

THE DISCOUNT -WINDOW

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The discount window refers to lending by each of the twelve regional Federal Reserve Banks to depository institutions. Discount window loans generally fund only a small part of bank reserves: For example, at the end of 1985 discount window loans were less than three percent of total reserves. Nevertheless, the window is perceived as an important tool both for reserve adjustment and as part of current Federal Reserve monetary control procedures.

Mechanics of a Discount Window Transaction

Discount window lending takes place through the reserve accounts depository institutions are required to maintain at their Federal Reserve Banks. In other words, banks borrow reserves at the discount window. This is illustrated in balance sheet form in Figure 1. Suppose the funding officer at Ralph's Bank finds it has an unanticipated reserve deficiency of \$1,000,000 and decides to go to the discount window for an overnight loan in order to cover it. Once the loan is approved, the Ralph's Bank reserve account is credited with \$1,000,000. This shows up on the asset side of Ralph's balance sheet as an increase in "Reserves with Federal Reserve Bank," and on the liability side as an increase in "Borrowings from Federal Reserve Bank." The transaction also shows up on the Federal Reserve Bank's balance sheet as an increase in "Discounts and Advances" on the asset side and an increase in "Bank Reserve

Accounts" on the liability side. This set of balance sheet entries takes place in all the examples given in the Box.

The next day, Ralph's Bank could raise the funds to repay the loan by, for example, increasing deposits by \$1,000,000 or by selling \$1,000,000 of securities. In either case, the proceeds initially increase reserves. Actual repayment occurs when Ralph's Bank's reserve account is debited for \$1,000,000, which erases the corresponding entries on Ralph's liability side and on the Reserve Bank's asset side.

Discount window loans, which are granted to institutions by their district Federal Reserve Banks, can be either advances or discounts. Virtually all loans today are advances, meaning they are simply loans secured by approved collateral and paid back with interest at maturity. When the Federal Reserve System was established in 1914, however, the only loans authorized at the window were discounts, also known as rediscounts. Discounts involve a borrower selling "eligible paper," such as a commercial or agricultural loan made by a bank to one of its customers, to its Federal Reserve Bank. In return, the borrower's reserve account is credited for the discounted value of the paper. Upon repayment, the borrower gets the paper back, while its reserve account is debited for the value of the paper. In the case of either advances or discounts, the price of borrowing is determined by the level of the discount rate prevailing at the time of the loan.

Although discount window borrowing was originally limited to Federal Reserve System member banks, the Monetary Control Act of 1980 opened the

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Figure 1

BORROWING FROM THE DISCOUNT WINDOW

Ralph's Bank		Federal Reserve Bank	
Assets	Liabilities	Assets	Liabilities
Reserves with Federal Reserve	Borrowings from Federal Reserve Bank	Discounts and Advances	Bank Reserve Accounts
+ \$1,000,000	+ \$1,000,000	+ \$1,000,000	+ \$1,000,000

Examples of Discount Window Transactions

Example 1 - It is Wednesday afternoon at a regional bank, and the bank is required to have enough funds in its reserve account at its Federal Reserve Bank to meet its reserve requirement over the previous two weeks. The bank finds that it must borrow in order to make up its reserve deficiency, but the money center (that is, the major New York, Chicago, and California) banks have apparently been borrowing heavily in the federal funds market. As a result, the rate on fed funds on this particular Wednesday afternoon has soared far above its level earlier that day. As far as the funding officer of the regional bank is concerned, the market for funds at a price she considers acceptable has "dried up." She calls the Federal Reserve Bank for a discount window loan.

Example 2 - A West Coast regional bank, which generally avoids borrowing at the discount window, expects to receive a wire transfer of \$300 million from a New York bank, but by late afternoon the money has not yet shown up. It turns out that the sending bank had due to an error accidentally sent only \$3,000 instead of the \$300 million. Although the New York bank is legally liable for the correct amount, it is closed by the time the error is discovered. In order to make up the deficiency in its reserve position, the West Coast bank calls the discount window for a loan.

Example 3 - It is Wednesday reserve account settlement at another bank, and the funding officer notes that the spread between the discount rate and fed funds rate has widened slightly. Since his bank is buying fed funds to make up a reserve deficiency, he decides to borrow part of the reserve deficiency from the discount window in order to take advantage of the spread. Over the next few months, this repeats itself until the bank receives an "informational" call from the discount officer at the Federal Reserve Bank, inquiring as to the reason for the apparent pattern in discount window borrowing. Taking the hint, the bank refrains from continuing the practice on subsequent Wednesday settlements.

Example 4 - A money center bank acts as a clearing agent for the government securities market. This means that the bank maintains book-entry securities accounts for market participants, and that it also maintains a reserve account and a book-entry securities account at its Federal Reserve Bank, so that securities transactions can be cleared through this system. One day, an internal computer problem arises that allows the bank to accept securities but not to process them for delivery to dealers, brokers, and other market participants. The bank's reserve account is debited for the amount of these securities, but it is unable to pass them on and collect payment for them, resulting in a growing overdraft in the reserve account. As close of business approaches, it becomes increasingly clear that the problem will not be fixed in time to collect the required payments from the securities buyers. In order to avoid a negative reserve balance at the end of the day, the bank estimates its anticipated reserve account deficiency and goes to the Federal Reserve Bank discount window for a loan for that amount. The computer problem is fixed and the loan is repaid the following day.

Example 5 - Due to mismanagement, a privately insured savings and loan association fails. Out of concern about the condition of other privately insured thrift institutions in the state, depositors begin to withdraw their deposits, leading to a run. Because they are not federally insured, some otherwise sound thrifts are not able to borrow from the Federal Home Loan Bank Board in order to meet the demands of the depositors. As a result, the regional Federal Reserve Bank is called upon to lend to these thrifts. After an extensive examination of the collateral the thrifts could offer, the Reserve Bank makes loans to them until they are able to get federal insurance and attract back enough deposits to pay back the discount window loans.

window to all depository institutions, except bankers' banks, that maintain transaction accounts (such as checking and NOW accounts) or nonpersonal time deposits. In addition, the Fed may lend to the United States branches and agencies of foreign banks if they hold deposits against which reserves must be kept.

Finally, subject to determination by the Board of Governors of the Federal Reserve System that "unusual and exigent circumstances" exist, discount window loans may be made to individuals, partnerships, and corporations that are not depository institutions. Such lending would only take place if the

Board and the Reserve Bank were to find that credit from other sources is not available and that failure to lend may have adverse effects on the economy. This last authority has not been used since the 1930s.

Discount window lending takes place under two main programs, adjustment credit and extended credit.¹ Under normal circumstances adjustment credit, which consists of short-term loans extended to cover temporary needs for funds, should account for the larger part of discount window credit. Loans to large banks under this program are generally overnight loans, while small banks may take as long as two weeks to repay. Extended credit provides funds to meet longer term requirements in one of three forms. First, seasonal credit can be extended to small institutions that depend on seasonal activities such as farming or tourism, and that also lack ready access to national money markets. Second, extended credit can be granted to an institution facing special difficulties if it is believed that the circumstances warrant such aid. Finally, extended credit can go to groups of institutions facing deposit outflows due to changes in the financial system, natural disasters, or other problems common to the group (see Box, Example 5). The second and third categories of extended credit may involve a higher rate than the basic discount rate as the term of borrowing grows longer.

In order to borrow from the discount window, the directors of a depository institution first must pass a borrowing resolution authorizing certain officers to borrow from their Federal Reserve Bank. Next, a lending agreement is drawn up between the institution and the Reserve Bank. These two preliminaries out of the way, the bank requests a discount window loan by calling the discount officer of the Reserve Bank and telling the amount desired, the reason for borrowing, and the collateral pledged against the loan. It is then up to the discount officer whether or not to approve it.

Collateral, which consists of securities which could be sold by the Reserve Bank if the borrower fails to pay back the loan, limits the Fed's (and therefore the taxpaying public's) risk exposure. Acceptable collateral includes, among other things, U. S. Treasury securities and government agency securities, municipal securities, mortgages on one-to-four family

dwellings, and short-term commercial notes. Usually, collateral is kept at the Reserve Bank, although some Reserve Banks allow institutions with adequate internal controls to retain custody.

The discount rate is established by the Boards of Directors of the Federal Reserve Banks, subject to review and final determination by the Board of Governors. If the discount rate were always set well above the prevailing fed funds rate, there would be little incentive to borrow from the discount window except in emergencies or if the funds rate for a particular institution were well above that for the rest of the market. Since the 1960s, however, the discount rate has more often than not been set below the funds rate. Figure 2, which portrays both adjustment credit borrowing levels and the spread between the two rates from 1955 to 1985, shows how borrowing tends to rise when the rate spread rises.

The major nonprice tool for rationing discount window credit is the judgment of the Reserve Bank discount officer, whose job is to verify that lending is made only for "appropriate" reasons. Appropriate uses of discount window credit include meeting demands for funds due to unexpected withdrawals of deposits, avoiding overdrafts in reserve accounts, and providing liquidity in case of computer failures (see Box, Example 4), natural disasters, and other forces beyond an institution's control.²

An inappropriate use of the discount window would be borrowing to take advantage of a favorable spread between the fed funds rate and the discount rate (Example 3). Borrowing to fund a sudden, unexpected surge of demand for bank loans may be considered appropriate, but borrowing to fund a deliberate program of actively seeking to increase loan volume would not. Continuous borrowing at the window is inappropriate. Finally, an institution that is a net seller (lender) of federal funds should not at the same time borrow at the window, nor should one that is conducting reverse repurchase agreements (that is, buying securities) with the Fed for its own account.

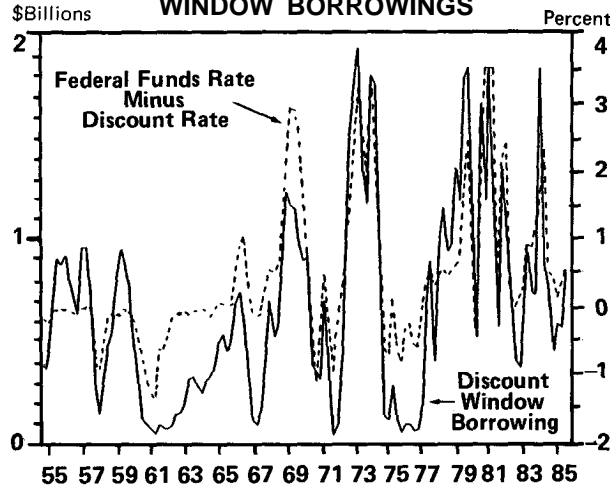
The discount officer's judgment first comes into play when a borrower calls for a loan and states the reason. The monitoring does not end when (and if)

¹For more detailed information on discount window administration policies, see Board of Governors of the Federal Reserve System, **The Federal Reserve Discount Window** (Board of Governors, 1980). The federal regulation governing the discount window is Regulation A, 12 C.F.R. 201.

²In order to encourage depository institutions to take measures to reduce the probability of operating problems causing overdrafts, the Board of Governors announced in May 1986 that a surcharge would be added to the discount rate for large borrowings caused by operating problems unless the problems are "clearly beyond the reasonable control of the institution." See "Fed to Assess 2-Point Penalty on Loans for Computer Snafus," **American Banker**, May 21, 1986.

Figure 2

THE SPREAD BETWEEN THE FEDERAL FUNDS RATE AND DISCOUNT RATE COMPARED WITH DISCOUNT WINDOW BORROWINGS



the loan is approved, however. The discount officer watches for patterns in borrowing and may look at such summary measures as discount window loans as a percentage of deposits and of reserves, and duration and frequency of past borrowing. In addition, special circumstances and efforts to obtain credit elsewhere receive attention. Finally, discount window borrowings are compared with fed funds market activity to make sure banks are not borrowing from the Fed simply to lend at a higher rate in the fed funds market.

If the discount officer suspects that borrowing by an institution has possibly gone beyond what is appropriate, he or she makes an “informational” call in order to find out the particular problems and circumstances of the case (Example 3), as well as how the institution plans to reduce its reliance on the discount window. If little or nothing changes, it may be time for counseling as well as a more direct effort to help the borrower find new sources of credit. It is conceivable that an institution’s credit could be terminated if counseling were to fail, but this is rarely if ever necessary.

The Borrowing Decision

When deciding whether and how much to borrow from the discount window, a bank’s funding officer can be expected to compare the benefit of using the discount window with the cost. The benefit of an additional dollar of discount window credit is the

savings of the rate on federal funds, which is normally the next best alternative to the window. The marginal cost contains two elements. The first is the price of discount window credit, that is, the discount rate. The second is the cost imposed by nonprice measures used by the Fed to limit the amount of borrowing. An equilibrium level of borrowing would be reached when the marginal benefit of savings of the fed funds rate is balanced by the marginal cost including both the discount rate and the cost imposed by nonprice measures.³

Antecedents

In the United States in the late nineteenth and early twentieth centuries, establishment of a central bank was urged in order to provide an “elastic” currency. The central bank’s task would be to expand discount window loans as production (and demand for money) expanded over the business cycle. The loans would then be repaid as goods finally went to market. Such a view of the central bank’s role was based on the “real bills” or “commercial loan” school, which asserted that expansion of the money supply would not be inflationary so long as it was done to meet the “needs of trade.” In other words, loans made by rediscounting commercial loans (which were considered to be made for “productive” purposes) would be self-liquidating since they would be paid back as the goods produced were sold on the market. The money supply increase would consequently be extinguished.⁴ Reflecting the influence of the real bills doctrine, the Preamble to the Federal Reserve Act of 1913 included as a stated purpose “to furnish an elastic currency.” Accordingly, the Act contained provisions for the rediscounting of bank loans “arising out of actual commercial transactions” and defining what paper was eligible for rediscount.

Although the real bills doctrine had the most practical influence on the development of central bank lending, some nineteenth century writers argued that the most important function of a central bank was to act as lender of last resort to the financial system. The first major writer to detail the role of a lender of last resort was Henry Thornton at the beginning of the nineteenth century.⁵ In today’s terms, Thornton described a lender acting as a “cir-

³See Marvin Goodfriend (1983).

⁴For a demonstration of the fallaciousness of this doctrine, see Thomas M. Humphrey (1982).

⁵For a more detailed treatment of the material in this and the following paragraph, see Thomas M. Humphrey and Robert E. Keleher (1984).

cuit breaker," pumping liquidity into the market in order to prevent problems with particular institutions from spreading to the banking system as a whole. He emphasized that the lender of last resort's role in a panic is precisely opposite that of a private banker in that the former should expand lending in a panic while the latter contracts it. At the same time, Thornton did not advocate lending in order to rescue unsound banks, since that would send the wrong message to bankers, namely, that imprudent management would be rewarded with a bailout. Rather, he urged that loans be made only to banks experiencing liquidity problems due to the panic. In other words, the central bank has a responsibility to protect the banking system as a whole, but not to protect individual banks from their own mistakes.

The other important architect of the lender of last resort idea was Walter Bagehot, who detailed his beliefs in *Lombard Street* in 1873. Generally, Bagehot agreed with Thornton, but developed the lender's role in far greater detail. His contribution is best summed up in the venerable Bagehot Rule: Lend freely at a high rate. This implies three points. First, the public should be confident that lending will take place in a panic, so that there is no question as to the central bank's commitment. Second, lending should go to anyone, not just banks, who presents "good" collateral. In addition, collateral should be judged on what it would be worth in normal times, and not on the basis of its temporarily reduced value due to a panic. Finally, borrowers should be charged a rate higher than prevailing market rates. The justifications for a high rate are several, namely, ensuring that central bank credit goes to those who value it highest, encouraging borrowers to look first to other sources of credit, giving borrowers incentives to pay back such credit as early as possible, and compensating the lender for affording borrowers the insurance provided by a lender of last resort.

The ideas set forth by both Thornton and Bagehot emphasized emergency lending rather than adjustment credit. In actual practice, the Bank of England did act as lender of last resort several times during the late nineteenth century, but such lending was done in addition to its normal practice of providing adjustment credit at the "bank rate." In the United States, the real bills doctrine was more influential in shaping the central bank than were the ideas of Thornton or Bagehot.⁶

⁶The lender of last resort idea did surface in the practice of some American clearinghouses acting as emergency lenders during panics. See Gary Gorton (1984).

Evolution of Discount Window Practices

The only type of lending allowed Federal Reserve Banks by the Federal Reserve Act of 1913 was discounting. In 1916 the Act was amended to add the authority for Federal Reserve Banks to make advances, secured by eligible paper or by Treasury securities, to member banks. Advances replaced discounts in practice during 1932 and 1933, when the volume of banks' eligible paper fell precipitously due to the general banking contraction taking place at the time. Emphasis on lending on the basis of "productive" loans gave way to concern with whether or not collateral offered to secure an advance, be it commercial or government securities, was sound enough to minimize risk to the Fed. Since then, advances have been the predominant form of discount window lending.

Nonprice rationing of Federal Reserve credit became firmly established as a matter of practice during the late 1920s. Use of the discount window to finance "speculative" investments was already discouraged due to the real bills doctrine's stress on "productive" uses of credit, but other reasons for lending also received the Board's disapproval. For example, in 1926 the Board adopted a policy of discouraging continuous borrowing from the discount window. In 1928, it specifically stated that banks should not borrow from the window for profit. Since then, the Federal Reserve has emphasized nonprice measures along with the discount rate to control borrowing.

Because market rates were well below the discount rate, banks used the discount window sparingly between 1933 and 1951. From 1934 to 1943, daily borrowings averaged \$11.8 million, and only \$253 million from 1944 to 1951. For the most part, banks held large amounts of excess reserves and were under little pressure to borrow. Even after the business recovery of the early 1940s, borrowing remained at low levels. Banks held large quantities of government securities, and the Federal Reserve's practice of pegging the prices of these securities, instituted in 1942, eliminated the market risk of adjusting reserve positions through sales of governments.

The pegged market for government securities ended in 1947, and the subsequent increased fluctuations of these securities' prices made buying and selling them a riskier way for banks to change reserves. As a result, the discount window began to look more attractive as a source of funds. By mid-1952, borrowings exceeded \$1.5 billion, a level not seen since the early 1930s. Given the new importance

of the window, Regulation A, the Federal Reserve regulation governing discount window credit, was revised in 1955 to incorporate principles that had developed over the past thirty years. In particular, the General Principles at the beginning of Regulation A stated that borrowing at the discount window is a privilege of member banks, and for all practical purposes enshrined nonprice rationing and the discretion of the discount officer regarding the appropriateness of borrowing as primary elements of lending policy.

The new version of Regulation A notwithstanding, the discount rate was for the most part equal to or greater than the fed funds rate during the late 1950s and early 1960s. As a result, there was not much financial incentive to go to the window. By the mid-1960s however, the difference between the fed funds rate and the discount rate began to experience large swings, and the resulting fluctuations in incentives to borrow were reflected in discount window credit levels (see Figure 2).

In 1973, the range of permissible discount window lending was expanded by the creation of the seasonal credit program. More significantly, in 1974 the Fed advanced funds to Franklin National Bank, which had been experiencing deteriorating earnings and massive withdrawals. Such an advance was made to avoid potentially serious strains on the financial system if the bank were allowed to fail and to buy time to find a longer term solution. This particular situation was resolved by takeover of the bulk of the bank's assets and deposits by European American Bank, but the significant event here was the lending to a large, failing bank in order to avert what were perceived to be more serious consequences for the banking system. The action set a precedent for lending a decade later to Continental Illinois until a rescue package could be put together.

Reflecting a discount rate substantially below the fed funds rate from 1972 through most of 1974, discount window borrowings grew to levels that were high by historical standards. A recession in late 1974 and early 1975 drove loan demand down, and market rates tended to stay below the discount rate until mid-1977. During the late 1970s, the spread was positive again, and borrowing from the window increased. Borrowing then jumped abruptly upon the adoption of a new operating procedure for day-to-day conduct of monetary policy (described in the following section), which deemphasized direct fed funds rate pegging in favor of targeting certain reserve aggregates. Because this procedure generally requires a positive level of borrowing, the gap between

the fed funds rate and the discount rate has frequently remained relatively high during the first half of the 1980s.

The Monetary Control Act of 1980 extended to all banks, savings and loan associations, savings banks, and credit unions holding transactions accounts and nonpersonal time deposits the same borrowing privileges as Federal Reserve member banks. Among other things, the Act directed the Fed to take into consideration "the special needs of savings and other depository institutions for access to discount and borrowing facilities consistent with their long-term asset portfolios and the sensitivity of such institutions to trends in the national money markets." Although the Fed normally expects thrift institutions to first go to their own special industry lenders for help before coming to the window, private savings and loan insurance system failures in 1985 led to increased use of extended credit.

The Role of the Discount Window in Monetary Policy

As a tool of monetary policy, the discount window today is part of a more complex process than one in which discount rate changes automatically lead to increases or decreases in the money supply. In practice, the Federal Reserve's operating procedures for controlling the money supply involve the discount window and open market operations working together. In the procedures, there is an important distinction between borrowed reserves and nonborrowed reserves. Borrowed reserves come from the discount window, while nonborrowed reserves are supplied by Fed open market operations. While nonborrowed reserves can be directly controlled, borrowed reserves are related to the spread between the funds rate and the discount rate.

During the 1970s, the Fed followed a policy of targeting the federal funds rate at a level believed consistent with the level of money stock desired. Open market operations were conducted in order to keep the funds rate within a narrow range, which in turn was selected to realize the money growth objective set by the Federal Open Market Committee. Under this practice of in effect pegging the fed funds rate in the short run, changes in the discount rate only affected the spread between the two rates and therefore the division of total reserves between borrowed and nonborrowed reserves. In other words,

⁷These are described in more detail by R. Alton Gilbert (1985) and Alfred Broaddus and Timothy Cook (1983).

if the discount rate were, say, increased while the fed funds rate remained above the discount rate, borrowing reserves from the Fed would become relatively less attractive than going into the fed funds market.⁸ This would decrease quantity demanded of borrowed reserves, but would increase demand for their substitute, nonborrowed reserves, thereby tending to put upward pressure on the funds rate. Given the policy of pegging the funds rate, however, the Fed would increase the supply of nonborrowed reserves by purchasing securities through open market operations. The result would be the same fed funds rate as before, but more nonborrowed relative to borrowed reserves.⁹

After October 6, 1979, the Federal Reserve moved from federal funds rate targeting to an operating procedure that involved targeting nonborrowed reserves. Under this procedure, required reserves, since they were at the time determined on the basis of bank deposits held two weeks earlier, were taken as given. The result was that, once the Fed decided on a target for nonborrowed reserves, a level of borrowed reserves was also implied. Again assuming discount rates below the fed funds rate, raising the discount rate would decrease the fed funds-discount rate spread. Since this would decrease the incentive to borrow, demand would increase for nonborrowed reserves in the fed funds market. Under the new procedure the target for nonborrowed reserves was fixed, however, so the Fed would not inject new reserves into the market. Consequently, the demand shift would cause the funds rate to increase until the original spread between it and the discount rate returned. The upshot here is that, since discount rate changes generally affected the fed funds rate, the direct role of discount rate changes in the operating procedures increased after October 1979.

In October 1982, the Federal Reserve moved to a system of targeting borrowed reserves.¹⁰ Under this procedure, when the Federal Open Market Committee issues its directives at its periodic meetings, it specifies a desired degree of "reserve restraint." More restraint generally means a higher level of borrowing, and vice versa. Open market operations

⁸Broaddus and Cook (1983) analyze the effect of discount rate changes if the discount rate is kept above the fed funds rate.

⁹Although under this procedure discount rate changes did not directly affect the funds rate, many discount rate changes signaled subsequent funds rate changes.

¹⁰See Henry C. Wallich (1984). In addition, since February 1984 required reserves have been determined on an essentially contemporaneous basis.

are then conducted over the following period to provide the level of nonborrowed reserves consistent with desired borrowed reserves and demand for total reserves. A discount rate increase under this procedure would, as in nonborrowed reserves targeting, shrink the spread between the fed funds and discount rates, and shift demand toward nonborrowed reserves. In order to preserve the targeted borrowing level, the fed funds rate should change by about the same amount as the discount rate so that the original spread is retained. As a result, discount rate changes under borrowed reserves targeting affect the funds rate the same as under nonborrowed reserves targeting.

Discount Window Issues

As is the case with any instrument of public policy, the discount window is the subject of discussions as to its appropriate role. This section will briefly describe three current controversies regarding the discount window, namely, secured versus unsecured lending, lending to institutions outside the banking and thrift industries, and the appropriate relationship between the discount rate and market rates.

The risk faced by the Federal Reserve System when making discount window loans is reduced by requiring that all such loans be secured by collateral. William M. Isaac, who chaired the Federal Deposit Insurance Corporation from 1981 to 1985, has suggested that this aspect of discount window lending be changed to allow unsecured lending to depository institutions.¹¹ Mr. Isaac's main objection to secured lending is that, as uninsured depositors pull their money out of a troubled bank, secured discount window loans replace deposits on the liability side of the bank's balance sheet. When and if the bank is declared insolvent, the Fed will have a claim to collateral that otherwise may have been liquidated by the FDIC to reduce its losses on payouts to insured depositors. Sensing this possibility, more uninsured depositors have an incentive to leave before the bank is closed.

Mr. Isaac's proposed policy is best understood by considering how risks would shift under alternative policies. Under the current policy of secured lending

¹¹**Deposit Insurance Reform and Related Supervisory Issues**, Hearings before the Senate Committee on Banking, Housing, and Urban Affairs, 99th Cong. 1 Sess. (Government Printing Office, 1985), pp. 27-8, 40. As an alternative, Mr. Isaac has suggested that if the policy of making only secured loans at the window is continued, only institutions that have been certified solvent by their primary regulators should be eligible.

at the discount window, if the Fed lends to a bank that fails before the loan is paid back, the fact that the loan is secured makes it unlikely that the Fed will take a loss on the loan. Losses will be borne by the FDIC fund, which is financed by premiums paid by insured banks. Thus, risk in this case is assumed by the stockholders of FDIC-insured banks.¹² Under Mr. Isaac's alternative, the Fed would become a general rather than a fully secured creditor of the failed bank. As a result, losses would be borne by both the Fed and the FDIC fund, depending on the priority given the Fed as a claimant on the failed bank's assets. Since losses borne by the Fed reduce the net revenues available for transfer to the United States Treasury, the taxpaying public would likely end up bearing more of the risk than under current policy. The attractiveness of moving to a policy of unsecured discount window lending thus depends on the degree to which one feels risks should be shifted from bank stockholders to the general public.¹³

A second discount window issue involves the exercise of the Fed's authority to lend to individuals, partnerships, and corporations. Although such lending has not occurred for over half a century, major events such as the failure of Penn Central in the mid-1970s and the problems of farms and the manufacturing sector of the 1980s raise the question of whether or not this authority should be exercised. On the one hand, one might argue that banking is an industry like any other, and that lending to nonfinancial firms threatened by international competition makes just as much sense as lending to forestall or avoid a bank failure. On the other hand, the Federal Reserve's primary responsibility is to the financial system, and decisions regarding lending to assist troubled industries are better left to Congress than to the Board of Governors.¹⁴

A final issue regarding the discount window is whether to set the discount rate above or below the

prevailing fed funds rate.¹⁵ Figure 2 shows that both policies have been followed at different times during the last thirty years. One could make several arguments in favor of a policy of setting the discount rate above the funds rate. First, as mentioned earlier, placing a higher price on discount window credit would ensure that only those placing a high value on a discount window loan would use the credit. Since funds could normally be gotten more cheaply in the fed funds market, institutions would only use the window in emergencies. Second, it would remove the incentive to profit from the spread between the discount rate and the fed funds rate. As a result, the process of allocating discount window credit would be simplified and many of the rules regarding appropriate uses of credit would be unnecessary. Finally, it might simplify the mechanism for controlling the money supply, since borrowed reserves would not likely be a significant element of total reserves. Indeed, setting targets for borrowed or nonborrowed reserves would probably not be feasible under a penalty rate. Targeting total reserves, however, would be possible, and open market operations would be sufficient to keep reserve growth at desired levels.¹⁶

Despite the possible advantages of keeping the discount rate above the fed funds rate, it is not clear what would be an effective mechanism for setting a discount rate. Should the discount rate be set on the basis of the previous day's funds rate and remain fixed all day or should it change with the funds rate? Letting it stay the same all day would make it easier for banks to keep track of, but incentives to profit from borrowing could result if the funds rate suddenly rose above the discount rate. Further, what is an appropriate markup above the fed funds rate? Too high a markup over the funds rate might discourage borrowing even in emergencies, thus defeating the purpose of a lender of last resort.¹⁷ Finally, some banks that are perceived as risky by the markets can only borrow at a premium over market rates. Even if the discount rate were marked up to a penalty rate over prevailing market rates,

¹² Since Congress has pledged the full faith and credit of the United States government to the fund, it is also possible that the public may bear some of the losses.

¹³ Fed Chairman Paul Volcker has characterized the proposal as changing the Fed from a provider of liquidity to a provider of capital to depository institutions. *Ibid.*, pp. 1287-8.

¹⁴ *Ibid.*, pp. 1315-6. For a discussion of the possibility of discount window lending to the Farm Credit System, see *The Problems of Farm Credit*, Hearings before the Subcommittee on Economic Stabilization of the House Committee on Banking, Finance, and Urban Affairs, 99th Cong. 1 Sess. (GPO, 1985), pp. 449-55, 501-4.

¹⁵ For a more complete summary of arguments regarding the appropriate use of the discount rate, see Board of Governors (1971), vol. 2, pp. 25-76.

¹⁶ For further arguments in favor of total reserves targeting, see Goodfriend (1984). For arguments against, see David E. Lindsey et al. (1984).

¹⁷ Lloyd Mints (1945), p. 249, argues that a higher price for discount window credit would discourage borrowing precisely at the time when the central bank should be generous in providing liquidity.

such banks might attempt to borrow at the discount window to finance more risky investments. In such a case, certain administrative measures might be necessary to ensure that, as under present policy, discount window credit is not used to support loan or investment portfolio expansion.

Choosing between policies of keeping the discount rate either consistently above or consistently below the fed funds rate involves a decision not only on

how best to manage reserves but also on the relative merits of using prices or administrative means to allocate credit. Administrative limits on borrowing may help to brake depository institutions' incentives to profit from rate differentials, but will not remove them. Pricing would take away such incentives, but there are difficulties with setting an optimal price. As in most policy matters, the choice comes down to two imperfect alternatives.

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