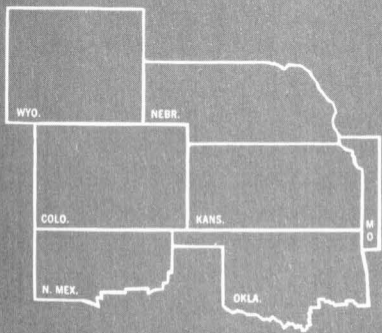




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Concepts of Rural Economic Development

By Gene L. Swackhamer

CONCERN IS a sign of our times. Youth are searching for identity and purpose. Their elders are searching for understanding. Economists continue to debate the merits of discretionary versus fixed economic policy, of an income-expenditure approach versus the monetarists' quantity-theory approach. Humanists restudy Malthus, with a fear that the technological revolution was only a temporary reprieve in the dismal science. The assumptions of an implicit institutional structure in economic analysis are being challenged by a new generation of institutionalists unawed by "establishment-like" rigidities. And, economic development has increasingly become a matter of concern to rural and urban communities facing uncertain futures.

It might not be entirely fair to imply that uncertainty or unrest are any more prevalent today than ever before—rapid communication and modern science may only make it seem so. Likewise, the similarity of the economic questions of today (institutionalism, economic development, etc.) to those of the past may be more imagined than real; nevertheless, considerable attention in the rural sector is being devoted to social and economic adjustment problems.

Many rural communities are failing to share in the growth and prosperity of modern times. Typical of their problems are loss of population, relative decline in the availability and quality of community services, lack of job opportunities, underemployment, low real incomes, and increasing per capita tax burdens. These are complex problems without simple solutions; yet, without more attention now, the adjustment process in rural communities will likely increase in severity.

This article has been written to assist understanding of rural economic development. A primary objective will be to break through the haze of concepts, programs, activities, and industrial park campaigns to better identify rural development problems and to analyze development strategies.

ESTABLISHING FUNDAMENTAL PRECEPTS

Real personal income per capita is the most widely used measure of economic welfare, especially when combined with additional information on income distribution. Personal income represents the individual's total money income, including transfer payments and some interest payments. By adjusting for price and population changes, the measure is standardized on

a real per capita basis, permitting comparisons among different areas.

Since income measures output in terms of goods and services, it represents economic welfare. Income measurements exclude such other important welfare considerations as leisure, quality changes in goods, services and environment, and the spiritual and noneconomic aspects of human welfare.¹

Real personal income per capita is also a good measure of economic growth, especially at local or subnational levels. The most widely used measure of national growth is real gross national product (GNP). Economic growth, as measured by income, is not dependent upon maintaining or increasing population, but prolonged loss of population leads to declines in demand for goods and services and, hence, employment, which may make continued income gains unsustainable. In sparsely populated regions, a larger proportion of personal income per capita may be required for education and other governmental services. Because economic growth is a many-sided process, real personal income per capita is often used in combination with population and other welfare measures.²

Surprisingly, not all rural residents want growth and development or, at least, they don't want what accompanies it. This realization immediately introduces some important aspects of temporal and intangible value. The availability of fresh air, unobstructed views, less population stress, accessibility to place of work, outdoor recreation, and numerous other intangibles compensate some rural residents for the income foregone by not pursuing other employment alternatives.

The early experiences of the Tennessee Valley Authority indicated that nonmaterial considerations produced social adjustment problems. Most people would now agree that

residents of the Tennessee Valley are better off economically than before development but, for several years, communication and value-judgment problems between residents and authorities obscured the long-term economic benefits.

It would be misleading to believe that all rural residents value rural living above income. Migration from rural to urban living is evidence that economic considerations weigh heavily in career decisions. Although rural nonfarm population increased modestly each census from 1900 until 1960—when definitional changes resulted in about a 1 per cent decrease—farm population has declined dramatically. Net migration from farms was 6.3 million in the 1920's, 3.8 million in the 1930's, 9.5 million in the 1940's, about 8 million in the 1950's, and approximately 5.2 million through the first eight years of the current decade. In part, it is this exodus that has stimulated interest in rural economic development. Loss of population threatens numerous small towns and rural communities.

Rural merchants need customers to stay in business, so they often view any attempt to increase population as economic development—regardless of the community impact. Economic development means much more than a larger population and more employment—often called extensive growth. It also means increased economic opportunity for residents and higher per capita real incomes. Thus, providing gainful employment for the formerly unemployed, increasing the productivity of the labor force, and providing higher-skill opportunities for the underemployed³ are desirable goals of economic development.

The distinction between extensive growth (more population) and the latter—call it “in-

¹*Urban and Rural America: Policies for Future Growth*, Advisory Commission on Intergovernmental Relations Report No. A-32, Washington, D. C., April 1968.

²*Ibid.*, pp. 30-31.

³Underemployment occurs when people earn less than their potential because their nominally full-time occupation is only seasonal, or when they do work they use inefficient methods of production from which they receive little income.

tensive growth" (higher per capita real income)—is important. Although some firms may gain from population growth, the average citizen may not benefit, or may even be worse off. If the population increase is from in-migrants, or of lower-wage employment, or if the cost of additional governmental services exceeds additions to real income, then the average citizen has not gained and meaningful community economic development is questionable.

Yet, the role of population cannot be ignored. Studies have shown population growth is systematically related to growth in median family income in small- and medium-sized municipalities.⁴ In large communities, population can become a burden. Cities over 250,000 population tend to exhibit higher relative costs for public and private industry and diseconomies of scale resulting in higher per capita public expenditure and employment.⁵ On the basis of findings such as these, development guidelines advocating balanced patterns of urbanization, reduction of barriers to migration, development of new communities, and population dispersion seem to be emerging.

DEVELOPMENT CONSTRAINTS

Natural resistance to change when traditional systems are threatened is common—even when economic betterment can be demonstrated to result. But people enjoy variety and will usually accept change once the goals are understood and the methods found to be acceptable. Economic development is a special form of economic change. In addition to the social constraints to rural development, other important limits are frequently encountered.

An inventory of area resources quickly reveals strengths, weaknesses, and potentials. Rural communities often depend upon agriculture as the sole economic base with a modest retail-service sector and little or no manufacturing or industry. Natural resources

such as land and water are usually abundant, but a skilled labor force frequently is not. Some rural communities depend upon extractive industry, forestry, government projects, and recreation, or a combination of these with one another or agriculture, but many rural communities lack a diversified economic base. If natural resources are lacking, the prospects of economic base building and income improvement are greatly diminished. "Traditional rural industries are no longer growth industries in the sense of having the capacity to provide more people with income. To the contrary, technology has caused these industries to expel people."⁶

Capital and financial availability are common rural development constraints. Without an economic base sufficient to generate export activity, internal capital generation through industry output is seldom sufficient to finance development activity. Furthermore, the financial alternatives available to private and public rural development interests are limited.

An adaptive and progressive community is a necessity to rural development. Intelligent reasoning and planning with attention to facts, data, and circumstances requires respected leadership and a knowledgeable populace. Most important of all, rational conduct must prevail. These traits are neither automatic nor predictable; they are, however, important determinants of economic development environment and must be understood by change agents and influence leaders.

Location theory has evolved to explain industrialization and urbanization. The existence of external economies such as joint growth of related industries, market specialization, and cost minimization has encouraged concentration of economic activity. The carryover influence of past decisions and the economic ad-

⁴*Urban and Rural America*, pp. 34-43.

⁵*Ibid.*, pp. 56-57.

⁶Lindley E. Juers, "Forming Rural Coalitions," a paper presented to a seminar on Communications to Build the Future Environment, Minneapolis, Minn., November 20-22, 1968.

vantages of agglomeration result in a “herd-effect” that tends to perpetuate concentration of economic activity.⁷ This trend of continued industrialization has been difficult to alter, partially because much new investment in capital equipment tends to be additions to existing facilities. Programs of rural development seeking to achieve a relocation of industry face these constraints as well as other market, raw material, and labor considerations.

There are costs of sparsity. Low density population, characteristic of rural areas, creates many development problems. The rural citizen’s desire for services is similar to that of urban residents, but the maintenance of a tax base sufficient to meet increasing wants is often impossible. The costs of transportation increase the total cost of education, health, and many other services in rural areas.

A final constraint is the inflexibility and inadequacy of many rural units of government in innovating new solutions to economic problems. Regardless of whether inertia is due to lack of leadership or foresight or resources, rural government often seeks to maintain the status quo, which, in reality, is to slip backwards socially, culturally, and economically over time.

DEVELOPMENT FOCAL POINTS

Defining the territory, problem, or neighborhood toward which development effort is directed can be difficult. Labels such as community, urban, rural, area, regional, and resource are used to identify economic development focal points. They are not mutually exclusive categories, since boundaries are often indistinguishable and overlapping; but there is an implied geographic dimension that ranges from relatively small (community) to relatively large (regional).

Community development has been defined as “an effort to increase the economic oppor-

tunity and quality of living of a given community through helping the people of that community with those problems that require group decision and action.”⁸ There are three important aspects of this definition: economic opportunity and quality of living are all-inclusive goals permitting wide latitude in programs and projects, problems that require group decision and action imply activity of public rather than private effort, and the dimensions of the community are left unspecified. The last point is important. The agrarian and village communities, as thought of in the traditional sense, frequently have lost identity under the advance of specialization, technology, and urbanization. Emergence of large-scale farming, development of secondary roadways, and decline of many local government units are examples of changes that have enlarged the concept of the rural community. Industrialization and specialization also have enhanced economic opportunities in urban centers, but not without fragmenting traditional community bonds. As a consequence of changes like these, preliminary study of the community becomes an even more important first step in community development. Whether the issue be a school bond election, providing jobs, or expanding health services, the task of effective communication and leadership within the community has increased in complexity. The task is particularly difficult if the issue requires a change in the traditional unit such as consolidation or reclassification.

Rural development is much like resource development—both are general descriptive terms. Rural, by census definition, is residual—in that it is all areas that are not urban, including towns under 2,500 population. Furthermore, rural population is comprised of two categories based upon residence—rural farm and

⁷*Urban and Rural America*, p. 44. Also see Lindley E. Juers, p. 6.

⁸Sheldon G. Lowry, “Sociological Concepts and Models Relevant to Resource Development,” *Readings in Community Development for Non Metropolitan Areas*, Resource Economics Extension Mimeo, No. 177, Durham, New Hampshire, April 1967.

rural nonfarm; the latter being about four times larger than the former. Thus, rural development includes the nonfarm as well as farm population. Resource development, on the other hand, lacks a geographic connotation and, instead, relates to physical, natural, human, and social capital.

In 1955, Congress established a Rural Development Program to lift farm and nonfarm incomes and living standards in chronically distressed rural counties. Although spawned nationally, the program's focus was self-help under local direction. Several "demonstration" counties throughout the United States participated in the program, attacking a variety of problems with only a modest expenditure of Federal funds. It appears that the program's most lasting impact was in upgrading living conditions and demonstrating techniques of community cooperation. The program did not materially improve incomes.

Based upon Rural Development Program experience, the Area Redevelopment Administration (ARA) was created in 1961 under the Department of Commerce; and the Department of Agriculture instituted a counterpart—Rural Areas Development (RAD) Program. The ARA's objective was to create new and permanent employment—a goal not achieved by previous programs. Several features of the ARA merit review. The focus shifted from rural community self-help at the county level, to area income improvement. Although more than half of the direct and indirect jobs created were in rural areas, total area development was the goal through Federal industrial-commercial loans. At best, the program's success over four years was limited—with little more than 100,000 jobs created. Emerging from the program was a belief that scattered, piecemeal projects would not solve fundamental development problems—that only massive efforts could hope to achieve lasting impact.

Successor to the ARA was the Economic Development Administration (EDA) created

by the Public Works and Economic Development Act of 1965. Creation of EDA acknowledged that the process of economic growth has a national dimension and that national prosperity is the best long-run solution to subnational development problems. Almost simultaneously with the formation of EDA, the U.S. Department of Agriculture reorganized its Economic Research Service (ERS), creating a new Economic Development Division (EDD), to "contribute to knowledge about economic growth and decline of areas and regions as these relate to people living in the open country, towns, and rural cities. . . ."⁹

Regional development can be defined as improving the real level of living of the inhabitants of a subnational unit that is large enough to be influenced by national economic policies and programs and to influence national economic progress. All, or parts, of several states usually comprise a region, though the dimensions may vary with purpose. Multistate regions also overlap as in the case of the Great Plains, Mississippi Valley, Ozarks, and Corn Belt.

Only in recent years have coordinated multistate and national efforts been made to influence regional development. The Appalachian Regional Development Act of 1965 provides for Federal-state cooperation in constructing hospitals, educational facilities, libraries, airports, sewage systems, public recreation facilities, highways, flood control projects, and other activities. Two similar regional development commissions—Ozarks (Kansas, Missouri, Oklahoma) and Four Corners (Colorado and New Mexico)—include parts of five Tenth Federal Reserve District states. Community development is a vital part of economic change, but the regional philosophy clearly indicates that coordinated planning and expenditure should guide community programs to avoid costly and competitive redundancy.

⁹*Rural People in the American Economy*, Agricultural Economic Report No. 101, Economic Development Division, ERS, USDA, Washington, D.C., October 1966, p. i.

GUIDELINES FOR RURAL DEVELOPMENT

The problems of rural America today will be the problems of urban America tomorrow.¹⁰

Not just sentiment demands that we do more to help our farms and rural communities, . . . the welfare of this Nation demands it. The cities will never solve their problems unless we solve the problems of the towns and smaller areas.¹¹

Are these just public pronouncements calculated to gain support or are they widely held public policy beliefs? The evidence increasingly suggests that rural and urban problems are opposite sides of the same coin. The economic lag and depopulation of rural areas is interrelated to agglomeration of economic activity and the massing of population into urban centers. This does not mean that the rural exodus is a primary cause of urban development problems; natural increases account for more urban population change than in-migration. The interdependence of rural-urban development results from the integration of functional economic areas in our national economy. Many new theories (trade, locational, staple export, national "trickle-down" growth, growth center polarization and hierarchy of functional economic areas) have been advanced by academicians to explain the process of growth and development and, regardless of whether the direction of economic advance is diffusion from nation-to-hinterland or from base up, none question the interrelatedness of rural-urban activities.

Perhaps because of these views, the prevailing development strategy has become one of "balanced urbanization." Central to this strategy is the belief that more than 100 million

Americans will be added to our population in the next 30 years—raising the total population to approximately 314 million, with 85 per cent being urban. The desire for "balance" in population dispersion, economic activity and equitable distribution of incomes results from many considerations. Past experience with urban sprawl, regional economic imbalance, and self-perpetuating poverty cycles suggests that development problems will intensify. Few disagree with this statement of the problem; but in the advocacy of solutions and creation of action programs, real conflicts materialize.

From an economic point of view, the trend toward a fully integrated national economy with activity polarized in megalopolitan concentrations seems likely; yet, from a social standpoint, such development would seem to have few merits. A major conflict arises in determining the appropriate role of Government in guiding economic development. Under the traditional independent private decision system characteristic of our society, industry and individuals are relatively free to locate where they please; thus, economic analysis concludes that future population and economic activity will be concentrated in megalopolitan strips.

Many who concur in the above projection do not accept its inevitability and offer alternative policies of public-private intervention in the urbanization process. Concepts of new towns, regional "nodal" growth centers, planned communities, decentralized government offices, and rural development commissions are examples of planned intervention for balanced economic development. Many of the programs related to these concepts would have a direct impact upon rural areas.

TRIAL AND ERROR AND LIMITED PROGRESS

What can rural communities do to assure their survival and enhance the quality of living for their residents? First, many must acknowledge the hard fact that not all small rural towns will survive. Consolidation of resources and

¹⁰President Richard Nixon, in remarks to Department of Agriculture employees as quoted in "Rural Change—Perspectives for the 1970's," by John H. Southern at the National Agricultural Outlook Conference, Washington, D.C., February 18, 1969.

¹¹Excerpts from President Lyndon Johnson's remarks at Dallastown, Pennsylvania, September 1966, as quoted in *Urban and Rural America: Policies for Future Growth*, p. xv.

energy to produce a viable county or area unit may be the best strategy for some. Next, it must be realized that generations of loyalties to local institutions die hard, but the passage of time often makes past causes seem trivial. The shifting of allegiance to larger towns or area growth centers is often socially difficult because of past rivalries. The consolidation of school systems creates an identity vacuum for areas where schools close. The refusal to participate in government development programs on a matching grant or loan basis because of pride, stubborn independence, or lack of information is costly to rural communities because they then fail to benefit from the tax purchased services. But if the surviving unit becomes a viable community, the school system and other services become more than adequate, and sparks of internal growth are generated, then meaningful development is more likely to result.

An often overlooked source of growth is the existing economic base. Major employers generally have grown with the community and provide "basic" employment—meaning employment in the production of goods and services sold primarily outside local markets. Employment which serves local markets is called "non-basic" and is usually dependent upon the level of basic employment. Support and expansion of basic industries is a growth stimulant.

In some areas, basic employment is declining. Before major expenditures are made to attract industry, these communities need to thoroughly analyze their status. The Rural Areas Development program of the USDA was created to provide this service in the form of Technical Action Panels composed of local leadership and agency specialists. If, after such a study, the community seeks to attract new industry, to build an industrial park, or to promote an existing attribute, then, hopefully, the chance of success has been enhanced. It is much easier to grow by broadening the economic base than it is to gain a larger relative share of existing output—especially in cases

such as manufacturing where total employment has remained nearly constant.

The planned construction of rural shopping centers represents many interesting aspects of rural development. As service centers, they would primarily represent nonbasic employment and would compete for a share of the existing business over a larger functional economic area than most local businesses would be serving. Also present, however, is the belief of investors that these complexes will become growth centers. Developers can cite many economic advantages that might accrue to rural residents and commercial agriculture; yet, widespread acceptance and success have not been demonstrated.

It is probably true that many national retailers and regional distributors would like to consolidate their outlets into economic size units designed to serve larger geographic areas. There is also a trend toward regionally dispersed farm supply distribution points and decentralized farm product marketing. The concept of rural shopping centers is directed toward this blend of serving the household needs of rural nonfarm and farm residents and providing an accessible and complete range of commercial farm services. Before assuming a defensive posture, rural towns should ask the question: Why are developers investing in rural shopping centers? If the answers relate to economic considerations, as they appear to, then a lesson from the history of urban change is relevant. Suburban shopping centers have grown dramatically while "downtown business" has declined. Earlier innovations in extending services (convenient parking and shopping hours, more extensive product lines) or in making downtowns more pleasant shopping environments would not have prevented suburban sprawl, but it might have stemmed urban decay. Likewise, how long will today's farmer wait in line to unload at harvest at a local elevator before driving a few more miles to a multiple dump facility? Or, consider the stockout cost

to a local merchant of a vitally needed repair part when a known availability exists less than an hour's drive away.

These are issues of competition, but they do not directly answer the question of whether new shopping centers will contribute to an area's growth or merely redistribute the relative share of existing business. Over a longer period of time, communities with successful rural service centers are likely to attract other business and show more rapid growth than peripheral areas.

In conclusion, the purpose of this article has been to review some of the concepts and issues of rural development. Many important programs and activities remain undiscussed, but additional literature is abundant. Although a "how-to-do-it" prescription for rural development has not been written, many of the critical considerations have been identified. The recent appointment of a Presidential Task Force on Rural Development indicates continued interest in rural communities.

Part I

An Alternative Approach To Liquidity

By Robert E. Knight

BANKS MUST possess adequate liquidity not only to protect against possible deposit withdrawals, but also to meet customers' demands for loans. While the need for sufficient liquidity has long been recognized, the methods by which banks were expected to meet this requirement have changed dramatically over time. The "real bills" doctrine, common until the 1930's, stressed that banks should primarily acquire short-term self-liquidating assets. The most liquid assets were believed to be loans to businessmen secured by physical goods in production, marketing, or shipment. When the goods were sold, the loan could be repaid with the proceeds of the sale. Loans for long-term purposes, such as plant and equipment investment or real estate purchases, were not regarded as appropriate for commercial banks.

The real bills doctrine was based on the idea of balancing the maturity structure of assets against those of deposits. Since bank deposits are payable on demand or on short notice, the funds should be applied to short-term self-liquidating loans. While banks found rigid adherence to the real bills doctrine virtually impossible because the loan needs of many customers were not self-liquidating, the theory nevertheless tended to serve as an ideal to be achieved until the depression of the 1930's. During the depression, bankers learned that

many loans which are self-liquidating in periods of high employment and rising income tend to become frozen and default in periods of falling income. As a result the real bills doctrine became thoroughly discredited; it did not provide for liquidity at precisely the time it was most needed.

The increased importance of bank holdings of investment securities during the 1920's and 1930's gave rise to a "shiftability" theory of liquidity. Banks could protect themselves against large deposit withdrawals by holding credit market instruments for which a highly organized market exists. The emphasis on the shiftability theory was greatly strengthened by the wartime financing policies of the Federal Government. Huge Federal deficits resulted in over a fivefold increase in Government securities outstanding, a significant proportion of which were absorbed by the commercial banking system. Fears that the large deficits would result in a sharp rise in interest rates and in the cost of financing the debt prompted the Federal Reserve to adopt a policy of pegging the rates on Government securities. Under this arrangement, banks were able to sell Government securities readily with no loss of principal whenever their liquidity needs rose.

Throughout most of the postwar period banks have continued to rely on their holdings of

Government securities as a primary reserve of liquidity. The banking system emerged from World War II with well over one-half of its assets invested in Treasury securities, and about 25 per cent of these were short-term. Although the Federal Reserve discontinued its policy of supporting the Government securities market early in 1951, the large volume of securities outstanding and the active interest of numerous different types of investors created a market for the securities which demonstrated depth, breadth, and resiliency. Since Treasury bills are readily marketable and experience comparatively minor fluctuations in price, they are highly liquid. Long-term securities are also readily shiftable, but they offer less liquidity. During periods of tight money, prices of long-term bonds fall as interest rates rise. Sales of bonds during such a period may require a bank to record capital losses. Nevertheless, if a depositor wished to withdraw his funds or a customer desired a loan, a bank could generally acquire the funds by selling securities. When the demand for loans tended to rise, banks sold Government securities; when the demand subsided and loans were repaid, banks would acquire securities.

Holdings of Government securities, of course, are not the only method banks have relied upon to provide liquidity. Most bank assets provide a degree of liquidity. Excess reserves and correspondent balances are perhaps the most liquid, but since these deposits earn no interest they are a relatively expensive way of providing for contingencies.¹ As a result, banks generally prefer to keep only a small working margin in these accounts as a matter of operating convenience. The loan component of a portfolio presents several possibilities, but the

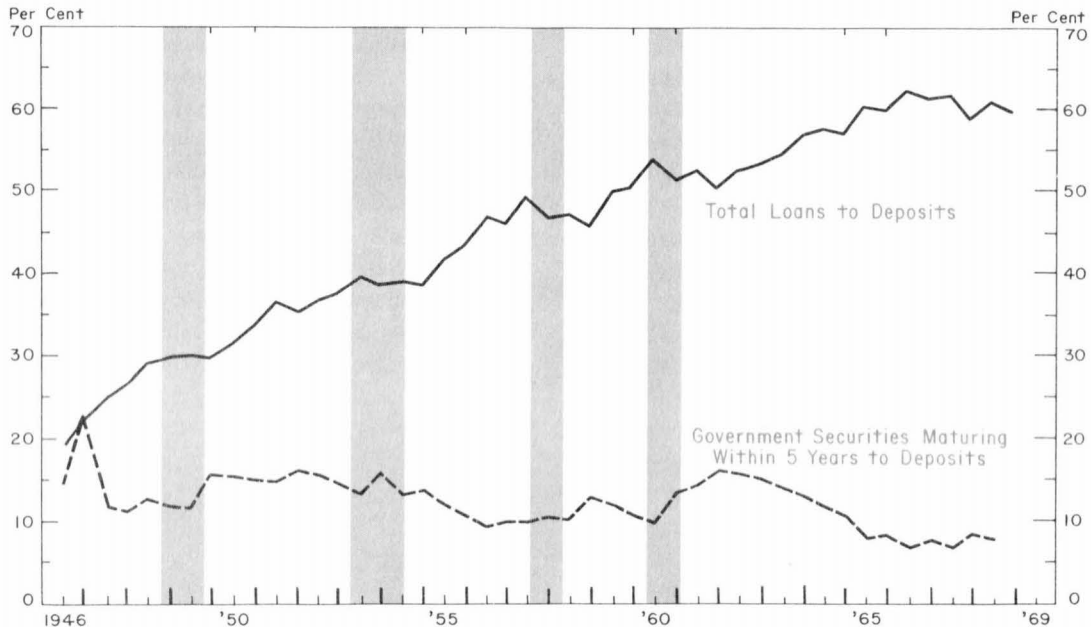
magnitude of liquidity from these sources tends to be limited. Since short-term loans many times require renewal, loan repayments may be less than anticipated. While liquid under most circumstances, call loans to brokers and consumer finance companies comprise a relatively small share of total loans and the desire by banks to meet the credit requirements of good deposit customers suggests that banks cannot raise cash by calling other types of loans or refusing new ones without destroying business connections. Commodity credit certificates and FHA and VA-guaranteed mortgages, however, are generally marketable.

The level of cash flow from the amortization and maturing of loans can provide another source of liquidity. Today not only consumer and real estate loans are amortized but also an increasing proportion of commercial and industrial loans. Estimates of the average effective time to maturity of loans in New York City banks in 1966 were slightly less than one and one-half years. Some banks have estimated that the cash flow from loan sources typically exceeds loan volume during a year. It would appear that loan repayments could be used to meet a steady outflow of deposits or to obtain funds to lend. However, whether the liquidity generated by repayments would continue to be a reliable source during a period of falling income or one with a sharp rise in deposit outflows is open to greater uncertainty. Loan repayments also cannot serve as a means for expanding the loan component of a bank's portfolio.

The most common indicators of the liquidity of the banking system are the ratios to deposits of loans or of short- and intermediate-term Government securities. Since many loans cannot be liquidated readily, the implication of a rise in the loan-deposit ratio is that the ability of banks to meet depositors' withdrawals has fallen. Similarly, a decline in the ratio of securities to deposits implies that the ability to meet sudden deposit withdrawals or further expan-

¹A bank is, of course, expected to maintain balances at correspondent banks sufficient to compensate them for services performed. In this sense correspondent balances earn a return. Nevertheless, maintaining balances in excess of an amount judged necessary to provide the correspondent with a small profit on the account would be costly because these balances earn no direct interest.

Chart 1
LIQUIDITY RATIOS FOR ALL INSURED COMMERCIAL BANKS



Shaded areas represent periods of business cycle contractions as designated by the National Bureau of Economic Research.
SOURCE: Federal Reserve System, National Bureau of Economic Research.

sion of loans has declined. The behavior of these liquidity indicators over the postwar period is shown in Chart 1. The dramatic growth of loans is immediately evident. In 1948 loans were equal to about 20 per cent of deposits, but by the 1960's the fraction had risen to over 50 per cent. The only slowdowns or reductions in the secular rise of the ratio occurred during the four postwar recessions and in 1967 when economic activity and the demand for loans declined. As might be expected, the ratio of short- and intermediate-term Governments to deposits has fallen secularly.

The rise in the loan-deposit ratio and the fall in the security-deposit ratio tend to imply that the liquidity of the banking system has deteriorated markedly over the postwar period. The ratios are, of course, very crude indicators of liquidity. For example, the loan-deposit ratio takes no account of the structure, quality,

marketability, or maturity of the loans, the continuing cash flow from repayments, or the stability and composition of the deposit base. All of these factors should be considered in judging liquidity. The ratio of Government securities to deposits, on the other hand, does not make allowance for securities which are held to meet reserve requirements or which are pledged to support Government deposits and cannot be liquidated, the strength of the secondary securities market, and bank holdings of other short-term assets which can be rapidly sold or liquidated, such as high grade municipals, short-term agency obligations, and directly placed prime finance company paper.

Passing judgment on whether the liquidity of the banking system has deteriorated as greatly as is suggested by the ratios would be premature at this point. During the 1960's, bank liquidity management has changed significantly.

The progressive expansion in the loan component of their portfolios left many banks with few unpledged securities which could be sold and the tight monetary policies of recent years limited the possible growth in bank earning assets. As a result of the rising trend of interest rates, moreover, many of the remaining securities held in bank portfolios had experienced large capital losses which banks were reluctant to realize. The demand for loans, however, remained strong and banks were forced to seek other methods of acquiring loanable funds. In this and succeeding articles some of the money management techniques which banks have adopted in recent years will be examined. These new methods of liability management suggest that traditional measures of bank liquidity must be interpreted with great caution.

NEGOTIABLE CERTIFICATES OF DEPOSIT

Perhaps the most significant innovation for bank liability management has been the introduction of negotiable certificates of deposit. Certificates had long been issued by some banks in the Midwest and South, but these were generally of small denominations and were non-marketable.² At the time negotiable CD's were introduced in 1961, their potential for bank liquidity management was not fully anticipated and they were viewed primarily as a means for preventing further deterioration in the competitive position of certain banks.

Between 1945 and 1960, the share of IPC savings in commercial banks fell sharply.³ In 1945 time and savings accounts in commercial banks comprised nearly 54 per cent of the savings in depository financial intermediaries. Mutual savings banks and savings and loan

associations (S & L's) accounted for most of the balance, although credit unions and the postal savings system also had small shares. (See Table 1.) By 1960, however, commercial bank holdings of savings had declined to about 39 per cent. The share of mutual savings banks had also slipped slightly, but the percentage held by S & L's had nearly tripled. Despite the fact that shares in savings and loan associations in 1945 totaled less than one-fourth the savings in commercial banks, the two were practically equal by 1960.

The comparatively high rate of interest paid on shares by S & L's was the overriding factor responsible for their rapid growth. During the

Table 1
SAVINGS AT SELECTED FINANCIAL INSTITUTIONS

	Com- mercial Banks ¹	Savings and Loan Associ- ations ²	Mutual Savings Banks ³	Credit Unions ⁴	Postal Sav- ings ⁵	Total
	(Billions of dollars)					
1930	18.6	6.3	9.4	.....	.2	34.5
1935	12.9	4.3	9.9	.....	1.2	28.3
1940	15.4	4.3	10.7	.2	1.3	31.9
1945	29.9	7.4	15.3	.4	2.9	55.9
1950	34.9	14.0	20.0	.9	2.9	72.7
1955	46.0	32.1	28.2	2.4	1.9	110.6
1960	66.8	62.1	36.3	5.0	.8	171.0
1961	76.7	70.9	38.3	5.6	.7	192.2
1965	134.2	110.4	52.4	9.4	.3	306.7
1967	167.6	124.6	60.1	11.2	.....	363.5
1968	184.9	131.6	64.5	12.3	.....	393.3
	(Percentage distribution)					
1930	53.9	18.3	27.2	.....	.6	100.0
1935	45.6	15.2	35.0	.....	4.2	100.0
1940	48.3	13.5	33.5	.6	4.1	100.0
1945	53.5	13.2	27.4	.7	5.2	100.0
1950	48.0	19.3	27.5	1.2	4.0	100.0
1955	41.6	29.0	25.5	2.2	1.7	100.0
1960	39.1	36.3	21.2	2.9	.5	100.0
1961	39.9	36.9	19.9	2.9	.4	100.0
1965	43.8	36.0	17.1	3.1	.1	100.0
1967	46.1	34.3	16.5	3.1	.....	100.0
1968	47.0	33.5	16.4	3.1	.....	100.0

²While some of these earlier certificates may legally have been negotiable, it was not until securities dealers began to make a market for CD's in 1961 that they became readily marketable.

³IPC savings refers to total time and savings accounts in commercial banks of individuals, partnerships, and corporations.

¹Time and savings deposits of individuals, partnerships, and corporations.

²All types of savings.

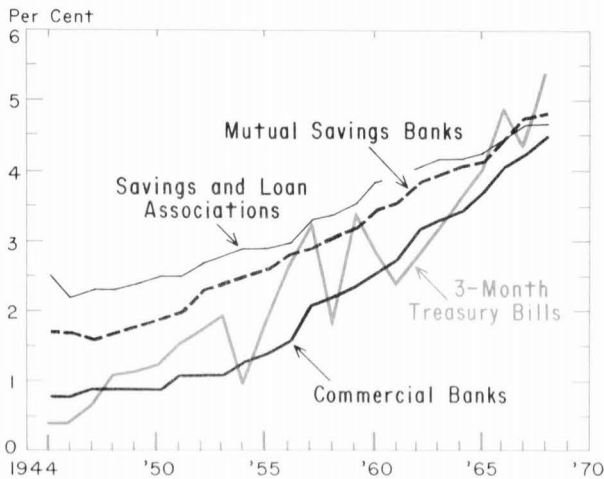
³All deposits other than interbank and U. S. Government, less cash items in process of collection.

⁴Shares and members' deposits.

⁵Outstanding principal and accrued interest on certificates of deposit.

SOURCE: Federal Reserve System, U. S. Savings and Loan League.

Chart 2
AVERAGE ANNUAL YIELD ON
SELECTED TYPES OF INVESTMENTS



SOURCE: Federal Reserve System, U. S. Savings and Loan League.

early 1950's, for example, commercial banks were generally paying about 1 per cent on savings, compared to the 2½-3 per cent available at S & L's. Until 1957, individuals could generally earn an additional 1½ per cent by placing funds in an S & L rather than a commercial bank. (See Chart 2.) Corporations, however, faced a different problem. Federal regulations limit savings accounts to individuals and to nonprofit organizations and, as a matter of policy, the New York City banks paid no interest on commercial time deposits prior to 1961. Thus, large corporations were generally faced with the choice of holding funds in non-interest bearing deposits in commercial banks or investing in money market securities.

Since 1933, the Board of Governors of the Federal Reserve System has controlled the maximum rates member banks may pay on time and savings accounts and a similar regulation of the Federal Deposit Insurance Corporation extends the restriction to all insured banks. Although banks typically were offering rates below the Regulation Q ceiling of 2½

per cent during the late 1950's, the Federal Reserve became increasingly concerned over the deterioration in the competitive position of banks. When money market interest rates rose above the 2½ per cent ceiling in 1956 and 1957, the Board raised the maximum permissible rate to 3 per cent. A similar hike in the ceiling to 4 per cent occurred early in 1962 for deposits held one year or longer, but then the aim was partly to discourage the outflow of private short-term capital.⁴ These actions brought the maximum rate which banks were permitted to pay on time deposits to a level exceeding the typical rate offered by S & L's, but banks initially were slow to respond to the higher ceilings. Savings and loan associations continued to have a competitive advantage.

Despite their declining market share of savings, commercial banks grew rapidly between 1945 and 1960. Total deposits rose 61 per cent and savings deposits grew 171 per cent. Money market banks in New York City, however, did not fare so well. Total deposits in these banks were practically the same in 1960 as they had been in 1945. (See Chart 3.) With interest rates generally rising, these banks were finding that corporations would no longer hold funds not required immediately for operating purposes in demand deposits on which they could earn no interest. It was much more profitable for corporate treasurers to invest excess funds in Treasury securities, commercial paper, or other money market instruments.

Development of a Money Market Instrument

To combat the loss of deposits and to acquire additional funds for lending, New York money market banks began to issue negotiable certificates of deposit in 1961. Large banks in other cities quickly followed suit. A CD is basically a time deposit which the purchaser agrees to have in a bank for a specified period. The

⁴In October 1962, the ceiling was removed altogether for time deposits of foreign governments and official foreign institutions.

negotiability feature meant that if the purchaser should need the money before the CD matured, it could be sold in the secondary market. As a result, CD's offered both liquidity and a yield. The banks hoped that by offering a marketable investment at rates competitive with other money market instruments, they would be able to induce corporations to buy CD's rather than to withdraw money to invest in securities. An additional motivation of the banks issuing CD's was to increase the stability of their deposits. Except in emergencies, CD funds cannot be withdrawn before their maturity. However, since many of the CD's are issued for a relatively short period of three months, and since purchasers of CD's may not be bound to the bank by a long-term "customer relationship," the added control over the flow of deposits may be very temporary.

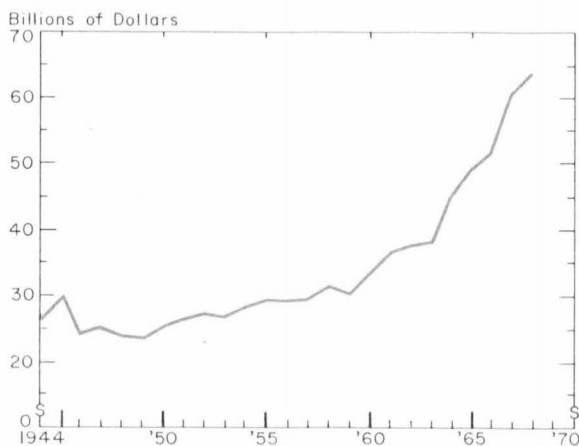
The popularity of CD's grew rapidly. By the end of 1961, New York City banks had over \$1 billion in CD's outstanding; nearly \$2 billion at the end of 1962; \$4.5 billion in 1964; and \$7.4 billion in mid-1966. Large denomination CD's in all weekly reporting commercial

banks in the United States rose to \$18 billion in 1966 and to \$24 billion in 1968.⁵ (See Chart 4.)

Initially, CD's served as a means for an individual bank to minimize its deposit losses. If a corporation were to withdraw a demand deposit to purchase a security, the seller of the security would receive a check which could be deposited in his checking account which most likely would be in a different bank. The effect on total deposits of such a transaction, therefore, was small—one bank would lose a deposit while another would gain it. By inducing a corporate depositor to purchase a CD, the issuing bank would be able to retain the deposit. Since reserve requirements are lower for time and savings deposits than for demand deposits, the issuing bank would also experience a slight increase in loanable funds. If the bank could also sell CD's to others, it would, of course, experience an increase in both deposits and loanable funds.

To investors, CD's are a close substitute for other short-term money market securities. Since they are less liquid and do not possess the absolute guarantee of repayment of U. S. Government issues, the yield on certificates must generally be slightly higher than on Government securities of comparable maturity. Certificates issued by the largest and best-known banks usually carry a premium of 20-30 basis points over the investment basis yield on Treasury bills and about 5-10 points over finance company paper, but yield 10-20 basis points less than prime commercial paper. Certificates issued by lesser known banks often have slightly higher premiums. Individual banks quickly learned that the supply of funds offered for CD's was very sensitive to variations in the

Chart 3
DEPOSITS IN NEW YORK CITY
MEMBER BANKS*



*Figures are based on December Call Reports of reserve city member banks in New York City.
SOURCE: Federal Reserve System.

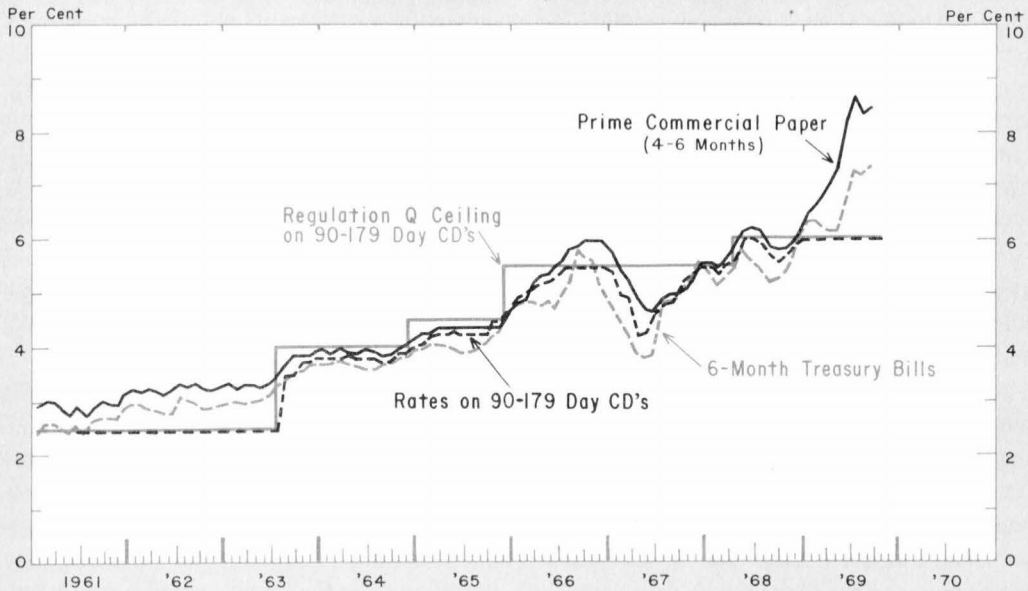
⁵Figures on certificates of deposit reported in this article pertain only to negotiable CD's of \$100,000 or more issued by large commercial banks. The size classification excludes smaller certificates which often serve as a medium for personal savings. The reporting banks would largely include the 30-35 banks issuing the certificates which have accounted for most of the trading in the secondary market.

Chart 4
LARGE CERTIFICATES OF DEPOSIT



Certificates of deposit issued in denominations of \$100,000 or more by weekly reporting banks. Figures are for the last Wednesday of each month.
SOURCE: Federal Reserve System.

Chart 5
INTEREST RATES ON CERTIFICATES OF DEPOSIT,
PRIME COMMERCIAL PAPER, AND TREASURY BILLS



Series shown are daily averages of interest rates on 4-6 month prime commercial paper, 6-month Treasury bills, and 90-179 day CD's.
SOURCE: Federal Reserve System.

rate of interest paid. For example, if a bank required additional funds to make loans, it could readily acquire them by offering a slightly higher rate on CD's than was available at competing banks or on money market instruments after allowance for the necessary premiums. If the need for funds declined, a bank could let some of its CD's run off by lowering the offering rate.

Many banks initially had been slow to issue CD's because they feared that money market rates would rise above the maximum they were allowed to offer on time deposits and they would lose CD's. But every time until 1966 that market rates began to approach the ceiling, the ceiling was raised. In July 1963, Regulation Q was revised to permit banks to offer up to 4 per cent on time deposits issued for 90 days or more. Previously banks had been permitted to offer 4 per cent only on time deposits maturing in twelve or more months. The ceiling of 1 per cent on CD's with maturities of 30-89 days, however, remained in effect, largely eliminating the issuance of CD's of this maturity. In November 1964, the maximum rate on time deposits over 90 days was raised to 4½ per cent and on those issued for less than 90 days, from 1 per cent to 4 per cent. In December 1965, a rate of 5½ per cent on all maturities was set. As a result of these successive upward revisions in the ceiling, banks were generally able to offer CD's in some maturity range at rates competitive with money market rates. (See Chart 5.)

During 1966, the economy experienced a sharp expansion in business investment spending, and military expenditures for the Vietnam War also increased greatly. Inflation meanwhile became much more widespread and tended to accelerate. During late summer, money market rates rose above the maximum banks could offer on CD's and banks experienced a runoff; investors preferred to place funds in higher yielding money market securities. Between July and December, 1966, commercial banks lost

nearly one-sixth of their CD's. Just as purchases of CD's result in a transfer of funds from demand to time deposits, disintermediation created by a runoff of CD's causes a shift from time to demand deposits which have higher reserve requirements. If the Federal Reserve were not to provide additional reserves under such circumstances, the banking system would be forced to contract its loans and investments. Despite the fact that total commercial bank earning assets continued to rise during the latter half of 1966 in all but one month, the growth rate was sharply reduced and a very tight monetary situation developed.

During 1967 and most of 1968, money market interest rates were again well below the ceilings which commercial banks could pay on large denomination CD's. In April 1968, the Fed instituted a graduated scale which banks could pay on CD's of over \$100,000. The ceiling ranged from 5½ per cent for maturities of 30-59 days to 6¼ per cent for maturities of 180 days and over. A 5 per cent ceiling was set on all CD's under \$100,000. As a result, commercial banks had little difficulty in attracting a large volume of CD's and in using variations in the offering rate on CD's to help satisfy liquidity needs. From November 1966 through November 1968, CD's at weekly reporting banks increased nearly \$9 billion. Since then, however, market interest rates have again been above the maximum banks can offer on CD's and banks have experienced another runoff. Between November 1968 and September 1969, banks lost nearly \$13 billion, over one-half the total of large denomination certificates.

From a very small base in 1961, negotiable CD's grew to become the second most important money market instrument by volume. Their amount was exceeded only by Treasury bills. This position has been lost in the recent runoff, but CD's are again likely to constitute a very significant money market instrument in the future.

While the primary market for large negotiable CD's has been limited mainly to major money market banks, both large and small banks have also been very successful in attracting consumer types of CD's. Between 1961 and 1968, the rise in total time and savings accounts contributed to make commercial banks the fastest growing segment of depository institutions. During this period, the market share of savings held by banks rose from 40 to 47 per cent. This is still considerably below the 54 per cent held by commercial banks in 1945, but the introduction of CD's served to reverse the trend of a decline in the relative importance of commercial banks. However, with the runoff of CD's in 1969, the share of the savings market captured by commercial banks has slipped greatly.

Effect on Bank Liquidity and the Availability of Credit

The issuance of CD's represents the first major attempt by banks to gain liquidity by varying their liabilities rather than their assets. Previous theory had stressed that banks maintain adequate liquidity primarily by holding short-term securities which could be sold readily with little loss of principal. By varying the rate offered for CD's, money market banks now found it possible to gain some control over deposit flows. If additional funds were needed to make loans or to meet withdrawals, the rate on CD's could be raised; if fund inflows exceeded the bank's needs, the rate could be lowered.

Although the number of banks issuing CD's grew rapidly, the increased flexibility should not be overestimated. In the first place, the ability of money market banks to acquire large CD's is highly dependent on the relationship between money market interest rates and the maximum permissible rate payable set by the Federal Reserve. Only if market interest rates are sufficiently below Regulation Q ceilings can the CD market serve as an effective source

of funds or liquidity for banks. Indeed, if banks are restricted from offering competitive rates, a runoff of CD's can create a need for additional liquidity. Secondly, only the larger, better-known banks are able to exercise control over CD funds flows with any degree of precision. Smaller banks and larger regional banks issuing certificates which are not regularly traded in the secondary market have found that inflows of CD's are much less sensitive to market interest rate differentials. For these reasons traditional measures of liquidity based on shiftability of assets continue to be useful, but their limitations and shortcomings should be clearly acknowledged.

If issues of CD's by the banking system were not constrained by Regulation Q during periods of restrictive monetary policies, banks aggressive in soliciting CD's would be able to escape partly the impact of Federal Reserve policies. In issuing CD's, these banks would attract funds from other banks or would induce customers with demand deposits to purchase CD's. In either case the bank issuing CD's would acquire a larger volume of loanable funds. If one of the aims of Federal Reserve policies is to control the growth in total bank credit, those banks not issuing CD's would be forced to bear a disproportionate share of the tightening. The experiences of 1966 leave little doubt that under such circumstances the major money market banks would become extremely aggressive in competing for the limited supply of funds.

The Federal Reserve has generally not permitted banks to compete freely for CD's during periods of tight money in the 1960's. By allowing money market interest rates to rise above the ceilings on CD's established by Regulation Q, the Board of Governors has sharply curtailed the growth of large denomination CD's, severely limiting the possible expansion of bank credit. The ability of the Federal Reserve to control the volume of CD's in this fashion has led some observers to conclude that Regula-

tion Q is an important new instrument in the Federal Reserve kit of tools.

Although banks have used CD's to acquire liquidity, the Federal Reserve has used its authority to set the maximum rates which banks can pay on time and savings deposits to govern the availability of credit. An examination of the effect of CD's on credit growth, therefore, is worthwhile. The following analysis is largely limited to a time in which banks are unable to compete effectively for CD's, but the reasoning could easily be reversed to cover a period in which market interest rates are below Regulation Q ceilings.

Most investors who fail to renew their CD's at maturity because higher yields are available on other money market securities are more than likely to invest the funds directly in these securities. In a sense, the commercial banking system has been bypassed as an intermediary. Since the sellers of the securities would deposit the funds obtained from the sale in a demand deposit, the net effect of the runoff for the banking system would be a transfer of funds from time to demand deposits. Total reserves and deposits of the banking system would not change. Demand deposits, however, are subject to higher reserve requirements than are time deposits and the transfer would increase required reserves and reduce excess reserves. Assuming bank portfolios are initially in equilibrium, the shift would tend to reduce excess reserves below the level desired by the banking system. If the Fed were to offset this change in the reserve position, banks would not be required to contract their earning assets. Since additional

funds flow into the securities market and since banks are not forced to contract their loans and investments, the immediate direct effect of the disintermediation, assuming the Fed offsets the change in the reserve position, would be to reduce money market interest rates. Alternatively, total credit availability would be increased at prevailing interest rates.⁶

If the Federal Reserve were not to offset the reduction in reserve availability, banks would begin to contract earning assets in an effort to restore reserve positions to the desired level. In this case the net effect on total credit availability would depend on whether the contraction in bank credit exceeds or is less than the amount of funds placed directly in the securities market by holders of maturing CD's.

The contraction which will occur in bank credit can be estimated. Since reserve requirements for deposits under \$5 million for reserve city banks are 17 per cent for demand and 3 per cent for time deposits, to select the most extreme example, the increase in required reserves and the reduction in excess reserves would be equal to about 14 per cent of the deposit shift. The quarterly credit multiplier of the banking system has been estimated to be between 3 and 4⁷—within the same quarter in which a change occurs in the actual or desired level of excess reserves, the banking system will expand or contract its earning assets by three to four times the initial change in excess reserves. Specifically, this implies that banks are likely to reduce their loans and investments during a given quarter between 40 and 60 per cent of any runoff of CD's occurring in that quarter.

⁶An exception to these generalizations must be made for cases in which bank subsidiaries or affiliates issue commercial paper to holders of maturing CD's. In recent months, a number of banks have resorted to this method of acquiring funds since they have been unable to offer competitive rates on CD's. Usually the affiliates or subsidiaries use the funds obtained from the issue to purchase loans or securities from the bank.

The immediate effect of these transactions on the banking system is to increase the volume of loanable funds by the amount of reserves released in the runoff of CD's.

However, if the Federal Reserve were to offset this increase, total credit extended by banks and bank related organizations would not be affected. In this instance also the net availability of credit to the organized securities markets would not increase.

⁷For a discussion of the estimation procedures see "Free Reserves in Monetary Policy Formulation" forthcoming in the Federal Reserve Bank of Boston's November-December 1969 *New England Economic Review*. The value of the quarterly multiplier estimated there is approximately 3.7.

Bank credit is reduced by the disintermediation process; but total credit availability, at least in the short run, is increased at prevailing interest rates. The reduction in bank credit, all other things remaining equal, is less than the increase in funds available to purchase securities directly. This conclusion implies that if the Federal Reserve seeks to slow the growth of total credit during a period of disintermediation, the monetary restrictions on banks must be more severe than if banks are not prevented from competing for large CD's by a Regulation Q ceiling.

These conclusions must be interpreted with care because they focus only on one specific factor influencing interest rates and credit availability within the overall environment of the aggregate demand and supply of loanable funds. They do suggest, however, that if all other factors remain unchanged, the short-run effect of a runoff of CD's is to create a net increase in the demand for money market securities. This rise in demand, *ceteris paribus*, would reduce money market interest rates or increase credit availability at prevailing interest rates.

The Regulation Q ceilings on large denomination CD's could perhaps be removed during periods of restrictive monetary policies without creating hardships for financial intermediaries, but the ceiling on smaller CD's could probably not be lifted without diverting a large volume of funds from savings and loan associations and mutual savings banks to commercial banks. If such a situation were to occur, these nonbank financial institutions might experience a severe liquidity squeeze. The percentage of highly liquid assets held in the portfolios of nonbank intermediaries tends to be substantially less than is maintained by banks.

The foregoing analysis also suggests that the maintenance of Regulation Q ceilings during

periods of restrictive monetary policies is likely to influence the distribution of credit. If the ceilings were to be removed on small, consumer type CD's, the availability of funds to the mortgage markets would be sharply reduced. Mutual savings banks and savings and loan associations invest a much larger share of their funds in mortgages than do commercial banks. On the other hand, the extension of the ceiling to larger corporate CD's diverts funds from the banking system. Loan customers who have no alternative source of credit but banks—small- and medium-sized business firms—are more likely to be denied credit, while larger corporations which have direct access to the national credit markets are likely to have their needs satisfied.

The development and growth of the market for negotiable certificates of deposit represents a major innovation for commercial banks. Not only was the CD instrumental in commercial banks becoming the fastest growing type of intermediary, but it has also permitted the larger banks on occasion to manage liquidity by governing inflows of funds. However, banks cannot count on this avenue as a permanent or unconditional source of liquidity; the ability of banks to acquire funds by issuing CD's is largely determined by Federal Reserve monetary policy, which seeks to regulate the growth of bank credit. The expansion of the CD market, therefore, has not eliminated the need for even the larger banks to hold highly liquid assets in their portfolios.

During 1969, Regulation Q ceilings have consistently been below money market interest rates and banks have experienced a very large runoff of certificates. The shortage of loanable funds has caused banks to turn to several non-deposit methods of securing funds. The implications and use of nondeposit sources of liquidity will be examined in succeeding articles.

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