers might establish a club to help them handle the problems runs pose. He maintains, nonetheless, that there are a variety of reasons why banks cannot achieve the best outcome on their own and he infers from these that a bankers' club needs help from an outside source (that is, the state). The reasons he gives fall under three broad headings:

First, he claims that there are certain general problems in the structure of private banking clubs that official regulation could presumably be expected to overcome. One problem is that the rules can be rigged to restrict new entrants or benefit those in charge of key committees (1988, p. 71). Another is that one cannot always take the independence of club managers for granted, and he cites as an example the refusal of the New York Clearinghouse Association to assist the Knickerbocker Trust in 1907 for essentially sectarian reasons (1988, p. 38–39). He also maintains that it “may well be impossible to check whether club members are obeying the regulations without spot checks, close monitoring, etc.,” which he believes would “be intolerable between competing members” (1988, p. 71). Finally, he suggests that heterogeneity among the members might make it difficult for private clubs to maintain their cohesion, and that government-imposed rules might be required to protect the club's integrity (1988, p. 71).

Second, he suggests that a private club would be unsuited to carry out rescue operations. The “usual circumstances of a rescue, at very short notice under conditions of severely limited information, make it more difficult for commercial banks to act conclusively than for an independent Central Bank to swiftly and decisively” (1988, p. 102). This difficulty in mounting operations is partly due to the influence of commercial rivalry (1988, p. 43–44), partly due to the consideration that crises require “leadership” that can only be provided by a “noncompetitive, non-profit-maximizing body” that is “above the competitive battle” (1988, p. 45), and partly due to differences about the appropriate level of support leading to support being watered down to the level of the “lowest common denominator” (1988, p. 45).

Third, Goodhart argues that only some form of external control can dampen down the cycles to which the banking system is otherwise prone. He cites approvingly an old argument that “competitive pressures would drive the banks to seek to maintain and expand market shares during normal (noncrisis) periods . . . [and that] during such periods . . . the more conservative banks would lose market share. With the public often being poorly informed, or incapable of discerning whether slower growth was due to conservative policies or lack of managerial effort and efficiency,

there was no guarantee that the more conservative banks could recover during panics . . . the market share lost in good times" (1988, pp. 47–48). Assuming that these cycles pose a problem that needs to be dealt with, one might ask why a "private" bankers' club could not deal with them. Goodhart's position seems to be that such a club could not be expected to match the independence and leadership that a central bank could show. He goes on to suggest the LDC debt crisis as an example of the way that profit-maximizing commercial banks can get themselves into this kind of trouble:

The recent history of the rapid expansion of international bank lending to sovereign LDCs during the 1970s, the resulting crisis, and the subsequent cessation of further voluntary lending would appear to provide an excellent example of this syndrome. Competitive behavior seemed to force all the major banks to take part in an undue expansion of lending, . . . the evidence seems incontrovertible that without the intervention of the IMF, and the support of national Central Banks, the crisis in, and after, 1982, arising from these events, would have been contagious, far-reaching, and probably disastrous on a massive scale. (1988, pp. 48–49)

These arguments need to be considered closely. One point to note, as with Gorton and Mullineaux, is that Goodhart does not show why banks would prefer a club to outright merger, but even if a satisfactory explanation is given to this point, a number of other difficulties remain:

It is true that club rules can be rigged, and that members may use their positions on key committees to pursue their own ends, and it is also true that one cannot take the independence of managers for granted, but the basic answer to these points is that setting up and running a bankers' club, like any other club, is a nontrivial principal-agent problem. All we can really say is that the incentive is there for the principals to deal with these problems in the most appropriate way, so we might presume that they would do so. Club members will generally try to minimize antisocial behavior on the part of club officials because they would expect to bear the costs of it. They will therefore write contracts with officials that encourage propriety and independence, and they will usually have their activities monitored. The argument about founder-members rigging the rules against later banks is also difficult to substantiate in any depth,<sup>17</sup> and there is in any case the plausible counter-argument that founder-members will be aware that the benefits of a bankers' club tend to rise, and fixed costs fall, with the number of members, and this reasoning suggests that the club will often find itself trying to attract new members instead of trying to keep them out.<sup>18</sup> In short, while members will never manage to eradicate antisocial be-

17. The evidence in favor is circumstantial and consists of occasional episodes like the victimization of the Knickerbocker Trust in 1907 referred to by Goodhart. The evidence against is stronger. The historical experience of free banking broadly suggests that clubs treated comparable banks, including late entrants, in not-too-unequal ways. Since banking clubs under approximate *laissez-faire* typically had few powers, there seems to have been little to gain by rigging rules anyway, and it is significant that the Knickerbocker case occurred in the United States when banks were subject to branch-banking laws and the legal restrictions of the National Banking System.

18. A counter-argument is that a club might engage in anticompetitive behavior, perhaps on the basis of a cost advantage over rival clubs, but it is not clear what would cause such a cost advantage, and as discussed already in n. 15, the historical evidence indicates that attempts to cartelize banking markets have tended to break down.

havior in the club, they have an incentive to minimize the damage it does, and it is not clear why we would expect an outside body with different (that is, public choice) incentives to produce a superior outcome. Goodhart suggests that member-banks will find monitoring by fellow-banks intolerable, but that is exactly why they might delegate the task to independent clearinghouse officials. Member-banks might not like being monitored, but they will appreciate that loans would be more difficult and possibly more expensive to obtain if they refused to submit to it. Finally, regarding the argument about the cohesion of clubs, it is not clear why cohesion should be an end in itself. If individual banks perceive their own private interest correctly and choose not to join, then they regard the costs of membership as exceeding the benefits, and it is not clear why we would want to force them to join against their will. We cannot be confident that a club will benefit its members unless they join voluntarily.<sup>19</sup>

Then there is the issue of whether a private club can handle a crisis. It is true that a group of banks might find it difficult to act decisively and in concert in a crisis, and there might be some tendency for the level of support to sink to the level of the lowest common denominator, but it is precisely because of factors like these that we would expect them to delegate crisis-handling to a clearinghouse. We would not normally expect the banks to wait for a crisis to find out the benefits of decisive action and leadership. They would anticipate the way in which a crisis should be handled and delegate appropriate powers. In this they are much like representative systems of government in which it is anticipated that certain types of situation are best handled by delegating emergency powers to the executive. One must also bear in mind that there needs to be some mechanism to restrict the abuse of emergency powers, and the best way to prevent abuse of any powers is for member-banks to make the rules and hold clearinghouse officials responsible. Leadership has its uses, but it needs to be circumscribed to prevent its over-use. This is why Parliaments typically hold their executives to account for the way their emergency powers have been used, and the danger with the leadership provided by Goodhart's central bank is that the commercial banks cannot easily restrain it or hold it to account. If clearinghouse leadership corresponds to Parliamentary government, the leadership of a central bank is more like a dictatorship which has a tendency to provide too much leadership and be unresponsive to the desires of those whom it is meant to serve.

Lastly, there is the argument that competitive behavior would lead banks to engage in excessive cycling, but this argument also has its problems. A bank that engages in a policy of aggressive expansion will tend to experience a deterioration in the average quality of its loans, its portfolio may become unbalanced, it may have to bid more for deposits, and so on, and these factors will undermine its longer-run solvency and increase the chances it will face an eventual run. It is not obvious why

19. A possible argument against is that there is some social interest that banks will fail to take properly into account, but Goodhart provides little evidence to support this claim and it is in any case not clear what that social interest might be. Externalities are the most obvious possible source of such an interest, but the existence of externalities is not sufficient to establish that the private outcome would necessarily be suboptimal. As discussed already in the text, the point of establishing the club in the first place is to internalize at least some of the benefits that are external to individual banks, but internal to the group.

it would want to pursue such a policy unless it believed that it could pass off some of the costs onto others, and it is doubtful that it could do that under competitive conditions. It would only be able to count on assistance from a private clearinghouse to the extent that it could “fool” clearinghouse officials into believing that its policies were sound, and the latter would be on their guard against just that eventuality. Nor is there any reason to believe that it could force more conservative banks to go along with a more aggressive policy. It could probably expect to earn some easy profits in the short term, but if they are willing to forego the lure of quick profits the more conservative banks could expect to increase their market shares in the longer run when the aggressive bank runs into difficulties. In the final analysis, the public want stability from their banks, and the banks that provide stability will eventually win out over the cowboys who aim for quick profits.<sup>20</sup> Goodhart might still claim that this is not what happened with the LDC debt crisis, but the debt crisis can hardly be considered an example of what banks will do under laissez-faire conditions. Many national monetary authorities were actively encouraging commercial banks to provide loans to the Third World, and the banks could reasonably expect a bailout if their loans turned sour. While no one is disputing that the banks over-expanded their lending, that over-expansion can be plausibly attributed to official policies, and there is no particular reason to believe that a crisis as severe as this one would have occurred had the banks had to rely on their own resources.

#### CONCLUDING REMARKS

Two broad conclusions suggest themselves. Recent claims to the contrary notwithstanding, banking regulation and central banking apparently did not evolve to counter inherent deficiencies in (free) financial markets. Real-world banking regulations must therefore have developed for other reasons than market failures, and the most obvious reasons are political ones. The other, complementary, conclusion is that the development of official regulations and central banking were not Pareto improvements over the free market, and cannot therefore be justified on efficiency grounds. The free bankers appear to be right after all—central banking did not evolve to counter market failure, and it presumably cannot be defended by market-failure arguments.

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20. A good example is provided by the history of Citicorp in the nineteenth-century United States. Citicorp maintained higher-than-average capital ratios and gained market share at rivals' expense in periods of financial distress when depositors were looking for a safe haven (Kaufman 1988, p. 569).

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