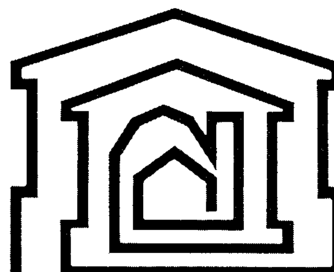
IMPROVED FUND AVAILABILITY AT RURAL BANKS



Report and Study Papers of the Committee on Rural Banking Problems

Board of Governors of the Federal Reserve System June 1975

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FINANCIAL MARKETS FOR RURAL BANK PAPER: REPORT ON RESEARCH FOR A SYSTEM COMMITTEE

BACKGROUND

In the 1960's, many rural banks experienced difficulty in accommodating the credit demands of their local farm customers. Their problems stemmed from a combination of several developments and circumstances. Basically, farm capital requirements were rising faster than rural incomes and bank deposits, thus creating capital-deficit areas. It was evident that funds had to be raised outside these areas; however, the Nation's principal financial markets were not structured to accommodate the small banks generally servicing such areas. These circumstances and the Federal Reserve studies and actions that they have stimulated provide the setting in which the special committee on rural banking problems began its work.

After the Korean war, real capital employed in agriculture continued to rise somewhat, though far more slowly than during the preceding decade. Of more importance from a financial point of view, the funds required annually to maintain or expand the physical plant rose at a substantially faster rate because of increases in prices of land and machinery. And of greatest significance to lending institutions, the proportion of these flows financed internally trended downward to levels far below historical norms. Loan demand surged as farmers undertook to expand their enterprises in order to maintain or to improve their individual incomes in the face of slow growth in total gross farm receipts and little growth in total net farm income.

At most rural banks these events led to divergent trends in loans and deposits. Deposit growth at individual banks, related mainly to the pace of rural economic activity, tended to reflect the relatively slow growth of gross farm income and the drop in farm population as farms were consolidated. Farm loans at banks, however, rose faster in response to the greater strength in farm credit demands—and even then, banks as a group did not maintain their previous share of total farm lending.

For some time, the disparate loan and deposit trends at rural banks—and similar events at urban banks—were accommodated by liquidating the sizable security portfolio with which the banking system had entered the period and by placing a higher proportion of new banking resources into loans. By the early 1960's, however, the cushion provided by these adjustments had disappeared at many banks. The Nation's larger banks then began to supplement their local deposit growth by raising funds in several ways: borrowing Federal funds and Eurodollars, selling negotiable assets such as acceptances, and issuing liabilities, primarily large negotiable certificates of deposit. By these pro-

cedures—which became known as liability management—banks adjusted their level of deposits and borrowings as required by changes in their loan demands, instead of adapting their loan extensions to deposit trends largely beyond their control.

As of the mid-1960's, however, only the larger banks were generally able to sell their instruments in money markets. At other banks, including most rural banks, lending capability continued to depend on local deposit trends. Concern began to be expressed, therefore, for the relative availability of bank credit to geographic areas or economic sectors—such as rural areas or agriculture—that for several reasons happened to be serviced primarily by small banking organizations. Thus, when the Federal Reserve System undertook a reappraisal of its discount mechanism, it was urged to recognize that the inability of financial markets to accommodate the instruments of small banks was an undesirable institutional impediment to national economic progress and also to mitigate this effect by making seasonal and longer-term credit available to such banks at the discount window.

The Steering Committee for the Reappraisal of the Federal Reserve Discount Mechanism sponsored a thorough investigation of the various aspects of these concerns and proposals. Research papers were prepared on: the incidence and handling of seasonal flows at banks; correspondent credit services; the Federal funds market; the secondary markets for State and local government bonds and negotiable certificates of deposit; and, of course, the patterns and determinants of past borrowing at the discount window. These studies indicated that small banks found it difficult or costly to raise funds through these market and banking mechanisms.[1] Another study documented the problems that rural banks were encountering in financing agriculture and furnished farm credit demand projections that indicated the continuance of such difficulties.[2] Papers discussing policy issues involved in Federal Reserve extension of seasonal and longer-term "development" credit at the discount window were prepared and the issues debated.

On the basis of this evidence the Steering Committee recommended, in its report submitted in July 1968, the implementation of a "seasonal borrowing privilege" for banks with relatively large seasonal needs for funds. However, the Committee concluded that long-term credit to meet the needs of banks servicing perennial credit-deficit areas or sectors did not properly lie within the scope of discount-window operations. It expressed the belief that more direct and fundamental answers to this problem lie in the improvement of secondary markets for bank assets and liabilities. Accordingly, it recommended "that *ad hoc* task forces be established within the Federal Reserve System . . . to pursue detailed studies of the feasibility of providing long-term credit assistance through some types of market-perfecting actions." [3]

This ancillary recommendation to the Board of Governors served as the basis for establishment, in January 1970, of a "special committee within the Federal Reserve System to investigate agricultural credit problems in capital-deficit areas and possibilities for their amelioration through improvements in the marketability of bank agricultural paper." In so doing, the

[1] Bernard Shull, "Report on Research Undertaken in Connection with a System Study," *Reappraisal of the Federal Reserve Discount Mechanism,* Vol. 1 (Washington, D.C.: Board of Governors of the Federal Reserve System, August 1971), pp. 52–65.

[2] Emanuel Melichar and Raymond J. Doll, "Capital and Credit Requirements of Agriculture, and Proposals to Increase Availability of Bank Credit," *Reappraisal of the Federal Reserve Discount Mechanism,* Vol. 2 (Washington, D.C.: Board of Governors of the Federal Reserve System, December 1971), pp. 107–73.

[3] "Report of a System Committee," *Reappraisal of the Federal Reserve Discount Mechanism,* Vol. 1 (Washington, D.C.: Board of Governors of the Federal Reserve System, August 1971), pp. 24–25. In making this ancillary recommendation, the Steering Committee also noted that increased reliance of banks on such markets for adjustment purposes could impose further responsibilities on the Federal Reserve System in periods of extreme monetary stringency. The banks' adjustment efforts, it felt, would increase the possibilities that one or more of the asset markets could become disrupted, in which case it would be necessary for the System to take crisis-forestalling action that could include making the discount window available to banks to reduce necessitous sales of assets.

Board noted that action on the other recommendations of the discount study had not yet been completed, but that it had "concluded that agricultural credit developments were such as to make it advisable that work proceed in this area on an independent basis." [4]

PROGRAM OF STUDY

The special committee, assisted by the staff that it had assembled, spent several months in developing and implementing an appropriate program of study. It adopted a research program intended to build upon rather than to replicate the substantial base of evidence and analysis that had been constructed during the discount study.

Thus, for instance, while projections of future farm loan demands might be updated or examined in greater detail—and such work was in fact under way—the general conclusions of previous work were not expected to be materially altered. Furthermore, the existence of the cooperative Farm Credit System, with its direct access to the Nation's principal financial markets, made it realistic to regard the difficulties that rural banks were having in financing agriculture as problems in banking and financial markets rather than as problems for farm borrowers—though of course the latter element was also present. Accordingly, the special committee decided that one major thrust of its studies would follow the lead provided by the discount study, particularly in the form in which it had been elaborated by the discount study Secretariat: [5]

> Despite the limited contributions that the redesign of the discount window may make to the filling of agricultural needs, the Secretariat feels that the only long-run solution lies in the perfection of secondary markets for bank assets and liabilities. What might appear to be a preferred position presently occupied by the large banks results essentially from their ready ability to sell their instruments—both earning assets and liabilities—in the market place. Small rural banks will be able to compete for funds on an equal footing only to the extent that they have a similar ability to market their instruments.
>
> The issue of market perfection lies largely outside the scope of the discount study, and the Secretariat therefore recommends establishment of an *ad hoc* System committee to investigate and develop suitable means of perfecting market performance and improving credit flows. Since this study would be independent of the discount study and would probably continue for some time past its conclusion, the Secretariat will not try to outline specifically the areas of concern or actions of this group. It does suggest, however, that such a committee study encompass the whole broad panoply of secondary markets, and that it establish special subcommittees to concentrate in those markets that seem to have the greatest difficulties and/or hold out the greatest hope for improvement (for example, the mortgage market and the market for agricultural paper).

To assist in pursuing these investigations, the committee assembled a markets study group that brought together Federal Reserve personnel with expertise in money markets, financial economics, rural banking, bank supervision, and Federal Reserve statutory authority.

As its other major research thrust, the special committee decided to study three alternative mechanisms or responses addressed to the same banking problem: (1) discounting of agricultural loans at Federal intermediate credit banks, (2) correspondent credit services, and (3) banking structure change from unit banking to branch or group banking. The committee arranged to obtain papers summarizing the available theory and evidence on each of these subjects and also sponsored several research projects to fill important gaps in that evidence. Hopefully, such studies would suggest adjustments that could improve the effectiveness of these mechanisms or organizations in providing rural banks with loanable funds. Or, failing that, the papers would at least set forth the various considerations and factors involved, and thereby contribute to ongoing public discussions of these mechanisms.

One other element of the special committee's activities, though not a part of its formal program of study, is worth noting. While the committee's studies were in progress, other discount study recommendations were being con-

[4] "Committee to Study Agricultural Credit Problems," Federal Reserve *Bulletin,* Vol. 56 (March 1970), p. 311.

[5] "Transmittal Memoranda," *Reappraisal of the Federal Reserve Discount Mechanism,* Vol. 1 (Washington, D.C.: Board of Governors of the Federal Reserve System, August 1971), p. 94.

sidered by the Board, the Presidents' Conference, and other groups within the Federal Reserve System. In these deliberations, the committee and its staff took an active role in setting forth the rationale and potential benefits of the proposed seasonal borrowing privilege, which would be particularly valuable to many rural banks. On April 19, 1973, the Board of Governors revised its Regulation A to make discount credit available "to assist a member bank that lacks reasonably reliable access to national money markets in meeting seasonal needs for funds." [6] As a result the committee had to rewrite the early drafts of its report, in which it had strongly urged such action. The committee's report continues to reflect its concern that the discount window be administered in ways that do not unintentionally discourage small banks from borrowing for appropriate seasonal and short-term adjustment purposes.

SURVEY OF RESEARCH

Access to Financial Markets

The markets study group, after a general discussion of the considerations involved in, and various possibilities for, tapping money and capital markets, provided the special committee with papers covering three major questions:[7] (1) What are the obstacles that limit the money market access of small or rural banks? (2) What methods and instruments can rural banks employ to overcome the obstacles and thus raise funds in money markets? And (3) would the use of money market funds be too risky an operation for such banks?

On the first question, the study papers agreed that a bank asset or liability must possess certain qualities of safety, liquidity, convenience, and volume in order to appeal to prospective buyers in the principal financial markets; most crucially, the credit risk—the risk of default—must be considered nil by market participants. Because usually they have no way of determining this directly at reasonable cost, market participants employ size and reputation of the issuer as proxies for quality.

As of 1971, the markets study group found a large gap between the characteristics of individual rural banks and of the instruments they could issue and the characteristics of most issuers and instruments actually found in existing financial markets. In most cases, a denomination of $100,000 was considered to be the smallest that could be efficiently traded. For an issue to have an active secondary market that provided liquidity, the outstanding amount usually had to total several hundred millions of dollars. With respect to credit risk, only banks with total deposits exceeding $500 million appeared to have the "name" necessary to sell their issues easily, particularly in times of monetary restraint. In sharp contrast to these parameters, the total deposits at many rural banks did not exceed $5 million, with many still in the $1 million and $2 million area.

Thus, it appeared that if a meaningful quantity of funds were to be raised, an intermediary institution would have to be interposed between the small banks and the national financial markets. This intermediary would be designed to accept from small banks one or more types of instruments that they could originate. It either would convert these, through packaging and insuring, into instruments acceptable to national money markets or would purchase them with funds obtained by selling its own debentures. For these operations it would need a market stature at least equivalent to that of the larger banks. The intermediary would provide liquidity to purchasers by issuing securities in sufficient volume to support a secondary market or by agreeing to redeem or repurchase its issues.

Having reached this conclusion, the markets study group noted that such an intermediary could conceivably be: (1) Federally sponsored and capitalized, (2) organized and capitalized

[6] For analyses of potential seasonal borrowing and of actual seasonal borrowing during 1973, see: Virginia Timenes and Emanuel Melichar, "Seasonal Borrowing Privilege: A New Dimension in Administration of the Federal Reserve Discount Window," *American Statistical Association: 1973 Proceedings of the Business and Economic Statistics Section;* and Emanuel Melichar and Harriet Holderness, "Seasonal Borrowing at the Federal Reserve Discount Window," *Agricultural Finance Review* (October 1974).

[7] See papers on access to financial markets (Sandberg, Gable, Doll, and Sloan, pp. 21–36 of this volume).

by the Federal Reserve System, (3) established as a private nonbank enterprise, (4) a money market bank or its affiliate, or (5) organized and capitalized by a large group of small rural banks acting together.

The last method had intuitive appeal to the group. Consequently it sought, without success, a legal means for such combined action by banks. Member banks apparently could not establish separate corporate entities for this purpose unless new legislation authorized an exemption such as that provided for ownership of stock in bank service corporations, in small business investment corporations, and in foreign banking corporations. The use of a "voluntary combination among banks"—the not-for-profit corporate device used for bank credit-card associations—was deemed inappropriate. Also, any voluntary association, joint venture, or "combination" of banks to form the intermediary apparently could violate the antitrust laws, given the nature of the contemplated undertakings of the proposed organization. Again, specific exemption would be needed in new legislation.

If it were to consider such enabling legislation, the Congress could simultaneously consider providing Federal capitalization for the venture—or at least providing initial capitalization while allowing the banks to become the eventual owners. Federal sponsorship would also go far toward resolving the basic organizational and marketing problems that any new intermediary would face. However, given the existence of the Farmers Home Administration and of the Federally sponsored cooperative Farm Credit System, such legislation would be difficult to justify on the basis of increasing the availability of farm credit. Perhaps, though, it could form part of a program to increase financial support for rural development.

There appeared to be some possibilities for expanding the intermediary role of nonbank private enterprise. In its simplest form, for example, more small banks could establish relationships with institutions such as discount houses. More complex arrangements were also proposed to the markets study group. A commodity exchange expressed interest in organizing trading in farm loans. While there is precedent for trading in such instruments on stock exchanges, the historical trend has been away from such a practice as financial structures have become more complex and specialized. Another organization expressed interest in insuring farm loans similar to the manner in which private residential mortgages have recently been insured. Such projects would require considerable resources and specialized skills, however, and it is not known whether the profit potential is sufficiently commensurate with these requirements to attract nonbank enterprise.

For the same reason, large banks are not likely to provide, under the shelter of their "name," general access to money markets for their small-bank correspondents. However, the markets study group found two avenues that appeared promising. First, money market banks could purchase, endorse, and resell the acceptances of small banks, in the process earning a mark-up at very little additional expense. Such activity may expand, particularly now that the Board of Governors has cleared up past regulatory uncertainties regarding "ineligible" acceptances. Second, large banking organizations could establish affiliates to raise funds for small banks through the sale of debentures or commercial paper—a route that may especially appeal to bank holding companies.

All in all, the possibility of legislative or private initiatives could not be ruled out, but significant actions have not as yet materialized. The markets study group therefore also investigated the possibility that the Federal Reserve System might take steps to ameliorate the effects of the existing imperfections in financial markets.

An intermediary sponsored by the Federal Reserve System could take various forms. Doll, for example, outlined a market for the full range of bank assets and liabilities.[8] Such an operation would be of maximum utility to banks but would also involve the most organizational problems and operating costs.

A more modest arrangement, developed by Sloan, would involve Federal Reserve sponsorship of the periodic sale of a single instrument —a standardized variant of a certificate of de-

[8] Doll, "A New Market for Financial Instruments Of Rural Banks," pp. 28–31 of this volume.

posit.[9] The special committee studied this proposal in considerable detail and, in its report, recommends that the Federal Reserve System consider establishing such a mechanism if other private or governmental initiatives do not appear.

The markets study group recognized that the use of money markets as sources of funds would expose rural banks to new risks. Gable described how the sale of various instruments affects the five different types of risk to which any bank is exposed.[10] He noted that, to an examiner, the amount of a bank's capital is a measure of its relative ability to withstand these risks, and that examination procedures are therefore designed to quantify risk and to evaluate the adequacy of capital. If a bank engages in the marketing of assets or liabilities, the effect of its specific operations on its capital needs is evaluated, and the adequacy of its capital governs the extent to which it can utilize the market sources of funds.

Discount Services from Federal Intermediate Credit Banks

Since 1923, when the Federal intermediate credit banks (FICB's) were established by the Congress, they have been authorized to discount farm loans for commercial banks. Given the rural banking conditions that developed during the 1960's, the number of banks using the FICB mechanism should have increased sharply. (In 1966, for example, 8 per cent of all commercial banks—about 1,100 banks—reported that they were experiencing difficulty in meeting the financial requirements of their regular farm customers.)[11] Instead, only a handful of banks were using the FICB mechanism—mostly through affiliated agricultural credit corporations rather than by discounting directly.

No studies to explain the prevailing low level of bank discounting had been made; nor had the Farm Credit Administration readily available data or information that could provide an explanation. Published conjectures on the subject appeared to disregard current banking conditions. For instance, the conjecture that correspondent credit services and the Federal Reserve discount window were adequate alternatives had, as Snider pointed out, been discredited by discount study research.[12] Nor, on the basis of their own contacts, could Federal Reserve personnel subscribe to the notion that only a few rural bankers were sophisticated enough or aggressive enough to avail themselves of an available discount service for farm loans. Still, the low level of usage of FICB credit services might have serious implications for the alternative mechanisms under consideration.

The special committee determined that a detailed study was required that would logically involve surveys of the: FICB's, banks already discounting directly, banks with affiliated agricultural credit corporations that were using the FICB's, and rural banks that were not using the mechanism in spite of their apparent need. At the request of the committee, the Board of Governors engaged Dr. John R. Brake of Michigan State University to plan and perform appropriate surveys, to summarize and analyze the responses, and if possible to recommend adjustments that would make the mechanism a viable source of funds. At the time, it was thought that bankers were in some way negligent or uninformed about FICB discount services, and that the committee could perform a useful function in stimulating their interest in this source of funds.

Brake performed comprehensive surveys of the institutions involved and submitted a report that should be recognized as a benchmark study of its subject.[13] It contained several surprises.

[9] Sloan, "Marketing of Negotiable Instruments of Deposit Issued by Small Commercial Banks," pp. 32–36 of this volume.

[10] Gable, "Nondeposit Sources of Funds for Rural Banks: An Examiner's View," pp. 24–27 of this volume.

[11] Emanuel Melichar, "Bank Financing of Agriculture," Federal Reserve *Bulletin*, Vol. 53 (June 1967), p. 931.

[12] Snider, "Bank Discounting of Agricultural Loans at Federal Intermediate Credit Banks," pp. 37–39 of this volume.

[13] Brake, "Federal Intermediate Credit Bank Discount Services to Rural Banks: Experience and Prospects," pp. 40–68 of this volume.

Contrary to prevailing conjecture, large percentages of rural banks were very interested in obtaining funds from FICB's—particularly through direct discounting—and a sizable proportion described the potential of the mechanism as "great." But the FICB's, by officially taking a neutral stance toward discounting by either banks or production credit associations, in general provided banks with no publicity, encouragement, or information on establishing a discounting agreement or on choosing or processing loans to be discounted. In addition, for no apparent reason, there was considerable variation among farm credit districts in the manner in which the Federal statutory authority was being implemented—to the extent that it was implemented at all (10 of the 12 districts had no direct discounting agreements with banks; 7 districts were servicing fewer than three bank-affiliated agricultural credit corporations).

Key officials of the Farm Credit System were also found to have misconceptions about the Federal Reserve's reaction toward providing rural banks with greater access to money market funds. Some apparently thought that they were assisting the Federal Reserve System by restricting the access of rural banks during periods of monetary restraint when, in fact, it is important that all sectors—and especially productive sectors as vital as agriculture—have an equal opportunity to bid for a share of the available national supply of funds.

The special committee studied the information that had been assembled and, in an appendix to its report, outlined an approach that the FICB's might follow should they desire to increase their credit service to banks while retaining adequate control over the amount of funds involved. Reluctantly, however, the committee concluded that in the near term the FICB's do not appear likely to adopt a more accommodative stance toward discounting by banks.

Correspondent Credit Services

As of 1970 relevant evidence on correspondent credit services to rural banks was available from annual surveys by the American Bankers Association, the 1956 and 1966 national farm loan surveys, and the 1963 national survey of correspondent banking. These surveys indicated that, through participation in loans, correspondents were performing a useful function in helping rural banks to meet loan requests that exceeded their legal lending limits. However, the 1963 and 1966 surveys also indicated that correspondent banking was not supplying net additional funds to rural areas, but rather, on balance, drew funds from these areas.

Using call report data and data from the 1966 farm loan survey, Melichar and Doll reported that the 855 member banks with 50 per cent or more of their portfolio in farm loans in 1966 received farm loan participations equal on average to only 22 per cent of the balances they maintained with correspondent banks. For the 2,069 nonmember agricultural banks, the figure was only 16 per cent. While banks with high loan/deposit ratios were able to do better than this average, only the larger banks succeeded in obtaining net additional funds. For agricultural member banks with loan/deposit ratios of 70 per cent or more in June 1966, loan participations were 32 per cent of correspondent balances at those banks with capital under $200,000; 73 per cent of balances at banks with capital between $200,000 and $500,000; and 146 per cent of balances at banks with capital over $500,000.[14]

Furthermore, the national volume of correspondent credit obtained by rural banks was relatively small. In June 1966 correspondents were providing $304 million through farm loan participations, which represented only 2.6 per cent of total farm lending by banks. However, the amount had apparently risen from only $43 million in 1956, an annual growth rate of 22 per cent. If such growth continued for a few more years, correspondent credit would become a significant net source of funds nationally. It seemed unlikely, however, that the rapid pace would continue after 1966, given the generally tighter liquidity positions of correspondent banks.

By coincidence, in 1969 a comprehensive

[14] Emanuel Melichar and Raymond J. Doll, "Capital and Credit Requirements of Agriculture . . .," pp. 151–58.

correspondent banking survey was made in the Kansas City Federal Reserve District—an area that had originated 48 per cent of the Nation's farm participation loans in 1966. In a report on this survey prepared at the request of the special committee, Knight indicated that growth in farm participation loans had virtually ceased in this area. The 1969 volume of $163 million was little more than that of 1966, in spite of an increase of 35 percent in farm nonmortgage loans at major lending institutions.[15] Also, balances maintained with correspondent banks were again found to far exceed correspondent credit accommodation.

Another study covered the correspondent credit experience of small rural banks in Illinois during 1968 and 1969. In a special report for the committee, Benjamin found some growth in loan participations between 1968 and 1969, even though monetary conditions were significantly tighter in the latter year.[16] Most of the growth, however, occurred at the smaller of the banks in the survey. Moreover, funds provided by Chicago correspondents fell significantly, with that drop offset by increases from correspondents in smaller Illinois cities.

Benjamin also analyzed the costs of noncredit correspondent services provided to a typical rural bank with deposits of about $6 million. He found that these could be paid for by maintaining balances equal to between 3 per cent and 4 per cent of the rural bank's deposits. In contrast, such banks in the survey—even those not using credit services—on average maintained balances exceeding 6 per cent of their total deposits.

In all the surveys, the bulk of correspondent credit service was connected with overline loans rather than with credit deficits in general. Even such limited assistance by correspondents appeared subject to curtailment during periods of monetary restraint. Thus correspondent banking was not a complete or an adequate substitute for more direct access to money markets. The special committee also noted the large amount of funds that could be employed for local loans rather than held in correspondent balances if correspondent services could be placed on a fee basis, and it recommended such a change in banking practices.

Influence of Banking Organization on Rural Credit Services

Because inadequate access to national capital and money markets is unique to small banks, the problem can be approached by seeking to increase the effective size of banks serving rural areas to the level required for participation in money markets. This situation already exists in most States that permit statewide branching. In rural areas, the required bank size can be attained by branch systems that also have a substantial urban base. Alternatively, most of the effects of large bank size might be obtained through ownership of rural banks by holding companies that also own one or more urban banks.

With these possibilities in mind, the special committee wished to ascertain the probable impact of banking structure on farm lending or, more generally, on the volume of bank credit available in rural areas. It therefore obtained (1) a review of past research relevant to this subject, (2) descriptions of current practices of branch systems and holding companies, (3) a comparison and analysis of farm lending trends in States with different banking structures, and (4) a number of before-and-after analyses in States where recent changes in banking structure had occurred.

Review of literature. Herder reviewed previous theoretical and empirical studies of the effects of banking organization.[17] One principal point of agreement was that very small banks have high unit costs. Such costs appear to decrease sharply as deposit size increases to $5 million and probably continue to decrease significantly to a deposit size of $10 million.

Past studies also indicated that both branch banks and banks owned by holding companies tend to utilize more of their capacity—that is,

[15] Knight, "Loan Participations and Fund Flows in Correspondent Banking," pp. 69–75 of this volume.

[16] Benjamin, "Correspondent Banking in Illinois: Credit Flows and Pricing Practices," pp. 76–87 of this volume.

[17] Herder, "Effect of Bank Structure on Performance and Implications for Agricultural Lending," pp. 88–95 of this volume.

they maintain a lower level of liquidity—and to put more of their resources into lending within their market area. This fact was attributed in large part to the lower over-all lending risk associated with the more diversified markets enjoyed by the branch and holding company systems.

But Herder also noted that all banks, even small unit banks with a banking monopoly, have nonbank competition in farm lending. All are therefore presumably limited in their ability to adjust farm lending terms to their specific cost and risk situations. The combined or separate influences of bank size, structure, ownership, market area characteristics, and nonbank competition on bank performance in farm lending were not ascertained in past studies, particularly since no major studies segregated farm lending in their analyses.

Characteristics of branch systems. Snodgrass detailed the various advantages derived by branch systems through larger size and geographical diversity.[18] For instance, some branches of large branch systems are being operated at loan/deposit ratios that would be impossible at small unit banks; that is, loans exceed deposits at some rural branches. He also described how a branch system can, and does, through internal accounting devices, influence both the total lending activity at its branches and the allocation of funds among different types of loans. If long-run returns on farm loans are competitive with other investment opportunities, however, there would be no reason for branch banks to assign a low priority to farm lending.

Comparison of aggregate trends. Melichar compared farm credit conditions and trends in three groups of States: unit banking States, limited-branching States, and statewide-branching States.[19] Data from the 1966 farm loan survey showed that banks in unit-banking States clearly experienced more problems with farm lending. However, these banks also used outside sources of funds to a much greater extent in making farm loans, so the net impact could not be ascertained from the survey data alone.

Aggregate farm loan data and trends at the three groups in the 1960's were also examined. Banks in unit-banking States were found to hold a much greater proportion of total farm debt than banks in statewide-branching States—37 per cent versus 26 per cent. And the proportion had actually increased slightly during the 1960's, whereas in statewide-branching States it had fallen from 31 per cent to 26 per cent. Analysis of variance showed these differences to be statistically significant at the 1 per cent confidence level. Also, the ratios of farmers' bank debt to their farm sales, income, and assets were lower in statewide-branching States and had increased significantly less during the 1960's. On the other hand, there were no significant differences among the three groups of States in the ratios of *total* farm debt to farm sales, income, or assets. Thus greater activity by other lenders offset the lesser role of bank credit in statewide-branching States.

Statewide mergers in Virginia. In Virginia many rural banks were recently acquired by statewide, primarily urban branching systems. Snider obtained special postmerger data on deposits and loans at the new branches and compared them with data for a control group of unit banks.[20] The ratio of farm loans to total loans at the merged branches fell from 17 per cent to 14 per cent, while at the control group it fell from 20 per cent to 15 per cent. The difference between the trends at the two groups was not statistically significant.

De novo branching in Wisconsin. Wisconsin recently changed its banking laws to permit banks to establish new branches within 25 miles of the head office, provided that no bank existed within 3 miles of the proposed new location. Rosenblum compared 39 branching banks with a control group of 39 similar banks that did not branch.[21] The average ratio of farm loans to total loans at the branching

[18] Snodgrass, "Branch Banking Systems and Rural Credit Services," pp. 96–101 of this volume.

[19] Melichar, "Impact of Banking Structure on Farm Lending: An Examination of Aggregate Data for States," pp. 102–11 of this volume.

[20] Snider, "Branch Banking and Loan Portfolio Changes: The Virginia Experience," pp. 112–14 of this volume.

[21] Rosenblum, "The Impact of Limited Branch Banking on Agricultural Lending by Banks in Wisconsin," pp. 115–17 of this volume.

banks fell from 16.90 per cent to 16.11 per cent from the pre-branching to the post-branching period. At the control group, the ratio fell from 15.93 per cent to 13.69 per cent. The difference between the groups was significant. Farm lending "benefited" at 29 of the 39 matched pairs of banks.

Characteristics of holding companies. Most of the farm credit advantages claimed for large branch systems are also commonly cited for multibank holding companies. To ascertain the extent of the advantages actually achieved, Arnold conducted detailed interviews with officials of five holding companies operating in the Minneapolis Federal Reserve District.[22] In each of the companies, cooperation among the banks in obtaining or exchanging credit and other services was encouraged as a policy goal of holding company management. However, banks in the two large companies operated independently in such matters, much as unit banks would have; only in the three smaller companies did holding company management play an active role in arranging interbank credit services. Also, most credit arrangements consisted of participations in loans, just as in correspondent relationships among unit banks. Reliance on loan participations—a relatively unwieldy instrument—may imply that potential credit mobility is not being fully achieved.

Holding company acquisitions in Florida. Substantial holding company activity in Florida, beginning in 1959, accounted for a significant share of the Nation's holding company acquisitions during the last decade. Between 1962 and 1969, 64 banks were organized into holding companies. Of these, 43 were in the citrus farming area, and a majority joined holding companies in 1967. Sullivan found that the farm loan volume at the 43 banks rose from $10 million in 1962 to $26 million in 1966, and then declined to $20 million by 1970.[23] In contrast, farm loan volume at all other banks in the area rose from $29 million in 1962 to $50 million in 1966 and continued to rise to $72 million by 1970. The ratio of farm loans to total loans at the acquired banks dropped from 4.5 per cent in 1966 to 2.4 per cent in 1970. At the other banks, the change was only from 3.7 per cent to 3.5 per cent. In general, the same contrasting trends occurred in the other farming areas of Florida, as well as in the State as a whole.

Same-county mergers in Ohio. Gady and Carter studied mergers of Ohio banks located in the same county, along with a handful of holding company acquisitions.[24] A large number of pertinent ratios were examined, including the proportion of the county's farm loans made by the merged banks, and the farm loan ratios at the merged banks and at other banks in the same county. On the whole, few differences in behavior were observed between the two groups of banks.

Summary. As the committee notes in Appendix B to its report, the impact of banking structure on farm lending was not consistent. However, given the potential farm lending advantages of branch systems and holding companies, it was, in a sense, disappointing to find the empirical evidence to be no more than a standoff, if that. Clearly, banks' share of the farm loan market held up better in unit-banking States than in other States during the 1960's. In the before-and-after studies of individual State experience, changes in bank structure resulted in relatively higher farm lending volume only in Wisconsin—where a very limited type of change was involved. In Ohio and Virginia the effect appeared neutral, while in Florida the relative farm lending volume at banks acquired by holding companies decreased. As the committee notes, the questions and issues remain unresolved. Inquiries into the reasons for the varying experiences observed in the committee's projects appear in order.

[22] Arnold, "Impact of Multibank Holding Companies on Banking Services to Agriculture in the Upper Midwest," pp. 118–24 of this volume.

[23] Sullivan, "Impact of Holding Companies on Farm Lending by Banks in Florida," pp. 125–29 of this volume.

[24] Gady and Carter, "Change in Banking Structure in Ohio: Impact on Agricultural Credit," pp. 130–33 of this volume.