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THE FREE BANKING ERA: NEW EVIDENCE ON LAISSEZ-FAIRE BANKING

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ABSTRACT

The purpose of this paper is to begin a reevaluation of the Free Banking Era by developing and examining individual bank information on the population of banks which existed under the free banking laws in four states. This information allows us to determine the number of free banks which failed and to estimate the resulting losses to their note holders. While the new evidence suggests there were problems with free banking, it presents a serious challenge to the prevailing view that free banking led to financial chaos.

I

The argument for free competition in most economic endeavors has much appeal. Under fairly general conditions, economic agents acting in their own self interest produce an economically efficient outcome. No one person can be made better off without someone else being made worse off. Yet despite both the logic of the argument and the apparent real world success of free-enterprise economies, there has always been one industry, one economic activity that even ardent proponents of laissez-faire have been afraid to leave to the vicissitudes of the free exchange of supply and demand. This is the business of banking, an industry that most believe is inherently unstable.

This fear and reluctance to permit free competition in banking is not based on an explicit theoretical foundation that has confronted real world events, but rather on the events themselves. The history of banking in the United States is replete with periods of major banking panics where a large number of banks fail and financial markets are in considerable disarray. The period considered by many as the worst, as a perfect example of what would happen if banks were left on their own to pursue their own profit motivated interests,is the so-called Free Banking Era (1837-1863).

Given the uniqueness of the Free Banking Era in U.S. banking history and given the influence it has had in shaping our views about the need to closely supervise and regulate banking, it is surprising that we have little more than casual empiricism about the experience of banks during this period. Most of the literature simply tells us something was amiss. Further, while it is generally agreed that the system did not work well, little agreement exists about the cause and virtually no research exists to support the various explanations.[1] Our purpose in this paper is to begin a reevaluation of the Free Banking Era by developing and examining far more detailed empirical evidence on this period than has been considered in any previous research. While we uncover some new results and confirm some old, our most important finding is that free banking was not as chaotic as most believe.

From a casual view of history, the reluctance to allow unfettered competition in banking is understandable. There is a long and costly history in U.S. banking of instability, bank panics and major disruptions to economic activity. Most date these problems back to the free banking era when there were no federal regulations, when entry barriers were low, and when banks were many and "free" to compete for deposits and loans. Historians have found this period chaotic and filled with speculators, wildcat banks and a large number of bank failures. Then came the national banking system (1863-1913), which was seen as an improvement, although problems still persisted. Under this system national banks were subject to supervison and regulation by the comptroller of currency who presumably promoted a much safer and sounder form of banking than the state officials. This new system was still not good enough to prevent the recurrence of major bank panics and was replaced in 1913 by the Federal Reserve System. It was not until we had both a strong central bank and federal deposit insurance (1933-35), however, that we appeared to have solved the inherent instability problem in banking.

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[1]Hugh Rockoff [1974, 1975] produced the first analysis of the Free Banking Era that tried to support a theory of what went wrong. Examining all states that adopted free banking laws, Rockoff argues that it was not special economic factors nor the lack of a central banking authority that caused the instability in free banking systems, but rather specific problems with the laws themselves and at times a failure to enforce them properly. Specifically, Rockoff argues that the problems occurred when the states allowed free banks to value the notes securing their bonds at par. In this paper we will not be concerned with testing Rockoff's theory. This is done in Rolnick and Weber [1982].

This historical record appears to have even convinced the staunchest proponents of free enterprise. Milton Friedman, for example, made his position clear when he responded to Gary Becker's proposal for laissez-faire banking [1959]. Becker suggested that we permit free deposit banking, without any requirements about reserves or supervision over assets or liabilities and with a strict caveat emptor policy. Friedman rejected this policy, arguing that while it had some merit, "it could not, however, solve the problem of inherent instability."

Clearly Friedman holds the majority point of view, as much of our bank regulation and supervision is aimed at promoting a safe and sound banking system. Nevertheless, observing instability in banking does not necessarily mean it is inherent. Recent theoretical work suggests that it is government intervention, supposedly aimed at safeguarding the system, that has produced the observed problems. John Kareken and Neil Wallace [1978] find that under certain assumptions there are no bank failures under laissez-faire banking. In their model, failures are induced by the non-optimal pricing of government deposit insurance. Eugene Fama [1980] argues that under competitive banking, portfolio management activities fall under the Modigliani-Miller irrelevance of pure financing decisions. Hence there is no need to control the deposit creation or security purchasing activity of banks to obtain a stable general equilibrium with respect to prices and real activity. And J. Huston McCulloch [1981] argues that the maturity transform activity of banks borrowing short and lending long is not a natural function of financial intermediaries. It is a misfunction that is a by-product of several forms of government intervention that encourages "misintermediation."

Such theories, however, must be able to confront the data. If unfettered banking is optimal, why did it not work during the free banking era? Why did the laissez-faire system turn out to be so chaotic and so costly? Why did it lead to wildcat banking and large numbers of bank failures in virtually all states that passed free banking laws?

To help find answers to these questions and eventually test alternative theories of banking, we take a much closer look at this period than previous researchers have done. Going back to the original state auditor reports for several of the major states that adopted free banking laws, we develop individual bank information on the population of banks which existed under the free banking laws in these states. This information allows us to determine the number of free banks which failed and to estimate the resulting losses to their note holders. The most striking result we find is that free banking cannot be simply labeled a failure. While the new evidence suggests there were problems, it presents a serious challenge to the prevailing view that free banking led to financial chaos.

In the next section of this paper we describe the Free Banking Era and why it has been generally regarded as a failure of laissez-faire banking. The final section contains our data on free bank failure rates, on length of time in business and on note holder losses. Using these data we compare the free banking experiences of the states we consider and contrast our findings with conventional views about free banking.

II

Based on the U.S. public's concern over financial instability and the misuse of financial power, banking has historically been one of our most regulated and supervised industries. These concerns date back to the First and Second Banks of the United States. Both banks reportedly used their financial power to at times rein in the other banks they thought were too aggressive in issuing notes and likely to cause currency problems. It was precisely this use of financial power by a quasi-private bank, however, that caused Congress to revoke their charters. In both instances there was a concern that these banks had become too big and too powerful.

Over the years, beginning with the National Banking Act of 1863, these concerns have produced a variety of laws, regulations and government agencies aimed at controlling banks and protecting their depositors. Commercial banks have been restricted in location, in size, in portfolios and in the interest they can pay depositors. Interstate branch banking has been explicitly prohibited since the MacFadden Act of 1927; and intrastate branch banking has been restricted to some degree in almost every state. Bank size has been closely watched, limited first by branching restrictions and then by the Bank Holding Company Act of 1956 and the Bank Merger Act of 1960. And under the Banking Acts of 1933 and 1935, banks have been prohibited from underwriting and distributing nongovernment securities, owning common stock and, until recently, paying interest on demand deposits.

Not only have bank operations been restricted, they have also been closely scrutinized. No less than three separate federal agencies (as well as state banking authorities) play a role in regulating, supervising and examining bank operations. The Comptroller of Currency is charged with overseeing the activities of national banks; the FDIC oversees the activity of all FDIC insured banks; and the Federal Reserve has responsibility for its member banks.

In order to promote stability and prevent the misuse of financial power, the federal government has clearly played an active role in regulating banking. It was only in the period between the end of the Second Bank of the United States (1837) and the National Banking Act (1863) that banks were subject to almost no federal intervention. During this period federal government involvement in the regulation of banking was exclusively limited to the restrictions on banks which held federal deposits, and these restrictions were removed by the adoption of the Independent Treasury System in January, 1847. So states were essentially free to design and regulate their own systems, and the system most chose was based on the free banking laws designed by New York legislators. The first free banking act that was passed, however, was by Michigan in 1837. New York and Georgia followed in 1838. A complete list of the states which adopted a free banking law and the year it passed is given in Table I.

Two perspectives of the free banking laws distinguish free banks from the traditionally chartered banks. First, the law made entry relatively easy. To open a bank by chartering, entrepreneurs had to convince the state legislators that there was a need for a new bank at the location desired and that they were competent bankers. No such test was required under free banking laws. Individuals with a certain minimum amount of capital could start a bank whenever and wherever they chose. No need or competency test was required, and no special legislative charter had to be granted. Second, the law attempted to protect the noteholders in almost every way possible. The law required that designated state and federal bonds had to be deposited with a state authority as security for all notes. Moreover, banks were required to pay specie for their notes on demand and at par value. Banks received the interest on bonds used as security against their note issue only as long as they honored this specie-on-demand requirement. Failure to pay specie to even a single note holder would mean the state would close the bank, sell the securities held as collateral and reimburse all note holders. Additional protection for noteholders contained in most free banking laws was the provision that entitled them to first lien on the assets of a bank.

Despite this protection, noteholders suffered losses throughout this period and in some cases the losses appeared quite substantial. In addition, there were many banks issuing notes. Consequently, it appeared difficult for people trying to use bank notes in transactions as bank notes sold at different prices in different places and one could not be sure of the safety and soundness of the bank backing the notes. Those banks that were only in business to issue notes and that located offices only in areas where the "wildcats roamed" became infamous.

The literature is filled with references to the debacle caused by free banking laws and the wildcat banks that appeared and then disappeared. John Knox [1900, pp. 701-702], for example, describes the free banking experience in Indiana as "...the darkest page in her financial history...." According to Knox, Indiana's free banking law

> "...was loosely drawn and opened wide the door for fraud. It was speedily taken advantage of by daring speculators, and banks sprung up like mushrooms everywhere."

Knox goes on to describe the financial instability produced by this law.

> "Such a flood of paper money with no substantial backing could not help proving disastrous. The bills rapidly depreciated, and notes taken one afternoon at eighty cents might be quoted the next morning at sixty-five, or even lower; thus all values and business were deranged. Several times the honest bankers made an effort to stem the tide of dishonesty, but their efforts were all in vain. Every merchant and businessman had to provide himself with a periodical know as the 'Bank Note Reporter', that he might keep informed as to the fluctuations of the bills."

Wildcat banking was not just confined to Indiana. As Bray Hammond reports [1963, p. 9], in Michigan, Wisconsin, and Illinois,

> "Speculators bought bonds, issued notes to pay for them and eluded their debtors by taking to the woods among the wildcats. Notes were issued by bankers with no known place of business and no regular office hours; and kegs of nails with coins laying on top were moved overnight from bank to bank to show up as cash reserves, just ahead of the bank examiners."

Recent work by Rockoff [1975] adds New Jersey, Minnesota and even New York to the list of states that suffered at least some degree of wildcat banking.

This view of the Free Banking Era has become the conventional view and appears in most standard texts on money and banking. Dudley Luckett's text [1980, p. 242] provides a good example.

> "...free banking degenerated into so-called wildcat banking. Banks of very dubious soundness would be set up in remote and inaccessible places 'where only the wildcats throve.' Bank notes would then be printed, transported to nearby population centers, and circulated at par. Since the issuing bank was difficult and often dangerous to find, redemption of bank notes was in this manner minimized. These and similar abuses made banking frequently little more than a legal swindle."

For students of banking, the implications are very clear. The banking industry, left on its own, is unstable. Unless banks are closely regulated and supervised, banking will self destruct, causing chaos in financial markets, substantial losses to bank creditors and ultimately affecting real economic activity. Cagan goes so far as to assert [1963, p. 20],

> "The nation could not so easily have achieved its rapid industrial commercial expansion during the second half of the 19th century with the fragmented currency system it had during the first half...."

III

The conclusion that when banking was left on its own it failed has very significant implications for regulatory policy and to a great extent influences policy today. Surprisingly, though, this conclusion is based on very casual empiricism. To better understand what went wrong with free banking systems we have gone back to the original state auditor reports to document the financial history of the population of free banks in four states. We describe in much greater detail than previous research the variety of experiences among states, finding considerable evidence to question the prevailing views on free banking.

The Free Banking States

We picked four states where there appeared to be a wide range of experience with free banking systems and where state auditor reports were available. These were New York, Indiana, Wisconsin, and Minnesota.

New York was picked because it supposedly had the most stable system. Bray Hammond [1957] claims that because of its sound banking practices free banking in New York worked well. Rockoff's work lends some support to Hammond as he found that New York after 1840 was relatively free of wildcat banking. And historians generally regard New York's system as an exception to the typically chaotic free banking systems of other states.

Indiana and Wisconsin were picked because while they were reported to have serious problems with their systems, they also had periods when free banking appeared to work reasonably well.

Minnesota, our fourth state, was picked because its experience was thought to be one of the worst. Rockoff claims that this state's experience is a good example of how wildcat banking arises and the damage it causes.

The Free Banking Evidence

Based on the apparent diversity of free banking experiences in these four states, a close look at the data should reveal insights into the generally accepted view that the free banking experience was a failure. The conventional view appears to be based on three "facts": (1) free bank failures were numerous; (2) free banks were in business for a relatively short period of time; and (3) free bank failures produced substantial losses for their noteholders. A large amount of data on failure rates, on years in business, and on note safety and losses to noteholders were available for our four states (see Table II -V and Appendix). Based on these data, the conventional view appears to be overstated.

1. Failure Rates.

Our data suggest that the accepted view on failures is exaggerated. While a large number of the banks that opened their doors under the free banking acts closed them well before 1863, few failed below par. Close to fifty percent of the free banks in the states we investigated failed, but less that a third of these banks failed to redeem their notes at par.

Evidence supporting this position is presented in Table II, which gives a summary of the aggregate experience in each state. Column 1 contains the total number of free banks identified in the state auditor's reports for the years specified. New York, between 1838 and 1863, had 449 free banks and is our largest system. Minnesota, between 1858 and 1862, had 16 banks and is our smallest. Column 2 contains the number of free banks that failed. New York had the most failures, but as a percentage of the total number of free banks in its state, it had the least. Column 3 contains the number of failed banks that redeemed their notes below par. Column 4 reports the number of banks for which we were not able to obtain redemption rate information.

Table II clearly confirms the accepted impression that free banking didn't work as it was marked by a large number of bank failures.[2] Of the 709 free banks which existed in the four states we consider, 339 (48 percent) failed. Over half of all free banks which existed in Indiana, Wisconsin and Minnesota failed with Indiana having the highest failure percentage at 86 percent. Even in New York, which had the smallest percentage of bank failures or closing, 36 percent of all free banks failed.

However, a somewhat milder picture emerges if we consider only those free banks which failed and redeemed their notes below par. We find that only 104 (15 percent) of the 678 free banks on which we were able to obtain redemption rate information failed with below par redemption of notes. Thus, only about one out of three free bank failures resulted in losses to noteholders. Examining the evidence state-by-state we find only eight percent of the total free bank population in New York failed with below par redemption. The below par failure rates for Indiana and Wisconsin are virtually the same at about 3 out of 10. Minnesota has the highest below par failure percentage at 56. These results confirm the general impression that New York's free banking system "worked well" and that Minnesota's free banking experience was among the worst.[3] They also confirm the view that free banking created at least

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[2]We will refer to a bank as having failed if it closed during the period under consideration. Thus, in our terminology a bank will be said to have failed even if it closed voluntarily or redeemed its notes at par.

[3]Further, in Minnesota two of the seven banks we identify as not closing were not in business during the entire period. Specifically, the Bank of Red Wing withdrew all but $1,368 of its initial circulation of $25,000 within five months of opening (see note to Table d), and the State Bank of Minnesota withdrew all but a small fraction of its circulation within a year after opening until it moved to St. Paul and began issuing notes again in October, 1862. Further, the report of the State Auditor for 1862 states, "the LaCrosse, LaCresent, and Chatfield banks maintain no offices of discount, deposit, and circulation in this State. Their circulation is entirely confined to Wisconsin" (p. 74). Thus, the overall effect was that only 2 of the 16 banks remained in operation during the entire four year period we consider.

some problems in most states that adopted a free banking law. The fifty percent failure rate, however, clearly exaggerated the extent of these problems.

2. Years in Business:

The conventional view of free banking is that banks formed under these acts were short-lived as well as unsuccessful. Hugh Rockoff, for example, in developing a theory of free banking, assumed these banks were in business for only a month or two [1975, p. 8]. Once again our data suggest that the conventional view is overstated. In our free banking states, only sixteen percent of free banks were in business under a year, while the average number of years in business was over five.

Data on the experience of the individual banks is presented in Tables A-D in the Appendix. Table A contains the data on individual New York free banks. It lists the names of the free banks and their locations. The dates at the top of the table are dates when we found condition reports for free banks. An "X" indicates that the bank was listed in that condition report, and an "O" indicates that the bank was presumed to exist at that date even though it was not found in the condition report. The next to last column gives the number of times a bank appears or is presumed to appear in the condition reports. Finally, the last column of the table gives the redemption rate for the bank if it failed.[4] The last row of the table gives the number

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[4]Even though New York's free banking law was passed in 1838, the first condition report we were able to find was for November, 1843. It is for this reason that our Table A begins with this date. However, using Dillistin (1946) and earlier reports on the securities deposited with the state auditor, it is possible to partially determine the experience of New York free banks before this period. Consequently, we have compiled a separate list of all New York free banks which closed or failed, their beginning and closing dates, and the redemption rates for their notes. This list is presented as Table E in the Appendix.

of banks in existence at each date. Tables B-D contain similar data for Indiana, Wisconsin and Minnesota, respectively.

From the information in these tables it is possible to approximate the length of time each free bank was in existence from the time the Free Banking Act was passed until 1863. This was done by counting the number of times each bank appeared in a condition report and assuming that if it appeared in a condition report it was also in existence for half the time until the next condition report. Our computations of the approximate length of time free banks were in existence are given in Table III. Banks which never appeared in a condition report are regarded as having been in existence for 0 years. Minnesota is not included in the table since most of its banks were in existence for a short period of time, and it is questionable whether those banks which were in existence for longer periods carried on much banking activity during 1860 and 1861. (See footnote 3.)

In discussing this evidence, however, one point must be kept in mind. In all calculations, we regard the free banking era as ending with the date of the last condition report listed on the table. To the extent that banks continued to exist after this point either as state banks or national banks, our approximations understate the number of years free banks were in business. Further, for New York, condition reports did not begin until four years after the free banking law was passed. This should add a further downward bias to our calculations for New York.

We find that for New York and Wisconsin the free bank population is not marked by large numbers of short-term banks. New York free banks were in existence a mean of 7.9 years (the median is 8 years), and Wisconsin free banks were in existence a mean of 4.3 years (the median is 4 years). These are quite long especially when it is considered that the population of banks was relatively small in New York until 1849 and in Wisconsin until 1856. The population of banks in Indiana was far shorter-lived. The mean length of time a bank was in existence was 2.0 years (the median was only one year).

3. The Safety of Banknotes and Noteholder Losses

We found that the most exaggerated views about free banks were those concerning the safety of the bank notes and the losses to noteholders . Many have asserted that free bank notes were generally regarded as unsafe, and some have claimed that the losses to noteholders ran into the millions for individual states. Our data, however, tell a much different story. They indicate that free bank notes appear to have been relatively safe and that the losses to noteholders were smaller than many have estimated.

In order to obtain an indication of the safety of free bank notes over time for each state, in Table IV we present the results of multiplying the circulation of each free bank in each condition report by its final redemption rate and then dividing this number by the total circulation of all banks for which we have redemption rate information. This gives a measure of the expected value of a randomly selected bank note held until 1863 as of the date of each condition report. The total circulation of all free banks and the average circulation per bank for each condition report is also given in this table.

The evidence in Table IV confirms the general impressions which we have obtained from the previous tables. New York bank notes were the safest; the expected value of a randomly selected bank note never fell below 97 cents on the dollar and for most years this expected value was 99 cents on the dollar or better. Wisconsin had an experience very similar to New York's at the beginning but the safety declined over time to a low of 88 cents on the dollar in 1861 due to the fact that all of Wisconsin's below par failures occurred in 1860 and 1861. No losses on Wisconsin free bank notes occurred after 1861. Indiana's problems with free banking occurred within the first two to three years after passage of its free banking act. This is shown by the expected values of 92 and 95 cents on the dollar in 1853 and 1854, respectively. However, beginning in 1856 Indiana's free banking experience was very similar to that of New York. Finally, Minnesota definitely had the worst bank note safety with expected values of less than 50 cents on the dollar through July, 1859. There was substantial improvement in the safety of bank notes after this time, however, expected values were only between 82 and 88 cents on the dollar during 1860. Nonetheless, Minnesota's largest problems occurred within a year of the passage of its free banking legislation.

Table V contains several estimates of the total losses sustained by noteholders in the four free banking states we have studied. The first estimate is based only on those banks where data on circulation were available. It was obtained by multiplying the last circulation for each bank which failed below par by one minus its redemption rate. Estimations by state and for selected time periods are presented in column 1.

This first estimate, however, understates the total loss to all free bank noteholders to the extent that it ignores losses at banks where circulation data were unavailable. Our second estimate (column 3) incorporates these banks using the average-per-bank loss (column 2) as an estimate for the losses due to the below par failure of banks for which we could not obtain circulation numbers. Finally, a third estimate (column 4) was necessary because in two of our states, New York and Indiana, we were not able to determine if some banks failed below par or not. We constructed the third estimate assuming all of the unidentified banks in these states failed below par and used the average loss-per-bank to estimate the loss in the unidentified banks.

We estimate that the total losses to noteholders under free banking in the four states for which we have compiled data ranged between $1.6 and $2.1 million. The breakdown by states is as follows: New York, between $603 and $674 thousand; Wisconsin, $503 thousand; Indiana, between $352 and $799 thousand; and Minnesota, $165 thousand. These estimated losses are slightly higher than those presented by Rockoff [1974, Table II, p. 150]. However, he only presents estimated losses through 1860, so that none of the losses for Wisconsin are included in his total. Further, our estimates are very probably biased upward since some included in the circulation numbers we use may have been redeemed at par before the bank failed. Nonetheless, our estimates taken in conjunction with Rockoff's cast doubt on the claims that losses to free bank noteholders in individual states may have run into the millions.[5] Instead, it appears that such estimates implicitly assumed that all notes of failed banks were worthless, which was obviously not the case.

Lastly, in column 5 of Table V we present the average loss per dollar for banks which failed below par. These losses are derived by dividing column 1 by the total circulation of the banks failing below par. Thus, column 5 is an estimate of the loss that a noteholder could expect given that he was holding a note of a bank which fails below par. We find that these losses were the smallest in Indiana, ranging between 11 and 15 cents on the dollar. The losses in New York are somewhat higher ranging between 21 and 31 cents on the dollar again depending upon the period in which the loss occurred. The losses

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[5]See, for example the statement of Hugh McCulloch, President of the Bank of the State of Indiana (not a free bank), cited in Hammond [1957, p. 620].

in Wisconsin and Minnesota were 24 and 71 cents on the dollar, respectively. These results present an interesting contrast between New York and Indiana. Losses to noteholders in New York were due to a small percentage of below par failures involving a substantial loss on each dollar of the failed bank's outstanding circulation. Losses to noteholders in Indiana were due to a large number of below par failure involving much smaller losses on each dollar of circulation.

Conclusion

A closer look at the free banking experience has uncovered some new insights into the problems of this period. While each of the four states we examined produced a significant number of problem banks, the experience varied considerably among the states. Moreover, we found it misleading to characterize the overall experience as a failure of laissez-faire banking. Many free banks did not go out of business; many that did, still redeemed their notes at par. Most free banks were in existence for more than a year, suggesting they were not wildcat banks. And total loses to note holders have been significantly overstated. Thus, although both historians and economists have generally drawn the conclusion that the Free Banking Era was a failure, our results suggest further work is needed before this period can be properly judged.

These new facts about the Free Banking Era lead to questions that should be addressed in future research. Were the problems with free banks caused by some inherent instability in the banking business or can they be explained by the laws and regulations that goverened free bank activities? Was there enough variation in these laws to explain the different experience among free bank states or can the difference be explained by special characteristics of the states themselves? And most importantly, what implications can be drawn from the Free Banking Era about banking deregulation today?

TABLE I

THE STATES OF THE UNION IN 1860, AND THE YEARS IN WHICH THEY ADOPTED THE FREE BANKING SYSTEM

STATE	YEAR
Alabama	1849[e]
Arkansas	-
California	-
Connecticut	1852
Delaware	-
Florida	1853[e]
Georgia	1838[e]
Illinois	1851
Indiana	1852
Iowa	1858[e]
Kentucky	-[b]
Louisiana	1853
Maine	-
Maryland	-
Massachusetts	1851[e]
Michigan	1837, 1857
Minnesota	1858
Mississippi	-
Missouri	-[d]
New Hampshire	-
New Jersey	1850
New York	1838
North Carolina	-
Ohio	1851[c]
Oregon	-
Pennsylvania	1860[e]
Rhode Island	-
South Carolina	-
Tennessee	1852[e]
Texas	-
Vermont	1851[e]
Virginia	-[a]
Wisconsin	1852

[a]In 1851, Virginia adopted the bond secured note system without permitting free entry.

[b]Kentucky never adopted the free banking system but it did charter a bank with a bond secured note issue in 1850.

[c]A law passed in 1845 provided for the setting up of "Independent Banks" with a bond secured note issue.

[d]Missouri never adopted the free banking system, but in 1858 it did charter a number of banks with bond secured note issues.

[e]According to Rockoff, very little free banking was done under the laws in these states.

Source: Rockoff [1975, page 3].

TABLE II

TOTAL NUMBER OF FREE BANKS AND BANK FAILURES AND CLOSINGS

State	(1) No. Free Banks	(2) No. Free Banks That Closed or Failed (% of Column 1)	(3) No. Free Banks Which Closed or Failed Below Par (% of column 1 less column 4)	(4) No. Free Banks Which Closed or Failed - No Redemption Information
New York	449	160 (36)	34 (8)	4
Indiana	104	89 (86)	24 (31)	27
Wisconsin	140	79 (56)	37 (26)	0
Minnesota	16	11 (69)	9 (56)	0
Total of the Four States	709	339 (48)	104 (15)	31

TABLE III

APPROXIMATE NUMBER OF YEARS FREE BANKS WERE IN EXISTENCE

Number of Years	Number of Banks: New York (1838-1863)	Number of Banks: Wisconsin (1852-1863)	Number of Banks: Indiana (1852-1863)
0[a]	48	4	30
.5			18
1	37	13	24
1.5		4	1
2	19	13	2
2.5		5	2
3	25	19	4
3.5		5	2
4	16	14	4
4.5		13	1
5	14	6	0
5.5		13	0
6	26	1	3
6.5		7	0
7	29	3	2
7.5		8	5
8	23	0	0
8.5		2	0
9	23	2	2
9.5		0	4
10	71	2	
10.5		6	
11	35		
12	1		
13	14		
14	12		
15	7		
16	1		
17	4		
18	2		
19	10		
20	31		
Mean	7.9	4.28	2.0
Median	8	4	1

[a]Number of banks which did not appear on any condition report.

TABLE IV

BANK NOTE SAFETY AND CIRCULATION

New York

Date	Expected Value	Circulation	Average Circulation Per Bank
11/1843	0.998	$ 3,359,322	$ 68,557.59
11/1844	0.998	5,036,953	77,491.58
11/1845	0.999	5,544,311	82,750.91
11/1846	0.999	6,235,397	89,077.10
2/1847	0.998	5,970,941	85,299.16
3/1848	0.971	8,621,269	92,701.82
12/1849	0.980	10,191,000	93,495.41
12/1850	0.974	13,197,995	101,523.04
6/1852	0.980	14,621,582	92,541.66
12/1853	0.990	21,029,339	95,155.38
9/1854	0.990	21,435,545	92,394.59
9/1855	0.992	23,169,329	96,942.80
9/1856	0.990	26,476,389	101,442.10
9/1857	0.996	22,015,221	82,763.99
12/1858	0.997	23,229,189	86,676.08
12/1859	0.998	24,524,209	89,832.27
12/1860	0.999	23,900,049	85,663.26
12/1861	0.999	25,990,007	94,166.69
12/1862	1.00	35,049,604	121,242.30

Wisconsin

Date	Expected Value	Circulation	Average Circulation Per Bank
7/1853	1.00	$ 301,748	$37,718.50
1/1854	1.00	485,121	48,512.10
7/1854	0.991	786,216	41,379.79
1/1855	0.991	740,764	32,207.13
1/1856	0.983	1,060,165	35,338.83
1/1857	0.964	1,702,570	37,834.89
1/1858	0.936	2,913,071	42,839.28
1/1859	0.928	4,695,138	47,425.64
1/1860	0.896	4,429,855	41,400.51
1/1861	0.882	4,283,175	39,659.03
1/1862	1.00	1,419,413	22,893.76
7/1862	1.00	1,643,148	27,385.80

TABLE IV (Continued)

Indiana

Date	Expected Value	Circulation	Average Circulation Per Bank
12/1853	0.922	$3,167,547	$105,584.90
7/1854	0.949	5,219,100	113,458.70
1/1856	0.997	1,448,318	45,259.94
7/1856	0.997	1,349,899	40,906.03
7/1857	0.992	1,453,703	55,911.65
1/1858	0.990	1,079,928	56,838.32
7/1858	0.989	1,043,608	57,978.22
1/1859	0.989	1,027,569	64,223.06
7/1859	0.989	1,080,577	63,563.35
1/1860	0.990	1,108,396	65,199.76
7/1860	0.990	1,143,466	63,525.89
1/1861	1.00	1,103,564	63,309.11
1/1862	1.00	971,933	53,996.28
7/1862	1.00	1,109,411	61,633.94
1/1863	1.00	1,223,426	71,966.24

Minnesota

Date	Expected Value	Circulation	Average Circulation Per Bank
1/1859	0.456	$ 50,000	$25,000.00
4/1859	0.489	216,549	30,935.57
7/1859	0.500	298,959	22,996.85
10/1859	0.810	155,258	14,114.36
1/1860	0.876	34,481	5,746.83
4/1860	0.846	38,898	6,483.00
7/1860	0.820	44,381	8,762.00
10/1860	0.850	49,145	9,829.00
1/1863	1.00	94,133	18,826.60
10/1863	1.00	100,161	20,032.20

TABLE V

ESTIMATED LOSSES TO NOTEHOLDERS

		(1) Total Losses: Below Par Failures Circulation Available	(2) Average Loss per Bank	(3) Total Losses: All Below Par Failures	(4) Total Losses: All Below Par and Unidentified Failures	(5) Average loss Per Dollar
(1)	New York	$ 496,390.10 (28/34)[a]	$17,728.25	$602,760.62	$673,673.64	0.2621
(2)	New York[b] (before 10/1841)	$ 320,929.90 (12/15)	$26,744.16	$401,162.37	$401,162.37	0.3015
(3)	New York[b] (after 10/1841)	$ 175,460.20 (16/19)	$10,966.26	$208,358.99	$252,224.04	0.2114
(4)	Wisconsin	$503,151.42 (37/37)	$13,598.69	$503,151.42	$503,151.42	0.2444
(5)	Indiana	$220,181.57 (15/24)	$14,678.77	$352,290.51	$748,617.34	0.1093
(6)	Indiana[b] (before 1856)	$204,837.07 (12/21)	$17,069.76	$358,464.87	$768,139.01	0.1069
(7)	Indiana[b] (1856 and after)	$ 15,344.50 (3/3)	$ 5,114.83	$ 15,344.50	$ 30,689.00	0.1533
(8)	Minnesota	$146,854.09 (8/9)	$18,356.76	$165,210.85	$165,210.85	0.7050
	Total [Sum of (1), (4), (5) and (8)]			$1,623,413.40	$2,090,653.25	
	Total [Sum (2) - (4), (6) - (8)]			$1,651,693.00	$2,120,576.69	

[a]Number of banks included in calculation/total number of below par failures.

[b]We have divided the New York and Indiana experience since there are substantial differences in these subperiods for these states.

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APPENDIX

NEW YORK

TABLE A

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
ADAMS B,ASH								X												1	1.00
ADDISON B														X	X	X	X	X	X	6	1.00
AGRICULTURAL B	X	X	X	X	X	X	X	X	X	X	X	X	X							14	1.00
ALBANY EX B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
ALLEGANY CTY B																				0	.50
AMENIA B,LDSVIL		X	X	X	X	X	X	X												7	1.00
AMERICAN B,HAYS						X	X	X												3	1.00
AMERICAN EX B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
ARTISANS B														X	X	X	X			4	1.00
ASTOR B																				0	1.00
ATLANTIC B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
ATLAS B OF NY						X														1	.75
AUBURN CITY B										X	X	X	X	X	X	X	X	X	X	10	1.00
AUBURN EX B													X	X	X	X	X	X	X	7	1.00
BALLSTON SPA B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF ALBANY												X	X	X	X	X	X			6	1.00
B OF ALBION	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF AMERICA,BUF																				0	.76
B OF AMERICA,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF AMSTERDAM																		X	X	2	1.00
B OF ATTICA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF AUBURN								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
B OF BAINBRIDGE						X	X	X	X	X	X									7	1.00
B OF BATH											X	X	X	X	X	X	X	X	X	9	1.00
B OF BINGHAMTON										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF BROCKPORT	X																			1	.80
B OF CANANDAIGUA											X	X	X	X	X	X	X	X	X	9	1.00
B OF CARTHAGE										X										1	1.00
B OF CAYUGA LAKE						X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
B OF CAZENOVIA													X	X	X	X	X	X	X	7	1.00
B OF CENTRAL NY	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X				17	1.00
B OF CHEMUNG									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF CHENANGO													X	X	X	X	X	X	X	7	1.00
B OF COHOES																X	X	X	X	4	1.00
B OF COMMERCE,BUFF																				0	.76
B OF COMMERCE,NYC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF COMMERCE,PC										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF COOPERSTOWN										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF CORNING	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				17	1.00
B OF COXSACKIE										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF DANSVILLE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF FAYETTEVILLE											X	X	X	X	X	X	X	X	X	9	1.00
B OF FISHKILL								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
B OF FORT EDWARD									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF GENESSEE									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF GENEVA										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF HAVANA									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF HORNELLSVIL											X	X	X							3	1.00
B OF KENT													X	X	X	X	X	X	X	7	1.00
B OF KINDERHOOK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF LAKE ERIE						X	X	X	X											5	1.00
B OF LANSINGBURG												X	X	X	X	X	X	X	X	8	1.00
B OF LIMA														X	X	X	X	X	X	6	1.00
B OF LODI																				0	.97
B OF LOWVILLE	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	X	X	20	1.00

TABLE A (Continued)

NEW YORK

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
B OF MALONE									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF N ROCHELLE		X	X	X	X	X	X	X												7	.84
B OF NEW YORK										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF NEWARK										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF NEWBURGH									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF NEWPORT															X	X	X	X	X	5	1.00
B OF N AMERICA									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF NORWICH													X	X	X	X	X	X	X	7	1.00
B OF O SARATOGA													X	X	X	X	X	X	X	7	1.00
B OF OLEAN																				0	.74
B OF ONTARIO																			X	1	1.00
B OF ORANGE CTY																			X	1	1.00
B OF ORANGETOWN																		X	X	2	1.00
B OF OTEGO																		X	X	2	1.00
B OF PAWLING							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
B OF PORT JERVIS										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF POUGHKEEPSIE															X	X	X	X	X	5	1.00
B OF RHINEBECK										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF RONDOUT							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
B OF SALEM										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF SARA SPRING						X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
B OF SENECA FALLS											X	X	X	X	X	X	X	X	X	9	1.00
B OF SILVER CREEK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF SING SING										X	X	X	X	X	X	X				7	1.00
B OF SYRACUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF CAPITAL										X	X	X	X	X	X	X	X			8	1.00
B OF COMMONWEALTH										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF EMPIRE STATE								X	X											4	1.00
B OF INTERIOR														X	X	X	X			4	1.00
B OF PEOPLE																				0	1.00
B OF REPUBLIC									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF UNION,BFL									X	X	X									3	1.00
B OF UNION,NYC										X										1	1.00
B OF US IN NY																				0	1.00
B OF TIOGA													X	X	X	X	X	X	X	7	1.00
B OF TONAWANDA																				0	.68
B OF TROY										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF ULSTER										X	X	X	X	X	X	X	X	X	X	10	1.00
B OF UTICA								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
B OF VERNON	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF WATERTOWN	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF WATERVILLE	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF WEST TROY									X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF WIRN NYC,ROC																				0	.75
B OF WESTFIELD							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
B OF WHITEHALL																X	X	X	X	4	1.00
B OF WHITESTOWN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
B OF YONKERS											X	X	X	X	X	X	X	X	X	9	1.00
BELLINGER B																			X	1	1.00
BINGHAMTON B																				0	.74
BLACK RIVER B		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
BOWERY B,NYC						X	X	X	X	X	X	X	X							[illegible]	0
BRIGGS B													X	X	X	X	X	X	X	7	1.00
BROADWAY B							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
BROCKPORT EX B										X	X	X	X	X	X	X	X			8	1.00

NEW YORK

TABLE A (Continued)

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
BROOKLYN B																	X	X	X	3	1.00
BROOME CTY B												X	X	X	X	X	X	X	X	8	1.00
BUFFALO CITY B										X	X	X	X	X	X	X	X	X	X	10	1.00
BULLS HEAD B											X	X	X	X	X	X	X	X	X	9	1.00
BURNET B										X	X	X	X	X	X	X	X	X	X	10	1.00
BTCHRS&DRVRS B										X	X	X	X	X	X	X	X	X	X	10	1.00
CAMBRIDGE VY B												X	X	X	X	X	X	X	X	6	1.00
CAMDEN B							X	X	X	X	X	X								7	1.00
CANAJOHARIE B												X	X	X	X	X	X	X	X	8	1.00
CANAL B	X	X	X					X	X	X	X	X								9	1.00
CANASTOTA B													X	X	X	X	X	X	X	7	1.00
CATARACK B															X	X	X			3	.93
CATSKILL B										X	X	X	X	X	X	X	X	X	X	10	1.00
CATTARAUGUS CTY B																				0	.77
CENTRAL B,BKLYN										X	X	X	X	O	X	X	X	X	X	10	1.00
CENTRAL B,CHRY VY												X	X	X	X	X	X	X	X	6	1.00
CENTRAL B,NYC										X	X									2	1.00
CENTRAL B,TROY										X	X	X	X	X	X	X	X	X	X	10	1.00
CENTRAL CITY B										X	X	X	X	X	X	X	X	X	X	10	1.00
CHAMPLAIN B						X	O	X												3	1.00
CHATHAM B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
CHAUTAUQUA CTY B																	X	X	X	3	1.00
CHELSEA B																				0	.25
CHEMICAL B		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
CHEMUNG CTY B													X							1	1.00
CHESTER B				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	17	1.00
CHITTENANGO B										X	X	X	X	X	X	X	X	X	X	10	1.00
CITIZENS B,F-O								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
CITIZENS B,NYC									X	X	X	X	X	X	X	X	X	X	X	11	1.00
CITY B,BROOKLYN								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
CITY B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
CITY B,OSWEGO								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
CITY B,PHKPSIE																	X	X	X	3	1.00
CITY TRUST&B CO																				0	1.00
CLINTON B,BUF													X	X	X	X	X	X		6	0
CLINTON B,NYC																				0	.60
COLUMBIA B																		X	X	2	1.00
COMMERCIAL B,ALY						X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
COMMERCIAL B,ALG						X	X	X	X	X										6	1.00
COMMERICAL B,CLYDE									X	X	X	X	X	X	X	X	X	X	X	11	1.00
COMMERICAL B,GF										X	X	X	X	X	X	X	X	X	X	10	1.00
COMMERICAL B,LPT							X													2	1.00
COMMERCIAL B,RCHR	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
COMMERICAL B,SS													X	X	X	X	X	X	X	7	1.00
COMMERICAL B,TROY	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
COMMERCIAL B,WTHL							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
CONTINENTAL B										X	X	X	X	X	X	X	X	X	X	10	1.00
CORN EX B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
CORTLAND CTY B							X	X												2	1.00
CROTON RIVER B													X	X	X	X	X	X	X	7	1.00
CUBA B												X	X	X	X	X	X	X	X	8	1.00
CUYLERS B				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	17	1.00
DAIRYMENS B										X	X	X	X							4	1.00
DELAWARE B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
DEPOSIT B											X	X	X	X	X	X	X	X	X	9	1.00

TABLE A (Continued)

NEW YORK

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
DOVER PLAINS B															X	X	X	X	X	5	1.00
DROVERS B,GOUNHRG		X	X	X	X		X	X	X	X	X									11	1.00
DUNKIRK B									X	X	X									3	1.00
DUTCHESS CTY B							X	X	X	X	X									6	1.00
E S RICHS B																			X	1	1.00
EAST RIVER B										X	X	X	X	X	X	X	X	X	X	10	1.00
8TH AVENUE B											X									1	.94
ELMIRA B										X	X	X	X	X	X	X	X	X	X	10	1.00
EMPIRE CITY B									X	X	X									3	1.00
ERIE CTY B,BUF																				0	.60
EXCELSIOR B									X											1	1.00
EXCHANGE B,BUF		X	X	O	X	X	X	X	X	X	X									11	1.00
EXCHANGE B,G&B	X	X	X	X	X	X	X	X	X	X	X	X	X	X						15	1.00
EXCHANGE B,LKPT		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
EXCHANGE B,RCHR																				0	1.00
FALLKILL B										X	X	X	X	X	X	X	X	X	X	10	1.00
FACITIZENS B										X	X	X	X	O	X	X	X	X	X	10	1.00
F&DROVERS B,BUF		X	X																	2	1.00
F&DROVERS B,SOM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
F&M OF ONONDAGA																				0	1.00
F&M OF GENESSEE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
F&M B,OGDNBURG		X	O	X	X	X														5	1.00
F&M B,ROCHSTER	X	X	X	X	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
FARMERS B,AMS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
FARMERS B,ATTICA														X	X	X	X	X	X	6	1.00
FARMERS B,GENEVA	X																			1	1.00
FARMERS B,HAM CTY								X	X											3	1.00
FARMERS B,HUDSON	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
FARMERS B,LSNGBURG											X	X	X	X	X	X	X	X	X	9	1.00
FARMERS B,MALONE	X																			1	1.00
FARMERS B,MINA						X	X	X	X			X								6	1.00
FARMERS B,ONDGA																				0	.85
FARMERS B,WARW	X																			1	1.00
FARMERS B,GRENS																				0	1.00
FARMERS B,EVAN																				0	1.00
FARMERS B,S CTY									X	X	X	X	X	X	X	X				8	1.00
FARMERS SEN CTY																				0	.74
FARMERS B,TROY										X	X	X	X	X	X	X	X	X	X	10	1.00
FARMERS B,W CTY														X	X	X	X	X	X	6	1.00
FLOUR CITY B													X	X	X	X	X	X	X	7	1.00
FORT PLAIN B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
FORT STANWIX B						X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
FRANKFORT B											X	X	X	X	X	X	X	X	X	9	1.00
FRANKLIN B,HARVIN						X	X	X	X											5	1.00
FRANKLIN B,MALONE				X	X	X	X													4	1.00
FREDONIA B														X	X	X	X	X	X	6	1.00
FREEMENS B								X	X											3	1.00
FRONTIER B								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
FULTON B,NYC		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X	19	1.00
FULTON CTY B										X	X	X	X	X	X	X	X	X	X	10	1.00
GENESSEE CTY B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
GENESSEE RIVER B										X	X	X	X	X	X	X	X	X	X	10	1.00
GENESSEE VALLEY B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
G WASHINGTON B											X	X	X	X	X	X	X	X	X	9	1.00
GLENS FALLS B									X	X	X	X	X	X	X	X	X	X	X	11	1.00

TABLE A (Continued)

NEW YORK

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
GOSHEN B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
GREENWICH B												X	X	X	X	X	X	X	X	8	1.00
GROCERS B,NYC									X	X	X	X	X	X	X	X	X	X	X	11	1.00
HOTCHKISS&CO B																	X	X	X	3	1.00
MESSENGERS B																	X	X	X	3	1.00
H MINERS B,FRED								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
HAMDEN B																		X	X	2	1.00
HAMILTON B										X	X	X	X	X	X	X	X	X	X	10	1.00
HAMILTON B																				0	1.00
HAMILTON EX B								X	X	X	X	X	X							7	.84
HANOVER B,NYC									X	X	X	X	X	X	X	X	X	X	X	11	1.00
HARTFORD B							X	X	X											4	1.00
H KEEPS B,KIN						X	X													2	1.00
H WHITE&CO B																X	X			2	1.00
HOLLISTER B								X	X	X	X	X	X							7	1.00
HOWARD TRUST&B CO	X																			1	1.00
HUDSON RIVER B												X	X	X	X	X	X	X	X	8	1.00
HUGUENOT B										X	X	X	X	O	X	X	X	X	X	10	1.00
HUNGERSFORD B				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	17	1.00
ILION B										X	X	X	X	X	X	X	X	X	X	10	1.00
IMPTRS&TRDRS B													X	X	X	X	X	X	X	7	1.00
INTERNATIONAL B											X	X	X	X	X	X	X	X	X	9	1.00
IRON B,PLATSBURG										X	X	X	X	X	X	X	X	X	X	10	1.00
IRVING B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
ISLAND CITY B										X	X	X	X							4	1.00
J CLARK&CO B																			X	1	1.00
J HUNGERFORDS B																X	X	X	X	4	1.00
J RAPLEES B														X	X	X	X	X	X	6	1.00
J RUMSEY&CO B																	X			1	1.00
JAMES B,JVIL	X	X	X	X	X	X	X	X												8	.91
JAMESTOWN B										X	X	X	X	X	X	X	X	X	X	10	1.00
JEFFERSON CTY B											X	X	X	X	X	X	X	X	X	9	1.00
J PRATT&CO B																			X	1	1.00
JUDSON B										X	X	X	X	X	X	X	X	X	X	10	1.00
KIRKLAND B				X	X	X	X	X	X	X										8	1.00
KNERPOCKER B,G							X	X												2	1.00
KNERPOCKER B,NYC									X	X	X									3	1.00
LAKE MAHOPAC B											X	X	X	X	X					5	1.00
LAKE ONTARIO B														X	X	X	X	X	X	6	1.00
LAKE SHORE B												X	X	X	X	X	X	X	X	8	1.00
LEATHER MANU B																			X	1	1.00
LELAND B,NL																				0	1.00
LEONARDSVILLE B														X	X	X	X	X	X	6	1.00
LINCOLN B																			X	1	1.00
LOCKPORT E&TRUST	X	X	X	X	X	X	X	X	X	X	X									12	1.00
LOCKPORT CITY B										X	X	X	X	X	X	X	X	X	X	10	1.00
LONG ISLAND B			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	18	1.00
LUMBERMANS B									X											1	1.00
L WRIGHTS B		X	X	X	X	X	X	X	X	X	X	X	X	X						14	1.00
LYON B		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
MANU&MERCH B																X	X	X	X	4	1.00
MANU&TRADERS B													X	X	X	X	X	X	X	7	1.00
MANU B,BROOKLYN										X	X	X	X	X	X	X	X	X	X	10	1.00
MANU B,RCHTER														X	X					2	1.00
MANU B,TROY										X	X	X	X	X	X	X	X	X	X	10	1.00

TABLE A (Continued)

NEW YORK

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
MANU B,ULSTER	X																			1	1.00
MARINE B,BUFFALO								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
MARINE B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
MARINE B,OSWEGO														X	X	X	X	X	X	6	1.00
MARKET B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
MARKET B,TROY										X	X	X	X	X	X	X	X	X	X	10	1.00
MCINTYRE B						X	X	X												3	1.00
M&F B,ALBANY										X	X	X	X	X	X	X	X	X	X	10	1.00
M&TRADERS B,NYC														X	X	X	X	X	X	6	1.00
MECHANICS B,BKLYN										X	X	X	X	X	X	X	X	X	X	10	1.00
MECHANICS B,BUF																				0	.63
MECHANICS B,NYC												X	X	X	X	X	X	X	X	8	1.00
MECHANICS B,SYRA									X	X	X	X	X	X	X	X	X	X	X	11	1.00
MECHANICS B,WTWN									X	X										2	1.00
MECHANICS & ASSOC	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	X	X	20	1.00
MEDINA B												X	X	O	X	X	X			6	1.00
MERCHANTILE B,NYC								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
MERCHANTILE B,FLSG										X	X	X	X	X	X	X	X	X	X	10	1.00
MERCHANTILE B,SCHN																				0	1.00
MER&F B,ITHACA	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
MER&F B,CARMEL	X	X	X	X	X	X	X	X	X	X										11	1.00
MERAM B,OSWEGO																				0	.77
MERAM B,TROY											X	X	X	X	X	X	X	X	X	9	1.00
MERCHANTS B,ALB										X	X	X	X	X	X	X	X	X	X	10	1.00
MERCHANTS B,C,N		X	X	X	X	X	X	X												7	1.00
MERCHANTS B,CC,M						X	X	X	X											5	1.00
MERCHANTS B,E CTY		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
MERCHANTS B,NYC														X	X	X	X	X	X	6	1.00
MERCHANTS B,PKPSIE			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	18	1.00
MERCHANTS B,SYRA									X	X	X	X	X	X	X	X	X	X	X	11	1.00
MERCHANTS B,W CTY																				0	1.00
MERCHANTS B,WTFD										X	X	X	X	X	X	X	X	X	X	10	1.00
MERCHANTS EX B,B																				0	.65
MERCHANTS EX B,NYC							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
METROPOLITAN B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
MIDDLETON B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
MILLERS B,NY																				0	.94
MOHAWK B										X	X	X	X	X	X	X	X	X	X	10	1.00
MOHAWK RIVER B														X	X	X	X	X	X	6	1.00
MOHAWK VALLEY B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
MONROE B,R,L										X	X	X	X							4	1.00
MONROE CTY B														X	X	X	X	X	X	6	1.00
MONTGOMERY CTY B														X	X	X	X	X	X	6	1.00
MUTUAL B,TROY										X	X	X	X	X	X	X	X	X	X	10	1.00
NASSAU B,BKLYN																X	X	X	X	4	1.00
NASSAU B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
NATIONAL B,ALB													X	X	X	X	X			5	1.00
NATIONAL B,NYC														X	X	X	X	X	X	6	1.00
NY&ERIE B										X	X	X	X	X	X	X	X	X	X	10	1.00
NY B,SARATOGA CTY									X											1	1.00
NY BANKING CO																				0	.42
NY CTY B,NYC												X	X	X	X	X	X	X	X	8	1.00
NY EXCH B,NYC									X	X	X	X	X	X	X	X	X	X	X	11	1.00
NY SECURITY B						X	X	X	X	X										6	1.00

TABLE A (Continued)

NEW YORK

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
NY STATE B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
NY S S SEC B																				0	1.00
NY STOCK B,B	X	X	X	X	X	X	X	X												8	1.00
NY TRADERS B									X											1	1.00
NIAGARA CTY B													X	X	X	X	X	X	X	7	1.00
N AMER B, NYC																				0	1.00
N AM TRUST&CO B																				0	1.00
N RIVER B,NYC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
NORTHERN B,NY						X	X	X												3	1.00
NORTHERN CANAL B							X	X	X											4	1.00
NORTHERN EX B						X	X	X	X											5	1.00
OCEAN B,NYC								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
O LEE & CO B		X	X	X	X	X	X	X	X	X	X	X	X							13	1.00
ONEIDA CEN B											X	X	X	X	X	X	X	X	X	9	1.00
ONEIDA CTY B										X	X	X	X	X	X	X	X	X	X	10	1.00
ONEIDA VLY B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
ONONDAGA B												X	X	X	X	X				5	1.00
ONONDAGA CTY B													X	X	X	X				4	0
ONTARIO B													X							1	1.00
ONTARIO CTY B													X							1	1.00
ORIENTAL B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
ORLEANS CTRY B																	X	X	X	3	1.00
OSWEGATCHIE B												X	X	X	X	X	X	X	X	8	1.00
OSWEGO CTY B							X	X												2	1.00
OSWEGO RIVER B													X	X	X	X	X	X	X	7	1.00
OTSEGO CTY B											X	X	X	X	X	X	X	X	X	9	1.00
P WESTFALLS B																	X	X	X	3	1.00
PACIFIC B,NYC								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
PALISADE B																			X	1	1.00
PARK B,NYC													X	X	X	X	X	X	X	7	1.00
PATCHIN B,BUF		X	X	X	X	X	X	X	X											9	1.00
PEOPLES B,NYC									X	X	X	X	X	X	X	X	X	X	X	11	1.00
PERRIN B,NYC													X	X	X	X	X	X	X	7	1.00
PHOENIX B,BH								X	X											3	1.00
PHOENIX B,BUF																				0	.73
PHOENIX B,NYC											X	X	X	X	X	X	X	X	X	9	1.00
PINE PLAINS B	X	X	X	X	X	X	X	X	X	X	X	X	X							14	1.00
POWELL B,NB	X	X	X	X	X	X	X	X	X	X	X	X	X							14	1.00
PRATT B,BUFFALO						X	X	X	X	X	X	X	X	X						10	.94
PRATTSVILLE B	X	X	X	X	X	X	X	X												8	1.00
PULSASKI B											X	X	X	X	X	X	X	X	X	9	1.00
PUTNAM CTY B							X	X	X	X	X									6	1.00
PUTNAM VALLEY B							X	X	X	X										5	1.00
WELLINGTON&CO B																			X	1	1.00
QUASSAICK B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
QUEEN CITY B										X										1	1.00
INGERSOLL&CO B																			X	1	1.00
GODDARD&CO B																X	X			2	1.00
RANDALL B											X	X	X	X	X	X	X	X	X	9	1.00
RENSSELAER CTY B										X	X	X	X	X	X	X	X	X	X	10	1.00
ROCHESTER B						X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
ROCHESTER EX B																		X	X	2	1.00
ROCKLAND CTY B																	X	X	X	3	1.00
ROME EX B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
SALT SPGS B									X	X	X	X	X	X	X	X	X	X	X	11	1.00

TABLE A (Continued)

NEW YORK

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
SARATOGA CTY B														X	X	X	X	X	X	6	1.00
SAUGERTIES B																	X	X	X	3	1.00
SCHNECTADY B																			X	1	1.00
SCHOHARIE CTY B										X	X	X	X	X	X	X	X	X	X	10	1.00
SETAUKET B																	X	X	X	3	1.00
SHOEALEATHER B										X	X	X	X	X	X	X	X	X	X	10	1.00
SMITHS B													X	X	X	X	X	X	X	7	1.00
SPRAYER B										X	X	X	X	X	X	X	X	X	X	10	1.00
ST LAWRENCE B																				0	.50
ST NICHOLAS B										X	X	X	X	X	X	X	X	X	X	10	1.00
STATE B,NY,BUF																				0	.30
STATE B,S HARBOR									X	X	X	X								4	1.00
STATE B,SAUGH						X	X	X	X	X										6	1.00
STATE B,TROY										X	X	X	X	X	X	X	X	X	X	10	1.00
STATE OF NY B										X	X	X	X	X	X	X	X	X	X	10	1.00
STATEN ISLAND B																				0	.56
STEUBEN CTY B																			X	1	1.00
STISSING B															X	X	X	X	X	5	1.00
SUFFOLK B,NYC										X										1	1.00
SUFFOLK CTY B		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
SULLIVAN CTY B								X												1	1.00
SUSQUEHANNA VY B												X	X	X	X	X	X	X	X	8	1.00
SYRACUSE CY B								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
GRANNIS&CO B																			X	1	1.00
TANNERS B																	X	X	X	3	1.00
10TH WARDS B,NYC																				0	.94
TRADERS B,KCHR								X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
TRADEMENS B,NYC												X	X	X	X	X	X	X	X	8	1.00
U.S. B,BUFFALO																				0	.77
ULSTER CTY B																		X	X	2	1.00
UMADILLA B		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
UNION B,ALBANY											X	X	X	X	X	X	X	X	X	9	1.00
UNION B,BUF																				0	.61
UNION B,KKHOOK										X	X	X	X	X	X	X	X	X	X	10	1.00
UNION B,MEDINA																			X	1	1.00
UNION B,NYC										X	X	X	X	X	X	X	X	X	X	10	1.00
UNION B,RCHR										X	X	X	X	X	X	X	X	X	X	10	1.00
UNION B,S CTY									X	X	X	X	X	X	X	X	X	X	X	11	1.00
UNION B,TROY									X	X	X	X	X	X	X	X	X	X	X	11	1.00
UNION B,WTR										X	X	X	X	X	X	X	X	X	X	10	1.00
UTICA CITY B							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
VALLEY B									X	X	X									3	1.00
VILLAGE B							X	X												2	1.00
WALLKILL B														X	X	X	X	X	X	6	1.00
WALTER JOYS B																				0	1.00
WARREN CTY B		X	X	X	X	X														5	1.00
WASHINGTON B																				0	1.00
WASHINGTON CTY B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20	1.00
WATERTOWN B&LOAN							X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
WAVERLY B													X	X	X	X	X	X	X	7	1.00
WEEDSPORT B												X	X	X	X	X	X	X	X	8	1.00
W WINFIELD B											X	X	X	X	X	X	X	X	X	9	1.00
WESTERN B,HIGN								X	X											3	0
WESTERN B,LKFT								X	X	X	X	X	X							7	1.00
WESTERN B,S CTY																				0	1.00

TABLE A (Continued)

NEW YORK

BANK NAME	43	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	PERS	REDEMP RATE
WHITE PLAINS B		X	X	X	X	X	X	X	X	X										10	1.00
WHITES B,BUFFALO		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
W WILLIAMS B																		X		1	0
WILLIAMSBURG B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
WILLOUGHBY B																				0	1.00
WOOL GROWERS B																				0	1.00
W SHERMANS B		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19	1.00
WORTHINGTON B												X	X	X	X	X	X	X	X	8	1.00
WYOMING CTY B									X	X	X	X	X	X	X	X	X	X	X	11	1.00
TOTAL	49	65	67'	70	70	93	109	130	158	221	232	239	261	266	268	273	279	276	289		

INDIANA

TABLE B

BANK NAME	12/53	7/54	1/56	7/56	7/57	1/58	7/58	1/59	7/59	1/60	7/60	1/61	1/62	7/62	1/63	PERS	RED RATE
AGRICULTURAL B																0	1.00
ATLANTIC B																0	.80
B OF ALBANY	X	X														2	.90
B OF ALBION																0	1.00
B OF AMERICA																0	.87
B OF ATTICA		X														1	.89
B OF AUBURN																0	N.A.
B OF BRDGEPORT																0	.88
B OF CONRSVIL	X	X														2	.87
B OF CORYDEN												X	X	X	X	4	1.00
B OF COVNGTON	X	X														2	N.A.
B OF ELKHART			X	X	X			X	X	X	X	X	X	X	X	11	1.00
B OF F WAYNE		X														1	1.00
B OF GOSHEN		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
B OF GOSPORT					X	X	X									3	1.00
B OF INDIANA	X	X	X	X	X											5	1.00
B OF MTICELLO																0	1.00
B OF MT VERNON		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	1.00
B OF NO AM,CLTN			X	X												2	.90
B OF NO AM,NP	X	X														2	N.A.
B OF PAOLI			X	X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
B OF PRYVIL																0	1.00
B OF RENSSELAER																0	N.A.
B OF ROCHESTER		X														1	N.A.
B OF RCKPORT																0	1.00
B OF RCKVIL		X	X	X	X	X	X									6	1.00
B OF SALEM,NA					X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF SALEM					X	X	X	X	X	X	X	X	X	X	X	11	1.00
B OF SO BEND		X														1	1.00
B OF SYRACUSE			X	X												2	1.00
B OF CAPITOL			X	X												2	1.00
B OF TWDSWRTH																0	.91
B OF WARSAW			X	X												2	N.A.
BLOOMINGTON B					X	X	X	X	X	X	X					7	.85
BOONE CTY B																0	1.00
BROOKVILLE B		X	X	X	X											4	1.00
CAMBRIDGE B	X	X	X	X	X	X			X	X	X	X	X	X	X	13	1.00
CANAL B	X	X	X	X	X											5	1.00
CENTRAL CY B	X	X	X													3	1.00
CRESCENT CY B	X	X	X	X	X											5	1.00
DELAWARE CTY B		X														1	1.00
DROVERS B	X	X														2	N.A.
ELKHART CTY I	X	X														2	.97
EXCH B, GC					X	X	X	X	X	X	X	X	X	X	X	11	1.00
EXCH BK, ATT											X	X	X	X	X	5	1.00
FARMERS B, J																0	.91
FARMERS B, WF		X	X	X	X	X	X									6	1.00
F&M B, INDAP		X														1	N.A.
F&M B, RED																0	N.A.
FAYETTE CTY B	X	X	X	X												4	1.00
GOVT STOCK B	X	X														2	.80
GRAMERCY B	X	X	X	X												4	N.A.
GREAT WTRN B		X														1	1.00
GREEN CTY B																0	.81
HOOSIER B		X	X	X												3	1.00

INDIANA

TABLE B (Continued)

BANK NAME	12/53	7/54	1/56	7/56	7/57	1/58	7/58	1/59	7/59	1/60	7/60	1/61	1/62	7/62	1/63	PERS	RED RATE
HUNTGTN CTY B			X	X												2	1.00
INDIAN RSV B			X	X												2	1.00
INDIANA B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
INDA FRRS B				X	X	X	X	X	X	X	X	X	X	X	X	12	1.00
INDA STOCK B	X	X	X	X	X											5	1.00
KALAMAZOO B		X														1	.90
KNTKY STOCK B			X	X	X	X	X	X	X	X	X	X	X	X		12	1.00
LAGRANGE B			X	X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
LAUREL B		X														1	.82
MARSHALL CTY B																0	N.A.
MERCHANTS B,S																0	.90
MERCHANTS BK, L	X															1	.90
M&M B, NALBANY				X												1	1.00
MISHAWAKA B																0	N.A.
MONTICELLO B																0	N.A.
NY STOCK B	X	X														2	N.A.
N INDIANA B																0	.83
NW B, BLMFD		X														1	1.00
MY,VA ST STOCK		X														1	1.00
ORANGE B																0	1.00
PARKE CTY BK			X	X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
PEOPLES BK																0	N.A.
PERRY CTY B		X														1	N.A.
PLYMOUTH B	X	X														2	N.A.
PRAIRIE CY B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
PUBLIC STOCK B	X	X														2	.69
SALEM B			X	X	X	X	X	X	X	X	X	X	X	X	X	13	1.00
SAVINGS B			X	X												2	.69
SHAWNEE B			X	X												2	N.A.
SO B, INDA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	1.00
STARKE CTY B																0	1.00
ST STOCK B,J	X	X														2	N.A.
ST STOCK B, L	X															1	N.A.
ST STOCK B, M		X														1	.90
ST STOCK B, I	X	X														2	.85
ST STOCK SEC B	X															1	N.A.
STEUBEN CTY B	X	X														2	1.00
TIPPECANOE B			X	0	X											3	1.00
TRADERS B,I	X	X														2	N.A.
TRADERS B,N																0	.92
TRADERS B,IN																0	N.A.
UPPER WABASH B		X														1	1.00
WABASH RV B,J																0	N.A.
WABASH RV B,C																0	N.A.
WABASH RV B,N																0	N.A.
WAYNE B, L	X	X														2	1.00
WAYNE B, K																0	1.00
WESTERN B	X	X														0	N.A.
TOTAL	30	40	52	53	26	19	18	16	17	17	16	18	18	18	17		

WISCONSIN

TABLE C

BANK NAME	7/53	1/54	7/54	1/55	1/56	1/57	1/58	1/59	1/60	1/61	1/62	7/62	PERIODS	REDEMPTION RATE
ARCTIC BK, EC&EP							X	X	X	X			4	.6850
BADGER STATE BK		X	X	X	X	X							5	1.0000
BK OF ALBANY									X	X			2	.7325
BK OF APPLETON									X	X			2	.6135
BK OF B DAM									X	X			2	.5750
BK OF BELOIT					X	X	X	X	X	X	X	X	8	1.0000
BK OF COLUMBUS							X	X	X	X			4	1.0000
BK OF COMMERCE			X	X	X								3	1.0000
BK OF EAU CLAIRE							X	O	X	X			4	.8400
BK OF FONDULAC			X	X	X	X	X	X	X	X			8	.6875
BK OF FOX LAKE					X	X	X	X	X	X	X	X	8	1.0000
BK OF GREEN BAY									X	X	X	X	4	1.0000
BK OF GRANT CTY							X	X	X	X	X	X	6	1.0000
BK OF HORICON									X	X			2	.6000
BK OF INTERIOR								X	X	X	X	X	5	1.0000
BK OF JEFFERSON								X	X	X	X	X	5	1.0000
BK OF LACROSSE						X							1	1.0000
BK OF LAPOINTE								X					1	1.0000
BK OF MADISON										X	X	X	3	1.0000
BK OF MANITOWOC								X	X	X	X	X	5	1.0000
BK OF MILWAUKEE					X	X	X	X	X	X	X	X	8	1.0000
BK OF MONEKA								X	X			X	3	1.0000
BK OF MONROE						X	X	X	X	X	X	X	7	1.0000
BK OF MONTELLO							X	X	X				3	1.0000
BK OF N AMERICA								X	X				2	.9550
BK OF NW, FDL					X	X	X	X	X	X	X	X	8	1.0000
BK OF OCONTO								X	X	X			3	1.0000
BK OF OSHKOSH							X	X	X	X	X	X	6	1.0000
BK OF PORTAGE								X	X	X			3	.7860
BK OF PRAIRIE DC							X	X	X	X	X	X	6	1.0000
BK OF RACINE	X	X	X	X	X	X	X	X	X	X	X	X	12	1.0000
BK OF RIPON						X	X	X	X	X	X	X	7	1.0000
BK OF SHEBOYGAN							X	X	X	X	X	X	6	1.0000
BK OF SPARTA								X	X	X	X	X	5	1.0000
BK OF WATERTOWN				X	X	X	X	X	X	X	X	X	9	1.0000
BK OF WEYAUWEGA										X	X	X	3	1.0000
BK OF WHITE WATER									X	X	X	X	4	1.0000
BK OF WIS, WTN								X	X	X	X	X	5	1.0000
BK OF CAPITOL						X	X	X	X				4	1.0000
BK OF WEST, MAD			X	X									2	1.0000
BATAVIAN BK											X	X	2	1.0000
BELOIT SAV BK									X	X			2	.4650
BROWN CTY BK							X	X	X				3	1.0000
CENTRAL BK, JNVL					X	X	X	X	X	X	X	X	8	1.0000
CHIPPEWA BK							X	X	X	X			4	.7750
CITIZENS BK									X	X			2	.7200
CITY BK, B DAM							X	X	X	X			4	.8050
CITY BK, KENOSHA	X	X	X	X	X	X	X	X	X	X	X	X	12	1.0000
CITY BK, PRESCOTT								X	X	X	X	X	5	1.0000
CITY BK, RACINE			X	X	X	X	X	X					6	1.0000
CLARK CTY BK, CF								X	X	X			3	1.0000
COLUMBIA CTY BK			X	X	X	X	X	X	X	X	X	X	10	1.0000
COMMERCIAL BK							X	X	X	X			4	1.0000
CORN EXCH BK							X	X	X	X	X	X	6	1.0000
CORN;PLTRS BK									X	X	X	X	4	1.0000

WISCONSIN

TABLE C (Continued)

BANK NAME	7/53	1/54	7/54	1/55	1/56	1/57	1/58	1/59	1/60	1/61	1/62	7/62	PERIODS	REDEMPTION RATE
DANE CTY BK				X	X	X	X	X	X	X	X	X	9	1.0000
DODGE CTY BK							X	X	X	X			4	.6930
ELKHORN BK						X	0	X	X	X	X	X	7	1.0000
EX BK, DARLING						X	X	X	X	X	X	X	7	1.0000
EX BK, MILW			X	X									2	1.0000
FARMERS BK, BDAM											X	X	2	1.0000
FARMERS BK,HUDSON													0	1.0000
FARMERS BK,TRIVERS									X	X			2	1.0000
F&M BK, FONDULAC								X	X	X	X	X	5	1.0000
F&MILLER BK, MILW	X	X	X	X	X	X	X	X	X	X	X	X	12	1.0000
FOREST CITY BK							X	X	X	X	X	X	6	1.0000
FOX RIVER BK			X	X	X	X	0	X	X				7	1.0000
FRONTIER BK								X	X	X	X	X	5	1.0000
GERMAN BK						X	X	X	X	X	X	X	7	1.0000
GERMANIA BK				X									1	1.0000
GLOBE BK													0	1.0000
GREEN BAY BK						X	X	X	X	X	X	X	7	1.0000
HALL BROS BK							X	X	X	X			4	.6300
HUDSON CITY BK						X	X	X	X	X			5	1.0000
IOWA CTY BK										X			1	1.0000
JNVL CITY BK					X	0	X						3	1.0000
JEFFERSON CTY BK		X	X	X	X	X	X	X	X	X	X	X	11	1.0000
JUNEAU BK							X	X	X	X	X	X	6	1.0000
KANKANKEE BK													0	1.0000
KATANYAN BK						X	X	X	X	X			5	.7900
KENOSHA CTY BK					X	X	X	X	X	X	X		7	1.0000
KOKOMO BK								X					1	1.0000
KOSHKONONG BK									X	X			2	.5430
LABORERS BK								X	X	X			3	.8700
LACROSSE CTY BK								X	X	X			3	1.0000
LAKESHORE BK								X	X	X			3	.7700
LUMBERMANS BK							X	X	X	0	X	X	6	1.0000
MANITOWOC CTY BK							X	X	X	X			4	.9300
MARATHON,CTY BK													0	1.0000
MARINE BK						X	X	X					3	1.0000
MECHANICS BK								X	X	X			3	.6225
MERCHANTILE BK						X	X	X	X	X			5	.7950
MERCHANTS BK						X	X						2	1.0000
H&M BK, WWATER								X					1	1.0000
MONROE CTY BK								X	X	X	0	X	5	1.0000
NORTHERN BK				X	X	X	X	X	X	X			7	1.0000
NO WISC BK								X					1	1.0000
NW BK, SPOINT						X	X	X	X	X			5	.6650
OAKWOOD BK							X	X	X	X			4	1.0000
OCONTO CTY BK								X	X	X			3	.7500
ONEIDA BK								X	X	X	X		4	1.0000
OSBORN BK								X	X	X			3	.6500
OSHKOSH CITY BK			X										1	1.0000
OSHKOSH COMM BK							X	X	X	X	X	X	6	1.0000
PEOPLES BK				X	X	X							3	1.0000
PORTAGE CTY BK									X	X			2	.7075
PRAIRIE CITY BK										X	0	X	3	1.0000
PRODUCERS BK							X						1	1.0000
RACINE CTY BK			X	X	X	X	X	X	X	X	X	X	10	1.0000
REEDSBURG BK									X	X			2	.7750

TABLE C (Continued)

BANK NAME	7/53	1/54	7/54	1/55	1/56	1/57	1/58	1/59	1/60	1/61	1/62	7/62	PERIODS	REDEMPTION RATE
ROCK CTY BK						X	X	X	X	X	X	X	7	1.0000
ROCK RIVER BK	X	X	X	X	X	X	X	X	X	X	X		11	1.0000
ROCKVILLE BK									X	X	X	X	4	1.0000
SAUK CITY BK								X	X	X	X	X	5	1.0000
SAUK CTY BK							X	X	X	X	X	X	6	1.0000
SEC WARD BK						X	X	X	X	X			5	1.0000
SHAWANAW BK								X	X	X	X	X	5	1.0000
SOUTHERN BK										X			1	.7050
STATE BK, MAD	X	X	X	X	X	X	X	X	X	X	X	X	12	1.0000
STATE BK, MILW	X	X	X	X	X	X	X	X	X	X	X	X	12	1.0000
STATE SECURITY BK								X					1	1.0000
STATE STOCK BK								X	X	X			3	.9500
SCROIX RIVER BK							X	X	X	X			4	.7550
SCROIX VALLEY BK							X	X	X	X	X	X	6	1.0000
SUMMIT BK									X	X	X	X	4	1.0000
SUN PRAIRIE BK										X	X	X	3	1.0000
TRADESMENS BK								X	X	X			3	.5100
UNION BK								X					1	1.0000
WALWORTH CTY BK					X	X	X	X	X	X	X	X	8	1.0000
WAUKESHA CTY BK					X	X	X	X	X	X	X	X	8	1.0000
WAUPACA CTY BK								X	X	X			3	.8300
WAUPUN BK						X	X	X	X	X			5	.8000
WAUSHARA CTY BK										X			1	.7350
WINNEBAGO CTY BK					X	X	X	X	X	X			6	.5700
WISCONSIN BK,MP	X	X	X	X	X								5	1.0000
WISCONSIN BK,MAD							X	X	X	X	X	X	6	1.0000
WIS MAN&FIRE INSUR	X	X	X	X	X	X	X	X	X	X	X	X	12	1.0000
WIS PINERY BK								X	X	X			3	1.0000
WIS VALLEY BK								X	X	X			3	.7700
WOOD CTY BK									X	X			2	.7700
TOTAL	8	10	19	23	30	45	68	99	107	108	62	60		

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MINNESOTA

TABLE D

BANK NAME	1/59	4/59	7/59	10/59	1/60	4/60	7/60	10/60	1/63	10/63	PERIODS	REDEMPTION RATE
BK OF CHATFIELD				X	X	X			X	X	5	1.0000
BK OF OWATONNA		X	X								2	.2075
BK OF RED WING				X							1	1.0000
BK OF ROCHESTER											0	.1625
BK OF ST. PAUL		X	X	X	X	X	X	X			7	.9800
BK OF STATE OF MN	X	X	X	X							4	.7000
CENTRAL BK,NEW ULM			X	X	X	X	X	X			6	.3000
CHISAGO CTY BK, TF		X	X								2	.1925
EXCHANGE BK, GLENCOE	X	X	X								3	.2125
FARMERS BK, GARDEN CITY		X	X	X							3	1.0000
FILLMORE CTY BK, SPLTER			X								1	.2000
L CROSS L CRFS BK,HOKAH			X	X	X	X	X	X	X	X	8	1.0000
NICOLLET CTY BK, SPETER		X	X	X							3	.3500
PEOPLES BK, ST. PETER			X	X	X	X	X	X	X	X	8	1.0000
STATE BK MN, AUSTIN			X	X					X	X	4	1.0000
WINONA CTY BK			X	X	X	X	X	X	X	X	8	1.0000
TOTAL	2	7	13	11	6	6	5	5	5	5		

TABLE E

Appendix

New York Failed Free Banks

Bank, Location	Begin	Close	Redemption Rate
Adams Bank, Ashford	1850	1851	bond
Agricultural Bank of Herkimer	1839(1846)	6/1858	par
Allegany County Bank, Angelica	1839	3/1842	.50(se)/.36(s)
American Bank, Mayville	1847	1851	bond
Amenia Bank, Leedsville	1844	1852	bond
Artisan's Bank, NYC	1856	10/1860	bond
Astor Bank, NYC	1852	5/1853	par
Atlas Bank of NY, Clymer	1847	12/1847	.75(se)/.97(s)
Bank of Albany	1792(1855)	5/1861	par
Bank of America, Buffalo	1839	p10/1841	.76(se)/.78(s)
Bank of Bainbridge, Penn Yan	1847	1855	bond
Bank of Brockport	1839	1844	.80
Bank of the Capital, Albany	1853	5/1861	par
Bank of Carthage	1852	1854	bond
Bank of Central NY, Utica	1838(1843)	1860	par
Bank of Commerce, Buffalo	1839	p10/1841	.76
Bank of Corning	1839(1843)	1860	par
Bank of the Empire State, Allegany	1848	8/1853	bond
Bank of Hornellsville	6/1854	1857	par
Bank of the Interior	1857	5/1861	par
Bank of Lake Erie, Frankfort	1847	1853	bond
Bank of Lodi, Gowenda	1839	p10/1841	.97(se)/.83(s)
Bank of New Rochelle, Bolivar	1844	1851	.84(se)/par(s)
Bank of Olean	1840	3/1842	.74(se)/.87(s)
Bank of the People, Lowville	1852	9/1853	bond
Bank of Sing Sing, Ossining	1854	10/1860	par
Bank of Tonawanda	1838	1840	.68
Bank of the Union, Belfast	1852	1855	par(bond)
Bank of the Union in the City of New York	1853	10/1854	par
Bank of the U.S. in NY, NYC	1838	10/1842	par
Bank of Western NY, Rochester	1838	p10/1841	.75
Binghamton Bank	1839	p10/1841	.74(se)/.79(s)

( )Date first listed as a free bank in condition statements.

p-Prior to.

nc-No circulation.

na-Not available.

bond-Bond posted for redemption of notes; par redemption assumed.

rec-Receiver appointed; no further information.

(se)-Redemption rate for notes secured by "Stock and Estate."

(s)-Redemption rate for notes secured by "Stock."

TABLE E (Continued)

Bank, Location	Begin	Close	Redemption Rate
Bowery Bank, NYC	1847	10/1857	rec
Brockport Exchange Bank	1852	8/1861	par
Camden Bank	1848	1854	par(bond)
Canal Bank of Lockport	1839(1846)	1/	par(bond)
Cataract Bank, Lockport	1858	1861	.93
Cattaraugus County Bank, Randolph	1840	p10/1841	.77(se)/.85(s)
Central Bank of City of NY	1853	1/1855	par
Champlain Bank, Ellenburgh	1846	1853	bond
Chelsea Bank, NYC	1839	1/1843	.25
Chemung County Bank, Horseheads	1855	10/1857	par
City Trust and Banking Co., NYC	1839	1/1843	par
Clinton Bank of Buffalo	1856	1863	na
Clinton Bank of NYC	1839	1844	.60
Commercial Bank of Allegany Co., Friendship	1847	1854	bond
Commercial Bank of Lockport	1847	1851	bond
Cortland County Bank, Ashford	1848	12/1851	bond
Dairymen's Bank, Newport	1852	1857	par
Drover's Bank of St. Lawrence County, Ogdensburg 2/	1844	10/1855	par(bond)
Dunkirk Bank	1851	1855	bond
Dutchess County Bank, Amenia	1849	1855	par(bond)
Eighth Avenue Bank, NYC	1853	10/1854	.94
Empire City Bank, NYC	1852	12/1854	par
Erie County Bank, Buffalo	1838	p10/1841	.60(se)/.72(s)
Excelsior Bank, Meridian	1851	1852	bond
Exchange Bank of Buffalo	1844	11/1854	par
Exchange Bank of Genesse, Batavia	1838(1843)	12/1856	par
Exchange Bank of Rochester	1839	p1/1843	par
Farmer's Bank of Geneva	1839	10/1844	par
Farmer's Bank of Hamilton County, Arietta	1850	1854	bond
Farmer's Bank at Malone	1842	1845	par
Farmer's Bank of Mina	1847	1853	par(bond)
Farmer's Bank of Onondaga 4/	1852	1853	.85
Farmer's Bank of Orange County, Warwick	1842	1844	par
Farmer's Bank of Orleans, Gaines	1838	3/1842	par
Farmer's Bank of Penn Yan	1839	3/1840	par
Farmer's Bank of Saratoga County, Crescent	1851	5/1857	par

1/ Succeeded by Niagara County Bank, but redemption rate information available.

2/ Originally Drover's Bank of Cattaragus County.

TABLE E (Continued)

Bank, Location	Begin	Close	Redemption Rate
Farmer's Bank of Seneca County, Romulus	1839	1840	.74(se)/par(s)
Farmer's & Drover's Bank of Erie County, Buffalo	1843	1846	par
Farmer's & Mechanics Bank of Ogdensburg	1843	1848	par
Farmer's & Mechanics Bank of Onondaga	1839	p1843 1/	par
Franklin Bank of Chautauqua County, Marvin	1847	1852	bond
Franklin County Bank, Malone	1846	1851	bond
Freemen's Bank of Washington County, Hebron	1850	1853	bond
H.J. Miner's Bank, Fredonia	1/1850	3/	par
Hamilton Bank	1841	5/1844	par
Hamilton Exchange Bank, Greene	1850	1857	.84
Hartford Bank	1849	1853	bond
Henry Keep's Bank, Watertown	1847	1850	bond
Hollis White & Co.'s Bank, Niagara Falls 4/	1855	11/1860	par
Hollister Bank of Buffalo	1850	9/1857	par
Howard Trust & Banking Co, Troy	1839	1844	par
Island City Bank, NYC	1853	10/1857	par
James' Bank, Jamesville	1839	10/1851	.91
J.W. Rumsey & Co.'s Bank, Tarrytown		1860	1861par
Kirkland Bank, Clinton	1845	1854	bond
Knickerbocker Bank, Genoa	1848	1851	bond
Knickerbocker Bank of NYC	1851	12/1854	par
Lake Mahopac Bank, Mahopac	1854	5/	par
Leland Bank, New Lebanon	1852	1853	bond
Lockport Bank & Trust Co.	1838	1855	par(bond)
Lumberman's Bank, Wilmurt	1851	1852	bond
Luther Wright's Bank	1844	6/	par
McIntyre Bank, Adirondac	1847	6/1851	bond
Manufacturer's Bank at Ulster, Saugerties	1840	1845	par
Mechanic's Bank of Buffalo	1839	p10/1841	.63
Mechanic's Bank of Watertown	1851	1854	bond
Medina Bank	1854	6/1861	par
Merchant's Banking Co., NYC	1839	12/1839	par
Merchant's Exchange Bank of Buffalo	1838	p10/1841	.65(se)/.81(s)

3/ Dillistin shows as continuing.

4/ See Dillistin.

5/ After 1859 operated a private bank, see Dillistin.

6/ Absorbed 1857 by Lake Ontario Bank.

TABLE E (Continued)

Bank, Location	Begin	Close	Redemption Rate
Mercantile Bank of Schnectady	1863	p1/1843	par
Merchant's Bank of Canandaigua, Naples	1843	1851	bond[7/]
Merchant's Bank of Chatauqua County, Mina	1847	4/1853	bond
Merchant's Bank of Washington County, Granville	1851	1851	bond
Merchant's & Farmer's Bank of Putnam County, Carmel	1843	1854	bond
Merchant's & Mechanics Bank of Oswego, N. Granville	1852	1854	.77
Monroe Bank of Rochester, Cuba	1852	1857	par
Millers Bank of New York, Clyde	1838	1840	.94(se)/par(s)
National Bank of Albany	1856	5/1861	par
New York Bank of Saratoga County, Hadley	1851	1853	bond
New York Banking Company, NYC	1838	10/1842	.42
New York Security Bank, Hope Falls	1847	1854	par(bond)
New York State Stock Security Bank, New York City	1838	1850	par
New York Stock Bank, Durham	1843	1851	bond
New York Trader's Bank of Washington County, N. Granville	1851	1853	par
North American Bank, NYC	1840	8/1842	par
North American Trust & Banking Co., New York City	1838	1842	par
Northern Bank of New York, Madrid	1847	1852	bond
Northern Canal Bank, Fort Ann	1847	1853	bond
Northern Exchange Bank, Brasher Falls	1847	1853	bond
Oliver Lee & Co.'s Bank, Buffalo	1844	1857	par
Onondaga Bank, Syracuse	1854	4/1860	par
Onondaga County Bank, Syracuse[8/]	1830	5/1856	nc
Ontario Bank, Canandaigua	1855	9/1857	par
Ontario County Bank, Phelps	1856	9/1857	par
Oswego County Bank, Meridian	1849	1851	bond
Patchin Bank, Buffalo	1844	1853	bond
Phoenix Bank of Bainbridge	1850	1854	bond
Phoenix Bank of Buffalo	1839	p10/1841	.73
Pine Plains Bank	1839	1857	par
Powell Bank, Newburgh	1838	1858	par
Pratt Bank of Buffalo	1847	1858	.94
Prattsville Bank	1843	1852	bond

[7/] Taken as Merchant's Bank of Ontario County, report of 1860.

[8/] A second bank with this name shown on condition reports for data different from those given by Dillistin. The approximate dates for this bank were 1856-1859. This second bank did not circulate notes.

TABLE E (Continued)

Bank, Location	Begin	Close	Redemption Rate
Putnam County Bank, Farmers Mills	1848	1855	par(bond)
Putnam Valley Bank	1849	1854	par
Queen City Bank, Buffalo	1853	1854	bond
R.M. Goddard & Co.'s Bank, Canton	1859	2/1861	par
St. Lawrence Bank, Ogdensburg	1839	3/1842	.50(se)/.32(s)
State Bank of New York at Buffalo	1839	3/1842	.30
State Bank at Sacket's Harbor	1852	1856	par
State Bank at Saugerties	1847	1854	par
Staten Island Bank, NYC	1838	3/1842	.56
Suffolk Bank, NYC	1852	12/1854	par
Sullivan County Bank, Monticello	1850	1852	bond
Tenth Ward Bank, NYC	1838	1/1843	.94
Union Bank of Buffalo	1839	p10/1841	.81
U.S. Bank at Buffalo	1838	p10/1841	.77
Valley Bank, Boonville	1851	1854	bond
Village Bank, Randolph	1848	1850	bond
Walter Joy's Bank, Buffalo	1848	11/1849	par
Warren County Bank, Johnsburgh	1843	1849	bond
Washington Bank in the City of NY	1839	2/1842	par
Western Bank of Lockport	1850	9/1857	par
Western Bank of Suffolk County, Babylon	1852	1853	bond
Western Bank, Huntington	1850	1854	na
White Plains Bank, Naples	1844	1854	par(bond)
William Williams Bank of Hastings	1861	8/1862	na
Willoughby Bank, Brooklyn	1838	p1/1843	par
Wool Grower's Bank of State of New York, New York City	1838	1/1848	par