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**AN ASSESSMENT OF RESTRUCTURING ALTERNATIVES
FOR BANKS FOR COOPERATIVES**

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John A. Hopkin

In January, 1987, Committees were appointed within the Farm Credit System to supervise the assessment of alternatives for restructuring the Banks for Cooperatives. The economic difficulties leading to this action fall largely into four categories: loss of revenue, high cost of providing loans, high concentration of loan risks and concerns over governance.

The loss of revenue is due, in part, to the declining number of farmer cooperatives, which fell from nearly 9000 in 1960 to just over 6000 in 1980, and has been projected at about 3400 in year 2000. More importantly, there has been a decline in the percent of cooperative debt supplied by Banks for Cooperatives, as reflected in data for the 100 largest cooperatives, shown in Figure 1. Total BC loans outstanding (after provision for losses) declined from \$8.9 billion on December, 1984 to \$7.2 billion December 31, 1986. As a consequence of these (and possibly other) factors, BC net earnings declined from \$181 million in 1981 to just over \$1.0 million in 1986.

The high costs of providing loans by BCs stems from at least three sources:

- * Average Operating Costs per \$100 of loans, which increased from 32 cents to 92 cents between 1980 and 1986;
- * Costs of Funds, which varies greatly from one district BC to another. These costs are influenced by many factors, but represent the average costs of the securities used by each district;
- * The assessments of BCs to cover losses elsewhere in the Farm Credit System under the loss-sharing arrangement growing out of the Farm Credit Amendments Act of 1985.

Loan volume is concentrated in a very few large customers in some districts. Although the loan-concentration risks are spread somewhat through the facilities of the Central Bank, loan concentration is much higher in several district BCs than most commercial banks and regulators would find acceptable.

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Governance controversy with respect to BCs largely relate to two issues. First, the large, regional co-ops which supply most of the BC capital have no more votes than a corresponding number of very small co-ops that supply very little capital. Second, the BCs feel their interests are under-represented on the district boards.

Project Objectives

The objectives of the research project were to:

1. Assess the dynamics of farmers cooperatives and the possible impacts of these changes on financial requirements of BC borrowers;
2. Assess the emerging competitive environment within which Banks for Cooperatives will provide those requirements;
3. Identify and assess relevant organizational restructuring alternatives, within the constraints of existing legislation, for those BCs desiring to participate; then recommend the preferred alternative to the Steering Committee for their selection;
4. Develop the merger prospectus pertaining to the selected alternative so that Banks for Cooperatives can determine whether or not they desire to join the merger.

THE DYNAMICS OF BC CUSTOMERS

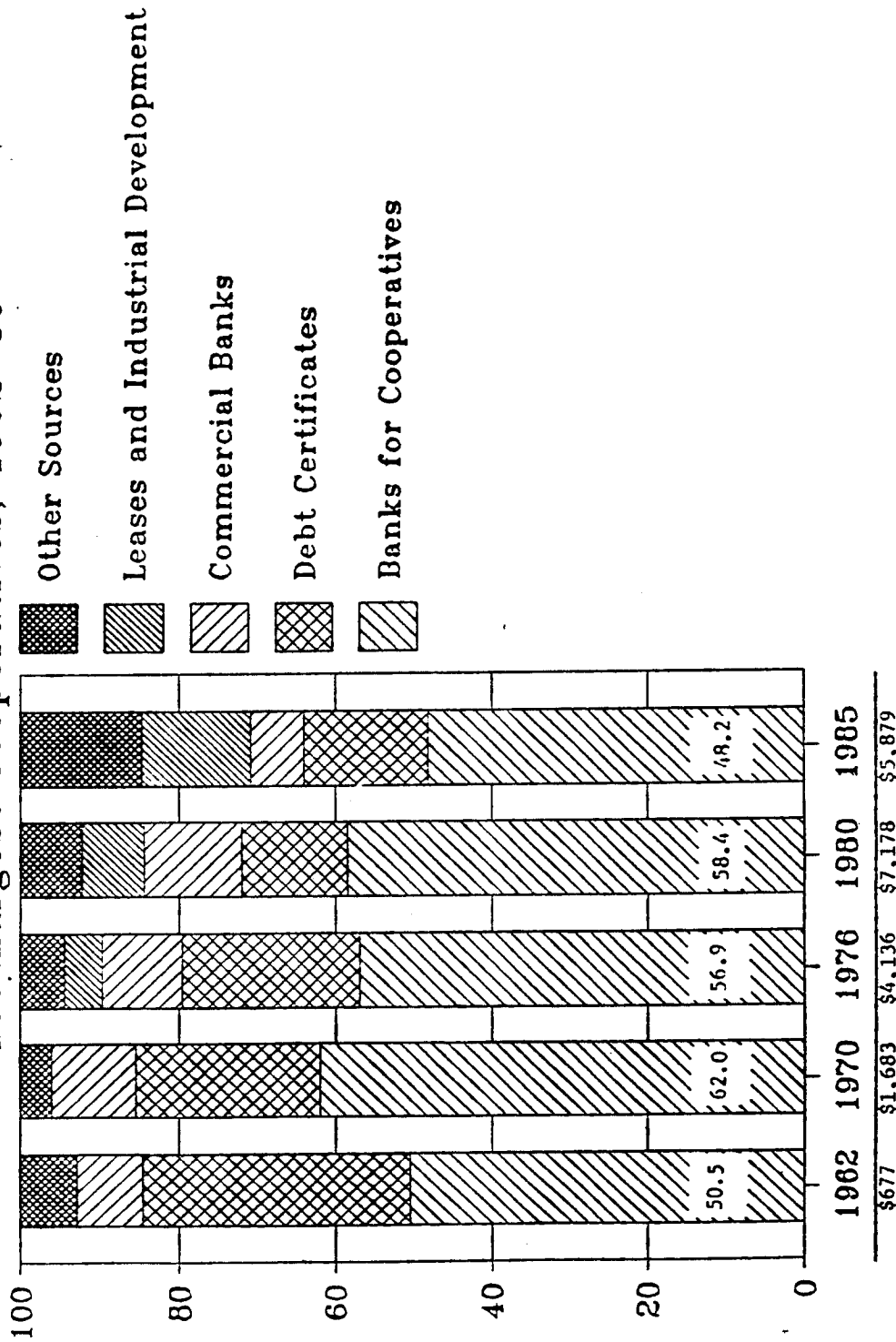
Not only has the share of farmer cooperative funding declined significantly, farmer membership in cooperatives declines sharply as size of farm increases, as shown in Table 1.

In all of Agriculture, 5 percent of the farms account for about half of farm sales. For Texas co-ops, (which likely are typical of most co-ops) 25 percent of the farms account for half of the farm sales. This is a problem that cooperatives must soon resolve or the largely will become the suppliers of part-time farmers only. Root causes of this problem lie in the one-man, one-vote process and uniform pricing.

Figure 1

Changes in Sources of Debt Capital

100 Largest Cooperatives, 1962-85



Total Debt Capital (Million Dollars)

Source: Agricultural Cooperative Service, USDA

Banks for Cooperatives face the same set of problems in dealing with different sizes of co-ops and customers with different levels of risks. The resulting problem is much the same -- holding on to the larger, more viable customers.

TABLE 1: PERCENT OF FARM OPERATORS WITH MEMBERSHIP IN A MARKETING OR SUPPLY COOPERATIVE BY CROPLAND ACRES, TEXAS SOUTHERN HIGH PLAINS, 1982.

Size of Farm	Percent of Farms
Acres	
1-320	75
321-640	60
641-1280	70
1281-1600	67
1601-2560	87
2561-4400	38
over 4400	20
All Farms	66

Challenge in the Future

Looking ahead, a combination of new technology and integration is increasingly challenging the position of farmer cooperation as a first-handler of farm products and supplies of farm inputs. Competitive pressures to control markets for farm inputs and products will intensify. These pressures will be manifested in several ways:

- * Control of complex inputs will be used more extensively to achieve integration,
- * Farm products will become more differentiated, often through genetic engineering, with patent rights to specific genetic traits;
- * Production will be designed and controlled to meet specific market needs;

- * Progressive farmers will be offered packages which may include unique production inputs, credit, and access to a differentiated market. Cooperatives must find ways to either duplicate or link with such packages if they are to remain in the mainstream of agriculture, moving into the next decade.

Rural Utility Financing

With changes in legislation, most BCs are seeking to expand rural utility financing to offset their decline in farmer co-op financing. To materially expand the BC share of utility financing, however, will require:

- * Uniform, highly qualified expertise in utility financing, serving all districts;
- * Uniform lending instruments across the nation;
- * Lower BC operation costs per \$100 of loans;
- * Reduced concerns over member equity rotation.

In summary of our look at agriculture and cooperatives and the changes cooperatives are undergoing to remain competitive, the more successful ones are developing the financial skills required to operate effectively in today's dynamic money market.

THE CHANGING COMPETITIVE ENVIRONMENT FOR BCs

A combination of financial deregulation, new technology and increased customer mobility is intensifying the problems BCs face in competing for the business of financially viable cooperatives.

Commercial banks are losing consumer and industrial customers to S&Ls, Credit Unions and other non-bank financial institutions such as insurance companies, security brokerage firms and large manufacturers and retailers. As a consequence, they are looking for new customers -- like local cooperatives. Banks in Ag. Trade Centers are becoming especially aggressive.

New and growing Agricultural Credit Corporations represent a new breed of Ag. lender that is looking for quality loans relating to agriculture. They are also beginning to show interest in financing smaller but viable farmer cooperatives.

Another development that began a decade ago but is now increasing sharply is the invasion of foreign agricultural cooperative banks into the U.S. Farm Credit Market. Several of these banks are competitive threats to the BC system including, Rabobank, Nederland, Credit Agricole, Norinchuken and the D.G. Bank.

Characteristic of increased competition under deregulation, competitors become "lean and mean" and compete head-on in terms of rates.

Trends If BC Banks Do Not Change

What likely trends can be expected if the BC System does not change?

1. BC loan volume will continue to decline as more and more of the regionals are attracted to competitors.
2. This will increase BC operating costs and further jeopardize capital rotation. As a consequence, effective rates will continue to increase for all BC borrowers.
3. Smaller, financially viable co-ops will also be drawn away by more competitive rates.
4. This, in turn will lead to a further decline in services.
5. Quality of BC loans will decline as financially viable co-ops shift to other lenders.
6. Unless reversed, this trend ultimately will lead to the BCs becoming "lenders of last resort."

Plans for restructuring should attempt to preserve the unique advantages over their competitors which BCs have, namely:

- * The "Agency" status of their securities as part of the cooperative Farm Credit System.
- * Access through the Funding Corporation to a large variety of debt maturities through which to reduce interest-rate risk through improved debt-liability matching. These tools require high financial skills, the acquisition of which should be enhanced by larger volumes and varieties of loans.

- * Ability to spread loans over broader geographic areas and types of supplies and services. This risk pooling within the BC system can be materially enhanced through merging.
- * Cooperatives have unique features relating to capital formation, pricing, taxing, etc. Lending officers familiar with the innerworkings of cooperatives have an advantage over competitors in identifying and projecting cash flows and monitoring credit problems of cooperatives.

ASSESSING ALTERNATIVES FOR CONSOLIDATION

Criteria and Methods

The criteria for evaluating alternatives for consolidation were developed with the help of the Project Steering Committee. Those selected as most relevant were:

1. Net interest rate to the borrower;
 - * Cost of FCS Securities
 - * Cost of operation per \$100 of loan
 - * Net present value of borrowers equities
2. Effective delivery system to local and regional co-ops;
3. Reducing loan risks;
4. Governance of the BC system;
5. Adequacy of capital.

The methods used in evaluating alternatives were varied. A questionnaire seeking opinions and ideas on consolidation alternatives was mailed to all BC directors and each district CEO. They strongly preferred total consolidation to either partial consolidation or no change. These responses also provided inputs useful in defining the combination of district BCs into regions for testing partial consolidation alternatives. In addition, previous studies of consolidation and other economic literature were used as input into the evaluation process. Statistical

models were estimated and cost functions analyzed to assess the economies of size which would accrue from BC consolidation. Detailed cost data for each BC covering the period 1981-1986 were used in the cost analysis.

Finally, the research team sought input, on an organized basis, from the National Council of Farmer Cooperatives, representatives of selected state Agricultural Councils, FCA, ACS-USDA, Central Bank staff, the Project Steering Committee composed of selected board representatives and CEOs from each BC, and CEOs and loan officers in selected BC districts. These varied and important sources of facts and opinions were used to form the basis for our final recommendation on BC consolidation.

Consolidation Alternatives

Three consolidation alternatives to the current BC Structure were evaluated:

- * Total consolidation;
- * Consolidation into five regions;
- * Consolidation into four regions.

The details of these consolidations, the structures of the banks that would be created, based on January 1, 1987 balance sheet data and the analytical models used in deriving the cost data for comparisons are outlined in the major report. The cost comparisons are summarized in Table 2. The alternative structures were analyzed and compared in terms of the five criteria outlined above.

Economics of Size - Operating Costs

Economics of size were measured through estimation of a long run average cost function, Figure 2. Operating cost per \$100 of loan volume was chosen as a measure sensitive to loan volume. A regression model was specified relating operating cost to time, net worth, and gross loans per dollar of net worth. In this specification, net worth serves as a proxy for "plant size" or capacity, while the ratio of gross loans to net worth is a proxy measure for output per unit of "plant" or capacity utilization.

The statistical model was specified as a cross-sectional model and estimated using 1981 and 1986 annual data:

$$C = a + b_1T + b_2(GL/NW) + b_3(GL/NW)^2 + b_4NW + b_5(NW)^2$$

where: C = operating cost per \$100 of gross loans per district,

T = a dummy variable for year,

GL = gross loans per district,

NW = net worth per district.

All parameter estimates are significantly different from zero 95 percent level and the adjusted \hat{R}^2 is 0.91. The relationship is estimated using data from each of the 12 BC districts. Operating expense for the Central Bank was allocated proportionately back to each district before the parameters were estimated. The IRAC of Figure 2 is based upon this estimated regression.

Important differences, were also found in the cost of funds among the 13 banks and from one period to another. These differences are due to many factors, some of which are associated with size of operation. No theoretically elegant method was devised for measuring the relationship of size to cost of funds. Instead, about one-third of the difference in the average cost of funds for the 12 districts and that of the Central Bank (which had from four to nearly 20 times the loan volume of each of the district banks) was attributed to be associated with size.

Increased loan volume and loan activity provides greater flexibility in the timing and maturity of new debt sold. More importantly, the increased volume of loans makes it possible to attract and hold people with superior financial skills. Differences in the average costs of funds and operating costs per \$100 of loan (expressed in terms of basis points) are summarized in Table 2.

TABLE 2: ESTIMATED COST ADVANTAGE OF TOTAL CONSOLIDATION OVER PRESENT STRUCTURE AND PARTIAL CONSOLIDATION.

	Operation Costs Per \$100 of loan* (Basis Points)	Cost of Funds (Basis Points)	Total (Basis Points)
<u>Protected Costs</u>			
Present Structure	63.0	973.0	1036.0
Five Region Consolidation	47.0	947.0	1021.0
Four Region Consolidation	42.6	972.0	1014.6
Total Consolidation	38.0	951.0	989.0
<u>Advantage of Total Consolidation</u>			
Over Present Structure	25.0	22.0	47.0
Over Five Region Consol.	9.0	23.0	32.0
Over Four Region Consol.	4.6	21.0	25.6

* Adjust to a 10:1 loan/net worth ratio.

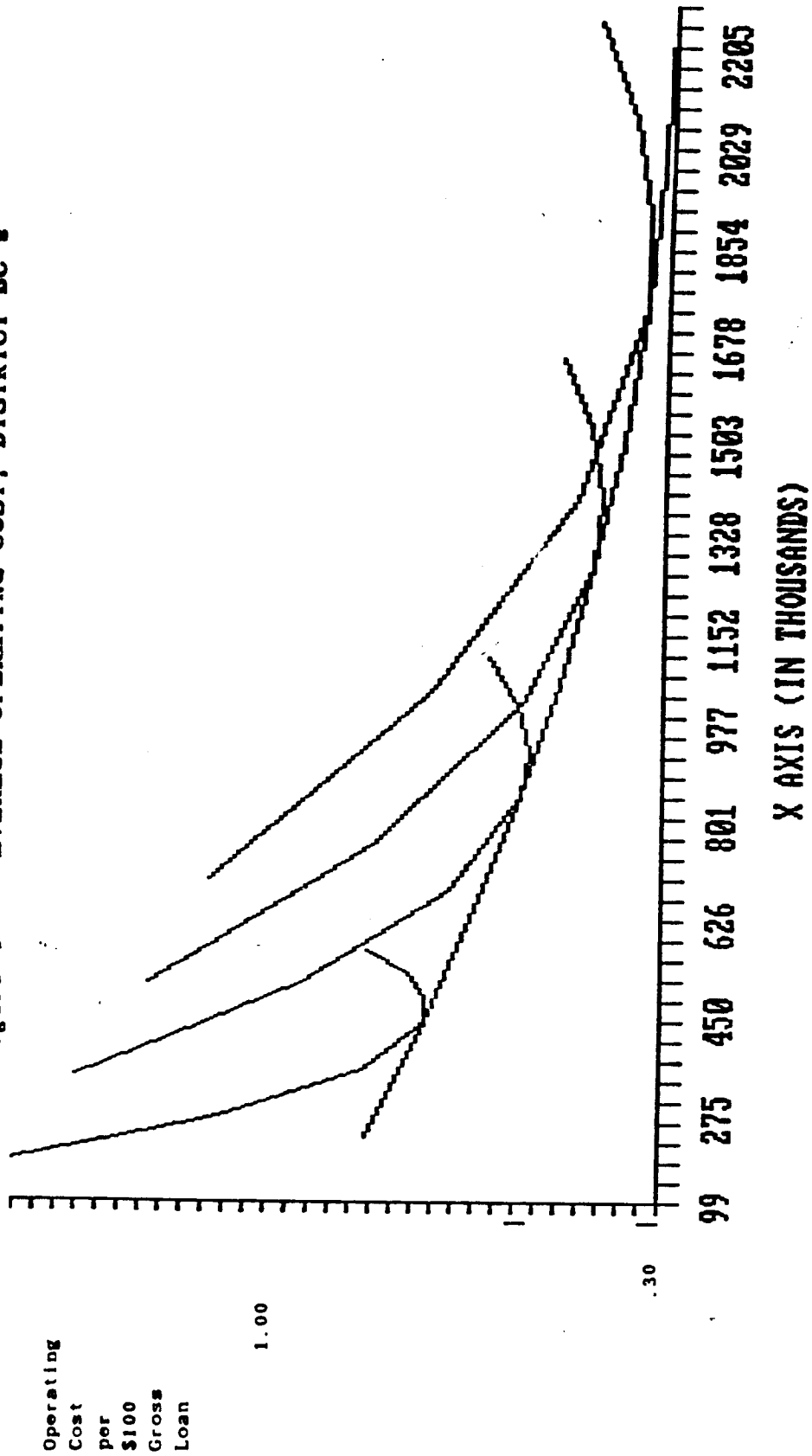
CONCLUSIONS AND RECOMMENDATION

The differences between results for the four-region and five-region consolidations were insignificant. Hence, the relevant comparisons were between no change, partial consolidation and total consolidation.

Based on: (1) A projection of the changing financial service requirements of successful cooperatives; (2) an assessment of the trends in the relative importance of BCs in financing those cooperatives; (3) the changing competitive environment in which BCs will supply those services; (4) an assessment of the cost savings projected for the restructuring alternatives considered, and (5) the opinions of most of the leaders of cooperatives and the BC system, a total consolidation of all 13 BCs into a single, unified Bank for Cooperatives was recommended. This consolidation bank would have the following characteristics:

- * A decentralized credit delivery system focused at the district level. The delivery system would be designed to achieve a maximum lending authority at the district level, consistent with credit quality control and district need.

Figure 2 AVERAGE OPERATING COST, DISTRICT BC's



Branch service offices would be maintained in each of the 12 Farm Credit districts;

- * A centralized administration, finance, legal, credit analysis and similar operations in order to achieve economies of size;
- * A central management of specialty programs, such as international and utility financing in order to establish unified procedures, documents and policies and to achieve a uniformly high level of services;
- * A dual loan review process for larger, more complex credits to insure a high level of loan quality;
- * A new board of directors for the consolidated Bank of Cooperatives composed, initially, of two BC representatives from each merging district and one BC representative from each non-merging district.

Advantages of Total Consolidation

Total consolidation offers several important economic advantages over regional consolidation. Among them are:

1. Lower interest rates to borrowers. Economies of size provides several benefits, such as:
 - * Lower operating costs per \$100 of loans. Total consolidation should save 25 basis points over the existing structure, 9.0 basis points lower than the five-region consolidation and 4.6 basis points lower than the five-region consolidation.
 - * Lower costs of funds growing out of greater flexibility in financial management and the likelihood of acquiring and holding higher skills in financial management associated with the increased volume. Cost of funds under total consolidation were estimated to be 22 basis points lower than for the present structure, 21 basis points lower than the four-region consolidation and 23 basis points lower than the five-region consolidation. Moreover, future technologies in analysis and communication will increasingly favor the larger size achievable through total consolidation

2. Improved Delivery System

- * Total consolidation makes possible unified policies and programs for improved market penetration. An immediate opportunity could occur, for example, with an expanded program for utilities.
- * Because qualified loan officers will operate in each district, the present capacity to serve the finance needs of members in the district should not be diminished by total consolidation.
- * Lower costs and specialized skills made possible through total consolidation should permit the consolidation bank to be competitive for the large cooperative accounts.
- * Easier for non-consolidating BCs to arrange for overlines.
- * Provide a single voice for co-op financing on public policy issues.

3. Loan risks should be lowered due to:

- * Spreading of loans over broader and diverse geographic areas.
- * Greater commodity and product service diversity.
- * Reducing portfolio concentration from a few large loans.
- * Improved asset-liability management.
- * Increased potential for improved credit management resulting from more effective utilization of top-quality credit personnel and more uniform credit analysis and supervision.

Reduced loan risks could make possible a shorter and more predictable equity rotation, thereby reducing the effective interest rate to borrowers. This benefit was conservatively estimated to be equivalent to nine basis points.

4. Capital Adequacy:

- * Lending limits of each unit operating by itself is much improved by total consolidation.
- * Greater efficiency of capital under total consolidation.
- * Uniform equity revolvment and larger volume should allow fine-tuning of capital ratio to improve capital efficiency.

Minimum Requirement for Consolidation

Because of important differences among banks within the System, no voluntary consolidation plan will likely be totally acceptable to all thirteen banks. Therefore, the following minimum conditions for consolidation were recommended:

- * At least seven of the existing 12 districts, plus the Central Bank, must agree to consolidation; * At least 75 percent of the total gross loan volume, including participations from non-consolidating banks, should be included in the new consolidated bank; and
- * The combined equity capital of the new consolidated bank should not less than \$700 million.

Unless these minimum are met in a consolidation plan, proceeding with general consolidation would not be recommended.