Bank Runs, Deposit Insurance, and Bank Regulation, Part II

by Charles T. Carlstrom

Contagious bank failures are often thought to be a possible consequence of a banking system without federal deposit insurance. This article considers whether federal deposit insurance is necessary to prevent these types of bank runs. Part I, which was presented in the February Economic Commentary, described some of the costs and benefits of providing deposit insurance and concluded that an analysis of contagious bank failures is necessary in order to understand these benefits. Part II continues with an examination of contagious bank runs and a discussion of how the market handled bank panics prior to the Federal Reserve System and the Federal Deposit Insurance Corporation.

Contagious Bank Failures

The last apparent difference between banks and other businesses is the possibility for a rumor or a failure of another bank to ignite bank runs and cause the failure of financially sound banks. These types of bank failures are termed "sunspots" because, if depositories truly believe that a bank's solvency depends on events unrelated to market fundamentals—such as the amount of solar activity—a bank's solvency would, in fact, depend on the amount of solar activity. In the typical example, a sunspot is the failure of one bank or a group of banks, which ignites rumors that other banks might also fail. It would seem irrational for depositors to run on a solvent bank. However, because a bank's solvency and solvency depend in part on the number of depositories wishing to withdraw money, it is rational for each depositor to queue up if he expects other depositors also to stand on line. Sunspot bank runs are also said to be "bubble" phenomena. One of the most famous examples of a bubble involved tulip bulbs in Holland during the seventeenth century. Investors frantically bought tulip bulbs, expecting their price to rise, which in turn caused their price to rise.

Sunspot bank runs are like bubbles in that they are self-fulfilling prophecies. To determine the correct regulatory response to this apparent market failure, one must first inquire empirically how frequently bank failures are caused by sunspots and examine some of the ways in which private clearinghouses protected against widespread bank failures. The article concludes that federally provided deposit insurance may not be necessary in order to protect against such bank runs.

Determining how often bank runs are caused by sunspots—extraneous events—is difficult to do with any degree of statistical accuracy. However, we can examine whether bank failures were the products of the same type of deposit and withdrawal behavior during both panics and nonpanics.
Gorton tests this hypothesis for bank failures during the U.S. National Banking Era (1863 to 1914) and shows that the factors affecting deposits and withdrawals were similar in periods of widespread bank failures and in periods when banking failures were not widespread. His results suggest that “bank runs during the National Banking Era were systematic responses by depositors to changing perceptions of risk.”

Catastrophic evidence that extraneous events did not seem to cause a substantial number of bank failures prior to the Great Depression is given by Benston, et al. They show that the average bank run in the U.S. for the 1875 to 1915 period was 0.82 percent, versus 1.01 percent for non-financial firms. If banks are like other firms except for the possibility of contagious bank runs, one would expect the failure rate of banks to be at least as great as it is for other kinds of businesses.

Most bank runs do not seem to be of the type pictured in textbooks (or in the Frank Capra movie American Madness). Rather, they result from the presence of depositors in bank lines, with mass hysteria as depositors line up for blocks hoping to withdraw their money. Instead, the evidence indicates that contagious bank failures may have been rational responses to changes in the financial worth of a bank. Even the recent runs on the Ohio and Maryland banks may have been caused by contagious behavior.

Since the evidence against contagious bank failures is indirect, one should not completely dismiss the possibility that a contagion of bank runs might arise in an unregulated environment. However, this type of bank run does not appear to be as widespread as typically thought, so the regulatory response to this possibility should be tempered by our current state of knowledge.

Why Bank Runs Can Be Contagious

The possibility for extraneous events leading to bank runs arises from two elements of banking structure: the first comes from a sector aspect of banking depositors, and the illiquidity of many bank assets. The former is necessary in order for runs to exist. If the amount in a depositor’s account fluctuated with the market value of the assets and liabilities of the bank (as it does in a mutual fund), bank runs would typically not occur. However, as discussed earlier, the threat of bank runs imposes a necessary discipline on banks.

A bank asset is said to be illiquid if the bank cannot sell it in a short amount of time without incurring a substantial loss. Illiquidity results from the asymmetry between the bank’s perception of the value of its assets and the market’s perception of the value of those assets. This difference arises because information that a bank learns at the time a loan is made (such as a borrower’s credit history, assets, and liabilities) and information that a bank learns during the life of a loan (such as timing and receipt of payments) cannot be costlessly acquired by other financial firms.

The fire-sale value of an asset is the price that can be received for an asset on short notice. Asymmetrical information explains why the fire-sale value of a government security (in which all investors have the same information about its quality) is nearly 100 percent of its longer-run market price. Similarly, the fire-sale value of a corporate bond is much closer to its longer-run value than the fire-sale value of a personal loan.

Banks will tend to first sell off assets that might look good to purchasers but that the banks know are of poor quality. Because the marketplace anticipates this, asymmetric information causes some of a bank’s assets to sell at a large discount.

Therefore, when a bank run occurs, a financially sound but illiquid bank can conceivably become insolvent. A bank may be forced to sell off a high-quality asset in order to get quick cash, which may bring a low fire-sale value since information about the quality of the asset is not made public.

Cures for Contagious Bank Runs

The two principal methods the federal government uses to eliminate bank runs based on extraneous events are federal deposit insurance and discount lending by Federal Reserve Banks.

FDIC insurance has eliminated the need for most depositors to run on a bank, whether the run is caused by sunspots or by information that the bank has become insolvent. Federal Reserve Bank lending can minimize such runs because the Fed stands willing to provide “adjustment” or even extended credit to a solvent but troubled bank, so that it does not have to liquidate in assets at fire-sale prices.

Before the Federal Reserve Act, the private banking industry was organized by a system of regional clearinghouses, whose powers and functions resembled those of a central bank. In many ways the Federal Reserve System was simply the nationalization of the private clearinghouses.

A study by Gorton indicates that the New York Clearing House helped eliminate contagious bank runs was by suspending convertibility of deposits into specie or currency, and the bank would make no payments, but temporarily would not honor cash withdrawals.

Although suspending convertibility was initially illegal, it was allowed to occur on at least eight occasions during the nineteenth and early twentih centuries.

Gorton argues that “such accommodating behavior arose because suspending the bank’s assets was not in their best interests.”

The ability to temporarily suspend convertibility not only helped to quell existing bank runs, but it also reduced the chance that a run based on extraneous information, or sunspots, could occur.

Bank Runs During the Great Depression

Another lesson can be learned by examining bank failures during the Great Depression. With the inception of the Federal Reserve System, suspension of convertibility did not occur (except for the government-imposed banking holidays). Friedman and Schwartz argue that “if the pre-Federal Reserve banking system had been in effect ... restriction (suspending convertibility) would have almost certainly taken place in September 1931 and very likely would have prevented at least the subsequent failures.”

Instead, the total suspension that eventually took place aggravated the situation. The bankruptcy in which states declared banking holidays in 1932 and 1933 further worsened the runs as depositors in open states rushed to get their money after neighboring states imposed holidays.

Ironically, at its inception, the Federal Reserve System instituted a discount window in order to prevent banking panics. As argued earlier, discount lending lesions the incentives for banks to hold liquid assets, making banks more vulnerable to runs.

Instead of lowering the discount rate that a bank could provide liquidity during the panics, the Federal Reserve raised the discount rate in September 1931 and again in February 1932.

Although the level of discount lending increased during the Great Depression, banks also had to dump assets on the market to try to meet depositors and to repurchase the Further liquidation of the bank’s assets was not in their best interests.

The ability to temporarily suspend convertibility not only helped to quell existing bank runs, but it also reduced the chance that a run based on extraneous information, or sunspots, could occur.

Conclusion

Many agree that the reform of the current banking structure is overdue. To their credit, banks regulators allowed nearly 200 insolvent banks to fail in 1987. Unfortunately, they may not be letting enough insolvent banks fail, and even when regulators close a bank, the FDIC sometimes employs a rescue procedure that protects the “unitized” depositors.

Although reform of the present banking system may be desirable, a growing body of evidence indicates that many of the current financial problems in banking are at least partly the result of the incentive structure created by deposit insurance and by the way deposit insurance is administered.

Regulators contemplating reform of the banking system should consider the costs associated with federal deposit insurance. Left on its own, the private system provided many of the current safeguards considered necessary for a well functioning banking system.

Charles T. Cowles is an economist at the Federal Reserve Bank of Cleveland. The author wishes to thank Walker Todd, James Thomson, John Scadding, William Goss, and Mark Sniderman for their helpful comments.

The views stated herein are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.
Gorton tests this hypothesis for bank failures during the U.S. National Banking Era (1863 to 1914) and shows that the factors affecting deposits and withdrawals in this period were phenomena of widespread bank failures and in periods when banking failures were not widespread. His results suggest that "...the presence of contagious bank runs during the National Banking Era were systematic responses by depositors to changing perceptions of risk." Combating evidence that extraneous events did not seem to cause a substantial number of bank failures prior to the Great Depression is given by Benston, et al. They show that the average bank failure rate for the 1875 to 1919 period was 0.82 percent, versus 1.01 percent for non-bank failures. If banks are like other firms except for the possibility of contagious bank runs, one would expect the failure rate of banks to be at least as great as it is for other kinds of businesses.

Most bank runs do not seem to be of the type pictured in textbooks (or in the Frank Capra movie American Banking). They are not the result of runs on consumer deposits, with mass hysterics as protagonists, and line ups for blocks hoping to withdraw their money. Instead, the evidence indicates that contagious bank failures had been rational responses to changes in the financial worth of a bank. Even the recent runs on the Ohio and Maryland banks seem to have been based on market fundamentals.

Since the evidence against contagious bank failures is indirect, one should not completely dismiss the possibility that a contagious run on one bank might arise in an unrelated environment. However, this type of bank run does not appear to be as widespread as typically thought, so the regulatory response to this possibility should be tempered by our current state of knowledge.

**Why Bank Runs Can Be Contagious**

The possibility for extraneous events leading to bank runs arises from two elements of banking structure: the fire-sale value of assets in order to get quick cash, which may bring a low fire-sale value since information about the quality of the asset is not made public.

**Cures for Contagious Bank Runs**

The two principal methods the federal government uses to eliminate bank runs based on extraneous events are federal deposit insurance and discount lending by Federal Reserve Banks.

FDIC insurance has eliminated the need for most depositors to run on a bank, whether the run is caused by sunspots or by information that the bank has become insolvent. Federal Reserve Bank lending can minimize such runs because the Fed stands willing to provide "adjustment" or even extend credit to a solvent but troubled bank, so that it does not have to liquidate in assets at fire sale prices.

Before the Federal Reserve Act, the pre-1914 banking industry was organized by a system of regional clearinghouses, whose powers and functions resembled those of a central bank. In many ways the Federal Reserve System was simply the nationalization of the private clearinghouses.

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**Factors Contributing to Bank Runs**

The New York Clearing House also maintained capital requirements and reserve requirements and required banks to publish their balance sheet items. In addition, it could effectively shut down an insolvent bank.

These practices are similar to current proposals to allow private insurance companies or mutual insurance funds to insure banks. Critics of this approach argue that the insurance companies could fail with a contagion of bank runs, as were experienced during the Great Depression. However, branch banking, to some extent, enables a bank to insulate itself. During the Great Depression, only one bank in California failed, and no banks in Canada failed—both areas in which branch banking was allowed.

How broad a role private insurance could play in our banking system is an open question. The recent crisis with the Ohio thrifts, in particular, seems to cast doubt on the ability of a private insurance system to protect against bank runs. In spring 1985, runs occurred on thrifts insured by the Ohio Deposit Guarantee Fund (ODGF) after the fund was depleted by the failure of the Home State Savings Bank. Any viable private insurance scheme, however, would have to give the insurance company the right to cancel a contract or the right to close a bank. That is, it would have to resemble the functions of the private clearinghouses. The ODGF did not have the right to close member thrifts when they became insolvent, however. Consequently, institutions like Home State Savings were not closed promptly.

Another way the New York Clearing House helped eliminate contagious bank runs was by suspending convertibility of deposits into specie or currency. A bank would have to pay off depositors at a troubled bank.

Although the level of discount lending increased during the Great Depression, banks also had to dump assets on the market to try to meet depositors' demands that further liquidation of the bank's assets was not in their best interest. The ability to temporarily suspend convertibility not only helped to quell existing bank runs, but also it reduced the chance that a run based on extraneous information, or sunspots, could occur.

**Conclusion**

Many agree that reform of the current banking structure is overdue. To their credit, bank regulators allowed nearly 200 insolvent banks to fail in 1987. Unfortunately, they may not be letting enough insolvent banks fail, and even when regulators close a bank, the FDIC sometimes employs a rescue procedure that protects the "uninjured" depositors.

Although reform of the present banking system may be desirable, a growing body of evidence indicates that many of the current financial problems in banking are at least partly the result of the incentive structure created by deposit insurance and by the way deposit insurance is administered.

Regulators contemplating reform of the banking system should consider the costs associated with federal deposit insurance. Left on its own, the private system provided many of the current safeguards considered necessary for a well-functioning banking system.
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It would seem irrational for depositors to run on a solvent bank. However, because a bank's solvency and liquidity depend in part on the number of depositors wishing to withdraw money, it is rational for each depositor to fear that other depositors also might the same thing and initiate a sunspot.

Sunspot bank runs are also said to be "bubble" phenomena. One of the most famous examples of a bubble involved tulip bulbs in Holland during the seventeenth century. Investors frantically bought tulip bulbs, expecting their price to rise, which in turn caused their price to rise.

Sunspot bank runs are like bubbles in that they are self-fulfilling prophecies. To determine the correct regulatory response to this apparent market failure, one must first inquire empirically how frequently bank failures are contagious and examines some of the ways in which private clearinghouses protected against widespread bank failures. The article concludes that federal deposit insurance is not necessary in order to protect against such bank runs.

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