

Economic Review



FEDERAL RESERVE BANK OF KANSAS CITY

November 1980

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Regional Banks and International Banking

By Richard K Abrams

Before 1960, most domestic banks were almost solely concerned with developments within their region. In the last 20 years, however, the perspective of U.S. bankers has broadened as they have become aware of many profitable opportunities outside the United States. While most public attention has been directed toward the international banking activities of the major money center banks, many subtler but highly significant changes have involved the smaller regional banks. This paper deals with the role of smaller regional banks in international banking.¹

¹ In this paper, international banking is defined as any bank-related activity in which one or more of the transactors is located outside the United States. In the area of international banking, a small bank can be defined as having domestic assets in the range of \$500 million to \$1 billion. A regional bank is a bank located outside of the nation's money centers. New York City, Chicago, and San Francisco are considered money centers.

Richard K Abrams is a financial economist at the Federal Reserve Bank of Kansas City. Much of the background work for this research was the result of interviews with members of international departments in banks throughout the Tenth Federal Reserve District and in St. Louis and Chicago. The author thanks these people for their help and cooperation. The author would also like to thank Donald Kimball and John Milan for their able research assistance. This paper is a shortened version of a forthcoming Federal Reserve Bank of Kansas City working paper entitled "The Role of Regional Banks in International Banking."

Consideration is given to areas where regional banks have and have not been successful, as well as to the special problems they have faced while pursuing international business. Organizationally, the paper examines the growth of international banking, the range of activities of internationally oriented banks, the methods of expanding into international banking, and the special problems a bank, especially a regional one, faces when transacting international business.

THE GROWTH OF INTERNATIONAL BANKING

Before 1960, international banking was almost solely the realm of the large money center banks, with seven U.S. banks controlling all 132 American foreign branch banks. U.S. international banking expanded moderately in the early 1960s, and by 1964, 11 U.S. banks operated a total of 180 foreign branches. Beginning about 1964, the United States saw a massive movement toward the internationalization of its banking system. By the time the boom in foreign branching abated in 1974, 125 U.S. banks were operating a total of 732 foreign branches.

Since 1974, the growth in direct foreign branching activities of U.S. banks has slowed markedly, and, by the end of 1979, a total of 130 banks were operating just under 800 foreign branches. However, the slower expan-

sion rate of foreign branches has not been fully matched by a slowing of the expansion of U.S. bank holdings of foreign assets. While foreign assets held by U.S. banks increased at nearly a 50 per cent annual rate between 1971 and 1974, their rate of expansion slowed to only 29 per cent during the 1974-79 period. At the end of 1979, the foreign assets of U.S. banks totaled over \$364 billion.

The reasons given for the growth in international banking are straightforward. Banks usually have expanded international operations to either expand, protect, or stabilize their expected flows of future earnings. Beyond this point, however, the specific reasons vary markedly.

Many banks expand internationally because they feel their special expertise gives them a comparative advantage in a certain area. For example, some bankers believe the additional cost of handling a given domestic customer's banking needs abroad may be low because of prior knowledge of his prospective needs. Some bankers also feel that their special knowledge of certain types of projects, products, or business procedures will make them effective international competitors. Other banks have expanded their international operations to take advantage of the expansion of U.S. international trade or to get a foothold in foreign loan or deposit markets.

Smaller banks often feel they are forced to expand internationally to defend their domestic customer base. This occurs because money center banks, larger regional banks, and even some local banks are using their international services as a basis for attracting the bank's better customers. In other cases, a bank finds it must provide for an existing customer's newly developed international needs in order to protect its relationship.

Some banks also begin or expand their international operations for reason of portfolio diversification. Diversification can take place

because loan demand and loan default patterns may be markedly different abroad than at home. With an internationally diversified customer base and loan portfolio, a bank may not only improve its expected return on assets, but also reduce the variability of its income stream.

Finally, government regulations have probably had a major impact on the extent of many banks' international involvements. Two prime examples of this regulatory effect were seen when capital controls were instituted by the U.S. government in 1964 and when Regulation Q became binding during the tight money periods of 1966 and 1969-70.²

In an attempt to alleviate the U.S. balance of payments problems in the 1964-65 period, the U.S. government instituted several capital control programs which lasted through the beginning of 1974. These programs limited the funds U.S. corporations could transfer to foreign overseas affiliates, restricted the earnings the affiliates could retain for reinvestment, taxed earnings on foreign securities issued in the United States, and place ceilings on the foreign lending of the U.S. offices of U.S. banks.³ As a result of these programs, not only were corporations limited in their ability to directly fund their foreign operations, but U.S. banks were unable to fully fund their customers' foreign activities. Some U.S. banks had to expand their operations abroad or face losing their customers to other banks capable of satisfying their customers' international needs.

Before June 1970, the Federal Reserve System's Regulation Q placed ceilings on the

² For a more complete discussion of these events, see A. B. Frankel, "International Banking: Part I," *Business Conditions*, Federal Reserve Bank of Chicago, January 1975, pp. 3-9, and R. K. Abrams, "The Role of Regional Banks in International Banking," working paper, Federal Reserve Bank of Kansas City, forthcoming.

³ These programs were the Foreign Direct Investment Program (FDIP), the Interest Equalization Tax (IET), and the Voluntary Foreign Credit Restraint Program (VCFR).

rates of interest banks could pay on their large certificates of deposit (CD's). In 1966 and again in 1969-70, a strong domestic economy, coupled with a tight monetary policy, increased the interest rates on alternative short-term investments above the Regulation Q ceiling. To defend against outflows of their large deposits, many banks opened foreign branches which could offer Eurodollar time deposits and Eurodollar CD's at rates competitive with domestic alternative instruments.

ACTIVITIES IN INTERNATIONAL BANKING

Banks engaging in international banking have the ability to handle documentary drafts, foreign collections, and remittances. Beyond these basic services, a bank may offer a limited or a wide range of services depending on its international commitment. Some banks find foreign exchange (FOREX) a profitable service to offer. As a bank becomes more involved with international trade, it often issues letters of credit (LC's) and may then begin to sell bankers' acceptances (BA's). Banks with significant international commitments may also enter the Eurocurrency market as well as offering other foreign banking services.

Foreign Exchange

FOREX services are usually necessary for a bank with significant international dealings. The largest international banks often have dealers who specialize in specific currencies or groups of currencies. These dealers hold open positions in foreign currencies and offer a wide range of forward commitments. If a bank holds foreign exchange or a forward contract to accept or deliver foreign exchange without a contract to offset this position, the bank is defined as holding an open foreign exchange position. With an open position a bank may receive foreign exchange profits if the currency in which it is long (short) appreciates

(depreciates). However, such positions are risky since losses will be incurred if the currency moves in the wrong direction. To offset these risks, many banks immediately cover their open positions by selling contracts.

The regional banks vary markedly in the extent of their FOREX commitments. Some larger regional banks have relatively small FOREX departments which do not hold open positions and offer only a limited range of forward contracts. On the other hand, some smaller banks have active FOREX sections that maintain open positions and offer a wide range of forward contracts. Apparently, the quality of a bank's chief trader and management's attitudes toward FOREX may be more important in deciding a bank's commitment than the overall international orientation of the bank.

Letters of Credit

Most banks' international involvement begins with trade finance. Generally, this starts by issuing LC's. LC's may be issued for imports, exports, or third-country transactions—that is, for goods stored overseas or shipped between two foreign nations, or for standby credit.⁴ Letters of credit expedite trade by allowing the bank to substitute its credit worthiness for the unknown credit worthiness of the buyer.

The LC business has historically been dominated by the nation's largest banks. In recent years, however, many regional banks with a billion dollars or less in assets have profitably entered the LC market. The smaller banks give two reasons for their success. First, many companies avoid the large money center banks because these banks are slow and impersonal.

⁴ Nationally chartered banks are sometimes hesitant to issue standby LC's because these credits count against their customer lending limits.

Second, U.S. trade has increasingly involved smaller importers and exporters who need more physically convenient and personalized services than the large money center banks normally provide.

Bankers' Acceptances

An area that has grown rapidly in recent years is acceptance financing. BA's are created from time drafts which are generally created to finance the movement of goods.⁵ When the bank on whom the draft is drawn receives it, the bank signs it and marks it "accepted," and the draft becomes a BA. By accepting the draft, the bank lends its name and credit standing to the borrower and assumes responsibility for payment of the draft. A bank issuing BA's earns a fee for its services by buying the draft at a discount from its value at maturity.

Bankers' acceptances are attractive sources of funds to large banks whose names are recognized in the secondary BA market. These banks often immediately resell their paper at competitive rates and collect their fees as profit. However, a bank can only have outstanding BA's amounting to 50 per cent of its capital and surplus, or 100 per cent with permission from the Board of Governors of the Federal Reserve System. With the rise in the use of BA's, many banks have found these limits to be a constraint.

Larger regional banks with well developed correspondent networks often receive favorable rates when selling their BA's. However, until a bank can sell its BA's on the secondary market at a rate approaching that of the large money center banks, it cannot be fully competitive. This usually takes a period of exposure in the market, as well as a concerted effort to regular-

ly resell some BA's in the market even when terms are not favorable. Smaller regional banks thus have difficulty marketing BA's. A smaller bank's name will usually command little respect in the secondary market, and its lending limits may force its notes to be too small for this wholesale market.

In 1960, only about \$1 billion in BA's were outstanding, while in June 1980 there were about \$54 billion. Although the large New York and West Coast banks dominate the BA market, banks in secondary money centers, such as Chicago, and regional banks are expanding their market share. Between 1969 and 1979, the New York Federal Reserve District share of the market declined from 67.9 to 51.5 per cent, while San Francisco's grew from 20.0 to 26.1 per cent, and Chicago's grew from 3.5 to 7.8 per cent. More interestingly, the other Districts' shares grew from 8.5 to 14.6 per cent (Table 1).

Eurocurrency Market

The area of international banking that probably receives the most attention is the Eurocurrency market. This market consists of a network of banks that issue and accept deposits in currencies other than those of the country in which the bank is located. The market is almost strictly wholesale in nature, and it is almost totally exempt from national regulation. The Eurocurrency market has grown rapidly since its inception in the late 1950s. The gross size of the market has increased tenfold from \$115 billion in 1970 to \$1,155 billion at the end of 1979.⁶

Many customers prefer to have their deposits in the Eurocurrency market. Some governments, while desiring accounts denominated in "hard" western currencies, wish to avoid the

⁵ For a discussion of bankers' acceptances, including eligibility requirements, see J. L. Harvey, "Bankers' Acceptances," *Business Conditions*, Federal Reserve Bank of Chicago, May 1976, pp. 3-11.

⁶ Morgan Guaranty Trust Company of New York, *World Financial Markets*, various issues.

possibility of foreign government seizure of their accounts in the event of international hostilities. The Eurocurrency market allows them to hold hard currency accounts in countries where seizure is unlikely. Also, many companies find it convenient to keep foreign currency deposits for trade payments. Finally, the Eurocurrency market allows companies to hold time deposits with maturities of less than 30 days, which is prohibited in the United States by Regulation Q.

A bank will sometimes have no immediate use for an incoming Eurocurrency deposit. In such cases, the bank may lend the deposit in the interbank market. In this intensely competitive market, the spread between bid and asked rates on deposits rarely exceeds 1/8 of 1 per cent. Banks in this market operate on a name basis, and since the loans are unsecured, they generally have credit limits for other bank participants.

Although Eurodollar rates are generally above similar U.S. deposit rates, many banks still find them a convenient source of funds. Some banks experiencing strong growth view this market as an easy, reliable way to obtain needed funds. Other banks find the market to be the most reliable source and the easiest way to fund any Eurocurrency loans or syndication participations they may engage in. Most Eurocurrency loans and syndications have floating rates which are reset regularly at the London Interbank Offer Rate (LIBOR) on three- or six-month deposits, plus a fixed spread. By borrowing the appropriate deposit at the time the loan is being repriced, the bank locks in its spread. The smaller regional banks generally pay slightly higher rates on their deposits than the major money center banks.

Regional bank activity in direct Eurocurrency loans, as well as syndications, has been

Table 1
BANKERS' ACCEPTANCES OUTSTANDING BY FEDERAL RESERVE DISTRICT
(In billions of dollars)

Yearend	New York		San Francisco		Chicago		Other Districts		Total Outstanding
	Out-standing	Per Cent of Total	Out-standing	Per Cent of Total	Out-standing	Per Cent of Total	Out-standing	Per Cent of Total	
1969	3.7	67.9	1.1	20.0	0.2	3.5	0.5	8.5	5.5
1971	5.0	63.6	1.7	21.5	0.5	6.0	0.7	8.9	7.9
1973	5.2	58.4	2.5	28.3	0.3	3.3	0.9	10.3	8.9
1975	10.4	55.7	5.3	28.2	0.8	4.5	2.2	11.6	18.7
1977	14.2	55.9	6.5	25.7	1.6	6.2	3.1	12.2	25.4
1979	23.3	51.5	11.8	26.1	3.5	7.8	6.6	14.6	45.3
Annual Growth Rate									
1969-78	18.4		23.8		29.3		26.5		21.2
1969-75	17.3		26.2		24.8		25.7		20.6
1975-79	20.1		20.1		40.0		27.8		22.1

SOURCE: Federal Reserve Bank of New York.

limited. Many regionals report they have withdrawn or reduced their activities in this area in recent years. Some now require that the loan be directly related to trade with their local marketing area before they will make the loan. Others will make foreign loans only to companies or foreign governments with whom they have had extensive dealings.

Regional banks have difficulties assuming either lead manager or co-manager status on syndicated Eurocurrency loans of any significant size. This problem not only results from lack of size and recognition in the market, but because the competition in syndicate management is intense and many large banks have a large amount of resources devoted to this area.

The reason most regionals have partly or completely withdrawn from buying participations in syndications is that competition has narrowed the spreads on these loans to below 1 per cent in most cases. Most regional banks believe current spreads do not cover the risk and cost of the loan. Some still buy a few participations when the loan involves a good, or potentially good, well-known customer in a country where the bank is not approaching its lending limit. However, most regional banks feel the goodwill gained from participations is minor compared to the risks.

ORGANIZATIONAL APPROACHES TO INTERNATIONAL BANKING

A bank's size and location often dictate its range of organizational approaches to international banking. By the same token, a bank choice of organizational approaches will largely determine the range of services the bank may provide and its flexibility in pursuing international business.⁷

⁷ For a discussion of the organizational alternatives available, see F. A. Lees, *International Banking and Finance*, New York: Wiley & Sons, 1973.

If a bank foresees potential profits from international activities, its first step is to open an international department. Only in this way can the bank offer the services necessary to attract customers with significant international activities. When a bank considers expanding its international activities beyond its head office, it is faced with a myriad of choices. The bank must first decide whether to open a domestic international office, an Edge Act or Agreement Corporation, or to go abroad. If the bank chooses to open a foreign office, it may do so in a modest way by opening a shell branch or a representative office, or it may choose to have a greater foreign presence by opening a branch office or joining with other banks in forming a consortium bank. A bank may also buy shares of an existing foreign bank or other financial institution.

International Department

Depending on the size, location, and managerial orientation of the bank, an international department can vary in size from a few people, providing only basic international services, to a major division of the bank which can provide for virtually any of its customers' foreseeable needs.

International departments at regional banks usually range from 4 to 25 people. Smaller departments tend to specialize in basic services, while offering little or no FOREX service. Usually trade finance is limited to the issuance of LC's. Larger departments usually offer FOREX services and BA's. As the department starts to grow, marketing becomes important, as does the establishment of close foreign correspondent relationships. Without correspondents, a bank cannot provide direct service to all parts of the globe. Many banks have several hundred foreign correspondents. An expanding international department generally uses calling officers to broaden and cement its foreign relationships. Foreign banks, rather

than foreign corporations, are usually emphasized when calling, because banks generally provide more business. Most regionals try to send referrals to foreign correspondents over domestic ones because a foreign bank is more likely to reciprocate.

International departments do have drawbacks. They are a drain on manpower, and hiring trained personnel is often both difficult and expensive. The market is also competitive. Even if a local market is potentially profitable, it may take some time for the department to become profitable.

Edge Act and Agreement Corporations

Edge Act and Agreement Corporations are international banking organizations that may be located outside of a bank's home state. There are three major differences between Edge Act and Agreement Corporations. First, Edges are chartered by the Federal Reserve System and not subject to state corporate and banking laws, while Agreements are chartered under state laws. Second, Edges must be capitalized to a minimum of \$2 million, which may not constitute more than 10 per cent of the parent's capital and surplus. Agreements have no such restrictions. Third, Edges may engage in both international banking and other foreign financial operations, while Agreements can only engage in international banking. Both can engage only in domestic business that is incidental to international trade. In recent years, Edges have been far more popular than Agreements.

The number of Edges expanded rapidly throughout the 1960s and early 1970s. Between 1960 and 1974, their number increased from 15 to 117, while their assets expanded from \$0.6 billion to \$10.1 billion. This growth occurred largely because these banks could open operations in money market or international trade centers. This allowed local customers to carry out their international trade with their local

bank but in a more convenient location for conducting international business.

While Edge Act Corporations offer a bank a number of advantages, few regional banks have chosen to open one. Nationally, only three banks with less than \$1 billion in total assets have opened Edges (Table 2). Edges are generally owned by multibillion dollar banks located in major port cities or in a major money center. In fact, each of the 14 banks with assets of over \$10 billion had at least one Edge Act. The median total domestic assets of the 71 banks with Edge Act or Agreement Corporations were \$2.9 billion, and the average share of total assets coming from foreign sources was 16 per cent.

Apparently, regional banks below the multibillion dollar asset range have avoided Edges because of their one severe drawback—expense. Edges must have at least \$2 million in capitalization, and they must also be staffed with a full complement of calling officers and operations personnel. The high cost of trained personnel, coupled with the high cost of real estate, requires a large volume of international

Table 2
EDGE ACT CORPORATIONS AND
BANK SIZE

December 31, 1979

Total Domestic Assets (\$ Bill)	No. of Banks	Per Cent of Banks with Edge Acts	No. of Edges
0.3-1.0	3	0.7	3
1.0-1.999	5	4.2	5
2.0-2.999	25	62.5	28
3.0-9.999	24	58.6	35
Over 10.0	14	100.0	60
All Banks	71	0.5	131

SOURCE: Board of Governors of the Federal Reserve System, unpublished data.

business for profitability. Only the largest inland regionals, with major wholesale banking operations, normally consider such an expansion worthwhile.

Shell Branches and Representative Offices

Some banks desire banking or quasi-banking operations abroad. The most basic types of such foreign entities are shell branches and representative offices. A shell branch is the easiest and cheapest way to gain access to the Eurocurrency market either for domestic funding or for a reserve-free location from which to issue foreign loans. Shells are booking offices located abroad which have no contact with their local market. The shell's actual banking activities take place at the U.S. head office. Most were originally located in the Bahamas because it offered a stable government and did not tax the income of the shells. Recently, most shells have been opened in the Grand Cayman Islands for the same reasons.

Shells have proven to be popular with large money center and regional banks alike. In 1979, of the 139 U.S. member banks with overseas offices, 84 had only a shell branch in the Caribbean. Further, many regional banks operate shells. In 1979, for example, 29 banks with less than \$1 billion in domestic assets operated shells, while half of the 153 shells were owned by banks of less than \$2 billion (Table 3).

Some banks have widespread dealings in specific global regions, but the potential business volume is too small to warrant a major investment or the country prohibits direct foreign bank entry. In either case, the bank might respond by opening a representative office. Representative offices are foreign loan production offices. They usually have a very small staff which searches out local business and handles local problems involving ongoing business. They cannot provide a full range of services or accept deposits. In areas where rents

are not high, representative offices are a relatively inexpensive way to establish a local presence.

Full-Service Foreign Branches

A full-service foreign branch offers numerous advantages to a bank desiring a direct foreign banking presence. It is a legal extension of the bank and does not require separate capitalization. Since a branch is an integral part of the bank, it has the same status in the international market as the bank of which it is a part. It is also the most flexible foreign banking vehicle available to a U.S. bank.

A foreign branch gives its domestic head office several competitive advantages in the foreign market. First, the branch may be well located to gather new business and reestablish old relationships by offering local customers abroad a service facility backed by the head office's name. Second, it can be used to gather foreign credit information. Third, the head office and the branch can easily and quickly transfer funds between each other when either's loan or deposit conditions change.

Table 3
SHELLS AND BANK SIZE

December 31, 1979

Total Domestic Assets (\$ Bil.)	Number of Banks with Shells	Per Cent of Banks in Size Category
0.1-0.999	29	7.5
1.0-1.999	49	41.2
2.0-2.999	25	62.5
3.0-4.999	24	85.7
5.0-9.999	14	100.0
Over 10.0	12	85.7
All Banks	153	1.0

SOURCE: Board of Governors of the Federal Reserve System, unpublished data.

While a foreign branch offers many advantages, it has a number of problems and restrictions. The largest drawback is the expense. A foreign branch can be prohibitively expensive. Not only is office space often a major expense, but providing staff is also a problem. A foreign branch can either be staffed with the parent's own personnel, which is expensive and a drain on home office manpower, or it can bear the expense and the risk of bidding personnel away from other banks in the area. Higher level international banking personnel are usually quite expensive. A new foreign branch may also have difficulties establishing a domestic deposit base, and its income is often heavily taxed. U.S. regulations prohibit branches from undertaking operations prohibited for its parent. Most foreign branches are also limited to wholesale banking activities either by law or by business conditions.

The locational choice of branches is restricted by national laws. Many nations, including Canada, Mexico, Australia, India, Saudi Arabia, and Brazil, expressly forbid new foreign commercial banking branches. In some other countries the risk of expropriation is simply too great to warrant the risk.

Most regional banks have chosen to avoid or to strictly limit their foreign branching. Few have more than a branch in London. The reasons for such limited activities are rather simple. First, the expense and the customer base necessary for profitable operation generally limit foreign branching to only the largest banks (Table 4). Second, the competition in most foreign money centers is quite intense, and only the largest regionals can afford to offer a package of services that will compete with branches of the large money center banks. Third, many good domestic customers prefer to carry on their foreign business with branches of better-known banks. Some regionals, however, by offering specialized packages of services or specializing in particular types of lending ac-

Table 4
FOREIGN BRANCHES AND
BANK SIZE*

December 31, 1979

Total Domestic Assets (\$ Bill)	No. of Banks	Per Cent of Banks with Foreign Branches	No. of Branches
1.0-1.999	4	3.4	4
2.0-2.999	5	12.5	5
3.0-4.999	11	20.4	19
5.0-9.999	12	92.3	66
Over 10.0	14	100.0	501
All Banks	46	0.3	595

*Does not include shell branches or branches in U.S. territories and possessions.

SOURCE: Board of Governors of the Federal Reserve System, unpublished data.

tivities, have been able to establish successful and profitable foreign branches.

Foreign Equity Investments

Some banks and holding companies want a foreign presence but because of foreign laws, country risk, or expense do not want to open a foreign branch. In this case, they may buy stock in a foreign bank or other type of financial institution. The purchase can constitute either majority ownership, in the form of subsidiary, or minority ownership, as an affiliate. In recent years, foreign purchases have included not only commercial banks, but also finance companies, factoring and leasing organizations, computer service companies, and merchant banks.

Foreign subsidiaries and affiliates are permitted to engage in activities that may be prohibited for the parent bank, such as security underwriting. By buying a share of an existing company, a bank also has an immediate entry into the foreign market, with an existing staff and customer base. Stock ownership in an ex-

isting company can sometimes provide favorable tax treatment or minimize the potential risk of nationalization. However, some countries permit only minority ownership of domestic financial institutions.

Equity purchases of foreign financial institutions also have certain drawbacks. The most important is that affiliates and subsidiaries are less operationally flexible than foreign branches. Difficulties are often experienced when trying to instill U.S. banking standards in the existing staff of a foreign country. If the company is an affiliate, the U.S. parent may also not get as much potential referral business or have as complete managerial control as it would if the institution were a fully owned subsidiary.

Regional bank stock purchases of foreign companies have been limited. Virtually all U.S. banks with foreign subsidiaries are located in New York, Chicago, San Francisco, or Boston. Only the very largest banks normally engage in such purchases. Fourteen of the 20 banks with foreign subsidiaries have over \$3 billion in domestic assets, and 159 of the 183 subsidiaries are controlled by banks with more than \$10 billion in domestic assets.

In the last 15 years, many banks have invested in consortium banks. Consortia are made up of groups of very large banks representing various nationalities. These groups generally pool resources and try to work as a worldwide network. The advantage of consortia is that they allow members to pool risk and handle large multicurrency lending arrangements and large Eurocurrency loans. Such activities are generally best suited for the world's largest international banks.

SPECIAL PROBLEMS IN INTERNATIONAL BANKING

The problems encountered by regional banks in international banking result from their limited size, their disadvantageous location, their limited resources, competition, and the

problem of convincing the market that the bank is a viable provider of international services. However, the problems of regional as well as money center banks do not end here. All banks also face problems with foreign lending risks.

Engaging in business with foreign customers and making loans in foreign countries involve several types of risk not present in domestic banking activities, including evaluating foreign credit risk, foreign exchange exposure, and country risk. Credit analysis of foreign companies is often more difficult than for domestic corporations. Adequate credit information may be difficult or impossible to obtain. While foreign correspondents and foreign branches may help ameliorate this problem, credit information that would be considered complete by U.S. standards may simply be unavailable.

If a bank makes loans or accepts deposits denominated in foreign currencies, the bank also faces the risk of losses resulting from exchange rate variation. If the bank feels this risk is unacceptable, it must cover its exposed foreign exchange position. This may be done by buying a forward foreign exchange contract or foreign currency-denominated deposit, or by issuing a foreign currency-denominated loan to offset the open position. Inadequate management of open foreign exchange positions may pose a grave risk to the solvency of a bank.

Country Risk

In recent years, no area of foreign lending has received more attention than country risk. Country risk is the possibility that political or economic conditions in a foreign country could interfere with or interrupt the servicing of external debt by either public or private borrowers.⁸

⁸ For a more complete discussion, see P. H. Kuwayama (Federal Reserve Bank of New York), "Analyzing 'Country Risk' of Banks' International Lending," presented at the 10th meeting of Central Bank Technicians of the American Continent, San Jose, Costa Rica, November 25-30, 1979.

One recent study showed that, as of September 1979, U.S. bank claims on nonoil-developing countries and Eastern European Bloc countries totaled \$62.7 billion.⁹ This exposure constituted 117 per cent of the combined capital of the 128 banks completing the Country Exposure Report. Further, the debt service costs for the nonoil-developing countries at the end of 1979 had reached a total of \$33 billion annually, or over 17 per cent of their export income.

The analysis of country risk is at best an inexact science. Current information on many countries' economic conditions is difficult or impossible to obtain. Moreover, the study of political risk is often tantamount to gazing into a crystal ball. Not only must a bank judge whether a country's current political situation may infringe on its debt service, but also make judgments as to what a country's political future may be. Also to be judged is whether a country will continue to make payments in the event of defaults elsewhere.

While the analysis of country risk may be difficult for a large bank, the task may seem insurmountable to a regional bank. At best, a smaller regional bank may be able to devote one or two people to the study of risk in a limited number of countries. As a result, many regional and larger banks curtail the number of countries in which they will make loans.

Several organizations exist that insure exporters against foreign lending risk and country risk. These organizations include both public and private corporations which issue insurance for U.S. exports. The largest insurers of U.S. exports are the Federal Credit Insurance Association (FCIA) and the Export-Import (EXIM) Bank.

The FCIA is a privately owned export in-

surance company. It specializes in insuring exporters against foreign credit and country risk for periods of up to five years. While much of the FCIA's work is done directly with exporters, the FCIA also cooperates directly with banks, helping them obtain coverage for their customers. Banks are usually willing to provide low-cost international credit to FCIA-insured shipments.

The EXIM Bank generally specializes in large and longer term transactions, especially those involving capital goods, but does not engage in transactions involving periods of less than six months. Its medium-term operations, ranging from six months to five years, often involve assisting the FCIA by providing its customers coverage against country risk. The EXIM Bank concentrates on financing and providing guarantees for long-term commitments. Many banks have found EXIM guarantees helpful because they minimize both foreign credit and country risk.

While only about half the regional banks with international departments make use of FCIA or EXIM, most banks find these facilities to be helpful. However, complaints have been voiced that the EXIM Bank has acted as a competitor and usurped bank business in some cases. This complaint is rather uncommon, and more bankers seem to believe their biggest problem in this area is the limited level of official funding the facility has received in recent years.

CONCLUSION

The activities of regional banks in the area of international banking have expanded markedly in the last two decades. Numerous banks which once had little interest in developments beyond their states' boundaries now have shell branches in the Caribbean and calling officers traveling worldwide. Some also have Edges in domestic money market and trade centers, operate branches or representative offices in far-flung corners of the globe, and own shares

⁹ H. C. Wallich, statement to Subcommittee on International Trade, Investment, and Monetary Policy, Committee on Banking, Finance, and Urban Affairs, U.S. House of Representatives, April 1980.

in various types of foreign banks and other financial institutions.

However, this study of regional banks shows their internationalization generally to be more modest in nature. Only the largest and best located regionals have opened foreign branches or Edge Acts, and many of those have chosen to specialize in a limited set of services, rather than trying to compete directly with the larger banks. Almost no regionals have bought majority interests in foreign financial organizations or made any attempt at large-scale foreign branching.

Many regional banks have opened shell branches. Shells have been found to be convenient for domestic funding during periods of strong local growth and a reserve-free source of funds for foreign lending activities. The low cost of shells makes them affordable to most banks large enough to consider supporting a significant international commitment.

Other regional banks have evolved such that a large portion of their business is concentrated in one or a few global areas. When business development and maintenance costs exceeded that which could be covered by a home-based calling officer, the banks often have responded by opening a foreign representative office.

The most significant expansion on the part of regional bankers has been through the opening

of international departments. According to a recent study, more than half the regionals among the top 300 U.S. banks now have international departments, and many smaller banks provide various types of international services.¹⁰ While many of these banks provide only the basic services and letter of credit facilities, others also provide FOREX services and issue bankers' acceptances. Also roughly half of these banks work with FCIA and the EXIM Bank. Some also engage in direct foreign loans or participations.

Although some larger money center bankers expect regionals to find the international marketplace unprofitable in the coming years, more large banks and most regional international bankers expect their international activities to continue to expand. Many regional banks are currently enlarging their departments, and some plan to expand their off-premise services in the coming years. Thus, while some authors have recently been saying that international banking is in a consolidation stage, international banking at the regional level is still experiencing a healthy expansion.

¹⁰ I. B. Thompson, "The International Banking Activities of Regional Banks," *American Banker*, March 23, 1979, pp. 14, 36, 38.

Farm Structure: A Policy Issue for the 1980s

By Marvin Duncan and Ann Laing Adair

The history of farming in the United States since World War II has been characterized by rapid and continuing change. Not only have the institutions, technology, and management practices associated with farming changed, but the farm structure itself has undergone a marked transition. Specifically, the ownership and operatorship of U.S. farms have become much more concentrated. For example, the U.S. now has fewer than half the number of farms it had just before the start of World War II. Moreover, two-thirds of the nation's food supply is now produced by only 10 per cent of the nation's farms. And many of the remaining smaller farms have become only part-time operations or rural residences.

The increasing concentration in farm structure has recently attracted the attention of government policymakers. Secretary of Agriculture Bob Bergland, calling for a national dialogue on farm structure, has said, "It is my hope that wide-ranging, informed discussion will give us a better understanding of our options and enable us to choose wisely among

them."¹ To further that discussion, this article outlines the recent changes in U.S. farm structure, identifies the major forces behind these changes, and suggests some major policy issues likely to emerge from the dialogue.

THE CHANGING FARM STRUCTURE

The trend toward concentration in farm ownership and in the operatorship of farms is of central importance to a discussion of farm structure. A number of agricultural data series serve as barometers of the concentration that has occurred since World War II.

Farm Numbers

While the number of farms in the U.S. has declined since 1930, the pace of the decline has increased substantially since World War II. Moreover, the adjustment has proven to be a continuous one. Farm numbers declined by more than 54 per cent between 1945 and 1979—from 5.9 million farms to fewer than 2.7

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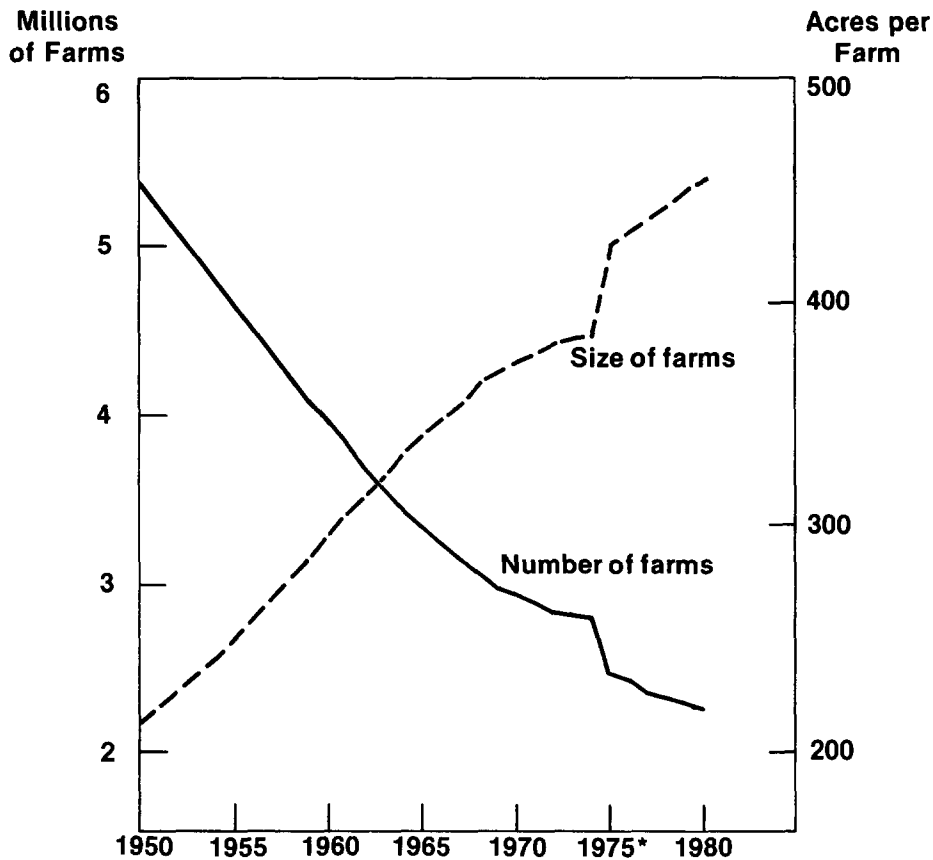
¹ Bob Bergland, Secretary of Agriculture, *Structure Issues of American Agriculture*, U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service, Agricultural Economic Report 438.

million. Currently, almost a third of today's farms are very small, producing annual sales of less than \$2,500, and can be characterized as primarily rural residences.

As farm numbers have declined, there has been an increase in the average size of farms because most of the land from farms that have

ceased to exist has been absorbed into existing farms (Chart 1). Average farm size has increased from 196 acres in 1945 to 450 acres in 1979. Concentration of land holdings, greatest for rangeland, has increased rapidly for harvested land as well. In 1964, farms of 1,000 acres or more harvested about 70 million acres of

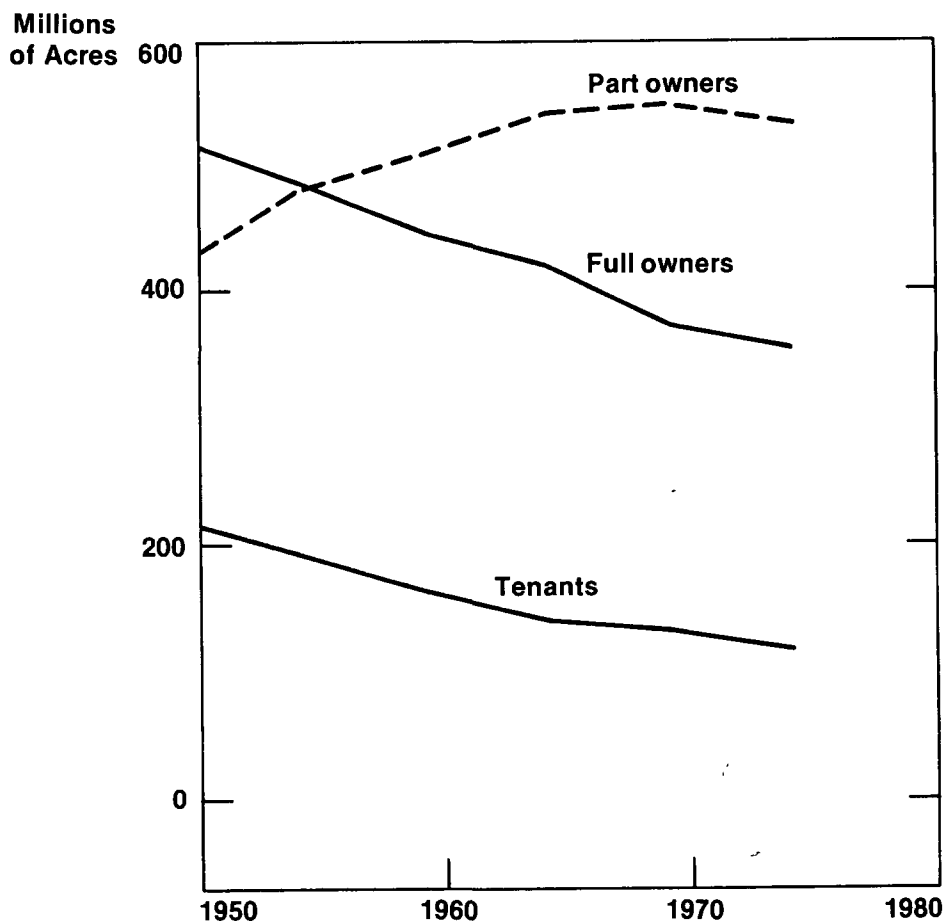
Chart 1
NUMBER OF FARMS AND NUMBER OF ACRES PER FARM
UNITED STATES, 1950-1980



SOURCE: USDA, ESCS, *Agricultural Statistics*, various years.

*Beginning with 1975, a farm is defined as a place which has annual sales of agricultural products of \$1,000 or more. Before 1975, a farm was defined as a place of 10 or more acres that had annual sales of agricultural products of \$50 or more or a place of less than 10 acres that had annual sales of \$250 or more.

Chart 2
LAND IN FARMS, BY TENURE OF OPERATOR
UNITED STATES, 1950-1974



SOURCE: U.S. Census of Agriculture, Vol. II, Part 3, 1974, p. I-10.

cropland. Ten years later, farms in this same size class harvested 100 million acres.

Tenure Patterns

As farms have grown larger and fewer in number, patterns of tenure have changed as well. Part owners—those who both rent and own the land on which they work—have increased as a proportion of total farmers. Also,

over half of all the land in farms is now in units operated by part owners (Chart 2). The proportion of land in the hands of both full tenants and full owners has consistently declined since 1950.

Despite changing tenure patterns, about 89 per cent of all farm businesses were still sole proprietorships in 1974. Even among the corporations in farming, almost 97 per cent were

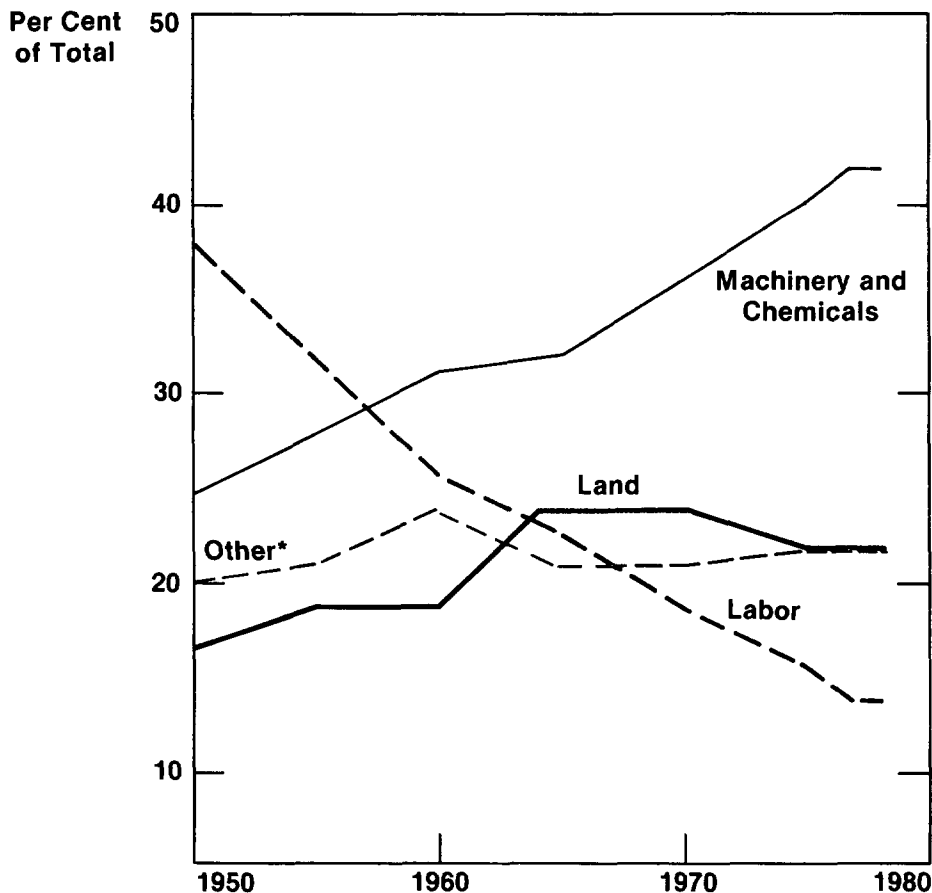
privately held and three-fourths were classified as family corporations.

Shifts in Resource Use

Shifts in resource use patterns by farmers have both caused, and been the result of, farm structure changes. Labor has declined from 40

per cent of all resources used in 1950 to 14 per cent in 1977. While labor use, measured in man-hours, is presently less than one-third that of 1950 and continues to decline, use of other resources has increased. Use of capital—including machinery and chemicals—has increased from 25 per cent of

Chart 3
RESOURCES USED IN FARMING
UNITED STATES, 1950-1978



SOURCE: USDA, ESCS.

*"Other" category includes taxes, interest, feed, seed, livestock purchases, and miscellaneous.

total resources used in 1950 to 42 per cent in 1977 (Chart 3).

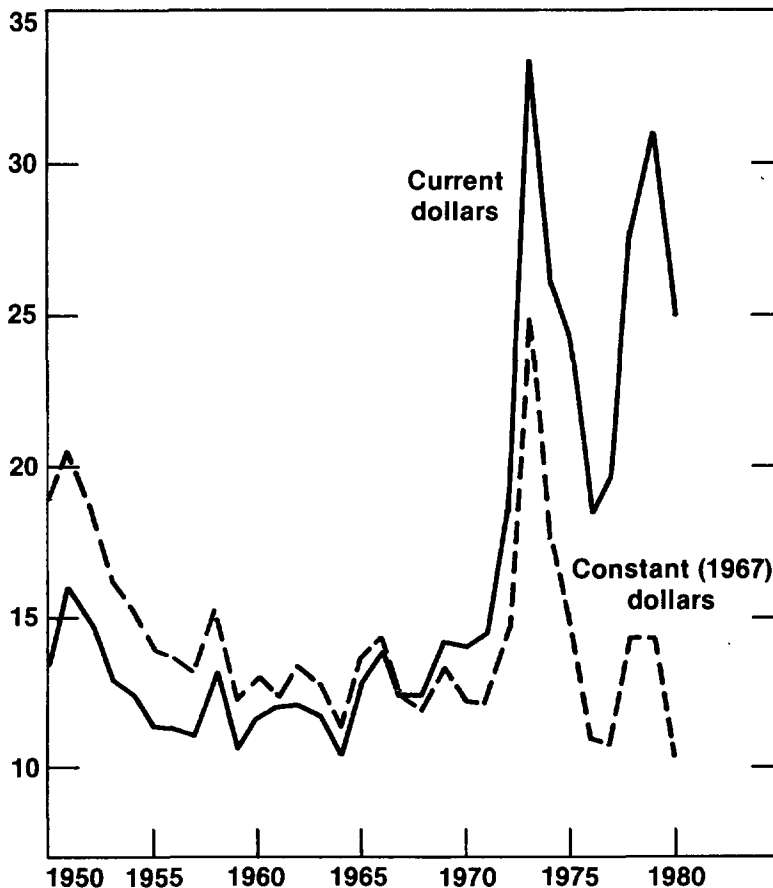
Farm Income and Assets

Net farm income has become much more volatile during the past decade. At the same time, inflation has eroded much of the potential gain in purchasing power associated with higher

income levels. Chart 4 illustrates the changes in net farm income since 1950 in both current and constant dollars. Over the same period, income to farm families from off-farm sources has grown substantially. Most of this income is captured by smaller farmers, greatly increasing their ability to remain in farming. In 1978, 59 per cent of the \$34.3 billion off-farm income

Chart 4
NET INCOME FROM FARMING
UNITED STATES, 1950-1980

Billions of Dollars



SOURCE: USDA, ESCS, *Agricultural Statistics*, various years.

went to farms with annual cash receipts from farm marketings of \$5,000 or less.

Increasing farm asset values have spurred concentration in farm structure. Since 1950, farm real estate values have increased at rates in excess of price inflation and far in excess of rates of capital appreciation in most other non-farm assets. Farmers owning real estate were able to use this increased value as collateral in purchasing additional land. Off-farm investors also were attracted by the favorable rates of appreciation. But new entrants into farming and those without land have found it increasingly difficult to purchase and service the debt on farmland.

Cash Receipts from Farm Marketings

Distribution of cash receipts has favored larger farms in recent years. The proportion of farm products sold by farms with sales of \$100,000 or over has increased dramatically. In 1970 these farms—1.9 per cent of all farms—received 33.4 per cent of the cash receipts from farming. By 1978, this category—7.0 per cent of all farms—received 56.3 per cent of cash receipts. By 1978, those farms with cash receipts of over \$200,000 received 39.3 per cent of all cash receipts from farming.²

Part of the growth of farms with annual sales of more than \$100,000 is more exaggerated than real. Since current dollar—rather than inflation adjusted—sales are used for comparison, price inflation during the past decade has pushed many farms into the \$100,000 sales category with no change in acreage or in real purchasing power. This is evidenced by the changes over the past 10 years in the indices of prices paid and received by farmers. While the index of prices received by farmers has increas-

ed 110 per cent since 1970, the index of prices paid has increased 114 per cent.

In brief, the data indicate that farm structure has become more concentrated since World War II, and the most recent evidence suggests that this concentration may be accelerating. If unchecked, this trend will likely lead to a U.S. farm structure composed of relatively few very large farms producing most of the nation's food and fiber, while most other farms will be very small and dependent upon off-farm income for survival.

THE FORCES OF CHANGE

This section identifies the forces that have contributed to the recent changes in farm structure, forces that can be put into one of seven major classifications.³

Inflation

Mainly due to generalized inflation, land prices have risen sharply in recent years, thereby increasing the wealth of landholders (Chart 5) and spurring their demand for additional land. Additionally, land has been bought by people outside agriculture seeking a long-run hedge against inflation. Farmland prices have thus been bid up to a level at which, during the early years of ownership, the income from the land purchased often is not adequate to service the debt incurred. Outside income, therefore, is required to bridge the gap. Farm input costs also have responded quickly to price inflation, lowering the profit margins in agriculture and creating pressure for government farm subsidies. In turn these subsidies have reinforced the demand for farmland.

² U.S. Department of Agriculture, *Farm Income Statistics*, ESCS, Statistical Bulletin 627, October 1979, Table 2D.

³ The discussion of these classifications draws heavily upon an analysis by Lyle P. Schertz, "The Major Forces," in Lyle P. Schertz and others, *Another Revolution in U.S. Farming*, USDA, ESCS, Agricultural Economic Report 441, December 1979, pp. 42-75.

Agricultural Exports

Rapid increases in farm exports, especially after 1970, have resulted in higher product prices and much greater price volatility. Farmers have reacted to these price trends by buying larger farm equipment and more land, using greater amounts of credit in the process. Also, the increased demand for wheat, feed grain, and soybean exports has led to greater production specialization on farms, which has enabled farmers to increase the size of their operations without increasing labor input.

New Technologies

New technologies reducing the per-unit cost of farm production have found a ready market in agriculture. Capital goods incorporating new technologies, such as four-wheel-drive tractors or new plant hybrids, have often required additional production inputs or a larger scale of operation to fully utilize the yield increasing, or

cost reducing, potential of the technology. Increased farm profitability during periods of the 1970s has provided a powerful incentive for farmers to purchase new technology, and for business firms to develop and market such technology. Thus, driven by technological change, the scale of agricultural production needed to achieve near minimum per-unit cost of production has been increasing.

Nonfarm Employment Opportunities

U.S. nonfarm employment opportunities have been plentiful since World War II. Consequently, people earning an inadequate income in agriculture have often been able to leave the farm for better paying jobs in the city.

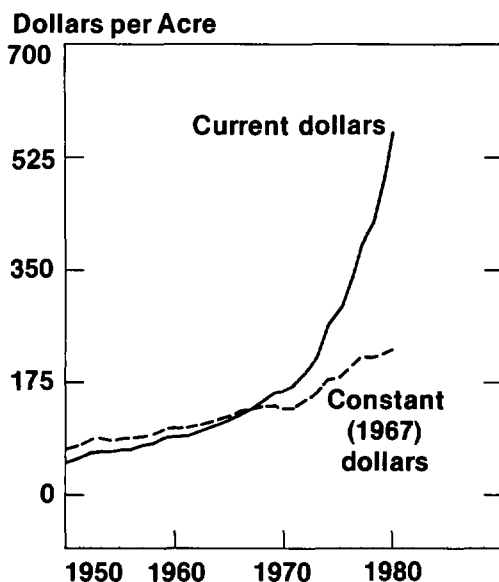
For much of the post-war period, labor has been a relatively higher cost and less reliable input into agricultural production than has capital. Hence, farmers have added more capital to their resource mix. But new capital equipment purchases have often more than offset the labor they were intended to replace. Therefore, farmers have attempted to add more land in order to fully utilize their equipment. Consequently, a continuous cycle of demand for more equipment and more land has been established.

Credit Expansion

Farmers have greatly expanded their use of credit since World War II. Five years after the war ended, in 1950, total farm debt was \$12 billion. By 1980, total debt had grown to \$157 billion. Even when adjusted for inflation, farm debt measured in 1967 dollars increased 2.8 times during this 30-year period. Farmers have increasingly been willing to use financial leverage in their businesses. Indeed, the high rate of inflation during the 1970s has greatly benefited debtors and has allowed debt repayment in ever cheaper dollars.

The supply of credit has generally been sufficient to meet the increased demand in

Chart 5
FARM REAL ESTATE VALUES
UNITED STATES, 1950-1980



agriculture. This is true in part because the attitude of lenders toward risk in agriculture has become more favorable. New means of intermediating loan funds from money market centers have been developed. And government-supplied credit has increased markedly through the Commodity Credit Corporation (CCC), the Small Business Administration (SBA), and the Farmers Home Administration (FmHA). The availability of credit on terms farmers can afford has greatly increased their demand for equipment and farm real estate.

U.S. Farm Commodity Programs

Both farm product prices and farmer incomes have been supported by a variety of government programs—CCC nonrecourse grain loans, cropland diversion, target price payments, marketing orders, etc. On balance, the programs have increased the quantity of farm assets, the annual capital expenditures by farmers, and land prices. The quantity of labor used in farming has been reduced and net farm income has been stabilized as income peaks and valleys have been reduced. Since farm program benefits have mostly been tied to acres farmed or quantities of products produced, most benefits have gone to larger, well capitalized producers. Thus, farm programs have tended to encourage increasing scale in U.S. agriculture.

Tax Rules

A number of tax rules tend to encourage larger farms, investment in farming by non-farm people, and the corporate structure of farms. Farmers can adjust their taxable income by choosing the method of accounting—cash or accrual—to be used for tax purposes; by counting as current expenses for tax purposes their expenditures for developing orchards, ranches, and breeding cattle; and by treating the gains from sales of purchased and breeding livestock as capital gains after holding the livestock for a

specified period. Some special advantages are available under estate taxes as well, such as valuing assets at use value, rather than market value, and deferring estate tax payments. Finally, income tax rate differentials often favor incorporated, over unincorporated, farm businesses. Generally, these benefits tend to lower the level of taxes on farm income and assets, increasing the rate of return on and the demand for the farm assets.

While the foregoing set of factors is not exhaustive, it does capture most of the forces of change. These forces do not act independently to affect change but are interrelated. For example, export market growth increases the demand for new technology, while the adoption of new technology can stimulate export market development by increasing product output or reducing product cost.

SORTING OUT THE ISSUES

While there is general agreement as to the major forces of change having an impact on farm structure, it is difficult to identify direct causal relationships. Moreover, it is not immediately apparent that something ought to be done to control the direction and the speed of changes in farm structure.

Four public policy issues pertinent to the recent changes in farm structure have been selected for discussion in this article. They are not the only issues that can be identified, but they are believed to be the issues of major importance to agricultural producers and to the general public. They also serve to illustrate the complexity and interrelationships of farm structure issues.

The Concentration of Farm Assets and Income

Farm assets and income have become increasingly concentrated, and the trend appears to be accelerating. In the decade ending in 1978, the proportion of land in farms with \$100,000

in sales almost doubled and the value of that land increased more rapidly than the value for all farmland. Moreover, those large farms held 30 per cent of all farm assets and 28 per cent of agriculture's net worth, although they represented only 7 per cent of all farms. They also received over 36 per cent of realized net farm income.

Farms with \$100,000 in annual sales may seem huge. However, that size may not be out of proportion to what most people consider a family farm. It should be recognized that the annual sales of a farm business approximate its gross income before either the variable or fixed costs of farming are subtracted. Net income will account for only a small proportion of gross income. Additionally, farm product prices have increased substantially in recent years. Thus, it is quite possible that in 1980 a relatively small family farm harvesting only 320 acres of corn could produce annual sales of \$100,000.

A driving force in farm enlargement is the effort to move toward a scale of farming where the per-unit cost of output is minimized. Based on research of the late 1960s, which is probably still valid in 1980, agricultural economists have generally concluded that most meaningful reductions in cost can be captured by a farming operation large enough to provide full employment for one or two men. Chart 6 illustrates this point by outlining theoretical short-run average cost curves for varying sizes of farms, measured in dollars of output.⁴

⁴ The resources used by the one-man farm do not stay constant over time. To the contrary, as new labor-saving, cost-reducing, or output-increasing technologies are adopted, the mix of land, labor, and capital used by a farmer can change, and the cost curves shift. Typically, however, the shifts of the curves have been downward and to the right so that the annual dollar sales for the optimum one-man farm tend to increase over time—even without price inflation. On balance, it seems likely that new research would reaffirm the efficiency of the fully employed one- or two-man farm.

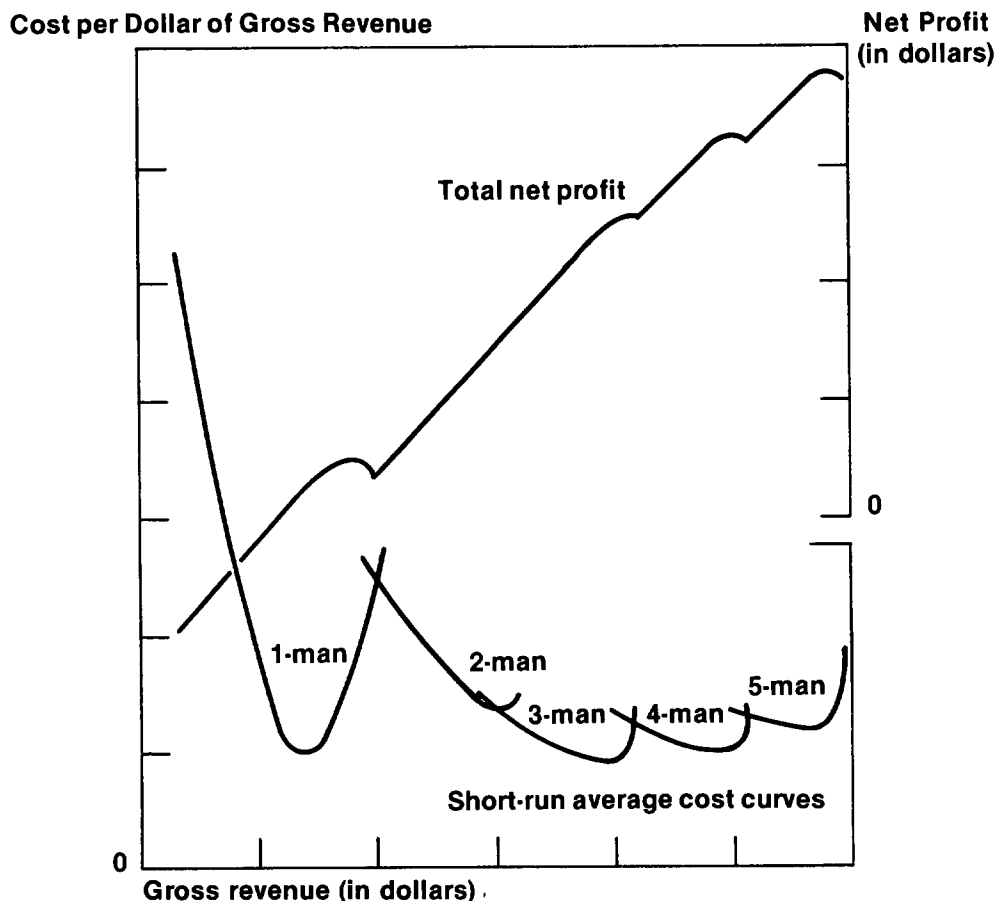
Why then do many farms expand beyond the one-man size? Again, an examination of the short-run average cost curves and the profit curve provides the answer. Even though the per-unit cost of production declines only slightly as the farm size expands, the cost curves do not turn sharply upward until a very large farm size is reached. Thus, there is no inherent economic limitation on farm size, and, within a broad range, size is indeterminate. With the low points on the cost curves relatively flat as the size of the farm increases, total net profit increases along with increasing size. Consequently, farmers wishing to increase net income often choose to increase farm size.

The data on increased concentration in farming raise the question of whether it is appropriate to vest the ownership of agricultural resources and the control of production in fewer and fewer hands. Different value systems may give rise to different answers, but the question may be more appropriately answered in terms of economic performance of the farms in the agricultural sector. On that point, it seems clear that efficiently operated one- or two-man farms capture most of the significant economies of scale for most kinds of agricultural production. Clearly, the answer is complicated by considering the impact of farm size on the community and the rest of the environment in which the farms exist. Moreover, it may be appropriate to consider the impact of increasing farm scale on the barriers to entry and exit in agriculture. Do the large farms prevent new entrants from obtaining sufficient land for an efficient farm operation? Should large farms be passed intact to succeeding generations? If so, how should this transfer be financed?

Government Policy Bias

Some people argue that government farm policy has contributed to the emergence of larger farms. As evidence, they point to the

Chart 6
NET PROFIT CURVES COMPARED WITH AVERAGE COST CURVES



SOURCE: USDA, ESCS, *Structure Issues of American Agriculture*, Agricultural Economic Report 438.

distribution of farm program benefits. Because program benefits are generally proportional to farm acreage or production, large farms receive a very large share of the benefits. About 58 per cent of the 1978 farm program benefits were captured by less than 22 per cent of the nation's farms (Table 1). And 7 per cent of the largest farms received over one-fifth of all payments.

Benefits from government programs are largely capitalized into the value of farm real

estate.⁵ Thus, as long as program benefits are based on acreage or production—with largely ineffective payments limitations—most of the resulting increases in asset values accrue to larger landholders.

Many observers also believe that the pro-

⁵ Michael Boehlje and Steven Griffin, "Financial Impacts of Government Support Price Programs," *American Journal of Agricultural Economics*, Vol. 61, No. 2, May 1979, pp. 285-296.

gressive tax structure in this country biases government policy toward large-scale farms. That is because a dollar of deductible production cost or interest expense will shelter more income at the margin for large farms with both higher incomes and higher marginal tax rates

than for small farms. Thus, as long as production expenses and interest costs on land and equipment loans are deductible in determining taxable income, this bias will tend to continue.

Policymakers have searched for ways to neutralize the bias of government policy toward

Table 1
SIZE AND DISTRIBUTION OF FEDERAL FARM PROGRAM PAYMENTS

(Dollars per Farm)

Farm Size Class	1970	1973	1975	1977	1978
\$100,000 Sales and Over	\$9,263	\$4,985	\$1,179	\$2,204	\$3,476
Percent of Payments	14.2	26.2	20.4	19.6	21.5
Percent of Farms	1.9	4.8	5.1	6.0	7.0
\$40,000 to \$100,000 Sales	\$4,056	2,135	739	1,770	2,800
Percent of Payments	19.4	25.5	28.7	33.9	36.0
Percent of Farms	6.1	11.0	11.3	12.9	14.6
\$20,000 to \$40,000 Sales	\$2,583	1,410	539	1,280	2,012
Percent of Payments	22.7	17.8	21.6	22.6	21.5
Percent of Farms	11.1	11.7	11.7	11.9	12.9
\$2,500 to \$20,000 Sales	\$1,111	638	202	407	647
Percent of Payments	36.3	24.8	24.7	20.2	18.2
Percent of Farms	41.1	35.9	35.5	33.9	32.0
Less than \$2,500 Sales	\$ 235	145	37	71	92
Percent of Payments	7.4	5.7	4.6	3.7	2.8
Percent of Farms	39.8	36.6	36.4	35.3	34.3
Total Government Payments					
Billions of Dollars	3.7	2.6	0.8	1.8	3.0
Millions of Farms	2.9	2.8	2.8	2.7	2.7

SOURCE: U.S. Department of Agriculture, Farm Income Statistics, July 1979.

larger farms. The alternatives presented usually involve size limitations on program benefits, tax deductions, and tax credits. But thus far, policymakers have been unwilling to sharply reduce the proportion of benefits accruing to larger farms, and changes in the tax codes are difficult to accomplish. Indeed, the debate must decide whether government policy ought to be corrected before the task of how to make the adjustment can be addressed.

Returns from Public Investment in Agriculture

Ensuring a bountiful supply of reasonably priced food for American consumers is an obvious reason for government farm programs and other public investment in agriculture. Public policy has clearly been successful in that respect. Americans spend about 16.5 per cent of their disposable personal income on food, a smaller proportion than is spent by the citizens of all other industrial countries.

Not only are Americans well fed at relatively low cost, but the products from about one of every three harvested acres are available for sale to world markets. In both volume and dollar value, U.S. agricultural exports are expected to set new records in fiscal 1980, continuing a decade of rapid growth. These exports will earn as much as \$40 billion in foreign exchange for the United States during fiscal 1980.

If public investment in agriculture provides benefits in the form of low-cost food and in support for the U.S. balance of payments, why should there be questions about the efficacy of such an investment? An examination of the economies of scale in farm production yields some insights. Most studies examining economies of scale conclude that per-unit costs of production decline sharply as farm scale increases, out to about the size farm that fully employs one or two men (Chart 6). Thus government policy to increase farm size to that scale could result in lower farm product costs to

U.S. consumers. However, beyond that size range there is apparently little payoff in lower costs. Hence, public subsidies to larger farms can be questioned.

Another line of reasoning suggests that government must underwrite part of the risk in agriculture to prevent disruption of the food supply. This argument has some validity if policy is oriented toward reducing hardship on individual farmers. But there is little evidence to indicate that the nation's food supply has been jeopardized by either intermittent shortfalls in agricultural output or periodic declines in farm income.

Another argument sometimes made is that the buying power of farmers must be protected to stabilize rural economies. Indeed, there do appear to be some costs to rural communities as a result of falling farm income. However, there are also costs to communities as farm size increases beyond the point necessary for near minimum cost in food production. These costs result as some communities grow and others decline in response to changing trade patterns caused by changes in farm structure.

Finally, if government resources are finite, the criterion of a positive benefit-cost relationship for public investment is a necessary, but not a sufficient, condition to justify such an investment. To maximize public returns, investment must be in those projects with the greater rates of return. Applying this test, one might ask whether basic agricultural research yields a higher return to the public than do farm price supports. An even broader question might be whether some other form of public investment, such as energy development or improvements to the nation's transportation system, would yield even higher returns than would public investment in agriculture.

Resiliency of the Emerging Farm Structure

As larger farms have become prominent in U.S. agriculture, they have been characterized

as rapidly growing, carrying higher ratios of debts to assets than smaller farms, and specializing in a single product. These farms also have benefited from a high rate of price inflation that has raised their asset values and provided them collateral to support rapid, debt-financed growth. And, some researchers assert, these farms have benefited disproportionately from government farm programs.

But how resilient would these farms be to economic adversity and to the discipline imposed by stable or declining rates of price inflation? If the experience of 1980 is valid, that resilience may be limited.

Many large, rapidly growing, heavily leveraged farms experienced financial stress in 1980 after a very short period of economic adversity. Decreased income prospects resulted in cash flow difficulties for many heavily leveraged farmers at the same time that appreciation in farm real estate values slowed drastically.⁶ Hence, farmers often could not borrow further against their land equity to resolve short-term financial problems. Many of these farmers had, in recent years, already restructured and refinanced farm debt using inflation-buoyed land equity. Others resorted to direct and guaranteed government loans to resolve cash flow problems. Indeed, the growth of government lending to agriculture has increased rapidly in recent years. As recently as 1970, the Farmers Home Administration held only 5.8 per cent of outstanding farm debt. By 1980, the proportion had reached 9.9 per cent.

Has a farm structure been encouraged that is unable to survive periods of economic adversity without large and continuing infusions of government farm program benefits and soft credit? Is this structure less able to prosper in a period of relatively stable prices than alter-

native farm structures? These are important policy questions, since U.S. agriculture's capacity to feed our population and to successfully compete for export markets has been premised on the efficiency and resilience of the nation's farms. These questions may be more related to the process by which many farms have grown than to the size of farms. To this point, perhaps too little attention has been given in recent years to developing staying power in the farm businesses. Too often investors have counted on rapid rates of price inflation for favorable investment outcomes. Nonetheless, limited evidence suggests that the emerging U.S. farm structure, especially at the upper end of the size spectrum, may be much more fragile than anyone had expected.

CONCLUSION

This article has outlined the post-World War II changes in U.S. farm structure and has identified some major forces contributing to those changes. Four major public policy issues related to the farm structure debate were suggested and discussed. While the policy issues discussed were not exhaustive, it is believed they do provide an indication of the breadth, the interrelatedness, and the complexity of the farm structure debate.

The nature of the policy issues that have been put forward suggests that the farm structure debate may be with us for some time. Some participants will likely call for additional government intervention to limit farm size, such as graduated land taxes or fertilizer taxes. Others will prefer that present government policies be continued, and they oppose policy changes that would neutralize the impact of government policy on farm structure. Overall, perhaps the most efficient economic solution over the long-run would entail reducing the policy bias toward big farms and increasing the reliance on market forces to shape farm structure in the future.

⁶ "Agricultural Credit Survey Results," *Financial Letter*, Federal Reserve Bank of Kansas City, Vol. 6, No. 5, May 1980.

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Federal Reserve Bank of Kansas City
November 1980, Vol. 65, No. 9