11 US banking in the 'free banking' period

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> The two decades preceding the American Civil War . . . witnessed something approaching a natural experiment. During those years the Federal government withdrew from the regulation of banking, a policy that was the final outcome of Andrew Jackson's war with the Second Bank of the United States. A wide range of experiments concerning entry into commercial banking were tried, from 'free' banking to 'socialized' banking. Moreover, other kinds of legislation affecting banking varied from state to state as well. While the regions of the United States differed in terms of economic structure, a common language, a common legal tradition, and, to some extent, a common culture permeated all regions. Thus the period provides excellent conditions for observing the effects of financial legislation on . . . financial intermediation.
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> (Rockoff 1975b: 160)

INTRODUCTION

Banking has always occupied a unique place in American history. When the republic was founded, entry to other industries was normally free, but banking was made an exception. Those who wished to set up a bank had to obtain explicit authorization in the form of a charter, and the constitution assigned the power to grant charters to the state legislatures to use as they saw fit. A typical charter would give the shareholders some limit on their liability and place restrictions on the ratio of notes to capital. Following on from English practice, the law interpreted a 'bank' as an institution that issued notes, and this narrow interpretation implied that while the issue of notes was quite restricted, the issue of deposits for a long time was not. (The restrictions on notes were important, none the less, in that notes were still a considerable part of the circulating medium.[1]) The controlled

entry to the industry implied that charters normally involved a degree of monopoly privilege. They were therefore valuable, and state legislatures were often inclined to sell them for financial favours (e.g., cheap loans) rather than give them away. In addition, charters often restricted the bank to operate only in one county and one office – a restriction that would have propped up the value of charters, and, therefore, what they could be sold for, by restricting competition at the local level. Not surprisingly, perhaps, the state chartering process was often highly politicized and frequently controversial. The chartering of federal banks was even more so, and although the federal government did grant banking charters, the constitutionality of its power to do so was always controversial.[2] Whether the charter of the (second) Bank of the United States (BUS) should have its charter extended on its expiry in 1836 became a key issue in national politics, and the 'war' against the Bank was the dominant theme in Andrew Jackson's presidency. Jackson eventually succeeded and vetoed the bill to re-charter the Bank. The Bank's charter then expired and the federal government effectively withdrew from the banking industry to leave the field almost entirely to the individual states.[3]

'FREE BANKING' IN NEW YORK

New York had a particularly controversial charter system. The legislature had long been accustomed to grant charters 'as patronage to political favorites' (Holdsworth 1971 [1911]: 31), and the corruption surrounding the chartering process was widely regarded as scandalous. As early as 1825, a report to the State Senate recommended opening entry to the banking industry by repealing the laws against non-chartered banks. If noteholder safety was a major concern, the report suggested that the law could require that non-chartered banks deposit approved bonds with the state authorities, and these bonds could then be used to repay noteholders of any banks that failed. These two features – free entry and a bond-deposit condition – were to become the distinguishing characteristics of the 'free banking' laws,[4] and numerous petitions were subsequently presented to the legislature for the passage of a 'free banking' act. The charter system meanwhile had become 'so shameless and corrupt that it could be endured no longer',[5] and a 'free banking' act finally became law in April 1838.[6]

The New York law allowed free entry to the industry subject to a number of conditions.[7] Banks had to have at least $100,000 in capital, they were to observe a 12.5 per cent specie reserve requirement against notes, and their notes had to be redeemable on demand. Their notes were also to be secured by deposits of eligible assets with the state comptroller, and these assets included US bonds and the bonds of New York and other 'approved' states, and certain mortgages. Shareholders of 'free banks' were also allowed limited liability, and noteholders had first lien on the assets that were deposited to secure the note issue. The act was revised in 1840 when the reserve requirement was eliminated and US bonds and the bonds of other states were removed from the list of eligible bonds – a move, incidentally, that Knox (1969 [1903]: 418) says was expressly intended to promote the demand for New York bonds. A revised state constitution in 1846 also altered the 'free banking' law and made shareholders personally liable for notes up to the amount of their capital subscription ('double liability').

A large number of 'free banks' was set up immediately after the passage of the act – Hammond (1957: 596) suggests that 50 were set up very soon after, and 120 within two years. The early years of New York 'free banking' coincided with the financial difficulties of the late 1830s and early 1840s, however, and a number of banks failed when a group of southern and western states defaulted on their debts and inflicted large losses on them (see Root 1895: 20).[8] (As an illustration, Rolnick and Weber (1985: 8) note that the 17 banks that closed in the period from January 1841 to April 1842 held no less than 95 per cent of their asset portfolio in the form of bonds issued by defaulting states.) After this initial growth spurt, the New York banking system settled down to two decades of fairly steady expansion. From 1841 to 1861,

> the banking sector's volume of outstanding circulating notes doubled. . . . Even more dramatically, deposits at New York banks increased by more than six times as New York City became the financial center of the US economy. . . . There was also substantial growth in the total number of banking institutions, which more than doubled between 1838 and 1863, rising from 133 to 301.
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> (King 1983: 143)

The impression of rapid growth is also borne out by Rockoff's observation that per capita bank money in New York grew at an annual rate of 4.41 per cent in the period from 1845 to 1860 (Rockoff 1975b: 162–3). (Rockoff notes, too, that this growth rate compares to national average of 2.56 per cent over the same period.) The losses that noteholders suffered in the first few 'free banking' years were also substantially reduced in the later period. To quote King again

> In the twenty year period from October 1842 through September 1862. . . . [the] average annual percentage loss was about 0.04 percent, described by a contemporary observer as being far less than the loss arising from wear, tear, and shaving of specie coins. The largest percentage loss – about one third of one percent – occurs during a period of general financial distress and sharp economic decline.
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> (King 1983: 148)

The success of 'free banking' in New York was widely acknowledged. Rockoff (1975a: 11) describes New York 'free banking' as 'brilliantly successful', and even Knox (who is often quite hostile to 'free banking') acknowledged that 'New York in 1863 had an excellent banking system; the banks under it were sound and solvent and issued a satisfactory and safe currency' (1903: 392).

'FREE BANKING' LAWS ELSEWHERE

The New York 'free banking' law was widely imitated, and eighteen states eventually passed versions of it by 1860. The list of eligible assets that could be used to secure the note issue almost always included the bonds of the state that passed the law, and it usually also included US bonds. The bonds of other states were often included as well, and other assets such as mortgages were sometimes allowed. These laws also required that banks redeem their notes on demand at face value, on pain of dissolution – chartered banks were normally under the same obligation too – and they had a minimum (and sometimes a maximum[9]) capital requirement. As with earlier charters, 'free banking' laws sometimes included restrictions against investments in real property (Rockoff 1975b: 162), restrictions on branch-banking, and (usually) restrictions on the maximum ratio of the note issue to bank capital. In addition, banks were often subject to usury laws[10] and a variety of restrictions on the minimum denominations of their notes.[11] And while early laws normally limited shareholders' liability to the amount of their initial investment, there was a tendency to extend their liability as time went on, and most states had 'double' liability for the shareholders of 'free' (and chartered) banks by 1860 (Klebaner 1974: 11). As we saw, already in New York, there was also a gradual tendency to strengthen noteholder protection, and most states eventually gave noteholders preferred status as creditors and first lien on the assets deposited with the state authorities. Early restrictions on the note–capital ratio were also supplemented as time went by with explicit reserve requirements, and twelve states had reserve requirements of one sort or another by 1860.[12]

Apart from New York, 'free banking' laws were passed in Michigan (1837), Georgia (1838), Alabama (1849), New Jersey (1850), Illinois, Massachussetts, Ohio and Vermont (1850), Connecticut, Indiana, Tennessee and Wisconsin (1852), Florida and Louisiana (1853), Michigan again (1857), Iowa and Minnesota (1858) and Pennsylvania (1860). The spread of 'free banking' appears to be due to a variety of factors. One is New York's clear success with it. One suspects, too, that it was not just the success of New York in achieving a stable and growing banking system that accounts for its imitation, but also the realization by state legislatures that it offered a good way to raise revenue by promoting the demand for state debt. The usefulness of 'free banking' in this regard is illustrated by the fact that the New York 'free banking' system held no less than 57 per cent of New York's state debt in 1860 (Rockoff 1975a: table 4). In a number of southern states the adoption of 'free banking' also appears to have been facilitated by the fact that the earlier controversies over banking that had been so pronounced in the 1830s and 1840s had to some extent burned themselves out by the 1850s. As the protagonists fought themselves to a standstill, they gradually converged to more liberal policies as a matter of pragmatism rather than principle (see, for example, Schweikart 1987: 47). There was also considerable dissatisfaction in many states with state banking systems which either prohibited banking entirely or else implied a large degree of political control through a state bank or a politicized charter system. Dissatisfaction with the results of prohibition thus led to its replacement with 'free banking' in Iowa and Wisconsin, and dissatisfaction with the politicized process by which bank capital was allocated was a major factor behind the adoption of 'free banking' in Ohio and Tennessee. Rockoff observes that the 'sentiment for free banking was especially strong in the West' (1975a: 50) because of these sorts of difficulties, and these restrictions were felt particularly acutely in areas of new settlement where there was scope for rapid economic development (1975b: 163–4). There appears to have been a general perception that 'free banking' would promote economic and financial development, and that more restrictive systems would hold it back, and these beliefs appear to be borne out by a comparison of different states' experiences, especially in the 1850s.

We turn now to take a closer look at the various experiences of 'free banking'.

'Free banking' in Michigan (1837)

Michigan was the first state actually to pass a 'free banking' law. As in New York, there was considerable dissatisfaction with the existing 'monopoly' in banking, and a 'free banking' law was passed in March 1837 modelled on a bill that was still before the New York legislature. Hammond (1948: 6) reports that 40 banks were set up very quickly after the passage of the new law and all were in liquidation within a year, while Knox (1903: 735) reports that 42 banks were in liquidation and only 6 banks – 2 chartered banks and 4 'free banks' – still remained in operation by the end of 1839. The 'free banking' act itself was suspended in 1838, and it was subsequently repealed in 1839 and declared unconstitutional in 1844. What had happened?

The most important factor behind the failures appears to be a suspension law that resulted from a special legislative session in June 1837 – three months after the 'free banking' law – that authorized all banks in the state to stop specie payments. This law effectively removed the discipline against overissue – if banks' notes are convertible, then a bank is limited in its ability to issue notes by the legal requirement that it redeem them on demand for specie. The suspension law removed that requirement and thereby eliminated any effective check on the note issue. As Rockoff put it,

> a unique situation was set up in which a group of men could issue bank notes with practically no risk to themselves. Few free banks had been started up to this time, but now the rush to start began in earnest, and in fact, nearly all the Michigan wildcats lived their brief lives during the period of general suspension.
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> (Rockoff 1975a: 95)

Far from telling us much about 'free banking' as such – recall that 'free banking' laws required that banks maintain convertibility – the Michigan experience thus appears to tell us more about the dangers of suspension laws.[13] Yet the Michigan experience, ironically, had a profound impact on later generations' perceptions of 'free banking', and 1837 Michigan was remembered when the successes of 'free banking' in New York and other states were all but forgotten. Many of the colourful stories about 'wild-cat' banking that were later regarded as the natural outcome of 'free banking' stem from episodes in late 1830s Michigan. With convertibility suspended, banks had no need to keep reserves other than to satisfy the bank commissioners, and the famous episodes of barrels of nails covered with coins and of specie being moved around the country to fool the commissioners were perhaps only to be expected.

Illinois

In 1835 the state of Illinois set up a state bank ostensibly modelled after Indiana's,[14] but the bank defaulted (as, indeed, did the state itself) in 1842, and the state constitution was subsequently amended in 1847 to ban state involvement in banking and to submit all banking legislation to referendum. A 'free banking' act modelled on New York's was then approved in 1851 (see, for example, Hammond 1948: 5, 13–14) and 141 'free banks' were subsequently formed (Economopoulos 1988, table 1). The Illinois 'free banking' system 'escaped practically unscathed' from the crises of 1854 and 1857 (Rockoff 1975a: 113), and Economopoulos reports that it 'worked reasonably well prior to 1861' (1988: 254). He notes, too, that it outperformed three out of Rolnick and Weber's four states during this period (1988: 113). However a potential problem was highlighted in a bank commissioners' report of 1857 which revealed that over two-thirds of Illinois banknotes were secured by bonds from the state of Missouri, and the Illinois banking system was therefore vulnerable to a fall in the price of Missouri state debt (Economopoulos 1988: 253). Relatively little was done to reduce the banking system's vulnerability to the prices of Missouri bonds, and a large number of bank failures followed when Missouri bond prices plummeted at the start of the Civil War. The prices of Missouri 6s fell from over 80 per cent of par in mid-1860 to under 40 per cent of par a year later (Rolnick and Weber 1984: figure 2). Only two banks had failed prior to 1861, with losses of only 8 cents on the dollar, but eighty-nine failed in 1861 and noteholders took average losses of 33 cents per dollar (Economopoulos 1988: 254). 'Free banking' in Illinois thus had a successful run until it was undermined by the fiscal instability associated with the outbreak of the Civil War.

Wisconsin

Wisconsin had a 'free banking' experience similar to Illinois. The territorial legislature was initially very hostile to banking and did what it could to prevent it,[15] and the prohibition on banking was continued under the constitution of the new state until it was reversed and a 'free banking' law passed in 1852 (Hammond 1948: 8). One hundred and forty 'free banks' were set up, and thirty-seven eventually

failed (Rolnick and Weber 1983: table 2). Wisconsin's 'free banking' appears to have been relatively successful throughout the 1850s and there were no failures until 1860–1 (Rolnick and Weber 1984: 280). The balance-sheet data provided by Rolnick and Weber (1985: table 3) indicate that those Wisconsin 'free banks' that failed had secured 48.8 per cent of their note issues with the Missouri 6s that subsequently lost over half their market values in 1860–1 and inflicted such damage on the 'free banks' of Illinois, and an additional third or more of their note issue was secured by the bonds of other southern states that also fell very heavily in price. The failed 'free banks' of Wisconsin were thus the victim of the same fiscal instability as their Illinois counterparts.

Ohio

Ohio had a charter system until its banking system was overhauled in 1845 and a dual system established in which a state bank was established to operate beside 'independent' ones (Holdsworth 1971 [1911]: 33). Branches of the state bank were obliged to contribute to a safety fund, and independent banks were subject to a bond-deposit provision but there was no automatic free entry (Rockoff 1975a: 121–2). These reforms helped develop the banking system, but there was still a feeling in 1850 that the state did not have enough banks or enough bank capital (Rockoff 1975a: 56), and this feeling led to the passage of a 'free banking' law in 1851. The 'free banking' law was apparently successful – one Ohio historian noted that 'The banks organized under the general banking laws of 1845 and 1851 were attended by a high degree of success, and furnished a currency well adapted to the business wants of the people' (Huntington 1964: 479) – and while there were some failures, noteholder losses were trivial at most (Rockoff 1975a: 16).

Indiana

Indiana set up what was nominally a state branch bank but really a system of private chartered banks in 1834 (see Calomiris 1989: 15).[16] Yet despite the fact that many modern historians have regarded this system as very successful, the legislature none the less chose in 1852 to pass a 'free banking' law modelled on that of New York. Ninety-four banks were established in three years and the circulation increased from \$3.5 million to \$9.5 million (Hammond 1948: 12), and 104 'free banks' were established altogether (Rolnick and Weber 1982: table 2). Some 86 per cent of these banks closed, but only 31 per cent actually closed without paying their creditors at par (i.e., failed). Most of these failures occurred in 1854–5 (Rolnick and Weber 1983: table 5) and can be traced to the large falls in the prices of Indiana state bonds which occurred just before the failures, and which would have inflicted capital losses on the holders of Indiana bonds (see, for example, Rolnick and Weber 1984: figure 1). These failures notwithstanding, Indiana's 'free banking' appears to have been reasonably successful – Rockoff (1975a) quotes the state auditor's assessment in 1856, 'The experiment of free banking in Indiana, disastrous as it has been in some particulars, has demonstrated most conclusively the safety and wisdom of the system' (p. 22) – and there were eighteen 'free banks' still operating on the eve of the Civil War (p. 98).

Minnesota

Minnesota had an unusual experience with 'free banking'. A 'free banking' law was passed in July 1858, and sixteen 'free banks' subsequently opened (Rolnick and Weber 1982: table 2). Seven of these then failed in the period from June to September 1859, and two more in the period from June 1860 to June 1861 (Rolnick and Weber 1986: 884). The cluster of failures in 1859 and the low redemption rates of these failed institutions – Rolnick and Weber (1988: 57) report an average redemption rate of only 21.25 cents on the dollar – had led many earlier writers to the conclusion that 'free banking' in Minnesota had been a failure, but Rolnick and Weber (1988) have put forward an interpretation of the Minnesota experience that suggests it was more successful than had hitherto been realized. The Minnesota law was amended in August 1858 to allow US or Minnesota bonds valued at par to be used as eligible assets, and the 'free banking' laws were passed at almost the same time as the 'five million dollar' loan bill which provided for an issue of Minnesota state debt – the Minnesota 7s – secured *de facto* by the assets of the railroad companies whom the bill was designed to assist (Rolnick and Weber 1988: 54–7). What was effectively private debt was thus classified as state debt, and was therefore eligible security for a note issue. Five banks were then set up which secured their note issues with Minnesota 7s, and they all failed the next summer when the railroad boom ended and the railroad companies themselves failed (Rolnick and Weber 1988: 57). (The reasons for the failures of the other Minnesota banks are not clear.)

While earlier writers interpreted these banks as 'wildcats', Rolnick and Weber suggest they should be interpreted as mutual funds whose liabilities were priced to reflect the riskiness of their assets. They emphasize that the notes of these mutual fund banks were not sold and did not trade at par (1988: 57) – and the implication is that earlier estimates of noteholder losses are inappropriate since they were based on the assumption that the notes had been sold at par. Rolnick and Weber suggest these institutions performed a useful intermediation service – enabling ordinary people to invest in the railroads on the one hand, and providing the railroads with finance on the other – and they present compelling evidence that the public were well-informed and knew the risks involved (1988: 67). The railroad banks were set up by St Paul brokers who appointed nominal owners out-of-state to protect themselves from extended liability, and the first-lien provisions of the laws were circumvented by the banks making loans to the brokers secured only by promises to repay bank notes (1988: 59). To prevent arbitrage at their expense by the public, the railroad banks refused to redeem at par the notes they sold at a discount, and they announced this policy clearly in advance (1988: 59). Noteholders had no incentive to force the issue since they could only recover the risky assets securing the notes, minus the costs of litigation, and no-one apparently tried to protest their notes. This interpretation is supported by various pieces of evidence – the timing of the railroad bank failures shortly after the failures of the railroads themselves, the discussions of the risks involved in the press, the absence of any outcry when the state government announced that it would repay the notes of failed banks at about 20 cents on the dollar, some circumstantial evidence that railroad bank notes were discounted on the market, and the fact that most other 'free banks' continued well past the summer of 1859 (Rolnick and Weber 1988: 64–70).

OTHER 'FREE BANKING' EXPERIENCES

'Free banking' experiences elsewhere can be summarized more briefly. 'Free banking' laws were passed in Alabama, Florida, Georgia, Iowa, Massachussets, Pennsylvania and Vermont, but few (and, in the case of Iowa, no) 'free banks' were ever formed under them.[17] One reason in most of these cases – Florida is an exception, Iowa a possible exception, and the Pennsylvania law was only passed in 1860 – was that charters were already easy to obtain before the Act was passed (e.g., in the New England states) or else the passage of the Act was accompanied by a more liberal chartering policy (e.g., in Alabama). An additional reason seems to be that the constraints implied by the bond-deposit requirements of the 'free banking' law sometimes bound so tightly that 'free banks' were not set up because they would not have been able to compete effectively. A case in point is Massachussetts where the 'free banking' law was passed in 1851, but no 'free banks' were set up until 1859 despite the very considerable growth of the Massachussetts banking industry from a capital of just over $4 million in 1850 to nearly $19 million in 1857 (Knox 1903: 364; Rockoff 1975a: 125). The Massachussetts law restricted eligible assets to US (federal), New England and New York bonds which all sold at substantial premiums in the 1850s and yet were valued at par when used as collateral for a 'free bank' note issue. Banking entrepreneurs presumably preferred to apply for a conventional charter so they could avoid the tax on a 'free bank' implied by the difference between the high market price of eligible bonds and their par valuation by the authorities.[18]

'Free banking' laws appear to have had more impact on other states. In New Jersey, a 'free banking' law was passed in 1850 and five 'free banks' were set up by August 1852 (Rockoff 1975a: 11, 102). The original act authorized issues of bank notes against US bonds or the bonds of selected states, but Virginia bonds were added to the list in 1852 at about the same time as Virginia was running a large fiscal deficit. Much of this debt was absorbed by the New Jersey 'free banks', and a number of them then failed in 1853 when the price of Virginia debt fell and undermined their net values (Rockoff 1975a: 102–4). Dissatisfaction with the restrictiveness of the financial system in Louisiana led to the passage of a 'free banking' law in 1853 (see, for example, Schweikart 1987). Six banks were chartered under the 'free banking' law in the 1850s and there was some growth, albeit slow, in the banking industry that decade, growth being restricted, perhaps, by the 'stiff' reserve requirements that Louisiana banks had to observe (Green 1972: 201; Rockoff 1975b: 163). The Louisiana banking system was strong and solid, and in common with a number of other southern banking systems was able to avoid any suspensions in the crisis of 1857 (Pecquet 1990: 3).[19] Ongoing controversy in Tennessee about the siting of the branches of the state bank apparently led to the abolition of the state bank and the passage of a 'free banking' law in 1853. The number of banks then rose rapidly and the industry boomed (Rockoff 1975a: 11; Schweikart 1987: 276–7). As Schweikart recently observed, 'Contrary to the oft-cited assumptions of some modern historians . . . free banking in the southern states of Louisiana and Tennessee . . . produced fairly sound institutions and increased competition' (1987: 170).

We now leave the different states' experiences of 'free banking' and turn to some of the broader issues raised by *ante bellum* banking.

'WILDCAT BANKING'

'Wildcat banking' is a subject on which traditional histories of *ante bellum* banking have placed considerable emphasis. The notion of a 'wildcat' bank is misleadingly easy to grasp – it suggests an institution that is unsound and irresponsibly run, and that probably sets out deliberately to 'rip off' the public – but it defies attempts to pin it down precisely despite its superficial intuitive appeal. The difficulty is illustrated by Rockoff's definition – and note that earlier writers usually sidestepped the problem by avoiding definitions altogether – of a wildcat as a 'bank that issued notes in a much greater volume than it could continuously redeem, and that came into being as a result of a liberal entry provision in a free banking law' (1975a: 5). It is not at all clear what this definition effectively amounts to. Most banks operate on a fractional reserve, so it is questionable whether they 'could' redeem their notes continuously anyway. But one would presumably be reluctant to say that all fractional reserve note-issuing banks in this period were 'wildcats' – to do so would concede that the notion was more or less useless – and yet it is not clear what alternative construction one can make of this clause that drives the appropriate wedge between 'wildcat' banking on the one hand and 'good' fractional-reserve banking on the other. And the fact that Rockoff then ties the notion of a 'wildcat' to an institution that operates under a 'free banking' law in no way clarifies the issue – it relates 'free' and 'wildcat' banking in terms of definition, but does not tell us what 'wildcat' banking actually *was*. The term 'wildcat' is ultimately a colourful label, but it does not capture any well-defined theoretical construct. If 'wildcat' banking exists at all, it exists, like beauty, only in the eye of the beholder.

Many observers have nonetheless looked at *ante bellum* banking and thought they saw 'wildcats' – whatever they might be – and they have insisted, furthermore, that 'wildcat' banking was an important, indeed, critical, element in the *ante bellum* banking experience. These claims seem to boil down to the hypothesis that an important proportion of banks in this period were unsound in some sense, but such a hypothesis would seem to be both implausible a priori and empirically refuted. It is implausible because it fails to explain why people would choose to patronize such institutions in the first place. If the public preferred 'responsible', solid banks, then how could 'wildcat' banks attract any business when they were presumably out-competed? The wildcat hypothesis also seems to presuppose that the banker can simply issue notes and then disappear with the proceeds. He would lose the bonds deposited with the state authorities, of course, but the hypothesis maintains that it would be worth his while if the value of those bonds fell below the value of the liabilities outstanding (see, for example, Rockoff 1974, 1975a.) One difficulty here is that such behaviour is effectively fraud, and various laws already existed to prevent it. At a more basic level, if noteholders were afraid of being ripped off, then they would have insisted on adequate security from the banker – that he has 'respectable' people on his board of directors whom they believe are unlikely to sanction 'misbehaviour', that he acquires a stake in the local community (e.g. by making loans to it), and so on – and the threat of losing this security undermines his incentive to disappear with his proceeds (see also Rolnick and Weber 1984: 272). And, to take the argument full circle, it is precisely this security that gives the 'good' banker the competitive edge over the 'wildcatter'.

The wildcat hypothesis also appears to be rejected empirically. As Rolnick and Weber (1982: 14) point out, the bank note *Reporters* which warned of counterfeit and dishonoured notes would surely have said something had it been common for bankers to abscond with whatever assets they could take. They also present empirical evidence which indicated that two of the empirical predictions of the wildcat hypothesis – that wildcat banks should stay in business only a short time, and that noteholders should suffer losses when they failed – were only satisfied for 7 per cent of failed banks in their sample of failed banks from Indiana, Minnesota, New York and Wisconsin (1982: table 2). One should note, too, that the conditions that Rolnick and Weber test are only necessary conditions, and (in the absence of a well-defined notion of a wildcat bank) cannot be treated as sufficient ones. Their evidence indicates, therefore, that 7 per cent is only an upper bound on the proportion of bank failures that might be explained by wild-cat banking. Their claim that 'wildcatting' was relatively unimportant is also supported by the empirical work of Economopoulos on Illinois. He identified three characteristics of a 'wildcat' – that it should last less than a year, that it should be set up when there was a 'wildcat' profit to be made on the note issue, and that it should be set up in an inaccessible location – and finds that only one 'free bank' out of 141 satisfied all three conditions, and only eight even satisfied two (Economopoulos 1988: 261).

In short, the notion of wildcat banking is entertaining but ultimately provides little understanding of *ante bellum* banking. Hammond (1948: 24) was not far off the mark when he wrote that 'wildcat' banking is

falsely taken as 'typical, being in accord with picturesque notions of frontier life [but that] fancy and theory have gone hand in hand to exaggerate the 'wildcat' banks' importance'. And Rockoff himself wrote

> To a remarkable extent the reigning view [about wildcats] is derived from purely anecdotal evidence . . . the traditional interpretation has been influenced by a small number of stories about wild-cat banks. It is not surprising that these stories are repeated frequently, for wild-cat banking is a romantic diversion from the usual dull recitation of statistics that makes up the backbone of most banking histories . . . little quantitative evidence has been presented that wild-cat banking was sufficiently frequent and harmful to constitute a basis for condemning free banking, and . . . few theoretical arguments have been advanced to show that wild-cat banking could not have been prevented without abandoning free banking.
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> (Rockoff 1975a: ii)

THE CAUSES OF THE 'FREE BANK' FAILURES

Much ink has been spilt over the causes of the 'free bank' failures. Earlier writers often ascribed the failures to 'wildcatting', but as we have just seen, the wildcat hypothesis is unsatisfactory as a theoretical explanation, and recent empirical work indicates that it is consistent with only a small proportion of the failures anyway. We therefore have to look elsewhere, and two other factors suggest themselves. One of them was the occasional tendency of state governments to intervene to suppress the convertibility of bank money. As the Michigan experience of 1837 illustrated, this intervention could eliminate the check on banks' issues and open the way for a major over-expansion, and while the Michigan suspension law was perhaps the most notorious example, many other states also adopted suspension laws during the panics of the late 1830s and 1857. Such laws illustrated what Smith (1990 [1936]) regards as 'probably the worst feature of the American system' – the 'extreme laxity with which the principles of bankruptcy were applied to insolvent banks'.

A second major cause of the failures was the capital losses inflicted on 'free banks' by falls in the values of the state bonds held in their asset portfolios. A bank's liabilities were basically fixed in value, so its net worth depended on it maintaining the value of its assets, and a sufficiently large fall in the value of these assets could wipe out that net worth. There is considerable evidence to link 'free bank' failures with such capital losses, and these losses, in turn, can be linked to the fiscal instability that certain states experienced at particular times. Some evidence is presented by Rolnick and Weber using data for the states of New York, Indiana, Minnesota and Wisconsin over the years 1852–63 (1982: table 3). They use Indiana bonds as a proxy for the assets held by the 'free banks' in these states, and the prices of these bonds fell 25 per cent in the second half of 1854, 20 per cent from March to October 1857, and about 20 per cent from October 1860 to August 1861 (1982: 16). The bonds therefore fell for a combined period of about two years out of the total sample period, and yet 54 (or 79 per cent) of the 68 known 'free bank' failures in these states during the sample period occurred during these two years (1982: table 3). Rolnick and Weber present comparable results for the same states over the longer period of 1841–61 (1984: table 9) – which, in effect, means the same sample plus New York over the additional period – and found that 76 out of the 96 known failures (i.e., 79 per cent again) occurred during periods of falling bond prices (Rolnick and Weber 1984: 288). Economopoulos provides even stronger evidence from Illinois. He takes the whole population of known 'free bank' failures – 91 in all – and finds that all of them occurred in periods of falling bond prices (1988: 262). The severity of these bond price falls and the amounts of them held by failed 'free banks' also lends support to the view that they contributed in a major way to the failures. Rolnick and Weber's figure 1 (1984) indicates that Indiana 5s fell about 80 per cent in value from January 1841 to April 1842, for example, and we already noted Rolnick and Weber's observation (1985: 8) that the seventeen New York 'free banks' that closed in the first four months of 1842 held no less than 95 per cent of their asset portfolio in the form of the bonds of states which defaulted on their debts. Similarly, there were large falls in the prices of southern bonds with the onset of the Civil War – for example, Lousiana 6s fell 53 per cent, Missouri 6s 57 per cent, North Carolina 6s 56 per cent, and Virginia 6s 59 per cent – and Rolnick and Weber's 'free banks' that failed in 1860–1 secured about 84 per cent of their note issues with southern bonds that fell severely in price (Rolnick and Weber 1984: 288; 1986: 887). The history of the period also makes it clear that these bond price falls were related to fiscal factors. The fall in the prices of Indiana state bonds in the early 1840s were related to fears that Indiana would default on its debt (Rolnick and Weber 1986: 884), and the falls in the prices of southern bonds in 1860–1 were related to fears of southern repudiation with the outbreak of the Civil War. In the final analysis, the losses that put so many of the 'free banks' out of business were ultimately caused by fiscal and, at an even more basic level, by political factors.

BANKING STABILITY DURING THE *ANTE BELLUM* PERIOD

A number of issues have been raised regarding the stability of American banking during this period. A key concern has been that banking problems may have been contagious – that the difficulties of one bank or one group of banks should adversely affect public confidence in other banks. If noteholders or depositors are imperfectly informed, so the argument goes, then

> they might have – rightly or wrongly – interpreted the redemptions and failures at some banks as evidence that their own bank was also in trouble. In this way a local shock . . . could have caused . . . a large number of bank failures and closings that were not warranted by the local shock.
>
> (Rolnick and Weber 1985: 5)

Rolnick and Weber looked for contagion using their data set for New York, Indiana, Minnesota and Wisconsin, but they found very little evidence of it. Bank failures tended to be clustered, and they found that clustered failures in one state – in New York in 1841–2, in Indiana in 1854, in Minnesota in 1859, and in Wisconsin in 1860–1 – were associated with shocks that were specific to particular groups of banks (in fact, as already noted, these banks failed because they held large amounts of particular state bonds whose prices fell dramatically). In fact, they found that there was little tendency for these banking problems to spread to other states (1985: 5–8; 1986: 885–7). Rolnick and Weber also looked for evidence of intrastate contagion, and found little evidence of that either (1986: 887, n. 7).[20]

The *ante bellum* period also saw some experience with private banking 'clubs' that both helped member-banks and 'regulated' them. These clubs can be viewed as attempts to reap economies external to the individual banking firm, but internal to the industry, in a context where the most direct means of exploiting these economies – amalgamation – was subject to legal restrictions. Perhaps the most famous example is the Suffolk system in New England. (For more on the Suffolk system, see Trivoli 1979, Mullineaux 1987 and Selgin and White 1988.) In 1819 the Suffolk Bank of Boston attempted to counter the Boston circulation of out-of-town ('country') banks by buying up-country bank notes at their currently discounted prices in Boston and then presenting them to their issuers for redemption. The Suffolk system gradually developed into a multilateral clearing system, membership of which involved certain obligations – members had to maintain permanent deposits at the Suffolk, and to 'behave themselves' – but also gave member-banks a public signal of 'good standing' and access to credit facilities provided by the Suffolk. Most banks judged the benefits of membership to be worth the costs, and the Suffolk system gradually spread over much of New England (see, for example, Sumner 1896: 417). It 'created lasting benefits for the New England economy' (Trivoli: 1979: 5) and was successful in various specific ways: it initially reduced discounts on the notes of member-banks, and ultimately eliminated them, and thus helped to 'unify' the currency provided by different note-issuers; it provided a cheap and effective clearing system, and ensured the rapid return of notes and cheques to their issuers; it economized on monitoring costs (instead of the public having to monitor each bank themselves, much of the monitoring was delegated to the Suffolk and the public had merely to monitor the Suffolk and take note of any expulsions from the Suffolk system); and it provided emergency loans to member-banks, and was well-placed to do so because it was already monitoring them. The weaknesses of the system were that the Suffolk combined the sometimes conflicting roles of club owner, club manager and club member, and the product provided by the Suffolk was more 'hierarchical' than many member banks wanted. The Suffolk's 'dictatorial' attitude provoked frequent complaints, and after earlier attempts had failed, a group of banks at last succeeded in 1855 in obtaining a charter for a rival bank – the Bank for Mutual Redemption (BMR) – which was to take-over the Suffolk's note-exchange function and offer a less hierarchical product. (It was to impose less irksome conditions on members but provide no overdraft or vetting facilities as the Suffolk did.) The BMR finally opened in 1858 and a brief struggle ensued which ended with the withdrawal of the Suffolk from the note-exchange business. The Suffolk system was replaced by that provided by the BMR, and the new system lasted until it was destroyed by the note restrictions of the National Banking System in the 1860s.

A related institution was the clearing-house association (see Timberlake 1984: 3–4). Like the Suffolk system, these institutions initially arose to economize on redemption costs. Banks would tend to take in each other's notes in the course of business, and they soon realized that it would be more convenient for bank representatives to meet together at a central clearing-house than it would be to arrange a series of bilateral note exchanges. One bank would typically be assigned to administer the clearing process, and member banks would keep balances with it with which they could settle their accounts. Later on, the administration of the clearing process would be transferred to a clearing-house institution established for the purpose, and the clearing-house would economize on specie by issuing certificates of its own which would be used in the clearing process in place of coins. The most important clearing-house association was the one in New York which was founded in 1853, and the role of the New York association soon expanded significantly during the crisis of 1857. While the banks' initial reaction to the crisis was to want to curtail their loans, the New York association arranged a co-ordinated response by which they allowed their reserve ratios to fall while the association began to issue loan certificates which were to be used to supplement specie and which were secured against clearing-house assets. These certificates helped to alleviate the specie shortage and enabled lending to continue, and they were retired after the crisis had subsided. The role of the clearing-house expanded further when it arranged for the issue of more loan certificates and a co-ordinated bank policy in the run-up to the Civil War (Timberlake 1984: 4–5). Unlike the system provided by the BMR, the clearing-house associations survived the National Banking legislation and continued to evolve until the crisis of 1907.

This period also saw the establishment of the first systems of state-sponsored liability insurance. Like the Suffolk–BMR systems and the clearing-house associations, these schemes are perhaps best viewed as substitute means by which banks could reap the economies of scale which legal restrictions implied they were not allowed to exploit by the more direct means of amalgamation. In this regard it is significant that southern banks faced relatively few amalgamation restrictions, and were generally comparatively large, reasonably well-diversified, and noticeably more stable than many of their northern counterparts. Northern banks were frequently hemmed in by amalgamation restrictions (e.g., restrictions on branching), and their greater instability was almost certainly due, in part at least, to their restricted ability to diversify risks. This instability gave rise to political pressure to protect the small banks, and some state governments responded by instituting liability insurance schemes to protect them – New York in 1829, Vermont in 1831, Indiana in 1834, Michigan in 1836, Ohio in 1845 and Iowa in 1858 (see Calomiris 1989). The schemes fall into one of two main classes, though the particulars vary somewhat in each case. There were the New

York 'safety fund' and the Vermont and Michigan systems loosely modelled on it, which Calomiris (1989: 12) characterizes as 'complete failures' and which ultimately defaulted. Insurance premiums were fixed and there was little or no attempt to relate them to banks' risk-taking, there was little incentive for banks to monitor each other and no effective supervision (i.e., the systems created moral hazard and failed to control it) and the systems tended to attract bad-risk institutions (i.e., had a bad adverse selection problem). The other systems were 'mutual guarantee' schemes modelled after the one introduced by Indiana which Calomiris (1989: 16) assesses as 'extraordinarily successful'. These schemes were actuarially much sounder, they provided more effective supervision and a stronger incentive for banks to monitor each other, and they were mostly managed by the banks themselves. All three were successful and lasted until the suppression of state note issues by the National Banking System.[21]

DE FACTO FREE BANKING

One feature of *ante bellum* banking experience that has often been touched upon but seldom addressed in any depth is the extent to which many states experienced free or competitive banking *de facto* (as opposed to banking under a 'free banking' law). While no state ever had pure *laissez-faire* in banking, many states had banking regimes which imposed relatively lax restrictions and which therefore gave a reasonable approximation to banking *laissez-faire*. Massachussetts provides a good example. Massachussetts operated a charter system, but charters were apparently granted relatively routinely after 1820 (Sylla 1985: 108) and the banking industry was widely regarded as competitive and successful (e.g., E. White 1990: 27). Pennsylvania also operated a charter system with a reasonably liberal chartering policy, and the Pennsylvania banking industry appears to have been at least moderately competitive and successful.[22] New York had something close to free banking after the passage of its 'free banking' law in 1838, and the success of New York banking has already been noted. Alabama also enjoyed something like free banking after the passage of its 'free banking' law in 1849 – few 'free banks' were actually chartered, but the legislature simultaneously adopted a more liberal chartering policy – and the more liberal regime of the 1850s saw the Alabama financial sector recover from its earlier decline (Schweikart 1987). Banks were theoretically prohibited in Florida from 1845 until the passage of the 'free banking' law in 1853,

but unchartered banks apparently operated there with considerable success. Schweikart (1987: 170) could say that these 'private bank agencies had preempted the revised banking law and operated so effectively that no reason to welcome new banks existed', and he went on to note that 'Florida had experienced free banking for a decade before it became official' (1987: 174).[23] The south also provides other interesting examples of approximate free banking. South Carolina had chartered banks which were allowed to branch state-wide, and the South Carolina banks were sound as well as competitive. As Knox observed,

> The laws regulating banks in South Carolina gave satisfaction throughout the country, affording as they did a sound currency and ample accommodation to the people. A Bank of Charleston note was current from Maine to Texas, and even circulated in England and the Continent of Europe.
>
> (Knox 1903: 567–8)

Virginia is another example. Virginia had a system of chartered branch-banks, and as in South Carolina, the banking system was both stable and competitive. Schweikart (1987: 126) observes that there were no failures, and consequently no noteholder losses, and he concludes that on the eve of war, Virginia 'could look back upon a decade marked by generally wise legislation and adequate, if not notable, growth in its banking system' (1987: 275).[24] Altogether, at least seventeen states could reasonably be said to have had approximate free banking – there were probably more, but it is hard to assess the competitiveness of the banking regimes in a number of other states (see Table 11.2, n. 1) – and it is surely highly significant that all appear to have been at least moderately successful and there are no obvious 'failures'.

GENERAL ASSESSMENT

The most obvious (and overwhelming) feature of US banking experience over this period is its sheer diversity. Some idea of the extent of this diversity can be gauged from the Appendix which lists the main features of each state's legislative regime and the most noticeable aspects of its banking experience (as far as I could assess them). Legislative regimes ranged from the total prohibition of banking at one extreme to something close to free banking towards the other, with state monopoly banks and various forms of state charter and 'free banking' systems at points in between. Some of the main

Table 11.1 States with 'free banking' laws[1]

State	Date of Act	Outcome
Alabama	1849	Few 'free banks'
Connecticut	1852	Unknown
Florida	1853	Few 'free banks'
Georgia	1838	Few 'free banks'
Illinois	1851	Successful until 1861
Indiana	1852	Moderately successful
Iowa	1858	No 'free banks' established
Louisiana	1853	Moderately successful
Massachusetts	1851	Few 'free banks'
Michigan	1837	Apparent disaster
Michigan	1857	Unknown
Minnesota	1858	Quite successful
New Jersey	1850	Some failures
New York	1838	Very successful
Ohio	1851	Successful
Pennsylvania	1860	Few 'free banks'
Tennessee	1852	Successful
Vermont	1851	Few 'free banks'
Wisconsin	1852	Successful until 1860

Note: [1] In addition, Kentucky, Missouri and Virginia adopted bond-deposit laws but not 'free banking' laws as such (in 1850, 1858 and 1851 respectively).

features of these experiences are summarized in tables 11, 1–4. Table 11.1 lists the states that adopted 'free banking' laws and gives an assessment of the outcome in each case. As the table indicates, eighteen states adopted 'free banking' at some point, and Michigan did twice. The first three 'free banking' laws were passed in Michigan, New York and Georgia in 1837–8, the fourth in Alabama in 1849, and the remainder in the period from 1850 to 1860. In seven cases – Alabama, Florida, Georgia, Iowa, Massachussets, Pennsylvania and Vermont – few 'free banks' if any were ever set up. In two other cases – Connecticut and Michigan in 1857 – I could find no real indication of the outcome. Of the remaining ten, 'free banking' was very successful in New York, and at least moderately successful in Illinois, Indiana, Louisiana, Minnesota (apparently, if one adopts the Rolnick and Weber (1988) mutual fund interpretation of the railroad banks), Ohio, Tennessee and Wisconsin. A considerable number of failures occurred in Illinois and Wisconsin around the outbreak of the Civil War, and in New Jersey in 1853, but these failures can be traced to the losses banks suffered on their asset portfolio and be

plausibly attributed to government policy, and the apparent disaster of Michigan in 1837 can be largely attributed to the state-induced suspension that quickly followed it. As far as one can tell, therefore, 'free banking' appears to have a reasonably good record, and most of the problems it encountered can be put down to government policies of one sort or another.[25, 26]

Table 11.2 States with (reasonably) competitive banking regimes[1]

State	Dates	Outcome
Alabama	1849 on	Financial recovery
Florida	1843 on?	Moderately successful
Georgia	1850s?	Successful
Illinois	1851 on	Successful until 1861
Indiana	1852 on	Moderately successful
Louisiana	1853 on?	Moderately successful
Maryland	Throughout	Successful
Massachusetts	Throughout	Successful
Minnesota	1858 on	Quite successful
New York	1838 on	Very successful
North Carolina	1850s, and maybe earlier	Very successful
Ohio	1845 on	Successful
Pennsylvania	Throughout	Successful
South Carolina	Throughout?	Very successful
Tennessee	1852 on?	Successful
Virginia	Throughout?	Successful
Wisconsin	1852 on	Successful until 1860

Note: [1] The table only includes states where one can reasonably maintain the banking system was competitive. The competitiveness of the banking systems of Connecticut, Delaware, Iowa, Kentucky, Maine, Michigan (1857), New Hampshire, New Jersey, Rhode Island and Vermont is hard to assess. Note that Michigan (1837) is omitted as a misleading case in view of the suspension law that followed.

If 'free banking' has a good record, free banking has an even better one. Table 11.2 lists the states that had reasonably competitive banking regimes (i.e., *de facto* free banking, or a reasonable approximation to it), the periods roughly when this occurred, and a brief assessment of the outcome. Seventeen states appear to have had *de facto* free banking over some period. All appear to have been at least reasonably successful, and four (Massachussetts, New York and North and South Carolina) were arguably very successful indeed. Unless one includes the perverse case of Michigan in 1837 – which is of questionable relevance anyway due to the suspension law –

there were no cases in which *de facto* free banking can be said to have demonstrably 'failed'. One should also bear in mind that the table almost certainly *understates* the success of free banking in so far as it excludes a number of cases – New Jersey and a number of New England states, among others – where the competitiveness of the banking system could not easily be assessed, but where one would be very surprised if the banking system was not both reasonably free and relatively successful. What is also striking is the extent to which the cases of 'free banking' and free banking differ. While there are some experiences that can be considered as both 'free' and free – Alabama (perhaps), Florida, Georgia and Ohio (in part), and Illinois, Indiana, Minnesota, New York, Tennessee and Wisconsin – many belong to one category but not the other. Connecticut, Michigan, New Jersey and Vermont all had 'free banking' laws, but I have not been able to find any notable evidence that they had free banking. A number of other states (Florida, Louisiana, Maryland, Massachussetts, North and South Carolina, Pennsylvania, and Virginia) had something like free banking over periods for which they had no 'free banking' laws – some of these states in fact never passed 'free banking' laws at all – and these experiences include some of the most successful cases of *de facto* free banking (e.g., the cases of Massachussetts and the Carolinas). There is thus a considerable discrepancy between the experiences of 'free banking' and free banking, and we must be careful not to confuse the two.

Tables 11.3 and 11.4 examine other aspects of *ante bellum* banking. Table 11.3 lists three cases where states had monopoly state banks – Illinois until 1842, Iowa for a brief period in 1858, and Missouri until 1857. Two of these experiments – Illinois and Missouri – clearly failed and the Iowa case is (perhaps not surprisingly) hard to assess. State monopoly banks thus had a poor record, and there are no cases where any (*de facto*) monopoly banks succeeded. Table 11.4 looks at the experiences of those states that prohibited banking entirely – banks were banned over various periods in Arkansas, California, Florida, Iowa, Oregon, Texas and Wisconsin. The effects of the bans in California, Oregon and Wisconsin are not clear, but the prohibitions failed to achieve any sensible purpose in any of the four cases where the outcome is easily ascertainable. In Arkansas the prohibition retarded the state's financial development, in Iowa and Texas it led people to use out-of-state notes, and in Florida it led people to resort to private bankers instead. Sumner (1896: 416) notes that 'states which had no banks . . . generally had a worse currency than those which had banks', and they presumably

Table 11.3 States with monopoly state banks[1]

State	*Period*	*Outcome*
Illinois	Until 1842	Failure
Iowa	1858	?
Missouri	Until 1857	Failure

Note: [1] Table excludes Indiana, which had a state monopoly bank in name only, and Michigan which chartered a bank that 'imitated almost exactly' the Indiana bank (Sumner 1896: 330) but was already in liquidation by the end of the next year.

Table 11.4 States which prohibited banking

State	*Period of Prohibition*	*Outcome*
Arkansas	1846 on[1]	Failure
California	1849 on	?
Florida	1845–53	Failure[2]
Iowa	Until 1858	Failure
Oregon	1857 on	?
Texas	1845 on	Failure
Wisconsin	Until 1852	?

Notes: [1] New charters were prohibited in 1846, but the last already existing bank only disappeared in the 1850s.
[2] The Florida ban only failed in the sense that it failed to achieve its objectives. Private bankers actually provided Florida with a reasonably good banking system (see Table 11.2).

made other banking services (e.g., loans and savings facilities) more expensive to obtain. Prohibition thus failed along with monopoly banking.

In a nutshell, *ante bellum* banking experience strongly suggests that liberal financial regimes were broadly successful and that state intervention by and large failed. There was also a tendency to imitate successful systems, and New York-style 'free banking' was widely copied, especially in the 1850s. By the eve of the Civil War more than half the states in the union had adopted 'free banking' in one form or another, and a number of others had liberal financial regimes even though they never passed 'free banking' laws. There was a significant improvement in banking in most states over this period – illustrated, for instance, by the growth in per capita bank money from \$7.64 in 1840 to \$14.21 in 1860 (Rockoff 1975b: 165) –

and, as Smith wrote,

> The improvement that took place in American banking in the twenty years preceding the Civil War was especially noticeable in the eastern region. The banking system was by no means perfect at this period, but except for the international crisis of 1857 . . . the situation was far steadier than before. It is very probable that this improvement was not attributable to any considerable extent to State regulations relating to bond deposit guarantees for notes. In fact, the State authorities seem to have become, after a time, rather lax in the enforcement of the law. . . . Much the greater weight is to be attached to the more rigid enforcement of specie payments between banks by frequent exchange of notes due in great part to the spread of the Suffolk system and to the institution of the New York clearing-house.
>
> (Smith 1990 [1936]: 45–6)

The Civil War then broke out and the federal government intervened once again to pass the National Banking legislation of 1863–5 by which the bond deposit provision was adopted at the federal level and the state note issues were effectively taxed out of existence. These measures were prompted by fiscal considerations and not by any well-established dissatisfaction with the existing state systems. They were also initially intended as emergency (and therefore, transitory) measures to help finance the federal government's wartime expenditures, but the wartime regime was left substantially intact after the war ended and it survived with relatively little alteration until the Federal Reserve Act was passed in 1913. And so it happened that

> The fiscal exigencies of the Civil War checked the process of evolution and fastened upon the country the incubus of a cumbersome and unscientific banking system. But for this check it is highly probable that some such organization as the free banking system of New York . . . would have spread throughout the entire country . . .
>
> (Holdsworth 1971 [1911]: 23)

NOTES

1 As an illustration, the ratio of note to deposits was 27 per cent in New York city in 1849 (Klebaner 1974: 26).

2 The argument made by opponents of federal chartering was that the federal government did not have any powers not expressly granted to it, and the chartering power was among these. For more on this issue, see Dowd (1990b) and Timberlake (1990).

3 The expiration of the charter of the BUS in 1836 saw the federal role cut down to imposing restrictions on banks that had federal deposits, and even these restrictions were removed by the adoption of the Independent Treasury System in January 1847 (Rolnick and Weber 1983: 1082; see also Scheiber 1963: 212, and Timberlake 1978).

4 Note that the adjective 'free' used in this context 'referred solely to freedom of entry' – the term 'automatic' would be more accurate, however, since entry was 'free' only subject to certain conditions – 'The free banking laws ended the requirement that banks obtain their charters through special legislative acts' (Rockoff 1975b: 161).

5 These were the words of New York comptroller Millard Fillmore looking back later in 1848 (quoted in Klebaner 1974: 9).

6 Knox (1903: 413–15) and E. White (1990) have detailed discussions of the origins of the New York 'free banking' law. See also Holdsworth (1971 [1911]: 31).

7 Details of the New York legislation are given in Rockoff (1975a: table 12), King (1983: 142–8), Knox (1903: 414–15), and E. White (1990: 9 and 22).

8 Arkansas, Florida, Indiana and Mississippi defaulted in 1841, and Illinois, Lousiana, Maryland, Michigan and Pennsylvania in 1842 (Rolnick and Weber 1985: 6; see also Schweikart 1987).

9 Examples are Vermont and Pennsylvania whose 'free banking' laws limited the capital of a 'free bank' to no more than \$200,000 and \$1 million respectively (Knox 1903: 357, 459).

10 For more on usury laws, see Rockoff (1975b: 169–72). These laws varied considerably, both in the interest ceilings they imposed and in the penalties imposed for violating those limits. His discussion suggests that they probably had some impact at some times, but were often ineffective.

11 Eugene White (1990) has a good account of the history and effects of denominational restrictions. Notes under \$1 were banned in Ohio in 1819, in Florida in 1828, and in Georgia in 1830, and the federal Treasury and a number of states attempted to discourage the use of notes less than \$5 in the 1830s. There were also some attempts to impose even higher minimum denominations (e.g., Missouri banned notes under \$20 in 1836). Denominational restrictions were sometimes highly controversial, and opposition to them led to the repeal of the New York ban on notes under \$5 in 1837. They were often ineffective, and led to a flood of 'foreign' (i.e., out-of-state notes) (see also Klebaner 1974: 19). Where they were effective, on the other hand, they tended to put banknotes out of reach of the ordinary man.

12 Reserve requirements were generally applied to chartered and not just to 'free' banks. Virginia was the first state to introduce one (1837), and other states soon followed suit. (New York's was repealed in response to opposition from the bankers.) While early reserve requirements stipulated reserves against the note issue, Louisiana was the first state to introduce a reserve requirement against deposits as well as notes (in 1842; see Klebaner 1974: 43).

13 The argument that it was the suspension law rather than the 'free banking' law that was the principal factor behind the failure is also supported by the observation that only two of the chartered banks remained in operation by the end of 1839 (Knox 1903: 735). It is questionable however whether all the 'free bank' failures can be blamed on the suspension law alone. Rockoff (1975a: 94) states that many banks 'were simply frauds which operated in violation of the free banking law'. He also suggests (1975a: 18) that 'only a small portion of the notes entered circulation at par' which suggests that the mutual fund model of Rolnick and Weber (1988) might be appropriate, as with Minnesota, or that losses might have been exaggerated.

14 Banking histories often regard the Illinois bank as modelled on the Indiana one (e.g., Hammond 1948), but this interpretation of the Illinois bank is misleading – see n. 16.

15 See n. 8 to the Appendix.

16 While many previous writers have admired Indiana's state monopoly bank – Holdsworth (1971 [1911]: 32) comments that it 'stands out as the most striking exception to the rule of failure among state-owned banks' – the Indiana bank was a state monopoly in name only. As Calomiris (1989) points out, the Indiana branches were 'separately owned and operated' (p. 15), and the language of state monopoly was required because the 'state constitution only provided for the chartering of a state bank and its branches' (p. 29, n. 21). The state monopoly in Indiana only appeared to work because it only appeared to be a state monopoly, and the state banks of Illinois and Missouri failed because they were apparently real state monopolies.

17 'Free banking' laws were also passed in Connecticut and Michigan in 1857, but their effects are difficult to determine.

18 This claim presupposes that the bond collateral restrictions of the 'free banking' legislation were binding, but it seems reasonable to suppose that they were. As White (1986: 893) puts it, it appears that 'collateral restrictions forced banks to hold unbalanced asset portfolios overloaded with state bonds. Such portfolios exposed the banks unduly to the risk of declining state bond prices'. He notes further that 'It seems unlikely that banks would deliberately so overload themselves absent regulatory distortions of their asset-holding choices'. While this hypothesis needs more investigation, the fact that banking entrepreneurs were sometimes so slow to set up 'free banks' (e.g., in Massachussetts) would appear to provide it with some support. Further work might focus on whether 'free banks' held more than the required amounts of state bonds in their portfolios. If they did not, as White (1986: 893, n. 3) points out, then there is *prima facie* evidence that the restrictions were binding; if they did, on the other hand, then the restrictions clearly were not. Assuming that the hypothesis is valid, then one can properly attribute the 'free bank' failures not only to the fiscal instability that produced the bond price falls, but also to the bond-deposit requirements as well. It was the latter that exposed the banks to capital losses, and the former that inflicted the losses on them.

One objection also needs to be considered. King (1983: 147) disputes the claim that the bond-deposit requirements were responsible for the failures and argues that 'there are natural means for any bank to undo any pure portfolio restriction. Banks should simply have as owners or creditors individuals who would otherwise hold amounts of government debt'. However this irrelevant result does not apply when there are limitations on agents' liability (see Dowd 1989: 149–50, n. 31). (It would be interesting to test the issue, nonetheless, since King's argument makes the empirical prediction that bond-deposit requirements should have no impact on the prices of state bonds. I would expect that such a test would find this prediction to be rejected.)

19 Pecquet also notes that 'This solid banking system depended upon a unique state constitution which forbade the legislature or governor to authorize or aid specie suspension in any way' (1990: 3) – an assessment which would seem to reinforce the earlier comments about the potential damage done by suspension laws.

20 The claim that there was little or no contagion has however been challenged recently by Hasan and Dwyer (1988) who present some circumstantial evidence and the results of logit analysis. In their model the probability of failure depends on the value of bonds relative to capital, the remoteness of the bank's location, and a dummy variable which takes the value one if another bank failed in that county, and zero otherwise, and they interpret the positive sign and statistical significance of the dummy variable as evidence of contagion. This interpretation of their results is open to the objection, however, that while the dummy *might* pick up contagion, it will also pick up *any other* factor that the first two variables proxy inadequately, but which is also linked to the failure of a neighbouring bank – conditions in the local economy come to mind – and these alternative explanations need to be ruled out before one can claim to have established the presence of contagion.

21 The stability of the banking industry of the period is also borne out by other indicators. Particularly important is its capital adequacy. Salsman (1990: 95) notes that 'the banking system restored its capital adequacy in the first decade of free banking from 40.5 percent in 1836 to 55.1 percent in 1842, the greatest capital adequacy level and the swiftest rise in the entire history of banking'. He also notes that there was 'no appreciable deterioration of banking capital adequacy' in the remaining 'free banking' period. Sechrest (1990: 102) also notes that capital adequacy was very high, and he notes too that capital ratios became more stable towards the end of the 'free banking' era. Indicators of banking liquidity reinforce the impression of the industry's stability. Salsman's cash–deposit ratio shows a steady climb from over 42 per cent in 1836 to 54.2 per cent in 1844, and it varies thereafter between 36.2 per cent and 41.5 per cent (Salsman 1990: table 17). Sechrest's reserve ratio, on the other hand, has a value of just over 20 per cent for 1834–49, and almost 18 per cent for the period

1850–62 (1990: 100–2). Sechrest also points out that commercial paper rates were lower and less variable in the period 1850–62 which saw the large-scale switch to 'free banking' than they had been in the earlier period 1834–49 (1990: 110).

22 There is however some controversy over how competitive the Pennsylvania banking system actually was. Evidence in favour is suggested by casual observation and a comment by the state auditor-general in 1863 that the reason so few 'free banks' were formed was the ease with which special charters could be obtained which, incidentally, also imposed less onerous conditions than the 'free banking' law (Knox 1903: 460). However Rockoff (1975a, 53) suggests that Philadelphia banks enjoyed a rather high profit rate which he attributes to restrictions on entry, and he presents anecdotal evidence that Philadelphia banks were undercapitalized.

23 The experience of Florida underlines the importance of private (i.e., unchartered or unincorporated) banking in the *ante bellum* USA. Schweikart writes that

> Unaccounted currencies, especially small-note issues, played an extremely important role in the antebellum southern economy but have defied attempts at measurement . . . [for example] Georgia chartered 150 'potential currency-issuing organizations' between 1810 and 1866, and more than fifteen hundred varieties of currency of this type circulated in the state . . . Florida, without chartered banks of its own, relied heavily on unaccounted currencies for its circulating medium.
>
> (Schweikart 1987: 80)

Sylla also indicates that they were a widespread and important phenomenon. He notes that though 'Quantitative information . . . is scarce, . . . what there is of it suggests that the private banker was considerably more important than previously thought' (1976: 181), and he presentts some indicative evidence to back that claim up (e.g., how some restraining acts were successful in 'smoking out' private bankers). Also revealing is a comment by James Gurthrie, the Treasury Secretary, who reported to the House in 1856 that the capital of private banks was more than a third of that employed in chartered banks (Sylla 1976: 184). Hammond (1948: 16) and Klebaner (1974: 12) indicate that private banking was important in the West as well, and the latter observes that by 1860, private banks in Ohio, Indiana, Illinois, Michigan and Wisconsin had more deposits than the combined liabilities of chartered banks in those states.

24 Virginia gives a good example of the difference between 'free' and free banking. It had supplemented its chartered banks with a law to allow bond-deposit banking in 1851 – although note that this law omitted the 'free entry' principle (Rockoff 1975b: 163) – but bond-deposit banks were not allowed to branch as easily as chartered ones. Aided by branch-banking, Virginian banks were 'strong and stable', and there were no failures (Schweikart 1987: 126). Thirteen bond-deposit banks opened soon after the 1851 law (E. White 1990: 22), but these banks had great difficulty competing against the chartered banks which expanded their branch networks to compete with them (Schweikart 1987: 274; E. White 1990: 22).

25 Despite the fact that 'free banking' laws were often (apparently) intended to lower entry barriers, it is far from clear that they usually did. If entry barriers fell, we would expect to see the state-level output of banks grow after the passage of 'free banking' laws. Ng (1988) tests for this prediction using data for seven 'free bank' states and finds that it is only demonstrably satisfied for New York. He concludes that 'free banking laws did not generally lower barriers to entry [or] increase competition in the banking industry' (1988: 886), and suggests that the explanation might be the conditions attached to the establishment of 'free banks' and that fact that chartered banking in some states was reasonably competitive already (1988: 887). However, Bodenhorn (1990) presents results that suggest that 'free banking' laws might have been more effective in promoting bank competition than Ng's results indicate.

26 The figures for bank failures and noteholder losses also suggest that these have been exaggerated by earlier historians. Rolnick and Weber (1983: 1084) find that in their four states about half the banks closed before 1863, but less than a third actually failed and did not redeem their notes at par (i.e., 15 per cent failed altogether). They also suggest that New York and Wisconsin banks were not very short-lived, and only 14 per cent failed to last a year (1983: 1086). Kahn (1985: 882) is less sanguine, however, and suggests that banks in 'free banking' states had much shorter life expectancies than banks elsewhere. (The explanation, presumably, has to do with the combination of the bond-deposit requirement and the states' fiscal instability discussed earlier.) Estimates of losses vary somewhat – losses were very low in New York, as already mentioned, but they were sometimes higher elsewhere (see, for example, Kahn 1985: 884–5), and these losses presumably reflect the factors that caused the 'free bank' failures.

Appendix Us banking experience, 1837–63

State	*Legislative framework*	*Comments/results*
Alabama	Chartered Banks and State Bank until 1849. 'Free banking' law passed 1849[1] and charters now granted liberally.	Chartering policy restrictive. State Bank a failure. 8 chartered and 2 free banks set up. Financial system recovered by 1860.
Arkansas	Real Estate Bank and State Bank chartered 1836. Constitutional amendment 1846 to prohibit further charters.	Both corrupt and eventually failures. Banking system backward. Some private banking.
California	Banking banned 1849.	–
Connecticut	Chartered banks. 'Free banking' law passed 1852.	–
Delaware	Chartered banks.	–
Florida	Charter system until 1845 when banking theoretically prohibited. 'Free banking' law passed 1853.	Evidence that private banks provided *de facto* free banking from 1843 onwards. Only two 'free banks' set up.
Georgia	Charter system with state bank ('Central Bank'). 'Free banking' law passed 1838.	Central Bank defaulted 1840. Only two 'free banks' set up. Chartering policy (apparently) liberal in 1850s. Considerable banking progress.
Illinois	Monopoly state bank until 1842. Constitution amended 1847 to ban state involvement in banking and to submit banking legislation to referendum. 'Free banking' law passed 1851.	State bank defaulted 1842. 'Free banking' very successful until large-scale failures in 1861.
Massachusetts	Charter System. 'Free banking' law passed 1851.	Charters granted liberally, so *de facto* free banking. Large increase in bank capital and number of banks in 1850s. First 'free bank' formed 1859, no more than seven 'free banks' formed altogether.
Michigan	Charter system. 'Free banking' law passed March 1837, but suspended in 1838, repealed in April 1839 and declared unconstitutional in 1844. Safety fund established 1836. Bank suspension law June 1837. Constitution amended 1850 to require that banking law be submitted to referendum. New 'free banking' law 1857.	40 banks set up in less than a year after passage of 'free banking' law, but most rapidly went into liquidation. Safety fund a failure.
Minnesota	Charter system until passage of 'free banking' law in 1858.	sixteen 'free banks' set up. Nine 'free banks' – mostly railroad banks – failed following the failure of the the railroad companies in 1859.
Mississippi	Charter system.	Flurry of charters in 1836–7. Banking system declined in 1840s and 1850s. By 1860 there were no unchartered banks left and the circulating medium consisted mostly of Tennessee bank notes.
Missouri	State monopoly bank set up 1837. Constitution amended 1857 to allow more banks to be chartered. Law passed to allow bank-secured banks (but not 'free banks') in 1857.	Only 3 banks set up by 1860. Some amount to private banking. Missouri financially underdeveloped.
New Hampshire	Charter system.	–
Indiana	'Free banking' law was passed 1852.[2] Safety fund system throughout period.	State bank apparently successful. Substantial number of 'free banks' rapidly set up, but most went out of business by 1854. 'Free banking'

State	Legislative framework	Comments/results
		apparently quite successful. Safety fund successful.
Iowa	Banking banned by 1846 constitution. Ban lifted in 1858 when a state (branch) bank was set up.[3] 'Free banking' law passed 1858. Safety fund set up 1858.	Widespread circulation of out-of-state notes during banking ban. No 'free banks' established. Safety fund apparently successful.
Kentucky	General banking law to allow bond-secured (but not 'free') banks 1850.	–
Louisiana	Charter system with branches. Banking reformed in 1842. Constitution amended 1845 to prohibit chartering and re-chartering. Constitution amended again in 1852 to allow chartering. 'Free banking' law passed 1853.	Large fall in bank capital after 1840, and banking capital only starts to recover in 1850s. Banking system in 1850s solid but grew slowly.
Maine	Charter system.	–
Maryland	Charter system. General banking law passed in 1853, but this merely consolidated existing laws and the 'free banking' principle was omitted.	Charters granted liberally, so *de facto* free banking.
New Jersey	Charter system. 'Free banking' law passed in 1850. Virginia state bonds added to list of eligible bonds in 1852.	Absorption of VA debt by 'free banks' and 'free bank' failures in 1853.
New York	Charter system with safety fund. 'Free banking' law passed in 1838.	Flurry of 'free banks' set up shortly after passage of 'free banking' law. *De facto* failure of Safety Fund in 1842. 'Free banking' very successful.

State	Legislative framework	Comments/results
North Carolina	Charter system with state bank and branching. Most activities of state bank wound down by 1860.	Banking system competitive and charters readily granted, especially in 1850s. *De facto* free banking.
Ohio	Charter System. Reform act of 1845 set up state bank and specified that its branches contribute to a safety fund, and allowed 'independent' banks subject to a bond-deposit requirement. 'Free banking' law passed in March 1851. Constitutional amendment effective June 1951 required that banking legislation pass a referendum.	Considerable increase in bank numbers following 1945 law. Thirteen 'free banks' established in 1851–2. Laws of 1845 and 1851 apparently successful. Safety fund successful.
Oregon	Banking banned 1857.	–
Pennsylvania	Charter system. General banking law 1850. 'Free banking' law March 1860. Banks suspended November 1860.	Charters granted liberally, but bank profits quite high. Nine 'Free banks' formed.
Rhode Island	Charter system.	–
South Carolina	Charter system with branching and state bank.	Banking system highly stable and successful.
Tennessee	Charter system with branching. New state bank 1838.[4] 'Free banking' law 1852 and elimination of Bank of Tennessee 1857.	Apparent decline in bank numbers from 1839 to 1853. Rapid growth in banks from 1853, and considerable financial development in state banking system. Withstood crisis of 1857 easily. 'free banking' apparently successful.[5]
Texas	Banking banned by state constitution 1845.	Private banking and circulation of out-of-state notes.[6]
Vermont	Charter system. 'Free banking' law passed 1851. Safety fund system established 1831.	Four 'free banks' set up. Safety fund a failure.

State	Legislative framework	Comments/results
Virginia	Charter system with state bank. Charter banks allowed to branch. General banking law 1837. Law passed to allow bank-deposit banking 1851.[7]	Banking system strong and stable – no failures in 1837 and 1857. Thirteen banks set up under bond-deposit law, but had difficulty competing against the branch-banking advantages of the chartered banks. Considerable banking development throughout period.
Wisconsin	Banks banned by territory of Wisconsin.[8] New state constitution of 1848 banned any legislative authorization of banks unless ratified by referendum. 'Free banking' law passed 1852.[9]	140 'free banks' set up. Large number of failures when southern bond prices fell with onset of Civil War.

1 There is some dispute over the date of this Act: Rockoff (1975a: 127) puts it in 1849, but Schweikart (1987: 269) puts it in 1850.

2 There is also some dispute over the date of this Act: Hammond (1948: 12) and Knox (1903: 698) put it in 1853, but Rockoff (1975a: 98) and Rolnick and Weber (1984: 279) put it in 1852. I have gone along with 1852 since Rolnick and Weber give the precise date the Act was passed.

3 Sumner (1896: 542) states that this bank was chartered in March 1858, but Hammond (1948: 10–11) claims it was chartered in 1857. As in note 2, I have gone along with the author who could give the precise date of the act (Sumner).

4 It is not clear when this bank was chartered. Schweikart (1987: 182) gives 1838, but his table 12 gives a date of 1837.

5 Note, however, that Knox (1903: 655) does not concur in this assessment. He suggests it performed badly and says that wildcats 'were as plentiful as grasshoppers', but he does not spell out the evidence behind that conclusion.

6 However, Schweikart (1987: 8, 259) suggests that there was one chartered bank in operation in the 1850s.

7 The 1851 law allowed banks to be set up under a bond-deposit provision, but Rockoff (1975b: 163) states that entry was not automatic. It therefore ought not to be considered a 'free banking' law in the strict sense.

8 Note however, that the Wisconsin Marine and Fire Insurance Company carried out some banking activities, and succesfully fought off legislators' attempts to stop it.

9 There is also some dispute about the date of this act: Hammond (1948: 8) and Rockoff (1975a: 84) say it was passed in 1852, but Knox (1903: 325) says it was passed in 1855 and Sumner (1896: 451) says it was passed in 1853.

Sources: Calomiris (1989), Hammond (1948), Rockoff (1974, 1975a, b), Rolnick and Weber (1982, 1983, 1984, 1985, 1986, 1988), Knox (1903), Schweikart (1987), Sumner (1896).

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