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CAPITAL STRUCTURE AND RURAL FINANCIAL NEEDS

by

Glen C. Pulver*

The availability of adequate financial capital to support the formation and growth of farm and agriculturally related business has been of long term interest to agricultural economists. In more recent years, the migration of people off the farm and the increased reliance of farm and rural families on off-farm income has generated concern about the availability of funds for creation and expansion of commerce and industry in rural areas. If people are to find adequate employment opportunities and/or nearby places from which to acquire necessary goods and services, then sufficient capital must be available to provide those opportunities.

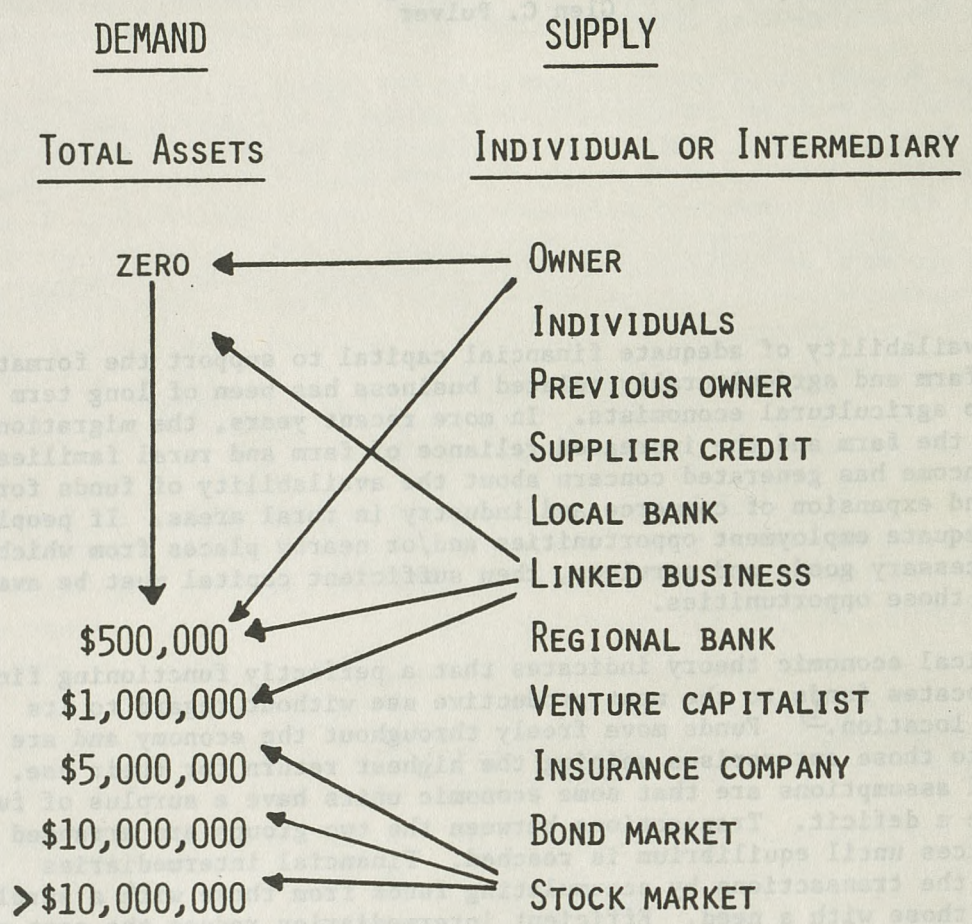
Classical economic theory indicates that a perfectly functioning financial market allocates funds to the most productive use without regard to its geographic location.^{1/} Funds move freely throughout the economy and are allocated to those enterprises gaining the highest return for their use. The fundamental assumptions are that some economic units have a surplus of funds, others have a deficit. Transactions between the two groups are arranged at varying prices until equilibrium is reached. Financial intermediaries facilitate the transactions by accumulating funds from those with a surplus and lending to those with a need. Efficient intermediaries reduce the cost of time and transaction to zero. As always, the classic assumption of perfect information prevails.

Under these theoretical conditions the availability of capital in rural areas would not be an issue. Funds would be allocated to borrowers in those areas and for those purposes with the highest rate of return, proper concern for risk being considered. Economists have always recognized that there are

* Professor of Agricultural Economics, University of Wisconsin-Madison Presented at AAEE Extension Workshop, Cornell University, August 4, 1984.

^{1/} For an excellent overview of financial market theory see: James Mikesell and Steve Davidson, "Financing Rural America: A Public Policy and Research Perspective", Rural Financial Markets: Research Issues for the 1980s, Federal Reserve Bank of Chicago, Chicago, Illinois, 1982.

FIGURE 1. FINANCIAL MARKET PARTICIPATION
BY FIRM SIZE



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potential if not real barriers to financial capital mobility. Not the least of these barriers is the lack of information. Those with a surplus of funds may not (probably cannot) always know the potential user capable of paying the highest price. Likewise those with a use for the capital may not have a clear idea of all the potential sources of funds and the pricing conditions which prevail. In addition financial intermediaries may be skeptical of unfamiliar products, processes, firms and locations. Other potential barriers are government regulation, the lack of active competition among financial intermediaries in specific locations and the desire to diversify risk against the loss of return. All suggest that the market might be something less than perfect.

It is clear that the role of the financial intermediary is critical to the economic vitality of any geographic area or group. For example, in their recent study of the impact of bank lending behavior in nonmetropolitan Wisconsin, Ho and Shaffer found a significant relationship between bank lending policy and community income. Every 1% change in bank loans generated a .53% change in per capita income [Ho and Shaffer, 1982]. A relatively small change in bank behavior has a substantial ripple effect as its spreads across all the incomes of the community. If the intermediaries are efficient, funds will flow swiftly and effectively to those capable of paying the highest price. This will stimulate the economic vitality of those regions capable of earning the highest return. In contrast, it may reduce the level of economic well-being in those regions which are less able to pay. Some communities may be at a consistent disadvantage in terms of return per unit capital and thus ability to pay. A perfectly functioning capital market may not always be in everyone's short-run interest.

More Complex Financial Markets

Of course, financial markets are not as simple as suggested by fundamental economic theory. They are becoming even more complex as the types and numbers of intermediaries increase and the variety of instruments widens. Financial markets are also becoming more integrated throughout the United States and the world [Rosenblum, 1982]. It is no longer true, if it ever was, that people start businesses with their own savings, borrow a few dollars from friends and relatives, acquire a loan from the bank at a fixed interest rate, grow to the size where they can sell bonds or stocks and, as the story goes, live happily ever after.

There is a wide range of instruments which the economic unit with a capital surplus can buy--time deposits, demand deposits, bonds, debentures, common stock, preferred stock, certificates of deposit, money market funds, money market certificates etc. Each carries its own earnings rate (fixed or variable), its own maturity date (if any), its own security, and its own baggage of advertising, promotion, accessibility and administration. Choosing the proper combination to maximize returns with proper consideration of risk is not easy.

Economic units interested in using funds sit on the other side of the table wondering which intermediaries and instruments are best for their specific application. Questions of whether to acquire the needed funds through borrowing

or by giving up equity must be resolved. A complicated package involving an interest write-down at a bank, preferred stock sold to a venture capitalist with a right to buy back or limited partnership might be combined with industrial revenue bonds, tax incremental financing, direct government block grants and a participation with another bank. The deal, whatever it turns out to be, must also properly address a wide range of government regulations. In short, the need for knowledge is tremendous.

The rapidly changing financial market environment greatly complicates the life of the players in the economic game, savers, intermediaries, and borrowers alike. Equally difficult is the work of the researcher attempting to provide demand and supply analysis aimed at improving knowledge and guiding public policy and the extension worker attempting to overcome the barriers to the free flow of information which theorists argue is fundamental to perfect capital markets. The intent of this paper is to provide a simplified framework which might be useful to economists addressing the complexities of financial markets and to suggest which aspects of the total concern might usefully be addressed in the short-run.

An Overview of Financial Markets

At first glance, the myriad of financial institutions and instruments appears overwhelming. In practice, business owners and managers seldom use all of the options before them. On the demand side, users might be classified by the amount of financial capital required. The small business requiring less than \$500,000 in total assets (including current and long term) faces a completely different set of practical options than the large business requiring more than \$25,000,000, for example. The smaller the business, of necessity, the less complicated the financial package. The small business operator does not have the time to understand and work out complex packages. Because individual capital demands are relatively low, they can usually be met by the local bank, thus there is no need to look further. Complicated packages are expensive to package, and usually involve legal, accounting, and brokerage fees. Small financial packages are simply too costly to package in a complex form. Large businesses have the time, resources and level of need sufficient to justify costly packaging.

The financial market supply side is represented by a diverse group of financial intermediaries ranging from individuals, supplier credit, local banks, regional banks, private companies, government grants and guarantees, secondary markets, venture capitalists, bond markets and stock markets. The size of the debt or equity transaction influences the intermediaries' willingness "to play" (see Figure 1).

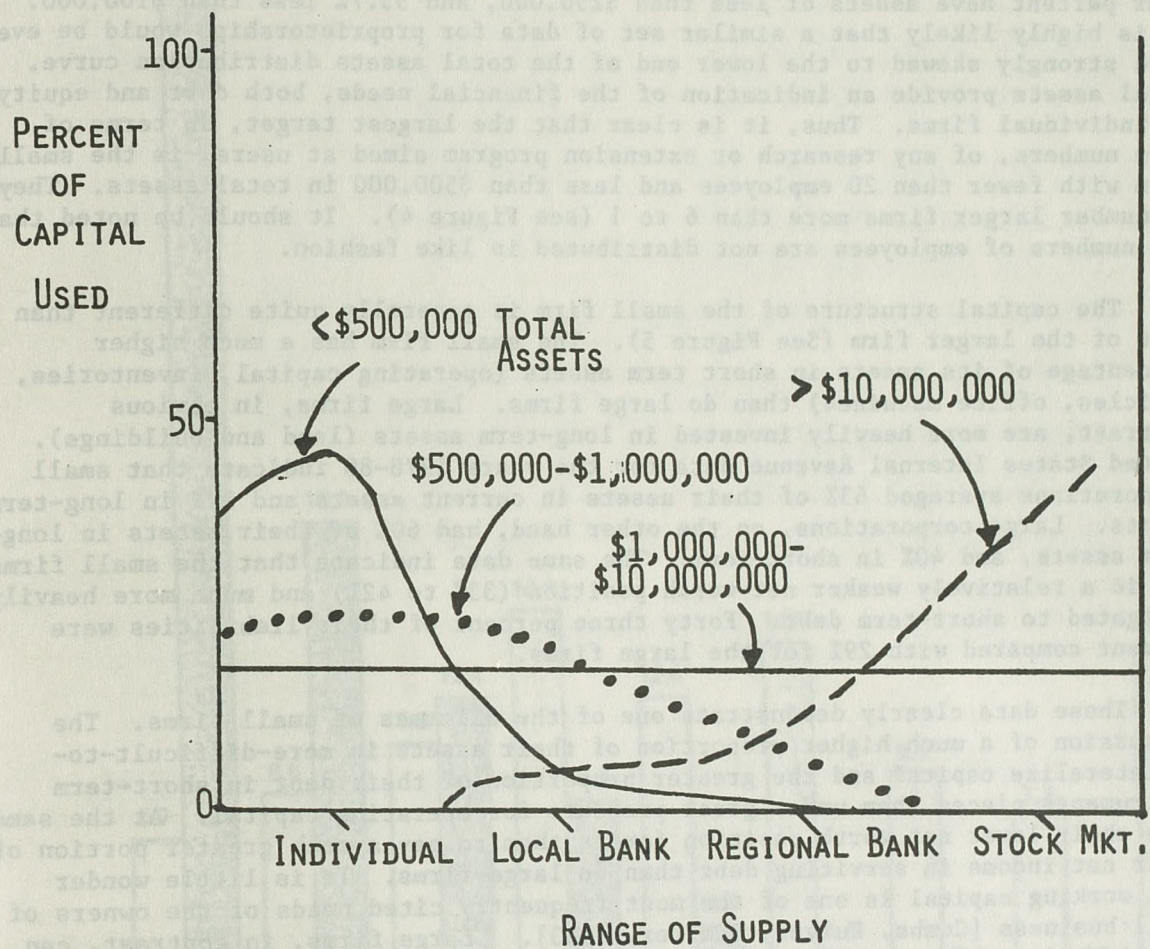
This is graphically represented in Figure 2. The needs of the small firms are likely to be met by the smaller institutions (owner, individuals, supplier credit, local bank). The needs of the large firm are met by the larger, more complex institutions. (The graph is purely theoretical as to firm size and demand distribution.)

FIGURE 3. PERCENT DISTRIBUTION OF EMPLOYMENT AND

ESTABLISHMENTS, BY EMPLOYMENT-SIZE CLASS, 1981

If the relationship between firm size and loan complexity really exists, then a quick look at the number of firms by size provides an estimate of the demand for complex financial packages (see Figure 3). U.S. Bureau of Census data reveal that the number of firms in the United States, as measured by the number of employees per firm, are distributed by very small firms. Establishments with fewer than 50 employees are 86.6% of the total and the total employment is 94.9% of the total and the total revenue is 97.1% of the total.

FIGURE 2. CAPITAL DEMAND BY SOURCE AND FIRM SIZE



SOURCE: COUNTY BUSINESS PATTERNS, 1981, U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS

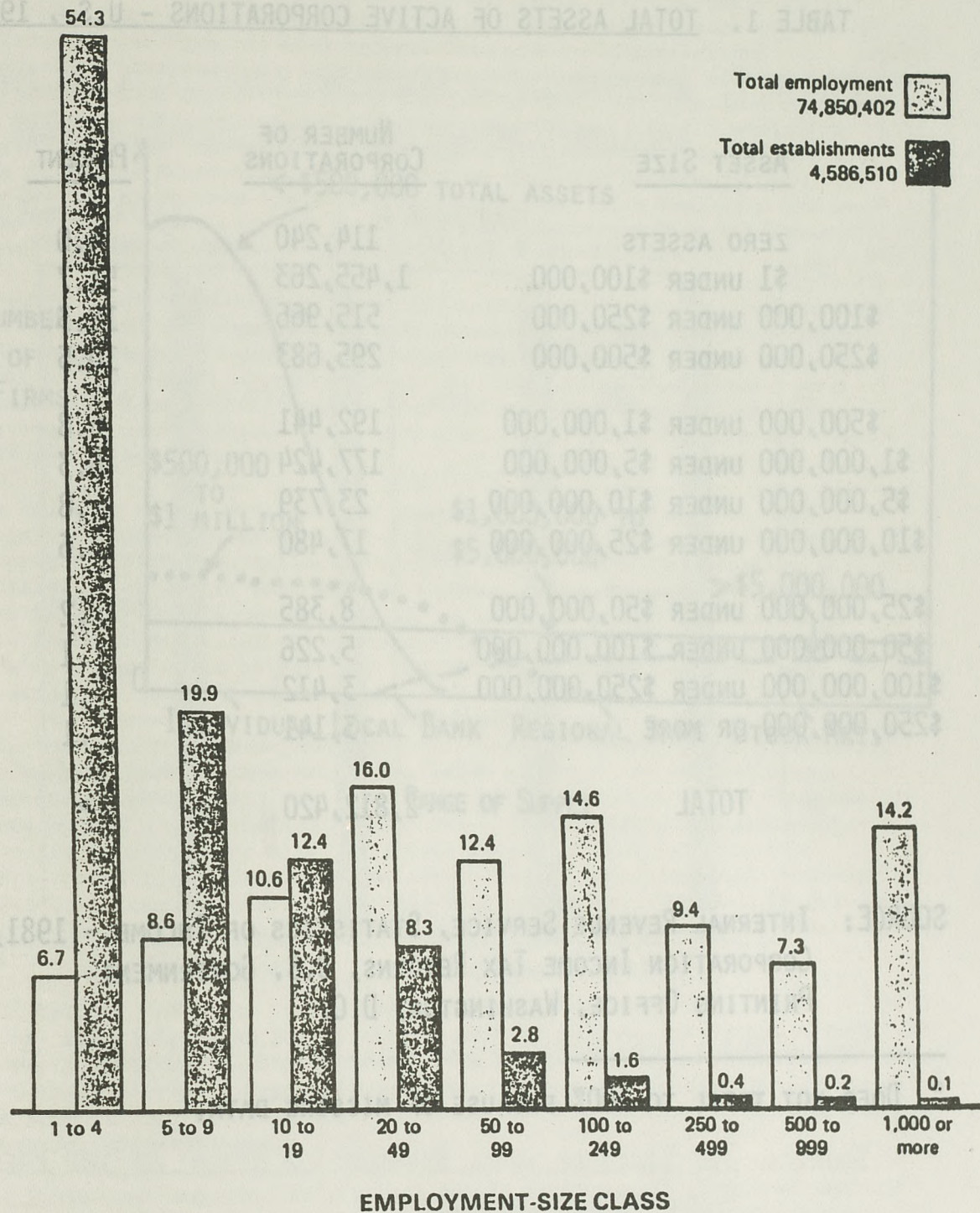
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The distribution of commercial and industrial firms by number of employees is closely paralleled by the distribution of firms by total assets. Examination of internal revenue data for the year 1981 indicates that 84.5% of U.S. corporations list total assets of less than \$500,000 (see Table 1). Seventy-four percent have assets of less than \$250,000, and 55.7% less than \$100,000. It is highly likely that a similar set of data for proprietorships would be even more strongly skewed to the lower end of the total assets distribution curve. Total assets provide an indication of the financial needs, both debt and equity, of individual firms. Thus, it is clear that the largest target, in terms of firm numbers, of any research or extension program aimed at users, is the small firm with fewer than 20 employees and less than \$500,000 in total assets. They outnumber larger firms more than 6 to 1 (see Figure 4). It should be noted that the numbers of employees are not distributed in like fashion.

The capital structure of the small firm is generally quite different than that of the larger firm (See Figure 5). The small firm has a much higher percentage of its assets in short term assets (operating capital, inventories, vehicles, office machines) than do large firms. Large firms, in obvious contrast, are more heavily invested in long-term assets (land and buildings). United States Internal Revenue data for the years 1978-80 indicate that small corporations averaged 63% of their assets in current assets and 37% in long-term assets. Large corporations, on the other hand, had 60% of their assets in long-term assets, and 40% in short-term. The same data indicate that the small firms are in a relatively weaker net worth position (33% to 42%) and much more heavily obligated to short-term debt. Forty three percent of their liabilities were current compared with 29% for the large firms.

These data clearly demonstrate one of the dilemmas of small firms. The possession of a much higher proportion of their assets in more-difficult-to-collateralize capital and the greater proportion of their debt in short-term instruments places them under great pressure for operating capital. At the same time their lower net worth position forces them to pay a much greater portion of their net income in servicing debt than do large firms. It is little wonder that working capital is one of the most frequently cited needs of the owners of small business [Combs, Pulver, Shaffer, 1983]. Large firms, in contrast, can collateralize a high percentage of their indebtedness and have less debt to service. Their financial capital concerns are markedly different. Research and extension programs aimed at assessing financial market concerns must recognize those differences.

FIGURE 3. PERCENT DISTRIBUTION OF EMPLOYMENT AND ESTABLISHMENTS, BY EMPLOYMENT-SIZE CLASS: 1981



SOURCE: COUNTY BUSINESS PATTERNS, 1981. U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS

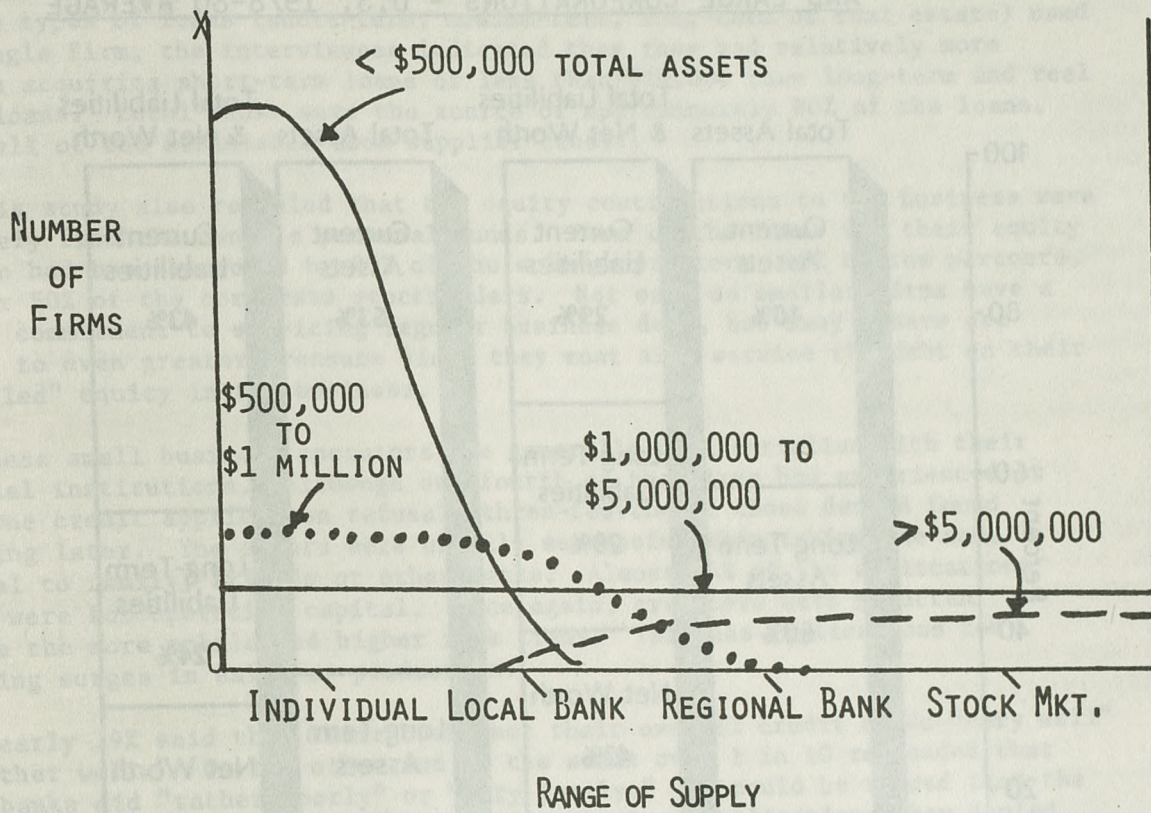
TABLE 1. TOTAL ASSETS OF ACTIVE CORPORATIONS - U.S., 1981

<u>ASSET SIZE</u>	<u>NUMBER OF CORPORATIONS</u>	<u>PERCENT</u>
ZERO ASSETS	114,240	4.0
\$1 UNDER \$100,000	1,455,263	51.7
\$100,000 UNDER \$250,000	515,966	18.3
\$250,000 UNDER \$500,000	295,683	10.5
\$500,000 UNDER \$1,000,000	192,441	6.8
\$1,000,000 UNDER \$5,000,000	177,424	6.3
\$5,000,000 UNDER \$10,000,000	23,739	.8
\$10,000,000 UNDER \$25,000,000	17,480	.6
\$25,000,000 UNDER \$50,000,000	8,385	.2
\$50,000,000 UNDER \$100,000,000	5,226	.1
\$100,000,000 UNDER \$250,000,000	3,412	.1
\$250,000,000 OR MORE	3,141	.1
TOTAL	2,812,420	*

SOURCE: INTERNAL REVENUE SERVICE, STATISTICS OF INCOME - 1981,
CORPORATION INCOME TAX RETURNS, U.S. GOVERNMENT
PRINTING OFFICE, WASHINGTON, D.C.

* DOES NOT TOTAL TO 100% BECAUSE OF MISSING DATA.

FIGURE 4. CAPITAL DEMAND BY NUMBER OF FIRMS

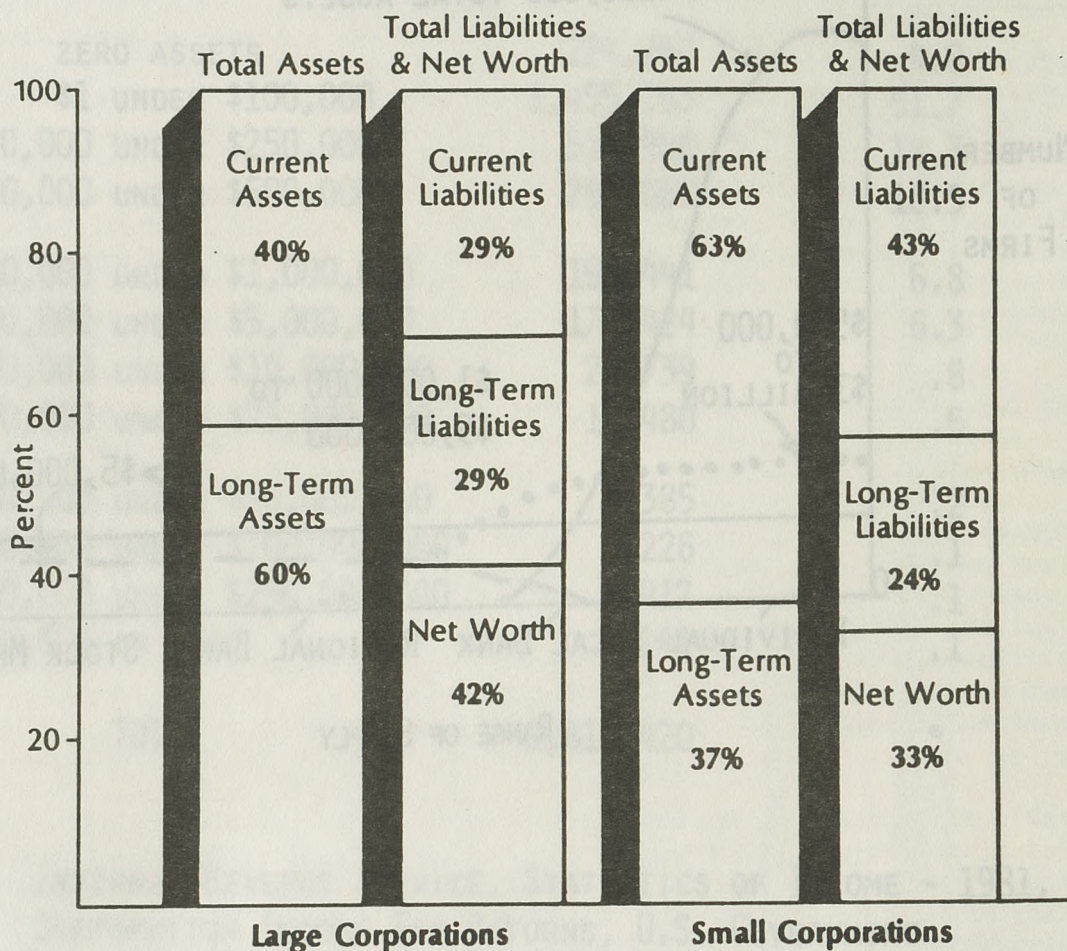


Source: The State of Small Business: A Report of the President's Small Business Commission, March 1954, page 185.

Using Internal Revenue Service data, the number of firms in each asset range is shown in the following table. The number of firms is shown in thousands.

Asset Range	Number of Firms (thousands)
< \$500,000	1,000
\$500,000 to \$1 million	200
\$1,000,000 to \$5,000,000	50
> \$5,000,000	10

FIGURE 5. DISTRIBUTION OF ASSETS AND LIABILITIES FOR SMALL AND LARGE CORPORATIONS - U.S., 1978-80 AVERAGE



NOTE: SMALL CORPORATIONS < \$10 MILLION IN TOTAL ASSETS - USING INTERNAL REVENUE SERVICE DATA.

SOURCE: THE STATE OF SMALL BUSINESS: A REPORT OF THE PRESIDENT, MARCH 1984, PAGE 185.

Small Business Financial Need

A study of the sources of capital used by Wisconsin firms in their first few years of operation support these conclusions [Combs, Pulver, Shaffer, 1983]. The study included 134 firms of nine general industrial classifications including metal working machinery manufacturing, trucking, retail grocery stores and eating and drinking places. All but four of the 134 firms utilized at least one loan. Seventy percent had negotiated fewer than three. Rarely were more than two types of loans (short-term, medium-term, long-term or real estate) used by a single firm; the interviewees indicated that they had relatively more problems acquiring short-term loans of less than \$10,000 than long-term and real estate loans. Local banks were the source of approximately 80% of the loans. Nearly all of the businesses used supplier credit.

This study also revealed that the equity contributions to the business were not solely from the owner's personal funds. Some of the funds for their equity position had been borrowed by 25% of the sole proprietors, 40% of the partners, and over 50% of the corporate stockholders. Not only do smaller firms have a greater commitment to servicing regular business debt, but many owners are subject to even greater pressure since they must also service the debt on their "so-called" equity in the business.

These small business operators are generally well satisfied with their financial institutions. Although one-fourth of the firms had experienced at least one credit application refusal, three-fourths of those denied found financing later. The owners were usually successful when taking the same proposal to family, friends or other banks. Almost 64% of the applications denied were for operating capital. Once again, creditors were reluctant to finance the more mobile and higher risk items. This has implications for financing surges in sales or production.

Nearly 79% said that their banks met their overall credit needs "very well" or "rather well." On the other end of the scale over 1 in 10 responded that their banks did "rather poorly" or "very poorly." It could be argued that the bankers were making proper choices because the loan applications they denied were improperly prepared, too risky or otherwise not prudent investments. Interestingly those firms which had been denied credit, once financed, grew much more rapidly than those not denied [Raizin, Shaffer, Pulver, 1983]. In any case, it appears there is a large segment of subjective judgment, given the success of the business denied.

Almost half of the firms interviewed felt they were under some credit stress. They had either been denied credit, did not believe they could acquire expansion capital within 30 miles, or rated their local financial institutions less than fair in meeting their needs. The stress was clearly greater in rural areas than in urban areas. This may be a consequence of the lower availability of local banking alternatives.

Since local bank behavior is critical in the provision of financial capital to 85% to 90% of the businesses in a community, the actions of the 10% of the banks which do not respond well may be of the greatest concern to researchers and extension workers. This is especially true in rural areas dominated by single banks. In any case, high quality performance (however measured) by local banks is necessary for the efficient operation of financial markets.

The Needs of Medium Sized Businesses

The capital requirements of those businesses with over \$500,000 in total assets will often exceed the legal lending limits of local banks. This is especially true in those rural communities with relatively small banks. Even when a large loan is within the legal level limits, banks are often unwilling to hold a large note all by themselves. In addition, the potential shortage of loanable funds or a mismatch between the maturities of deposits and loans pose serious problems for both the banks and their communities.

Theoretically, such bottlenecks to increased business lending can be removed at least in part through a variety of financial arrangements. These include government agency guarantees, correspondent banking relations with larger financial institutions, ad-hoc participations with other institutions, sales in the secondary market, and holding company support. Public-private partnerships are also useful mechanisms in acquiring capital for physical plant expansion, especially when more jobs are to be created. Industrial revenue bonds can be sold at reduced interest rates. Tax incremental financing and government grants (Community Development Block Grants, Urban Development Action Grants) can often reduce the amount of new capital required by the business owner. Today, very few major development projects (> \$10,000,000) take place without some form of public-private partnership.

Once again, the role of the local bank is critical. Local bankers can facilitate the operation of these financial markets, or, simply by inactivity, reduce the availability of funds to local business and industry. Their failure to act may be caused by the lack of technical skills, the real absence of awareness of the importance of their participation, or a mind-set against the process of complex loan packaging. As one participant in the Midwest Banking School recently put it, ". . . young bankers have more important things to do than worry about community development."

In a study of nonmetropolitan bank behavior in Wisconsin, Taff, Pulver and Staniforth report that most banks in rural areas, have very limited experience in making complex loans to commerce and industry [Taff, Pulver, Staniforth, 1984]. Their survey of nonmetropolitan banks reveals that 47% had no guaranteed loans to commerce and industry. Only 40% arranged any loans over their legal lending limit. Fifty-nine percent had sold no loans on either the secondary market or to correspondent banks.

A handful of banks accounted for a large portion of the complex loans recorded. Complex loans are defined as those for which a government guarantee was obtained and/or which were sold all or in part to others. Six percent of the banks surveyed were responsible for 22% of the total business loan volume, 47% of all loans sold, and 36% of all the complex loans. Only 8.7% percent of the banks had sold more than five loans. Only 2% indicated that acquiring government guarantees or finding a secondary market was a problem. The most active banks were concentrated in a few areas of the state. They indicated that 86% of their complex loans went to businesses within 10 miles of their home office. Medium-sized businesses in some parts of the state simply do not have easy access to the funds needed for expansion. The key to assessing a community's financial preparedness appears to be the size of its local bank.

Larger banks generally have more experience in making larger and more complex business loans. The communities with the least availability of these loans are those with populations of less than 1,000 people and with banks whose assets were less than \$30 million.

Some concern has been expressed about the potential impact of recent bank deregulation [Tomson, 1982 and Barkley, Potts, Mellon, 1984]. It is hypothesized that one result might be an erosion of the level of deposits in rural banks as funds flow to more attractive interest rates in urban setting. For example, increased branch banking may facilitate the easy transfer-of-funds from rural banks to urban banks. The flow of funds debate continues. If, in fact, there are fewer dollars to lend in rural areas, then the smaller businesses which are so heavily reliant on bank loans could be injured. It must also be remembered, however, that if capital is to be assembled in larger lumps so that it can be loaned to meet the needs of the community's larger business, then some form of capital outflow is necessary (i.e. to a correspondent bank or secondary market investor). The fact is that the long-run consequences of deregulation are not yet known.

Summary

In summary, a great deal is known regarding capital structure and rural financial needs.

- The behavior of the local bank is vital to community economic vitality.
- A major portion of commerce and industry are small businesses with fewer than 20 employees.
- Small businesses have relatively large shares of their debt in short-term credit and thus face a heavy credit service load. Working capital is a problem.
- A high percentage of very small businesses are satisfied with local bank performance.
- There is a strong concern regarding credit availability among a minority of businesses, particularly in rural areas.
- There is an increasing need for business loans above bank lending limits.
- The need for complex financing packages is growing.
- There is very limited experience in packaging complex loans among small banks, especially in rural areas.

Implications for Research and Extension

These conclusions have major implications for research and extension programs. For this discussion's sake, they are divided into three general sections: (1) banker education, (2) public policy, and (3) education of other critical public and private actors.

Banker education: It is absolutely essential that major educational effort be addressed to the banking community.

- They must be made aware that their actions have as much or more to do with economic well-being of the community than anyone else's. The economic vitality of the community in turn reflects positively on the banks.
- Bankers need to be accomplished at loan evaluation or acquire consultant assistance in feasibility analysis in specialized areas of commerce and industry.
- Skill in loan packaging is increasingly important. Bankers, of necessity, need to learn how to be loan brokers as well as lenders.
- It will be vital that officials in even the small banks be completely knowledgeable of government financing programs.

Public policy research and education: Public understanding of rural financial markets is laced with a lack of knowledge. Much more research is necessary on a number of questions.

- Are banking regulations appropriate to the needed packaging of capital? For example, do state security regulations discourage equity capital formation?
- Is there a real shortage of investment capital in rural areas? If so, for what types of loans? Is there a real need for public involvement in forming venture capital funds?
- What is the real impact of bank deregulation?
- Will multi-state banking aid or injure small business and/or rural areas?

In all cases the need for public policy education programs is obvious.

Education of other critical public and private actors: Perhaps an extension program dealing with these critical questions should start with state and local governmental officials, developers, Chamber of Commerce executives, and planners. They play a key role in influencing public policy and local bank behavior. Their participation is especially critical in rural areas or in dealing with small and medium-sized firms.

- All critical community leaders must be aware of the importance of the behavior of local banks. Bank boards can be influenced by community leaders.
- Increased support must be given to the packaging of complex loans.
- Public officials must be aware of the financial programs available from broader governments and support their use locally when appropriate.

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