

**RECONSTRUCTION FINANCE CORPORATION
ASSISTANCE TO FINANCIAL INTERMEDIARIES AND
COMMERCIAL & INDUSTRIAL ENTERPRISE IN THE US, 1932-1937**

Prepared for the World Bank Group

by

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January 17, 2000

I express thanks for comments and criticisms from Charles Calomiris, Daniela Klingebiel, and the anonymous referee. All remaining errors are my own.

Many have attempted to distill lessons on combating economic crises from the experiences of the US Reconstruction Finance Corporation (RFC) during the 1930s. However, the resulting policies have been subject to widespread doubts and criticisms. Many economic historians doubt RFC assistance to financial intermediaries and commercial & industrial firms contributed a great deal to stabilizing the US economy during the Great Depression. RFC assistance probably did not, therefore, form a significant basis for the general economic recovery to follow. The present essay does not dispute that point. However, between 1932 and 1937, the RFC experimented with a wide variety of programs targeted toward resolving systemic distress. It did so by attempting to stimulate credit and capital market activity through acting as a lender of last resort, recapitalizing the banking industry, and providing direct credit to commercial and industrial enterprises.

Though no one of these programs was an unmitigated success, important lessons can be learned by comparing the structures of programs that were successful with those that were not. Below I compare the objectives, operations, and outcomes of four major RFC programs. The lessons that can be learned from the experiences of these four programs revolve around two guiding principles. First, successful RFC programs restricted credit or other assistance to reasonably sound institutions. Like Bagehot's rule, however, this strategy seems simple in theory but may in fact be quite difficult in practice. During economic and financial crises conditions of high asymmetric information may result in markets that do not reflect true fundamental asset values. Therefore, the RFC often evaluated firm solvency and soundness on the basis of future market expectations or favorable environmental conditions that were (and still are) difficult or impossible to quantify. Second, therefore, successful RFC programs often took a measure of control over institutions to assuage junior creditors and nurse firms to profitability and recovery over the long run.

I. RFC Background: Politics, Funding, and Operations

Before evaluating individual RFC programs, it is important to have some understanding of the structure and function of the RFC itself. The RFC was begrudgingly established by Herbert Hoover after strong moral suasion and an experiment with a private sector cooperative alternatives, the National Credit Corporation and the Railroad Credit Corporation, failed. Hoover never favored government intervention in private markets, but accepted that markets were beginning to fail as a result of the severity of the Great Depression. Therefore, Hoover resuscitated the US War Finance Corporation that had so successfully motivated human and financial capital during World War I to stimulate general economic activity during peacetime.¹

At the time the RFC was established the Great Depression was primarily attributed to overleverage and debt deflation.

As business everywhere slowed down, the banks began to feel the pressure of curtailed activity. Credit was contracted by the paying down of business loans, and bank profits were reduced. For a time, these developments were not serious, but soon bankers began to realize that trade advances that had been amply secured by the pledge of marketable securities and commodities were no longer fully protected when the market value of those commodities was rapidly falling (Waller, 7-8).

Banks therefore slowed lending to reduce further exposure to declining asset values and accumulate loan loss reserves that could offset the capital depletion resulting from expected defaults. The combined reduction in bank credit and debt deflation led policymakers to believe

¹ Hoover and Chairman of the Federal Reserve Board Eugene Meyer had been instrumental in the success of the War Finance Corporation and modeled the RFC directly after that institution, with the same organizational structure and many of the same people in charge.

that if they could relieve bank credit stringency, capacity utilization and therefore asset values would increase and general economic recovery would follow (Olson 1972, 268).

At the same time, policymakers also believed that the Depression would soon end.² This belief was widely held from 1929 until after 1935, when several studies of low credit activity concluded that the perceived credit stringency may, in fact, have been a lack of *demand* for business credit rather than a lack of *supply* (see Hardy and Viner; Kimmel). Until this realization became apparent, the RFC remained conservative in its focus, extending primarily fully secured short-term credit at penalty rates as a lender of last resort. Once the realization came about RFC programs took on a substantially broadened scope, recapitalizing the banking sector and making loans to a broad base of commercial and industrial enterprises (Agnew; Locker; Olson 1972; Spero).

The RFC itself was an agency of the Executive branch of the United States government. Therefore, expansions to the scale or scope of RFC powers could be enacted by Executive Order, rather than by introducing legislation for full Congressional approval (Waller 20). This had obvious implications for organizational and institutional flexibility in a time of economic emergency. Furthermore, the RFC was immune from Civil Service regulations for hiring and promotion and Congressional General Accounting Office audits (Delaney 12).³

The freedom that was advantageous for organizational and institutional flexibility, however, also raised issues of accountability and misallocation of government funds. In fact, in reaction to widespread allegations of political favoritism, five months after the RFC Act passed an amendment was added that made all the names of all RFC assistance recipients and amounts

² In fact, the original RFC Act contained a sunset clause that gave the agency a life span of one year. This was extended by Executive Order on December 8, 1932.

³ As a true corporation, the RFC could also sue and be sued in a court of law.

public. Like any political entity, RFC distributions may have been affected by political influence and favoritism. Unlike other New Deal programs, however, no systematic political influence is evident among RFC credit and capital distributions.⁴

At least three elements of the RFC's structure probably mitigated political influence over the RFC's credit and capital assistance programs. First, the original RFC Act stipulated that all "...loans made by the corporation be fully and adequately secured," and this stipulation was extended to nearly all RFC credit and capital programs with which we are presently concerned (RFC *Circular no. 1*, 1). Once the RFC received an application for assistance from a financial institution or commercial & industrial enterprise the agency only had the power to evaluate whether asset values were sufficient to secure assistance.⁵ Companies sometimes challenged whether their industry sector was appropriate for RFC investment under the law. However, RFC loans were underwritten by a staff that consisted primarily of displaced bank loan officers who were instructed to keep asset valuations rather liberal. Therefore, RFC decisions about collateral were rarely, if ever, challenged (Delaney; Simonson and Hemple).

Second, the RFC's funding assured a minimum of political interference. The operation was too large to fund directly out of Federal budget allocations, so the RFC was founded as a government-owned corporation with an initial appropriation from Congress and the right to borrow more money from the public at large. The original capital stock of the RFC was subscribed by the Secretary of the Treasury on behalf of the Government of the United States. Additionally, the RFC was (initially) authorized, with the approval of the secretary of the

⁴ See Wallis; Wright; and Anderson and Tolleson for analyses of New Deal programs in general. See Mason 1996 for an analysis of RFC credit and capital programs.

⁵ Though political influence and positioning certainly took place with respect to RFC grants for state-level unemployment relief and development, these programs were not the original focus of the RFC and are not dealt with in the present essay (see Olson 1972; 1988).

Treasury, to have outstanding at any one time subordinate notes, debentures, bonds, or other such obligations in an amount aggregating not more than three times its subscribed capital stock.

These additional notes, debentures, and bonds were marketed by the U.S. Treasury, using all the facilities of the Treasury Department authorized by law for the marketing of obligations of the United States. The Secretary of the Treasury was authorized, at his discretion, to purchase or sell any obligations of the RFC. These notes, bonds, or other obligations of the RFC were fully and unconditionally guaranteed as to the interest and principal by the United States and such guaranty was expressly noted on the face of all RFC obligations. Rates paid by the RFC approximated those of other US government obligations with similar maturity (Waller, 43-44). Since the RFC was an executive agency, the limit on additional notes and debentures, and therefore the scale of the agency, could be (and was) raised unilaterally by executive order (Waller, 41; Walk, 229). Since RFC officials did not have to appeal to Congress for this additional funding, they were relieved of the potential for political influence that would otherwise be apparent.

Third, RFC decision-making was devolved to the regional level wherever possible. The RFC functioned through a principal office in Washington and loan agencies (or field offices) established in principal cities throughout the country. Field office managers had authority to approve loans up to \$100,000, though unusual loans required clearance by the Board of Directors in Washington.⁶ In practice, each field office was almost autonomous, and only major problems were taken up with Washington (Delaney, 7).

The field offices, had "...the sole right to fix a valuation on the securities put up for collateral with each application," (Waller, 61-62). If a field office showed a profit, everything

⁶ Washington interventions were therefore often the subject of widespread journalistic scrutiny.

was fine; if not, someone would be detailed from Washington to see what was the matter, and possibly a new field office manager would be appointed,” (Delaney, 47-48). These profitability yardsticks seem to have effectively constrained inefficient credit or capital allocation that may have arisen from ineptitude or local political influence.

In summary, it seems that influence over RFC officials that could channel assistance to inefficient applications was constrained by at least three factors. First, RFC credit and capital programs were required specifically to be “...fully and adequately secured...” extensions. Second, the RFC’s primary budgetary reliance on an established capital base (rather than the Congressional budget process) reduced contact between RFC officers and directors and the vast majority of elected officials. And third, the independence of regional field offices in the credit and capital allocation processes constrained the extent to which influence could be commanded. In addition, the RFC’s status as an Executive branch agency led to a great deal of organizational and institutional flexibility that could be brought to bear on resolving systemic distress among financial institutions and firms. However, the activities of the RFC were constrained by policymakers’ perceptions regarding the depth and severity of the economic crisis, and these perceptions significantly lagged reality.

II. RFC Assistance to Financial Institutions and Commercial & Industrial Enterprises

Keeping in mind the overall objectives of the RFC and its operating procedures, we now turn to an analysis of the four main RFC credit and capital programs, and the principal similarities and differences that led to their individual success or failure. Throughout this section, there are two guiding principles. First, successful RFC programs restricted credit or other assistance to reasonably sound institutions, but sometimes evaluated soundness rather liberally due to unresolved high asymmetric information in markets during the financial crisis. Second,

therefore, successful RFC programs often took a measure of control over institutions to calm junior creditors and nurse firms to profitability and recovery over the long run.

A. Loans to Financial Intermediaries

1. Objectives of the Financial Intermediary Loan Program

The creators and initial board members of the RFC attributed the ongoing Depression largely to the effects of a debt deflation and believed that the effects of this debt deflation need not be persistent. Such beliefs led policymakers to believe that if they could relieve the existing credit stringency, economic recovery would follow quickly (Olson 1972, 268). The simplest way to relieve the credit stringency was by providing liquidity to the financial institutions that extended credit in the private sector. Therefore, it is not surprising that the first RFC program provided for loans to financial institutions.

Under the provisions of §5 of the original RFC Act, the RFC was authorized to make loans on full and adequate security to any bank, savings bank, trust company, building and loan association, insurance company, mortgage loan company, credit union, federal land bank, joint-stock land bank, federal intermediate credit bank, agricultural credit corporation, or livestock credit corporation, organized under the laws of any state, territory, or possession of the United States. These provisions also included the ability to make loans secured by the assets of any bank, savings bank, or building and loan association that is closed, or in the process of liquidation, or to aid in their reorganization or liquidation upon application of the receiver or liquidating agent of such institution (Waller, 27-28).

2. Operations of the Financial Intermediary Loan Program

Three main aspects of the RFC loan program deserve attention. First, loans under §5 could be made with a maturity not exceeding three years and the RFC could renew or extend the time

of payment up to a maximum of five years from the dates upon which the loans were made originally (Waller, 28-29). Despite this authority, the RFC limited loan maturities to less than six months to effect greater control over borrowers than would otherwise be possible.

Second, the RFC Board initially set loan interest rates at six percent for all types of financial institutions. Rates were decreased to five percent in mid-1932, then four percent in 1933. Despite these decreases RFC rates were always above those at the Federal Reserve Bank discount windows, whose collateral requirements were always kept on par with that accepted at the RFC. The highest rate at the Federal Reserve Bank of New York during this period was three-and-a-half percent during 1932 and 1933. The rate dropped to two percent in 1934 and one-and-a-half percent in 1935 and 1936 (US Department of Commerce, 1001). The RFC consciously kept its rates well above the market rate to ensure that RFC financing would not crowd out private-sector alternatives. However, in doing so the RFC seems to have priced itself out of the market for loans that may have actually helped weak institutions in need of liquidity.

Last, it is important to realize that the financial institutions, not regulators or the RFC itself, initiated the assistance process. Banks initiated the assistance process by submitting an application form and recent examination reports to any of the RFC's regional loan offices. The loan agency could then ask for any additional information they deemed necessary. Once a loan was granted, even private financial institutions consented to such examinations as the RFC required (*RFC Circular #1, 2*).

After July 1932, any loan amount authorized was made public by the RFC and typically carried in local newspapers and trade journals. Additionally, in 1933 the RFC was prohibited by law from making or renewing loans to borrowers (1) if at the time, any officer, director, or employee of the applicant is receiving compensation at a rate that appears unreasonable to the

RFC, and (2) unless the applicant agrees to the satisfactions of the RFC not to increase compensation beyond such reasonable levels for the life of the loan (Waller, 29). Since these later conditions are rather subjective, these additional provisions gave the RFC implicit control over bank operations after the loan was granted.

3. Outcome of the Financial Intermediary Loan Program

Short maturities, high interest rates, and the possibility of publicity and RFC control probably dissuaded financial institutions from taking advantage of the liquidity offered through the financial institution loan program. These aspects represented substantial disincentives to apply for a loan in the first place. Nonetheless, Figure 1 shows that during the first year of the RFC, loans to financial intermediaries were the primary form of assistance offered by the agency. But Figure 1 also shows a decline in loans to financial intermediaries as other RFC programs were established.

Figure 2 shows that open banks almost immediately switched out of the RFC loan program and into RFC preferred stock when that program became available after March 1933. There is a good reason banks switched out of the loan program. Olson (1972) maintains:

...the RFC helped only those basically sound enterprises which needed temporary liquidity.... For weaker banks the conditions of an RFC loan often brought more problems than solutions. The [RFC's] collateral requirements were so high that an RFC loan forced a bank to deposit its most valuable and liquid assets as security for the Corporation's advance. All too often, the Corporation would advance a loan, take over the bank's best assets for collateral, and leave the bank unable to meet demands by depositors once those demands exceeded the amount of the loan (177-8).

By statute, the RFC could not make any loans or advances that were not considered fully secured (Waller, 49). Initially, the RFC accepted as collateral only 80% of the market value of the highest grades of securities, and no more than 50% of the market value of other assets (Olson 1972, 88). In practice, therefore, the RFC often took a bank's most liquid assets as security for loans, increasing the risk of default on remaining bank debt and undermining the stabilizing effect of assistance.

Mason (1999) also shows that a non-trivial portion of RFC lending can be accounted for by repeated roll-over the short-term debt. Of the more than \$1 billion lent to banks prior to the March 1933 banking holiday, nearly 70 percent went to banks borrowing more than once, and 15 percent to banks borrowing more than five times (see Table 1). The RFC therefore appeared to be lending a lot of money during this period, but in reality a lot of this activity resulted from merely rolling over loans it had already extended.

While maintaining short maturities to keep collateral values on par with market conditions and charging high interest rates are certainly sound lending practices, especially during a deflationary period, they do not necessarily form the basis for effective assistance to banks that are liquidity constrained. Mason (1999) also uses individual bank balance sheet, income statement, and other data to construct a bank failure model to test the effects of individual RFC loans on subsequent survival. The RFC loans in Mason's sample, however, are associated with increased *ex post* probability of failure. Furthermore, RFC loans are most strongly associated with increased failure probabilities during the earliest periods of RFC activity, i.e., in early 1932, when RFC collateral requirements were most strict. RFC publicity requirements enacted after July 1932 had no effect on whether a bank failed or survived after a loan. Though the deleterious

effect of RFC loans eases with the gradual relaxation in collateral requirements and rates up to March 1933, loans never have a positive effect on bank survival in Mason's analysis.

Since deposits in closed banks represented decreased consumer and business illiquidity, the closed bank loan program had tremendous potential to relieve debt deflation and restore economic activity. But the closed-bank lending program was severely constrained from the start, and was not popular among RFC officials. Under §5 of the RFC Act, the outstanding stock of loans to closed banks, savings banks, and building and loan associations was limited to \$200 million (Agnew, 34). The stock of deposits in closed National banks alone averaged more than \$285 million on a monthly basis throughout 1932-1937, peaking at close to \$1.2 *billion* in March 1934 (Ali, Kolari, and Mason 1999).⁷ RFC officials viewed closed-bank loans as long-term loans that were secured only in the speculative judgement of asset values in five to eight years' time. Since the RFC Act stipulated that all loans be "fully and adequately secured," RFC officials thought closed-bank lending was outside the legislative scope of the agency. Furthermore, such risky long-term lending had the potential to place a significant amount of their capital at risk. Therefore the Deposit Liquidation Board was created on October 15, 1933 to continue the closed-bank loan program outside the RFC.

In summary, neither the RFC's closed- or open-institution loan programs alleviated the succession of financial crises of the early 1930s. By the time the RFC was established many financial institutions already were technically insolvent, or close to insolvent, due to the pernicious effects of the debt deflation spiral. The available evidence suggests that the RFC was too conservative in its open-institution loan structures to help these marginal institutions. These

⁷ Ali, Kolari, and Mason further conjecture that State bank assets added significantly to this stock, not only because there were more failed State than National banks, but also because of the relative illiquidity, and consequent slower liquidation, of State bank assets.

financial intermediaries needed long-term assistance based on collateral values that more accurately reflected probable future price of the underlying assets, if not outright recapitalization. That is, they needed an institution to bridge the asymmetric information gap that depressed market values and constrained capital flows. The additional temporary liquidity offered by RFC loans was not sufficient to rescue the economy from crisis and Depression.

B. Loans to Railroads

1. Objectives of the Railroad Loan Program

The Railroad loan program served two purposes over the life of the RFC. When the RFC began operations, the railroad loan program's only objective was to directly augment the financial intermediary loan program. Federal and State governments had recapitalized or otherwise bailed out weak railroads since the late 19th century. Because of this implicit bailout provision, nearly all railroad bonds were rated AAA. As the stock of US Government securities was retired during the 1920s, banks and other financial intermediaries increasingly relied upon railroad bonds as safe liquid investments that were a close substitute for reserves. But when railroads were not bailed out in the early 1930s the value of railroad bonds, and thus bank reserves, fell precipitously. In theory, therefore, helping out railroads could increase the value of bank reserves and stimulate credit activity, relieving the perceived credit stringency and pulling the economy out of the debt deflation spiral. After 1933 the railroad loan program shifted its objective to become a means to stabilize general business activity and maintain employment. This objective, however, did not significantly differ from that of traditional New Deal programs, in that the loans were not specifically for the relief of corporate distress. The present evaluation of the railroad loan program will focus only on the first objective – the degree to which the

program relieved corporate distress in the railroad sector and therefore relieved the perceived credit stringency and the debt deflation spiral.

2. Operations of the Railroad Loan Program

Under the provisions of §5 of the RFC Act, the RFC was authorized to make loans, upon approval of the Interstate Commerce Commission, to railroads and railways engaged in interstate commerce, and to aid in the temporary financing to railroads and railways in the process of construction. The RFC could also lend to receivers of railroads and railways when they are unable to obtain funds upon reasonable terms through banking channels or from the general public and the Corporation will be adequately secured.⁸

In contrast with loans to financial intermediaries, only loans to railroads in *receivership* had to be adequately (though not fully) secured. Herbert Spero, who wrote the definitive history of the RFC railroad loan program, maintains that the RFC initially paid "...little attention to the financial position and structure of (railroad and railway) applicants and their earning potentiality," (2). Between February 1932 and October 1937, \$638,597,795 was authorized to 75 railroads (see Spero, 33 for a complete list). "Of the twenty-one largest railroad borrowers from the RFC, nine were ultimately forced to file for bankruptcy, four underwent capital reorganization and judicial readjustment of their interest charges to avoid bankruptcy, and one was absorbed by a larger line. Only seven survived the depression and the RFC's loans unscathed," (See Table 2) (Olson 1972, 182).

Furthermore, rather than pricing themselves out of the relevant market as with loans to financial intermediaries, the RFC actually priced themselves *into* the market for railroad loans by setting rates below even benchline common stock yields between 1932 and 1935. Like loans to

⁸ And later, trustees of railroads which reorganized under §77 of the Bankruptcy Act of March 3, 1933.

financial institutions, railroad loans were set at six percent in 1932, five-and-a-half percent in 1933, and five percent in 1934 and beyond. Moody's common railroad stock yields over this period were more than seven percent in 1932 and almost six percent in 1933 and 1934⁹ (US Department of Commerce, 1003). RFC debt was therefore cheaper than a typical railroad equity issue between 1932 and 1934. The incentive to finance with RFC debt rather than equity and the moral hazard implications of less-than-secured lending to railroads mandated under the RFC Act soon placed RFC capital at risk as the RFC was forced into litigation to recover loan proceeds in large-scale widely publicized bankruptcy proceedings.

Table 3 details the major purposes of railroad loans. Between February 1932 and October 1933, most RFC loans to railroads were for the purpose of paying debt interest and principal. Between November 1933 and October 1934, the most popular use of RFC loans was to pay off short-term maturity debt principal. Both these types of loans directly helped preserve the value of railroad securities and thereby aided banks.

Between February 1932 and October 1933 the RFC also dedicated a substantial amount of resources toward purchasing equipment trust certificates, that is, debt instruments for the purchase of operating equipment like locomotives and freight cars and secured by the same. The purchase of equipment trust certificates maintained business activity and employment in ancillary industries. As it later turned out, support to this sector significantly smoothed production of railroad equipment on the eve of a high-demand period during World War II.

By November 1934 through October 1936, the principal purpose of RFC assistance became that of repurchasing railroad securities in order to reduce firm leverage ratios. In January 1935 the agency was further empowered to purchase and guarantee directly the general

⁹ During 1935 and after, common railroad stock yields were below RFC rates.

obligations of railroads and railways (Spero, 27). In this way, RFC railroad loans, in practice, were initially used to help out with bond interest payments and finance equipment, but were eventually used as a substitute for railroad capital. As mentioned earlier, this extension of the RFC's powers served as acknowledgement that the Depression was now expected to last much longer than previously believed. Therefore, the operations of the agency adapted to this philosophical shift by providing long-term capital (or debentures) rather than short-term secured debt.¹⁰

3. Outcome of the Railroad Loan Program

Since RFC railroad loans were not fully secured under the original statute, many loans went to railroads that failed shortly thereafter. Therefore there existed a set of perverse incentives whereby railroads could borrow from the RFC to pay favored creditors and investors in full before defaulting. More importantly, since railroad capital levels were not regulated and rates on railroad loans, unlike those on RFC loans to financial intermediaries, were favorable, railroads had an incentive to borrow from the RFC to finance a public capital flotation, which could be used to replace private debt (sometimes held primarily by insiders) with a mix of equity and RFC debt before default.

Once RFC officials recognized this problem, they began pushing for changes in the original statute. In June 1933, the RFC Act was amended so that the agency could no longer make a loan to any railroad or railway that was in need of financial reorganization in the public interest. In 1935, as policymakers became further convinced of the long-term nature of the

¹⁰ Loans for additions and betterments were important during February – October 1932, but diminished in significance afterward. The primary purpose of these loans was often to maintain or increase employment rather than maintain or restructure the firm's finances. Although these loans did not require ICC approval, they carried two additional requirements: (1) the railroad had to repay the loan before granting any dividends, and (2) 75% of the money had to be spent rehiring furloughed labor (Spero, 27, 38-41; Jones, 118). By 1933, a substantial portion of

economic downturn, the RFC railroad loan program was further restricted to only those applicants "...who could demonstrate the fundamental soundness of their financial position and their ability to survive a reasonably prolonged period of depression," (Spero, 2).

But loans made before the more stringent provisions still placed RFC capital at risk. Therefore, as the RFC became concerned with the effects of their loans to the railroads, they also became concerned with management quality of those railroads (Jones, 145). As time wore on, the RFC directly intervened more often in response to imprudent financial management and shady dealings with other creditors.

A good example of the manipulations the RFC faced are those of the Missouri-Pacific line. Investment bankers lent to the Missouri-Pacific to arrange a capital flotation for the railroad at high interest rates and fees with a notion that the RFC would be called in to bail out the railroad with cheap debt and support the issue. Through these and other manipulations, the Missouri-Pacific line was eventually drained of cash by its holding company, the Alleghany Corporation, and its principal holders, the Van Sweringen family. After indeed bailing out the Missouri-Pacific, the RFC was repaid only after wresting control of the line away from Alleghany as the principal creditor in a protracted bankruptcy and reorganization of the line between 1935 and 1937 (Sullivan).

After the Missouri-Pacific debacle, the RFC was a great deal more careful to constrain management from the outset. Eventually, the RFC began to insist on management changes as a condition of support. When the Southern-Pacific Railroad borrowed \$23,200,000 in early 1937, the RFC "...ordered reduction of executives' salaries [ranging] from ten percent to sixty percent," (Sullivan, 43). During this period the RFC also strictly enforced its requirement that

lending for unemployment relief, including loans to railroads for additions and betterments, was spun off to other New Deal agencies.

railroads repay RFC loans before granting dividends. The “Pennsylvania Railroad borrowed seventy-five million dollars from the Corporation to electrify the lines between Boston, Massachusetts, and Washington, DC. When the debt was only a few months old and the dividend period was approaching, Pennsylvania Railroad, being proud of its [long, continuous] dividend record, paid off the Reconstruction Finance Corporation loan instead of stopping the payment of dividends,” (Sullivan, 23).

Even with such conditions, RFC loans to railroads only prevented temporarily a large number of insolvencies, prolonging the agony of impending bankruptcy. “...Prices of railroad bonds moved generally downward, intensifying the economic, banking, and credit difficulties,” (Spero, 143). Like the Corporation’s loans to banks, the underlying problems of the railroads, declining revenue, increased competition, and burdensome debt structures, were left untouched,” (Olson 1972, 181).

The problem with RFC railroad loans was almost exactly the opposite of the experience with loans to financial intermediaries – the program was too *liberal* instead of too conservative.¹¹ Over time, however, RFC officials learned that the less secure interest resulting from these more liberal policies could be mitigated by strictly enforced detailed covenants and greater involvement with day-to-day management. These provisions, especially being so intimately involved with management, were very effective not only at making loans that were repaid, but also at resolving asymmetric information about management quality at marginally solvent firms. Over time, both these provisions became integral features of the financial institution preferred stock program and the C&I loan program.

¹¹ Part of this was most likely due to the different institutional structure of the railroad industry as well as the involvement of the Interstate Commerce Commission in the lending process.

C. Preferred Stock in Banks, Trust Companies, and Insurance Companies

1. Objectives of the Preferred Stock Program

The objectives of the preferred stock program were twofold. First, the establishment of the preferred stock program in March 1933 marked the further evolution in policymakers' perceptions of the Great Depression. Before this period, policymakers largely believed that the depression was a the manifestation of a temporary debt deflation spiral. If they provided liquid funds to relieve the credit stringency that perpetuated the spiral, the economic pressures would lift. After March 1933, policymakers began to realize that the debt deflation spiral was caused by something much more complex than a simple lack of liquidity. Rather, they began to believe it was caused by a general lack of bank capital to support additional lending, even in the face of added liquidity through the RFC loan program. The preferred stock program would add capital to banks and trust companies to relieve this constraint.

A second, *de facto*, objective of the preferred stock program became apparent around October 1933. All banks were required to be solvent in order to reopen following the nationwide Bank Holiday of March 1933. It was believed that such a requirement would relieve public fears about the incidence of solvency in the banking sector that could lead to panics. Since there were around 15,000 banks in the US at this time, accurately evaluating the soundness of all of these within the allotted week was impossible. In trying to restore confidence in the majority of institutions, therefore, regulators and policymakers consciously erred toward reopening marginal banks in hopes that their condition would improve.

Though public sentiment was immediately relieved by this strategy, a few months later it was again threatened. In March 1933, Congress also passed a bill to provide Federal Deposit Insurance Corporation (FDIC) coverage to depositors at all banks that were solvent on January 1,

1934. By October 1933, it became apparent that several thousand banks that opened following the Holiday still were not solvent and therefore could not qualify for FDIC coverage. The RFC preferred stock program became an important mechanism through which these banks could be quickly and effectively recapitalized so their number and condition would not be exposed.

2. Operations of the Preferred Stock Program

After President Roosevelt's Bank Holiday, on March 9, 1933, the RFC was authorized to subscribe for preferred stock, exempt from double liability, in any National or State bank or trust company. The RFC was also authorized at this time to make loans secured by the preferred stock of National or State banks as collateral. In cases where a State bank or trust company was not permitted to issue preferred stock exempt from double liability, or if state laws permit such issue only by unanimous consent of the stockholders, the RFC was authorized to purchase legally issued capital notes or debentures. The RFC was authorized to sell in the open market the whole or part of its preferred stock, capital notes, or debentures of any national or State bank or trust company.¹²

RFC preferred stock initially paid senior dividends of six percent per annum. RFC officials quickly realized, however, that banks already thought this rate was expensive so within two months the rate was lowered to five percent. Even at the reduced rates, however, RFC preferred stock was priced only slightly below the prevailing yield for Standard & Poor's corporate preferred stocks, which averaged around five-and-three-quarter percent in 1933.¹³ As RFC

¹² On June 10, 1933, the RFC was further authorized to purchase preferred stock of insurance companies, but the size of insurance company authorizations never grew to any substantial prominence. Such equity could only be purchased if (1) the applicant had unimpaired capital stock or promised that it will furnish new capital unimpaired, and (2) no officer, director, or employee received total compensation in excess of \$17,500 per annum. The total amount outstanding of loans, preferred stock subscriptions, and capital notes in insurance companies could not exceed \$50,000,000 at any time.

¹³ Banks were first allowed to issue preferred stock after March 1933 under the RFC preferred stock program.

officials more actively sought to recapitalize the banking industry, rates were lowered further still. In 1934, RFC rates were lowered to four-and-a-half percent, and in 1935 to three-and-a-half percent. Moody's benchmark preferred stock yields dropped to about five-and-one-quarter percent in 1934, and maintained about four-and-a-half percent thereafter, making RFC preferred stock attractive during this later period. (US Department of Commerce, 1003).

Unlike the first railroad loans, however, the preferred stock purchased by the RFC was subject to some important additional provisions. RFC preferred stock was senior to all other stock upon liquidation of the firm. All other stock dividends were limited to a specified maximum, and remaining earnings were devoted to a preferred stock retirement fund. These provisions were strictly upheld and banks, like railroads during this period, often found them overbearing.

The stock also carried voting rights that were often used to direct the institution toward solvency and profitability. The RFC was prohibited from purchasing more than 49 percent of the total outstanding voting stock in any one bank. However, it often owned the largest voting block in the company. Thus the RFC had effective control of many of the institutions in which it had investments (Upham and Lamke, 234; Cho, 29-34; *Commercial and Financial Chronicle* 1933, 1625-6).

In several situations, the RFC used this control to replace officers and significantly alter the business practices of the institution. The earliest and most prominent intervention involved Continental Illinois National Bank of Chicago. Agreement on selecting a new chair was a pre-condition of the investment in Continental Illinois. However, the current directors did not

approve of the RFC's choice and visited Washington to voice their objections. They finally acquiesced after eight other directors were replaced with RFC appointees.¹⁴

A similar situation played out with the Union Trust Company of Cleveland. The RFC agreed to finance the reorganization of Union Trust by providing a loan of \$35,000,000 to liquefy and write off the poor assets of the old bank and a purchase of \$10,000,000 of preferred stock to guarantee the new bank's capital structure. But these were contingent upon "...the right of the RFC to select the new bank's officers and the ability of those officers to raise \$10,000,000 more in common stock," from the private market (Olson 1972, 233). Other prominent banks were assured that the situations at Continental Illinois and Union Trust were due to a combination of unusual circumstances, and would not be repeated without due cause, but the threat of such control kept many banks from availing themselves of the resources offered by the RFC for at least the first nine months of the program's existence. (See Figure 2)

3. Outcome of the Preferred Stock Program

The RFC preferred stock program was an appropriate response to capital growth constraints that plagued the banking sector during the Great Depression. In fact, bankers and Federal legislators had appealed for a recapitalization program like this since early 1931. But by the time the preferred stock program went into effect high adverse selection premia – in terms of high bid-ask spreads for common stock and high dividend yields for preferred stock – made bank capital relatively expensive in historical perspective. Figure 3 illustrates that bid-ask spreads moved sharply upward at the end of 1929 and remained high until at least 1936. Figure 4 shows that New York Stock Exchange (NYSE) preferred stock dividend yields were at record levels in

¹⁴ Continental was actually quite weak at the time, and a few weeks later, despite a rather large investment in the First National Bank of Chicago, the RFC did not intervene in the bank's management after the death of its Chief Executive, Melvin Traylor (Jones, 47-9).

June 1932 and did not decline to their August 1931 low until February 1935. Therefore, although RFC dividends were always below NYSE preferred stock dividend yields, they were by no means cheap by historical standards.

Figure 2 illustrates the lack of demand for bank capital as it reflected on the RFC preferred stock program. Before the first quarter of 1934, demand for RFC preferred stock assistance was stagnant. As with RFC loans, banks petitioned the agency for preferred stock assistance. At this time, many banks felt that having their name published in conjunction with receiving assistance from the RFC was evidence of high default risk, which could precipitate deposit outflows. Furthermore, banks feared the sort of RFC intervention exhibited at Continental Illinois and Union Trust. Since banks felt capital was costly, feared publicity about their financial condition, and did not want to be reorganized at the hands of RFC officials, they were understandably reluctant to apply to the preferred stock program.

However, banks were severely undercapitalized during this period. Wigmore points out that although some banks did not feel financial pressures during this period, such examples were rare. Even the largest banks in the country faced intense pressure on earnings and stock prices. Chase's stock hit a low of 13 percent of its highest 1929 price, and National City, 8 percent. However, during the first three weeks of the preferred stock program, the RFC made investments in only four banks, most as part of larger restructuring plans. During the second quarter of 1933 the RFC authorized preferred stock purchases in only 50 banks nationwide (468).

Since the existing set of voting rights, price, and publication requirements were substantial disincentives for banks to apply for preferred stock assistance, some leverage was needed to get weak banks into the program. Although the Glass-Steagall Act of 1933 did not alter the RFC's operating procedures, it provided just that leverage in the establishment of the FDIC. The FDIC

was due to open on January 1, 1934, and only financially sound banks would be accepted for membership at that date. However, Jesse Jones, the Chairman of the RFC at the time, estimated that over five thousand banks that reopened after the holiday "...required considerable added capital to make them sound," (1951, 27).

It was widely believed that if *all* banks that were certified after the Bank Holiday did not join the FDIC a crisis of confidence would ensue and deposit outflows would again increase. Still, marginally solvent open banks were often unwilling to issue preferred stock to the RFC, and since they were not in reorganization they could not be forced to do so. For nearly three months, Jones harangued and cajoled bankers about the need for all banks to join the FDIC on January 1, 1934. At the American Bankers Association annual meeting in Chicago in September 1933, Jones strongly rebuked bankers for their reluctance to participate in the preferred stock program. In his speech, Jones urged all the leading banks in the US to sell preferred stock to the RFC "...so that depositors would not be induced to switch out of ... banks when their names were published." The appeal to the American Bankers Association convention had an impact, and the number of applications received daily at the RFC increased substantially. In time, nearly all the banks, including those undeniably sound like the First National Bank of Chicago, the Continental Illinois Bank and Trust Company of Chicago, and National City Bank, sold stock to the RFC (Jones, 26-7; Burns, 123-5; Wigmore, 468-70). On January 1, therefore, the FDIC accepted 13,423 banks as members and rejected only 141, and the potential crisis of confidence was averted (Olson 1988, 81).¹⁵

¹⁵ Not all the banks were actually recapitalized by the time the FDIC opened for business. On December 15, 1933, there still existed more than two thousand open banks in need of RFC capital in order to join the FDIC. Jesse Jones met with Secretary of the Treasury Morgenthau to propose a compromise: if Morgenthau would certify these banks as solvent, Jones guaranteed they would be so within six months (Jones, 28- 30). This bargain was instrumental in qualifying nearly all the open banks for membership in the FDIC on January 1, 1934.

By March 1934 the RFC had purchased preferred stock in nearly half the commercial banks in the US (Jones). By June 1935, these RFC investments made up more than one third of all outstanding capital in the banking system (Olson 1988, 82). Mason (1999) shows empirically that RFC preferred stock was associated with lower *ex post* probabilities of bank failure. Therefore, it appears that the preferred stock program was successful at helping banks withstand the economic depression.

In many ways, the preferred stock program addressed the inadequacies of the financial institutions loan program while taking into account the valuable lessons from the railroad loan program. RFC capital was a cheaper, more junior (less secure), and longer-term claim than financial institution loans, but carried more detailed covenants and voting rights to effect greater corporate control, as with railroad loans. Preferred stock did not result in increased bank lending, as policymakers hoped. However, unlike previous programs, it did stabilize the business sector that it targeted for assistance.

D. Loans to Commercial & Industrial Enterprises

1. Objectives of the Commercial & Industrial Program

Banks avoided costly equity issues by reducing default risk elsewhere on the balance sheet. Calomiris and Wilson (1998) explain that, “in the wake of the loan losses produced by the Depression, high default risk was penalized with deposit withdrawals... To reduce deposit risk, banks increased their riskless assets and cut dividends,” but avoided costly equity issues. By 1935, therefore, a dearth of new bank capital issues and bank programs to stabilize default risk by investing in safe liquid securities severely constricted the business lending pipeline. Figure 5 shows that bank lending continued to decrease after bank capital began to recover. In fact, in Figure 5 bank lending does not turn up until at least late 1935.

Although preferred stock stabilized the banking sector, as long as banks were primarily concerned with their perceived default risk among depositors they would not undertake new lending. But RFC officials and other policymakers still believed that an ample supply of business credit was the key to unwinding the debt deflation spiral that was at the heart of the economic downturn. Therefore, in June 1934 the RFC began making commercial and industrial (C&I) loans directly to businesses in order to relieve the credit stringency and expand economic activity.

2. Operations of the Commercial & Industrial Loan Program

The legislation passed in June 1934 allowed the RFC to make C&I loans with maturities “...up to five years provided the applicant was sound, could supply adequate collateral, and could not get credit at banks. Loans could be advanced for working capital rather than equity or fixed capital, but could not exceed \$500,000 per customer or be used to pay off existing indebtedness,” (Olson 1972, 274).

In addition, §1 of the same act that granted direct C&I loan authority to the RFC also amended the Federal Reserve Act to give equal authority to the Federal Reserve System (Walk, 62). The legislation “...allowed the RFC to loan up to \$300,000,000 and the Federal Reserve Banks up to \$280,000,000,” in C&I loans. Of the \$280,000,000 authorized to the Federal Reserve Banks, half was funded by their own surplus, and half by the Treasury (65). Any future extensions of the \$280,000,000 limit would be funded in the same manner.

Table 4 shows there were few differences between the terms of RFC and Federal Reserve C&I loans. Both could lend to any commercial or industrial firm, though the RFC could also lend to the fishing industry. Both required that credit be otherwise unavailable through conventional channels. The RFC required that borrowers be solvent, and both the RFC and Federal Reserve

required that loans be backed by reasonable and sound, adequate security. Borrowing businesses had to be established concerns. That is, RFC and Federal Reserve loans could not be used to start new businesses.¹⁶ Both also required all borrowers to “...consent to such examinations as the [RFC or Federal Reserve Banks] may require,” (Agnew, 48).

Fed C&I loan procedures were similar to general loan procedures already established at the RFC. Each set up local industrial loan committees composed of three to five industrialists, which passed on the merits of applications. As with RFC loans to financial intermediaries, only unusual RFC loans were reviewed by the Washington staff. Fed C&I loan applications were evaluated solely at the regional level, and were not subject to central review or pricing policies established in Washington (Walk, 64).

RFC and Federal Reserve Bank C&I loans were granted to a similar mix of business types (See Table 5). In particular, both granted the majority of their loans to the manufacturing and wholesale and retail trade sectors. As a matter of informal policy, however, the RFC did not lend to newspapers, radio stations, churches, the oil industry, and the automobile industry. This decision was due to the potential political nature of the media and the moral suasion that could arise from religious organizations. Large industrial concerns, like those in the oil and automobile industries, could usually obtain financing elsewhere on reasonable terms, which excluded them from the RFC or Federal Reserve credit programs.

In order to conserve capital and reintroduce banks into business credit arrangements, the RFC and Federal Reserve developed cooperative credit arrangements with banks by purchasing participations in C&I loans rather than originating the loans exclusively (Olson 1972, 276). Most

¹⁶ This provision was altered after 1937 to provide investment for the war effort.

of the RFC C&I assistance authorized after 1934 therefore took the form of loan participations with firms' existing banks (Agnew, 78).

RFC C&I loan participations were either immediate or deferred. Immediate participations could cover any portion of the loan agreeable to both participants. These may consist of a bank purchasing part of an RFC-originated loan, or the RFC purchasing part of a bank-originated loan, upon disbursement. Either way, the RFC took a stake in the default risk underlying the investment, and which communicated confidence in the firms and effectively insulated the banking sector from default.

In practice, immediate participations were often combined with deferred participations. Deferred participations allowed the banking sector to assume a larger proportion of a loan while holding a put option on a portion of the default risk. By definition, "a deferred participation is one in which the [RFC] and the bank execute an agreement under which the [RFC] will purchase upon ten days notice by the bank an agreed percentage of the unpaid balance of the loan..."¹⁷ (Sullivan, 15-16).

The price of the put option depended upon the amount of risk the RFC assumed. Deferred participations were priced as "...two percent per annum when the local bank's participation is less than twenty-five percent of the loan; one and one-half percent per annum when the bank's participation is from twenty-five percent to fifty percent of the loan; and one percent per annum when the bank's participation is fifty percent or more," (Agnew, 79).

A streamlined set of procedures for deferred participations was developed for small borrowers. In cases where the loan principal is less than \$100,000, the bank files a short, one-page application to the RFC accompanied by supporting documents, i.e., identification of

¹⁷ Deferred participations by the RFC could not exceed seventy percent in loans of less than one hundred thousand dollars, and sixty percent in loans of greater than one hundred thousand dollars (Sullivan, 15-16).

borrower, use of funds, and collateral. The RFC approves or denies on the basis of this application and any supporting material (Sullivan, 17). The borrower never has to deal with the RFC directly in a small-loan participation. More than eighty-five percent of all RFC C&I loans were eligible for the small-loan program¹⁸ (RFC *Quarterly Report* for Fourth Quarter 1937, 93).

Federal Reserve Bank and RFC C&I loans were also used in tandem with the other assistance programs outlined above. For instance, both RFC and Federal Reserve Bank participations could be used to limit a bank's exposure to any single borrower as per statutory loan limits. If a bank was limited to \$100,000 per borrower, a loan in which the RFC or Federal Reserve Bank took up the excess principal over \$100,000 would keep the bank within the regulatory limits (Walk, 68). Alternatively, an RFC or Federal Reserve participation might also limit banks' exposure to credit risk. Sometimes, a bank that had previously refused to accommodate a borrower would later request to purchase or participate in the loan from after the RFC or Federal Reserve decided to accept it (Walk, 71). If all other methods failed, the Federal Reserve Bank or the RFC could make loans to financial intermediaries for the indirect purpose of funding particular C&I credit (Walk, 68).

3. Outcome of the Commercial & Industrial Loan Program

Like the railroad and preferred stock programs, the assistance provided to commercial and industrial firms afforded the RFC "... a profound influence upon policies and organizations of borrowers to insure soundness of their equity," (Sullivan, 7). As long as any portion of a [C&I] loan remained outstanding, no dividends could be paid by any corporate borrower, nor could

¹⁸ Although these made up only about thirty-five percent of the amount of RFC C&I lending, the wide base of these loans provided much-needed political capital. This program later formed the basis for the Small Business Administration, which was spun off the agency upon its liquidation in 1953.

distribution or withdrawal be made by a partnership or individual borrower without the consent of the RFC (Walk).

The RFC sometimes used their influence or inserted managers directly in commercial and industrial concerns to ensure sound business practices and therefore help provide earnings sufficient to repay C&I loans. Though there exists no formal data on the extent to which the RFC intervened in business operations directly, Jones includes several examples (183-192). One of these describes how the RFC funded the reorganization of the National Department Stores, Inc. of New York City. The National subsidiary stores in major cities throughout the country were generally sound, but the parent company was in reorganization. The RFC put up \$2,250,000 for a successful restructuring that allowed the company and its subsidiaries to remain in business.

Jones also describes the case of Botany Worsted Mills, of Passaic, NJ. The owner of Botany was selling products at unprofitable levels to keep 5,000 citizens of Passaic employed. The RFC loaned Botany \$1,000,000 and inserted a representative on Botany's finance committee to ensure merchandise was sold at a reasonable profit. Although the loan had to be increased several times, Botany ultimately regained profitability, repaid the RFC, and later hired the RFC's advisor into a more permanent consulting position. These are just two examples of RFC intervention that helped improve business operating procedures and maintain employment and, thereby, local economic activity.

The C&I loan programs had the capacity to make up a substantial portion of C&I funding during the early- to mid-1930s. RFC and Federal Reserve loan programs combined allowed the extension of almost \$600 million to C&I firms. Compared with total industrial capital flotations of only \$381 million in 1933, \$491 million in 1934, and \$2,296 million in 1935, the programs had the capacity to fully cover new industrial capital investment in 1933 and 1934, and more

than a quarter of new investment in 1935 (*Commercial and Financial Chronicle*, various issues). Despite this capacity, the C&I loan programs' performance was lackluster. The comparison of RFC and Federal Reserve direct loans outstanding in Table 6 shows that by the end of 1937, the RFC only authorized about \$140 million in its C&I loan program, and the Fed about \$150 million.¹⁹ Therefore, neither agency ever drew close to their statutory limits on C&I lending.

At least part of the explanation for this lackluster performance probably lies again with pricing. Even at their highest, in 1932, bank rates were only about 4.7 percent, and they continued to decline in subsequent years. When RFC rates were at six percent at the inception of the C&I loan program in 1934, comparable bank rates were about three-and-a-half percent. Though RFC rates were lowered to a range of four-and-a-half to five-and-a-half percent in 1935 and after, comparable bank rates were less than three percent, reaching nearly two-and-a-half percent in 1937. Therefore, it appears that RFC C&I loans were grossly overpriced compared to bank rates on short-term business loans during the period (US Department of Commerce, 1002).

Furthermore, in 1934, when Congress first authorized the RFC to make loans directly to industry, the law again provided that they should be adequately (though, again, not fully) secured. Though these loans could be made to insolvent firms, the RFC had already learned the value of close monitoring from their experience with the railroad loan program. As with loans to financial institutions, however, the adequate security greatly constrained the RFC's ability to affect a meaningful recovery. Therefore, "The provision respecting loans to industry was later, at [the RFC's] request, changed to read that such loans be so secured as 'reasonably to assure payment'," (Jones, 184).

¹⁹ Federal Reserve direct loans also included loans to financial intermediaries that supported specific C&I loans. Such extensions by the RFC were covered under the bank loan program.

Still, this relaxation in collateral requirements had little effect on the program. In 1935 Hardy and Viner concluded that “efforts to relieve [credit] stringency through direct lending on the part of the Federal Reserve Bank of Chicago and the Chicago agency of the Reconstruction Finance Corporation have so far had a negligible effect on the general state of credit,” (VI). In a later study, Kimmel reached similar conclusions for the entire period, 1933-1938.

...both the demand for loans and the soundness of [C&I] borrowers was not what [RFC officials] expected. By September [1934], the Corporation had authorized only 100 business loans totaling \$8,000,000. Less than \$400,000 had been disbursed. Either because of inadequate security, insolvency, excessive indebtedness, or lack of potential earning power, the RFC rejected the majority of applications. But the apparent lack of demand for credit by business provided the RFC with its greatest surprise. It was a direct contradiction of what both [the Hoover and Roosevelt] administrations had told the country since 1931 (Olson 1972, 277).

In fact, therefore, policymakers and RFC officials discovered what banks knew all along: the perceived credit stringency did not exist. Commercial and industrial firms did not want loans because consumption was stagnant. As it turned out, bank lending remained below its 1921 levels until the 1940s, when fiscal programs stimulated by wartime production resuscitated economic activity. No amount of RFC C&I lending, preferred stock, or other assistance to the corporate sector would change these fundamental conditions.

Nonetheless, the C&I loan programs built on many of the lessons learned from the financial institution loan, railroad loan, and preferred stock programs. C&I loans included longer maturities and were (eventually) based on relatively liberal collateral and solvency requirements,

while these attributes were balanced by strong covenants and active involvement in firm operations if necessary. True, the C&I loan program was not very effective. But it appears this was the result of restrictions that loan proceeds be used to maintain or increase employment, and not to replace or roll over existing debt finance. C&I firms really needed a long-term replacement for their existing debt. That is, like banks, C&I firms needed long-term capital investment. But in the US, such a large-scale nationalization of the nation's commerce and industry probably conflicted too strongly with American philosophies and ideals.

III. Summary and Conclusions

The RFC operated a wide variety of recapitalization and lending programs for financial institutions, commercial and industrial enterprises, and individuals from 1932 to 1953. Above, I described the details of a few of these programs that are widely held as instrumental in America's emergence from the Great Depression and subsequent growth in the latter half of the twentieth century.

Though results under these individual programs vary significantly, RFC programs converged over time to a set of operating principles that can guide prudent contemporary policy responses to systemic distress and economic crisis. First, assistance offered through such programs should be of a long-term nature, based on liberal collateral requirements or loose interpretations of current solvency. Second, and crucially, the security of assistance should lie in fixed-term medium- to senior-insider stakes and strict covenants that will promote relationships with management to guide eventual profitability and repayment. These relationships should resolve asymmetric information so firms may once again obtain outside finance from normal markets and intermediaries and subsequently provide an avenue through which the assistance can be systematically phased out as economic growth resumes.

Two caveats deserve mention, however. First, the RFC programs above do not constitute a necessary and sufficient set of institutions to remedy economic downturn or crisis. One glaring omission lies in the RFC's reluctance to provide funds that could be used to purchase bank assets in liquidation, relieving asset market overhang and supporting reflation. My own research suggests that this overhang results from rational behavior by trustees charged with maximizing creditor recovery during a systemic downturn, and this behavior was an important determinant of the persistence of the Great Depression (Mason, Anari, and Kolari 1999; Mason 1999b). I think the existing programs would have been more helpful with this support.

Second, any application of the lessons from the RFC must be tailored to the institutional context of the sovereign nations in which they are implemented. At the very least, this means that there must be legal provisions for bankruptcy and registration of collateral claims. There should be economic provisions for an active market for corporate control, a profit motive for recovery, and a macroeconomic policy of reflation that promises long-term economic growth. And there should be cultural provisions that provide a credible threat of closure, asset seizure, and liquidation as a result of insolvency. Without at least adapting policies for these institutional preconditions, we can expect little impact from the reincarnation of RFC-like policies in contemporary crises.

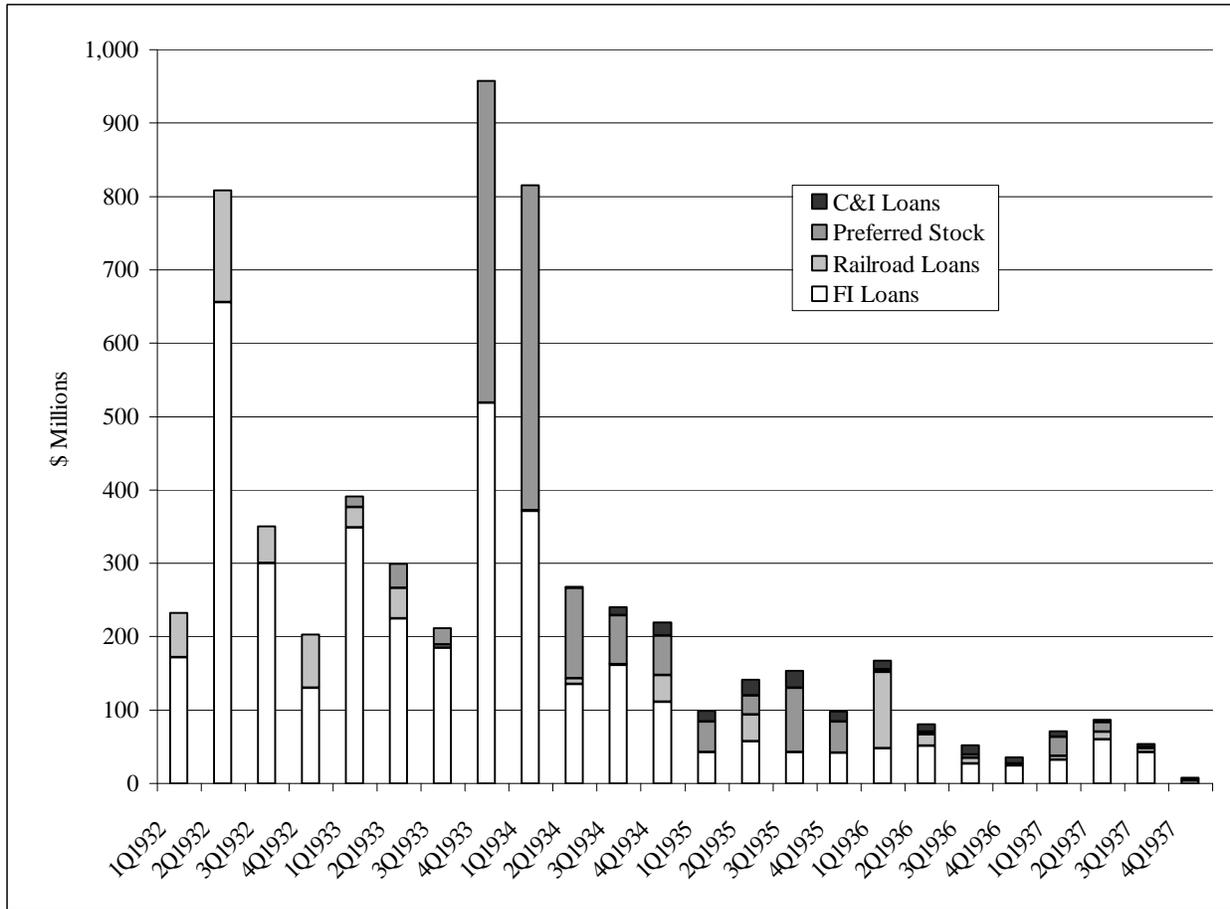
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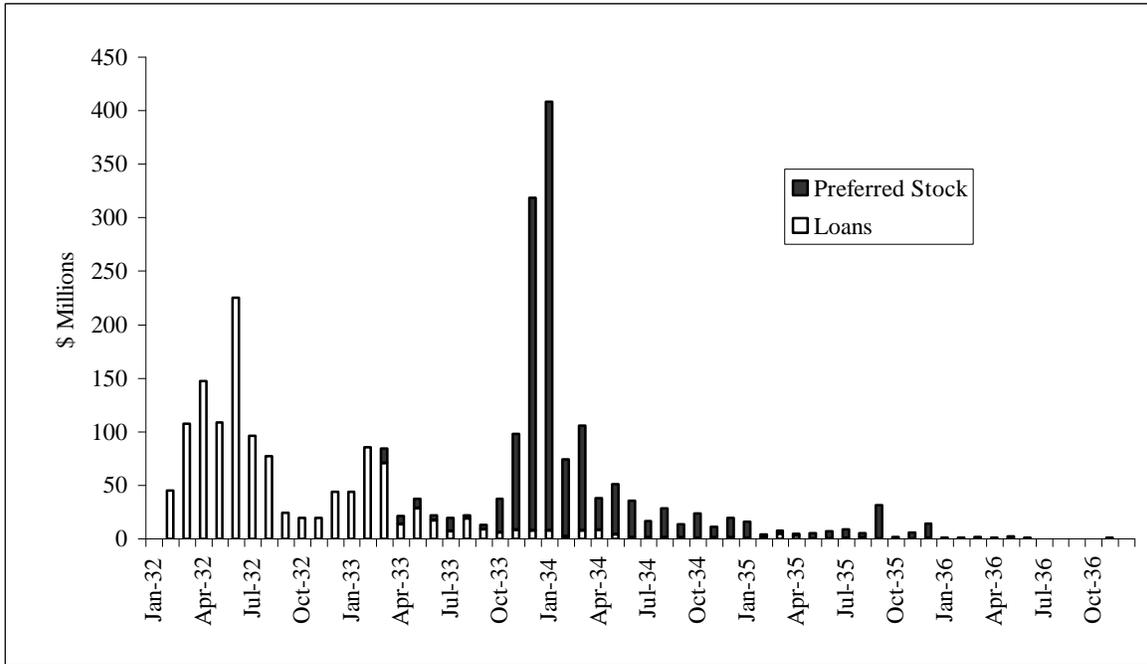
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Figure 1: RFC Authorizations Under Four Corporate Assistance Programs, Quarterly, 1932-1937



Source: Reconstruction Finance Corporation, *Quarterly Reports*, various issues.

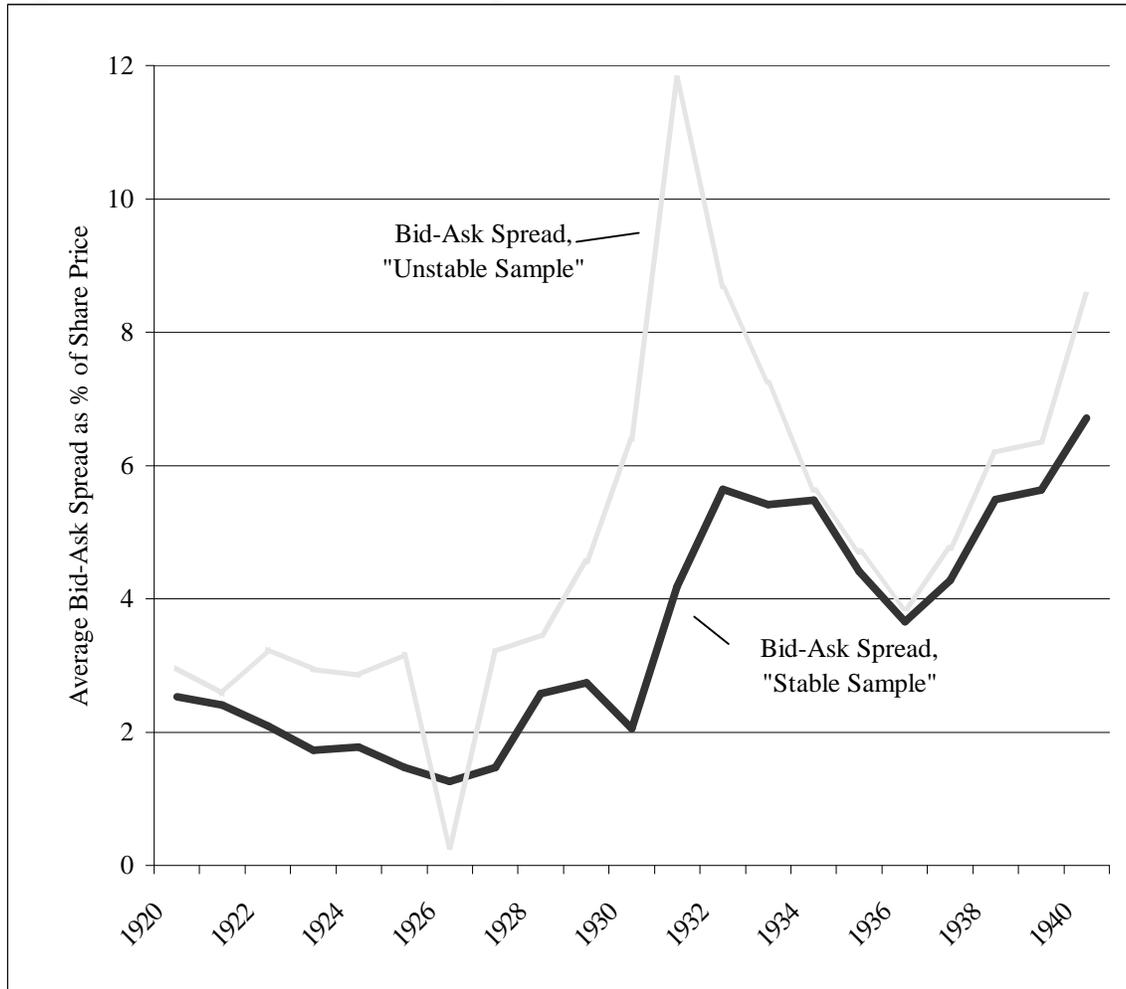
Figure 2: Amounts Authorized to Open Banks Under the RFC Loan and Preferred Stock Programs Monthly, 1932 - 1936



Source: RFC Monthly Reports to Congress, Various Issues.

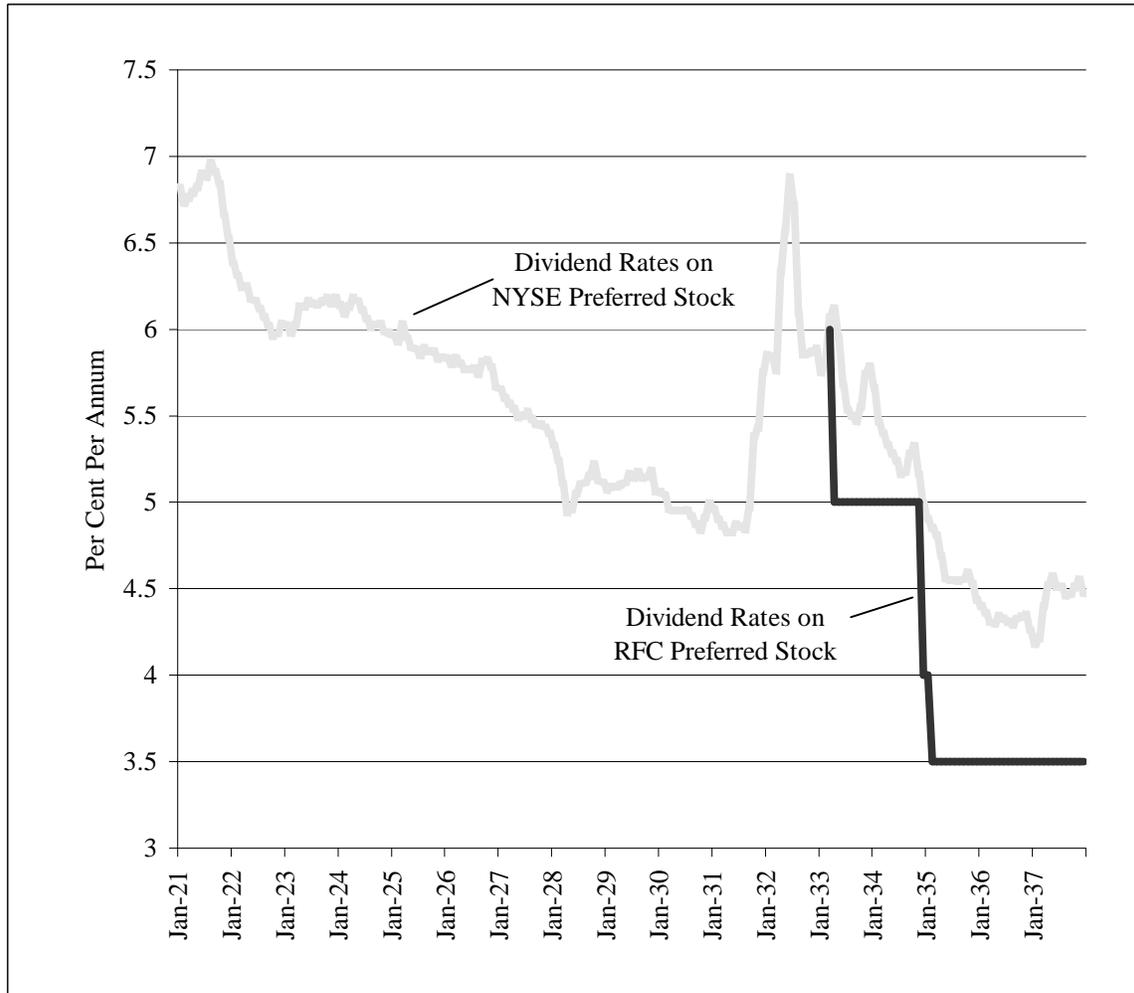
Note: Figure includes only loans to open banks. Does not include loans to receivers or those made on preferred stock. The RFC preferred stock program began in March 1933. Preferred stock includes investments made through notes and debentures to banks in states that prohibited preferred stock investments.

Figure 3: Calomiris-Wilson Bid-Ask Spreads for New York Banks, 1920-1940



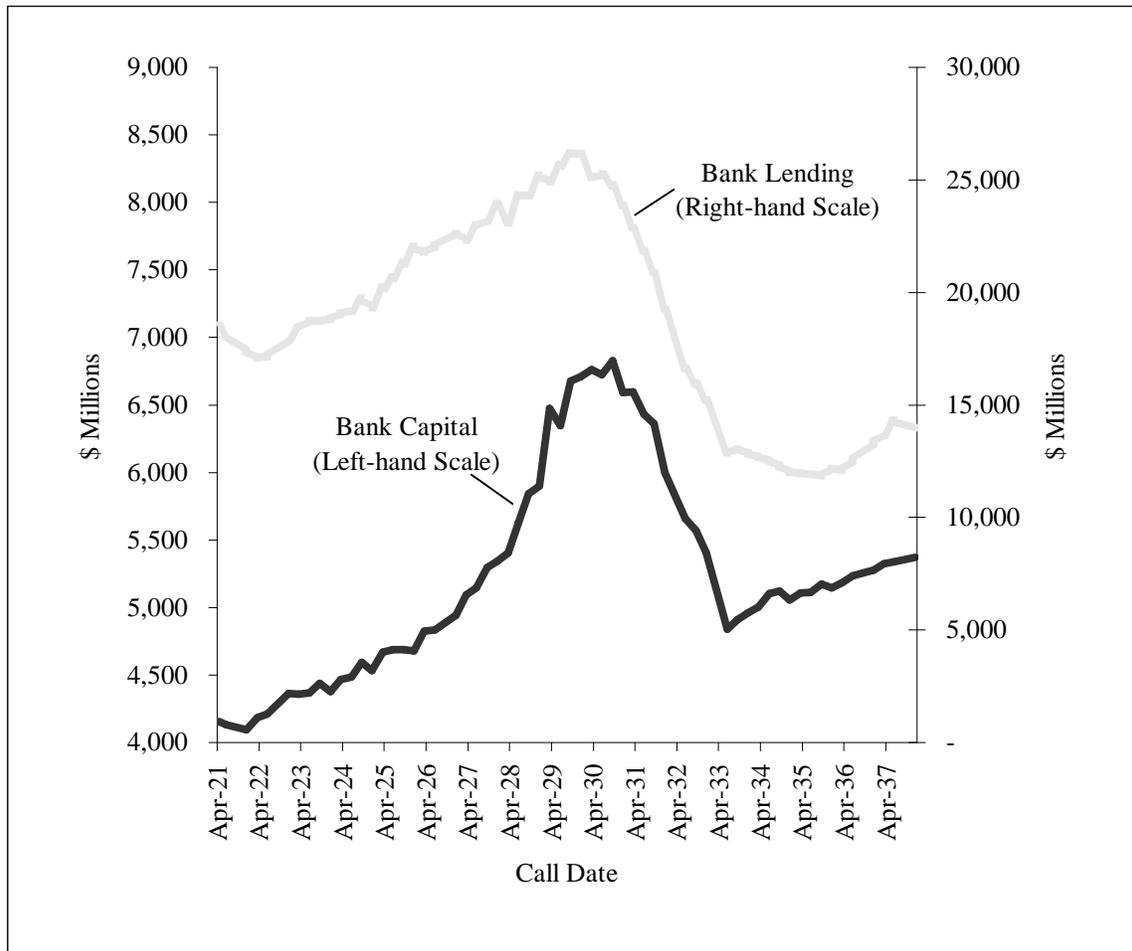
Source: Calomiris and Wilson (1999)

Figure 4: Dividend Rates on RFC and NYSE Preferred Stock, January 1921-December 1937



Source: Standard and Poor's, *Trade and Securities Statistics: Security Price Index Record*. NBER Macro History Database.

Figure 5: Bank Capital and Bank Lending, 1921-1937



Source: *Banking and Monetary Statistics*.

Table 1: Borrowing Behavior of Banks, February 1932 - March 1933

Number of Loans Authorized to The Bank	Number of Banks	Total Amount of Bank Borrowing from the RFC	Average Bank Loan Amount from the RFC
1	4,481	\$ 358,077,401.04	\$ 79,910.15
2	1,342	325,464,728.02	242,522.15
3	434	125,427,277.95	289,002.94
4	175	97,681,758.24	558,181.48
5	66	31,357,926.04	475,120.09
6	38	42,665,017.79	1,122,763.63
7	18	104,056,172.63	5,780,898.48
8	4	3,517,862.39	879,465.60
9	3	1,448,437.68	482,812.56
10	2	1,065,099.32	532,549.66
>10	4	6,806,275.50	126,042.14
Total	6,567	\$ 1,097,567,956.60	\$ 167,133.84

Source: RFC Monthly Reports to Congress, Various Issues, and author's calculations.

Note: Includes only loans to open banks. Does not include loans to receivers or those made on preferred stock.

Table 2: Major RFC Railroad Loans and Corporate Outcomes

Railroad	Loan Amount	Result	Date
Baltimore & Ohio	\$82,125,000	Judicial Readjustment of Debt	9/3/38
Boston & Maine	7,569,000	Judicial Readjustment of Debt	1/4/40
Chicago & Northwestern	46,589,000	Bankruptcy	6/28/65
Chicago, Milwaukee, & St. Paul	15,840,000	Bankruptcy	6/29/35
Chicago & Rock Island	13,718,000	Bankruptcy	6/8/33
Colorado and Southern	29,000,000	Judicial Readjustment of Debt	12/19/40
Denver & Rio Grande	8,300,000	Bankruptcy	11/1/35
Erie	16,582,000	Bankruptcy	1/20/38
Ft. Worth & Denver	8,176,000	Merger	4/4/32
Great Northern	105,422,000	OK	
Illinois Central	35,312,000	OK	
Lehigh Valley	9,500,000	Judicial Readjustment of Debt	10/11/33
Missouri Pacific	23,134,000	Bankruptcy	4/1/33
New York Central	27,500,000	OK	
New York, Chicago, and St. Louis	18,200,000	OK	
New York, New Haven, & Hartford	7,700,000	Bankruptcy	10/23/35
Pennsylvania	29,500,000	OK	
St. Louis & San Francisco	8,000,000	Bankruptcy	11/1/32
St. Louis & Southwest	18,790,000	Bankruptcy	5/17/33
Southern Pacific	23,200,000	OK	
Southern Pacific	19,610,000	OK	

Sources: Loans from Spero, p. 33. Results from New York Times, various issues. Cited in Olson 1972, p. 207, *f* 21.

Table 3: Purposes and Amounts of Authorized RFC Loans to Railroads, January 22, 1932 - October 31, 1937

Purpose	Jan. 22, 1932 - Oct. 31, 1932	Nov. 1 1932 - Oct. 31, 1933	Nov. 1, 1933 - Oct. 31, 1934	Nov. 1, 1934 - Oct. 31, 1935	Nov. 1, 1935 - Oct. 31, 1936	Nov. 1, 1936 - Oct. 31, 1937
Bond Interest	\$68,815,734	\$34,399,942	\$7,028,475	\$8,906,800	\$0	\$0
Bond maturities	54,144,460	15,073,000	10,597,575	6,757,000	-	218,861
Retirement of Bonds	-	-	-	-	12,405,667	18,007,500
Equipment Trust Maturities	21,829,181	16,212,305	4,611,000	-	5,000,000	573,000
Equipment Trust Interest	5,115,054	545,316	-	-	-	-
Short-term Maturities	40,702,413	-	43,000,000	-	-	-
Short-term Obligations, Interest	-	-	-	280,800	-	-
Payment of Short-term Loans (Notes)	-	-	-	-	-	310,639
Debenture Maturities	-	3,177,500	4,143,000	-	-	-
Debenture Interest	-	-	1,281,910	-	-	-
Purchase of Carriers' Securities	-	-	-	28,978,900	111,445,400	-
Mortgage Sinking Fund Payments	-	-	-	622,000	-	-
Purchase of Stock of Subsidiary Company	-	-	-	3,182,150	-	-
Interest on Leased Line Stock Certificates	-	-	-	195,200	-	-
Additions and Betterments	53,964,007	2,674,000	3,286,254	205,748	150,000	27,000
Bank Loans	39,803,100	-	-	-	-	-
Taxes	20,467,204	5,937,811	5,823,891	1,918,000	-	-
Audited Vouchers for Materials, Supplies, etc...	14,080,492	560,689	2,500,000	200,000	-	-
Rentals	7,050,059	-	-	-	-	-
Preferential Claims	6,986,742	1,500,000	-	-	-	-
Judgements	-	6,959,943	-	-	-	-
Equipment Repairs	-	2,500,000	-	-	-	-
Purchase of Property of Lessor Company	-	-	-	-	-	900,000
Working Capital	-	-	-	-	-	-
Miscellaneous	13,870,733	35,838	686,467	134,200	140,000	61,805
Total	\$346,829,179	\$89,576,344	\$82,958,572	\$51,380,798	\$129,141,067	\$20,098,805

Source: Interstate Commerce Commission, *Annual Report*, various years.

Table 4: Legal Qualifications and Conditions for Direct C&I Loans

	Reserve Banks	Reconstruction Finance Corporation
Type of Business	Any industrial or commercial business.	Any industrial or commercial business, including the fishing industry.
Age of Business	An established business.	Established prior to Jan. 1, 1934.
Financial Status	-	Solvent, in the opinion of the Board of Directors of the RFC.
Credit Position	Unable to obtain requisite financial assistance on a reasonable basis from usual sources.	"When credit at prevailing bank rates for the character of loans applied for is not otherwise available at banks."
Purpose of Loan	For working capital.	For maintaining and increasing the employment of labor.
Maturity of Obligation	Not over 5 years.	Not over 5 years.
Security Required	"On reasonable and sound basis."	"Adequately secured, in the opinion of the Board of Directors of the [RFC]."
Amount of Funds Available	\$139,299,557	\$300,000,000
Amount of Any One Loan	-	Not over \$500,000
Form of Transaction	(a) Direct loan, or (b) Discount or purchase from financial institutions, or (c) Advance to financial institution on the security of such obligation, or (d) Commitments with regard to such loan or advance to financial institution. (b, c, and d require 20 percent participation of financial institution in the risk.)	(a) Direct loan, or (b) Loan in cooperation with bank, or (c) Purchase of participation

Source: Hardy and Viner, p. 30.

Table 5: C&I Commitments Approved by the Federal Reserve Banks and RFC, Major Industrial Classifications

Type of Industry	Number Approved	Amount Approved	Number Approved	Amount Approved
	by the Federal Reserve Banks, June 19, 1934 - May 1, 1935	by the Federal Reserve Banks, June 19, 1934 - May 1, 1935	by the RFC, June 19, 1934 - December 31, 1937	by the RFC, June 19, 1934 - December 31, 1937
Manufacturing:				
Autos, Trucks, and Accessories	17	\$7,732,500.00	43	\$5,320,500.00
Metals	27	2,798,000.00	249	20,562,998.34
Machinery and Machine Tools	33	3,285,000.00	145	12,863,123.43
Textiles	19	2,496,500.00	259	33,597,883.33
Lumber and Builders' Supplies	31	2,286,600.00	235	20,418,203.81
Furniture, Office, and Household Equipment	31	1,964,500.00	84	4,680,600.00
			287	11,097,118.43
Wholesale and Retail Trade:				
Food Products	30	1,985,900.00	42	536,050.00
Lumber and Builders' Supplies	42	1,630,700.00	34	983,000.00
Chain and Department Stores	15	689,000.00	13	2,391,000.00
Grain, Feed, Seeds, Etc...	12	753,000.00	32	802,760.00
Miscellaneous:				
Contractors and Construction	19	1,572,000.00	*	*
Printing, Publishing, and Allied Trades	22	953,000.00	84	2,499,450.00
Hotels, Apartments, Restaurants	8	188,500.00	*	*
Transportation	6	120,000.00	*	*

Sources: *Federal Reserve Bulletin*, June 1935, p. 340; Quarterly Report of the RFC, December 1937, p. 93.

* Authorized under alternate RFC programs.

Table 6: Number and Amounts of Federal Reserve Bank and Reconstruction Finance Corporation Industrial Advances
(Amounts in thousands of dollars)

Date (Last Wednesday of each month)	Federal Reserve Bank Applications Recommended for Approval to Date (with and without conditions)		Outstanding Federal Reserve Bank Participations with Financial Institutions	Reconstruction Finance Corporation Applications Recommended for Approval to Date (with and without conditions)		Outstanding Reconstruction Finance Corporation Participations with Financial Institutions
	Number	Amount	Amount	Number	Amount	Amount
Dec-34	1,122	\$54,531.00	\$1,296.00	519	\$25,477.35	\$0.00
Jan-35	1,341	73,470.00	1,764.00	632	28,840.45	0.00
Mar-35	1,521	79,490.00	2,472.00	826	37,556.52	0.00
May-35	1,734	90,799.00	4,228.00	977	46,999.25	0.00
Jul-35	1,907	109,603.00	5,611.00	1,135	63,623.33	20.00
Sep-35	2,009	121,837.00	7,060.00	1,263	79,063.63	26.00
Nov-35	2,134	130,502.00	8,893.00	1,386	85,937.19	26.00
Jan-36	2,212	134,243.00	8,699.00	1,506	93,995.58	26.00
Mar-36	2,294	138,450.00	7,550.00	1,605	99,879.42	25.60
May-36	2,374	141,749.00	7,641.00	1,704	104,746.42	25.60
Jul-36	2,413	143,978.00	7,534.00	1,782	111,296.21	25.20
Sep-36	2,463	147,191.00	7,276.00	1,840	118,510.53	24.80
Nov-36	2,482	148,312.00	7,435.00	1,900	122,358.74	23.92
Jan-37	2,506	149,527.00	6,977.00	1,958	128,690.24	23.52
Mar-37	2,543	150,561.00	6,767.00	2,002	132,328.17	23.94
May-37	2,577	153,720.00	7,114.00	2,049	134,333.76	133.63
Jul-37	2,590	155,023.00	7,330.00	2,105	138,899.33	141.12
Sep-37	2,610	155,902.00	7,304.00	2,134	140,028.83	128.99
Nov-37	2,624	156,533.00	7,145.00	2,152	142,087.08	128.52

Sources: *Federal Reserve Bulletins*, December 1935-1937; Reconstruction Finance Corporation *Quarterly Reports*, various issues; Reconstruction Finance Corporation *Monthly Reports*, various issues.