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Credit Unions as Consumer Lenders in the United States

Credit unions, which have grown faster than any other type of depository intermediary in the past decade, are particularly renowned for their ability to make small consumer loans at low interest rates. However, the emergence of an electronic funds transfer system (EFTS) may lessen credit unions' present competitive advantages and slow their future growth.

The Pattern of United States Tariffs: the myth and the reality

A common assumption is that stagnant industries with strong import competition have more tariff protection than healthy industries without such competition. This study indicates, however, that the height of an industry's tariff bears little or no relationship to an industry's general health or degree of its import competition.

A special study of the "Costs and Benefits of the Proposed Tax Credit on Residential-Mortgage Income" by Edward J. Kane, Everett D. Reese Professor of Banking and Monetary Economics at Ohio State University is being published by this Bank. It is available without charge on request to the Research Department, Federal Reserve Bank, Boston, Massachusetts 02106.

The study analyzes the impact of the proposed tax credit on mortgage lenders and borrowers. It also presents current and future estimates of the cost of the credit and concludes that the revenue loss will significantly exceed that forecasted by the Treasury.

[The New England Economic Review](#) is produced in the Research Department. Mrs. Ruth Norr is the Editor. The authors will be glad to receive comments on their articles.

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Credit Unions as Consumer Lenders in the United States*

MARK J. FLANNERY

I N the course of the past decade credit unions have been the most rapidly growing type of depository financial intermediary in the United States. While they still account for only a small share of the assets of savings institutions, credit unions have been able to employ their unique organizational form to compete successfully in the market for small consumer loans—a market that is notoriously difficult to serve.

This paper describes some recent research undertaken at the Federal Reserve Bank of Boston concerning the operations and significance of credit unions in the United States. First, the operating characteristics of credit unions are described and it is shown how these institutions have been able to fill a gap in the consumer loan market. Second, the article discusses the possible role of credit unions in a changed financial environment that will

result from regulatory reform of the financial sector and new technological developments such as an electronic funds transfer system.

1. Profile of the Credit Union Sector

Credit unions are cooperative institutions owned entirely by their member-customers—both borrowers and savers. In this respect they are basically different from other intermediaries. Commercial banks (and some savings and loan associations) are stock corporations, while most thrift institutions are mutual organizations owned by their savers alone.

Credit union operations are confined by law almost exclusively to serving the consumer sector. Although the roots of the cooperative credit concept can be traced back to mid-nineteenth century Germany, the first American credit union was founded in 1909. Credit unions were designed to serve the specific credit and savings needs of urban working classes, which had been largely neglected by other financial institutions of the day. This historic orientation is still prominently reflected in credit union laws and operations.

The basic powers of credit unions are limited to serving their members by accepting simple

* Steven J. Weiss and George H. Gonyer of the Federal Reserve Bank of Boston, and the editors of this *Review* have provided a great deal of help and encouragement in the cause of completing this paper and the research report upon which it is based.

The full research report is available, upon request, from the Research Department, Federal Reserve Bank of Boston, Boston, MA 02106; Mark J. Flannery, *An Economic Evaluation of Credit Unions in the United States*, Federal Reserve Bank of Boston, Research Report No. 54, February 1974.

passbook deposits¹ and making consumer loans on terms that are as favorable as possible to borrowing members. Of these two functions, the latter has traditionally been viewed as more important. The allowable interest rate that may be charged on loans (12 percent annual percentage rate) and paid on deposits (6 percent) is prescribed in chartering laws at both the state and Federal levels. In the event that members' demand for loans falls short of savings supplied to the credit unions, it may invest excess funds in a limited number of other assets. Generally included in this category (the particulars vary from state to state) are government securities, savings and loan shares, bank deposits, and loans to other credit unions.

Credit unions are, therefore, severely restricted with respect to both their allowable portfolio composition and the manner in which they can bid for deposit funds.

The Bond of Association

A unique aspect of credit unions is their organization around a *common bond* of association. When members of a financial institution are related to one another in an important, non-financial way, it is argued, they will be better able to conduct successful lending operations with one another. The Federal chartering law of 1934 (as well as most state laws) allows for three types of associations, whose relative importance can be seen from Table 1.

Table 1
CREDIT UNIONS BY TYPE OF COMMON BOND
(December 31, 1972)

	INSTITUTIONS		ASSETS	
	Number	% of Total	Millions of Dollars	% of Total
Occupational	18,373	79.3	22,852	92.5
Associational	3,858	16.7	1,330	5.4
Residential	929	4.0	503	2.1
TOTAL	23,160	100.0	24,685	100.0

SOURCE: 1973 Credit Union National Association *Yearbook*.
1973 *Annual Report* of the National Credit Union Administration.

¹ Actually, credit unions sell "shares," but they are for all practical purposes equivalent to deposits. The introduction in 1970 of Federal share insurance (which is mandatory for all federally chartered credit unions and available to any state-chartered institution that qualifies) has made the legal distinction between shares and deposits operationally irrelevant. These shares earn interest on a monthly

basis (day-of-deposit to day-of-withdrawal compound interest is not allowed), and there is in general no provision for fixed-maturity term accounts such as have become so popular at other depository intermediaries in recent years. Some state-chartered institutions offer passbook deposits, but they comprise a very small proportion of aggregate credit union assets.

The *occupational* type is composed of individuals who work at the same plant or for the same firm. This is the most common type of credit union organization and from an operational point of view it has proved to be the most effective. An *associational* type is one based on membership in an organization of some sort, most often a church or labor union. The *residential* type is composed of people living in a "well-defined" geographic area. Originally intended to provide small farmers with an avenue for the provision of cooperative credit, this organizational form has more recently been used at a neighborhood level to provide credit to low-income urban residents.² However, some residential credit unions have also been chartered to serve entire cities and even counties or broader geographic areas—a situation that seems to violate the basic premise of a common bond of association.

Primarily as a result of the credit union image of helping the small, naive borrower-investor, credit unions receive both public and private aid. On the public level, credit unions have benefited by having their retained earnings (i.e., a mutual firm's equivalent of profits) exempt from income taxes. Neither are they subject to formal reserve requirements against their deposits as are some other intermediaries. More recently, Congress has created an Insurance Fund (within the National Credit Union Administration) which provides share insurance similar to that of the Federal Deposit Insurance Corporation (FDIC) and Federal Savings and Loan Insurance Corporation

(FSLIC). While the operation of this Fund is supported by fees paid by the insured credit unions, the costs of organization were assumed by the Federal government, and the Fund's borrowings are federally guaranteed. There is thus a distinct, though unmeasurable, element of public subsidy being extended to the credit union sector as a result of the provision of the NCUA Insurance Fund.

Subsidies provided by sponsors are even more important to the success of the credit union movement. A credit union's sponsor (i.e., the firm, church, labor union, etc., that underlies its common bond of association) often provides free office space and accounting services, including the provision of some sort of payroll deduction plan. Sponsors generally feel that providing inexpensive and "safe" small loans is socially useful and desirable. Moreover, from an employer's point of view, one benefit of sponsoring a credit union is that it will reduce lateness and absenteeism by giving employees an on-premises financial facility. Credit unions are a relatively inexpensive fringe benefit that can be of considerable value to many employees.

Finally, most credit unions also depend on their members to provide a sizable amount of volunteer labor—both officers (who, except for the treasurer, are required by law to serve without compensation) and clerical staff.

The exact value of these subsidies, particularly the subsidies in kind provided by the private sector, is inherently difficult to measure. (How, for example, is one to place a market value on volunteer labor?) It can, however, be inferred from credit union income statement data that private subsidies underwrite a greater proportion of the expenses of small than large credit unions. This is not a surprising result, since it seems to suggest (quite plausibly) that the effectiveness or "tightness"

² During the sixties, several hundred Federal low-income credit unions were chartered under the auspices of the Office of Economic Opportunity's Community Action Program. For an account of these organizations see Thomas F. Cargill, "Credit Unions and the Low-Income Consumer," *Journal of Consumer Affairs*, Fall 1973.

of a bond of association will tend to decrease with the size of the institution.³

It is thus evident that the public and private subsidies afforded credit unions result in lower operating costs, enabling them to pay higher dividend rates on savings and charge lower consumer loan rates than similar profit-oriented lenders.

The Consumer Loan Market

As of December 1972 there were 23,081 credit unions in the United States, with an average asset size of slightly more than \$1 million. Despite a rate of deposit growth over the past decade exceeding any other financial intermediary's, credit unions still lag far behind commercial banks, mutual savings banks, and savings and loan associations in terms of total savings, controlling only 3.8 percent of the household savings market. They do, however, constitute the third largest source of consumer instalment credit in the country (after commercial banks and finance companies) with 15.2 percent of that market. While credit union competition for deposit funds may be an important influence in some areas at a local level, it is in the consumer lending sector that the credit union movement has its greatest aggregate importance.

In order to understand the significance of the credit union movement in the United States, it is accordingly necessary to understand the financial difficulties that characterize consumer loan markets. Credit unions' success has been based largely on their ability to supply credit to consumers at "reasonable" interest rates in a market that tends to be dominated by high costs for both borrowers and lenders.

The costs of making and servicing consumer loans do not vary with the size of the loan for several reasons. First, it is expensive to collect and validate financial information on an applicant. Access to accurate information is necessary prior to the completion of any sort of loan contract, but for unsecured consumer loans the problem is a particularly serious one. Second, the lender must bear the cost of receiving and processing the monthly repayments of an instalment loan contract. Even if payments are made promptly, there are attendant processing and record-keeping costs. Finally, lenders must absorb operating costs associated with defaults and delinquencies, which are quite high for consumer loans relative to other types of lending. In addition to the out-of-pocket losses on a loan contract that is defaulted, special collection costs are often incurred prior to writing off the loan as a loss. These costs are largely unrelated to a loan's size.

As a result of the fixed nature of these cost components, lenders must charge very high effective rates on small loans in order to recoup their expenses and make a profit within the term of the loan. The magnitude of this effect can be seen in Table 2, which is based on the cost structures of the other two major consumer lenders, commercial banks and consumer finance companies. The table shows clearly that such lenders must charge extremely high rates of interest in order to make a profit on loans under \$1,000. At credit unions, however, the maximum legal rate that may be charged on any loan is 12 percent (APR).

It is also true that borrowers are confronted with sizable fixed costs in their endeavor to obtain a loan. Frequently they must go from place to place filling out application forms, presenting credentials, etc., in an effort to find a lender willing to grant a loan. Under such circumstances the *availability* of credit is often a

³ For a more complete discussion of subsidization, including its effects and extent, see Flannery, *op. cit.*, Chapters II and IV.

greater concern to the borrower than the interest rate being charged at a particular institution. Such considerations may in fact account for large part of the interest insensitivity that has been shown to characterize consumer borrowing.

The prevalence of large fixed costs on both sides of this market has tended to result in a limited supply of consumer credit for some areas and groups. The high interest cost of

consumer loans, when available, has also long been an important social concern. This situation led to the introduction of the first credit union laws in the United States in the early twentieth century. Because these institutions were designed to overcome the special problems that account for high consumer lending costs, the supply and distribution of consumer credit in the economy has improved significantly as a result of credit union operations and the competition generated by them.

Credit Union Lending

In a world of perfect information there is no special place for financial institutions based on a common bond of association. But since such perfect information is not available, a credit union usually has a sizable advantage in lending operations because it is likely to have accurate and useful information about its members that competing "open" consumer lenders cannot easily obtain. An effective common bond will give members of the credit union's Loan Committee a good understanding of applicants' jobs, living standards, etc. Their need to rely on more general credit criteria is consequently diminished.

A second result of an effective common bond is that credit unions tend to experience lower default rates than other lenders for two reasons. First, allegiance to the group and social pressure may induce credit union borrowers to be more conscientious about their loan repayments. Second, widespread availability of payroll deduction plans within a homogeneous group (especially at occupational credit unions) significantly reduces collection costs and delinquencies.

A third advantage of credit unions over other types of depository intermediaries is the convenience of their location. The location of

Table 2

**ANNUAL PERCENTAGE RATE
NECESSARY TO RECOVER
TOTAL ESTIMATED COST OF
CONSUMER INSTALMENT LOANS**

Size of Loan	Maturity of Loan		
	1 Year	2 Years	3 Years
\$ 100	102.3%	82.0%	74.9%
500	28.5	24.4	23.0
1,000	19.2	17.2	16.5
2,000	14.6	13.6	13.2
3,000	13.1	12.4	12.2

This table is based on the following assumptions, which are meant to be illustrative only (although they are in general accord with cost estimates of the National Commission on Consumer Finance and the Federal Reserve's *Functional Cost Analysis*): the initial cost of granting a loan, regardless of size, is \$25. The annual cost of processing instalment payments is \$25. The lender's cost of funds (interest on borrowed money, cost of equity funds, allowance for bad debt losses, etc.) is 10 percent.

The reader should note that these percentages are derived by dividing the lender's costs by the average outstanding size of the loan which is something over half of the initial amount of the loan. For example, the average size of a one-year, \$100 instalment loan is \$54.17 and the finance charge is \$55.42 (\$50 in fixed costs plus \$5.42 as the lender's cost of funds), making the annual percentage rate necessary to recover the lender's total cost 102.3 percent.

credit union facilities at the plant, church, or labor union headquarters reduces the inconvenience of carrying on one's financial business. In a similar fashion, payroll deduction plans make routine transactions for both borrowing and saving automatic and effortless.

On the basis of the qualitative description of credit union operations to this point it has been argued that credit unions are lower-cost consumer lenders than are banks or finance companies. In order to test this idea, 1972 income statement and balance sheet data from a sample of 1,016 Federal credit unions were analyzed. These analyses show that average operating costs of credit unions are very low. For example, the average annual cost of making and servicing an instalment loan is about \$20 at a credit union as compared to about \$48 for commercial banks and about \$51 for consumer finance companies.⁴ Such low operating expenses result from organizational features unique to credit unions. Allegiance to the bond of association brings volunteer labor to the credit union, and subsidies of various kinds are also provided by sponsoring organizations. Moreover, the prevalence of payroll deduction plans and the influence of the common bond tend to reduce delinquencies and loan losses.

Another interesting cost finding is that credit unions have relatively constant unit costs by size. That is, a small credit union can make a loan about as cheaply as a large institution. This is surprising in light of the fact that unit costs decrease rapidly at commercial banks in the size range of the majority of credit unions,

namely less than \$5 million of deposits.⁵ The explanation for this "constant returns to scale" observation is that the small credit union has a greater share of its total costs borne by the sponsor and its members. Larger credit unions tend to operate on a more commercial, self-sufficient basis, paying a larger proportion of their total operating expenses.

The preceding discussion of operating characteristics has treated credit unions as a homogeneous group. However, significant differences can be seen between the various types of credit union institutions. These differences are described in the following section.

II. Operating Differences Among Types of Credit Unions

Analysis of the operating characteristics of credit unions shows that the various types of credit unions differ appreciably with regard to average size of deposits, lending characteristics, delinquency rates on loans, and the use of payroll deductions.

The 1972 data for deposit sizes at Federal credit unions were as follows:

	<i>Average Deposit Size</i>
Occupational	\$623
Associational	379
Residential	275
Average	<u>\$574</u>

The most striking feature about credit union deposits is their small average size. Regular

⁴ For consumer finance companies this estimate is given in the *Report of the National Commission on Consumer Finance*, p. 144; the bank data are from *Functional Cost Analysis, 1971 Average Banks*, and pertain to banks with less than \$50 million in assets.

⁵ George J. Benston, "Economies of Scale in Financial Institutions," *Journal of Money, Credit and Banking*, May 1972, pp. 312-341. Frederick W. Bell and Neil B. Murphy, *Costs in Commercial Banking*, Federal Reserve Bank of Boston, Research Report No. 41, 1968, p. 161.

savings accounts at commercial banks average about \$1,500 and at thrift institutions \$2,000 to \$3,000. This suggests that credit union deposits may be more in the nature of convenience savings than investment accounts. But it is also important to note that in order to become a credit union member (and then be eligible for borrowing), an individual must purchase at least one savings share, generally worth \$5. A relatively large number of such small, token accounts will reduce the overall average share size. Moreover, the number of large (i.e., greater than \$5,000) accounts at credit unions has risen sharply since the late 1960s, indicating that the nature of credit union accounts may have begun to change in recent years. Finally, credit union savers are fully as sensitive to dividend rates and yield differentials as are depositors at other types of intermediaries.

Within the credit union sector, the interest rate paid on savings does not vary significantly with the type of bond. Thus, the larger average size of savings share accounts at occupational institutions presumably reflects greater convenience and loyalty associated with that particular type of bond.⁶

Loan sizes also differ among credit union types. Precise comparisons regarding credit union lending practices are difficult to make because data on the composition of individual loan portfolios (particularly the relative proportions of personal versus automobile loans) are unavailable. But occupational credit unions tend to make loans that are smaller,⁷ and of

slightly shorter maturity than nonoccupational institutions. This emphasis most probably reflects a relatively greater commitment to unsecured personal lending, thus showing that occupational credit unions service that segment of the market that has been most neglected by traditional lenders.

The delinquency rate on loans outstanding also varies quite widely by type of credit union. An average of 6.8 percent of the sample credit unions' loan accounts were delinquent (i.e., a payment two or more months overdue). After allowing for other factors that affect delinquencies (e.g., average size of loans, presence of a payroll deduction plan, etc.), it was found that occupational credit unions have a delinquency rate 3.9 percent below this level, while the residential group experiences a rate 2.4 percent above the mean, and the associational rate does not differ significantly from the overall average. While these average delinquency figures seem rather high, actual losses on loans extended by credit unions are very small—about 0.28 percent.

Payroll plans are offered to members by 92 percent of all occupational credit unions, versus only 36 percent of the non-occupational institutions. The close relationship with members' employers in the former case makes payroll deductions both convenient and easy to operate. A payroll plan lowers operating costs for the credit union, reduces its loss and delinquency rates (relative to those experienced by credit unions without payroll plans), and provides added convenience for members. As a result of these cost-reducing features, smaller loans are profitable for both the lender and the borrowers. On the savings side, the use of an automatic payroll deduction plan results in a *higher* average share size, while the dividend rate required to attract a particular level of deposits is lower, again because of convenience

⁶ It should also be pointed out that the residential group includes about 700 low-income credit unions founded during the 1960s. (See footnote 2 above.) These institutions depress rather sharply the average share size for all residential credit unions in aggregate.

⁷ The average loan size at occupational credit unions is approximately \$130 smaller than at similar, nonoccupational institutions.

advantages that accrue to savers. These cost effects of payroll plans serve to differentiate credit unions from other types of intermediaries, as well as distinguishing between occupational and nonoccupational institutions within the credit union sector itself.

To summarize, credit unions differ from one another appreciably depending on their type, with the occupational form having several advantages over the others. All, however, have low operating costs, allowing them to be effective lenders in the small consumer loan market—the primary reason for their establishment.

III. Credit Unions in the Future

It has been shown here that credit unions fulfill the role for which they were initially designed—providing small personal loans to households at reasonable cost. In order to achieve these results, the credit unions have utilized the economic effects of their bonds of association, as well as receiving both private and public subsidies. As they exist today, most credit unions are small, private institutions, dealing almost exclusively with their members and relying on personal loans for the major part of their income. It is very likely, however, that credit unions' competitive environment will be substantially altered in the future as a result of technological progress—specifically, the emergence in the United States of an electronic funds transfer system (EFTS).

In the past few years, an EFTS has been a much-discussed possibility. Such innovation in the payments mechanism is technically and economically feasible, and should prove to be socially desirable as well.⁸ While the type of

full-blown point-of-sale system sometimes envisioned in trade journals will not necessarily occur, it now seems inevitable that certain elements of an EFTS will emerge in the United States. The transition will undoubtedly be a lengthy process, but it has in fact already begun.

The general features of an EFTS as it will affect financial intermediary competition can be summarized as follows. First, it will become feasible for all intermediaries to provide their customers with payroll deposit plans. While such plans have always been possible in theory, the EFTS technology will sharply reduce administrative costs, making it more profitable to offer the plans.⁹ This tendency is already visible in the automated clearing houses (ACH) currently operating: preauthorized deposits occupy a prominent place in advertising and marketing ACH services.

Second, individuals will enjoy much better access to their deposit accounts at all types of financial intermediaries. Automatic teller devices, preauthorized deposits and payments, point-of-sale terminals, and even home “banking by phone” will reduce the time and effort required to complete financial transactions.

Finally, the actual transfer of funds through the EFTS will require banks¹⁰ to process more and different information than they currently do with checks. Electronic payments will be similar in this respect to the giro transfers which are currently employed in many European countries. The computerization of payments and other financial operations will afford intermediaries the opportunity to gather and

⁸ See Mark J. Flannery and Dwight M. Jaffee, *Economic Implications of an Electronic Monetary Transfer System* (Lexington: D.C. Heath and Co., 1973), Chapter 4.

⁹ A major advantage of occupational credit unions today is that the homogeneity of their membership makes payroll plans easy and inexpensive. See above.

¹⁰ In this section “banks” refers to the group of intermediaries that will eventually effect third-party payments.

authenticate information on loan applicants quickly and cheaply.¹¹

EFTS-related innovations such as these are likely to afford other intermediaries several key competitive advantages currently employed only by credit unions. Credit unions' advantages in terms of instalment payments processing costs and lower delinquency and loss rates will no longer be so pronounced when direct payroll deposit and deduction plans are widely available. The physical convenience of occupational (and to a lesser extent associational) credit unions will also become irrelevant in a system where customers can conduct their financial business without locational inconvenience or the need to stand in line at a teller window.

Furthermore, the technology of electronic funds transfer will greatly encourage the practice of attaching consumer lines of credit to demand deposit accounts. The operation of bank credit card plans has already demonstrated that this type of lending procedure reduces the high, fixed costs associated with consumer lending, so EFTS banks (*et al.*) will be able to make a profit on smaller, shorter maturity loans.

Under the EFTS, individual lines of credit will also be less risky investments from the lenders' point of view. Unlike today's bank cards, where the credit grantor learns of customers' purchases with a lag of at least several days, EFTS technology will allow constant, real-time monitoring of customers' credit line usage.¹² The risk of "credit abuse" will thus

be diminished. Moreover, financial information about potential borrowers will be more accessible and more accurate, allowing more complete control over the riskiness of all consumer loans.

On net, then, credit unions will be faced with sharply increased competition both for deposits and small consumer loans as a consequence of the EFTS. Their recent rapid rate of growth may well slacken—at least relative to that of their competitors. As other intermediaries become relatively more efficient operators in the market for smaller consumer loans, the need for credit unions' special consumer lending services will be reduced. It is thus evident that the emergence of an EFTS will alter in a fundamental way the role played by credit unions in the economy.

In considering the competitive problems confronting credit unions, their situation has generally been regarded as similar to savings and loan associations and mutual savings banks. However, if the EFTS emerges in the fashion predicted above, the future plight of credit unions will be distinctly different from that of the other thrifts.¹³ Not only will the credit unions' competitive advantages be reduced, but the primary reason for their existence—to increase the allocation of credit to households in the economy—may no longer be relevant in

tion service through point-of-sale terminals in retail stores. (*American Banker*, June 25, 1974, p. 1.) Also see Flannery, *op. cit.*, pp. 63-66 for a further discussion of the advantages of consumer lending by means of credit lines.

¹³ The savings and loans and mutuals may also encounter competitive problems under the EFTS. See Flannery-Jaffee, *op. cit.*, Chapter 5. It is important to point out that the need for regulatory reform of the financial sector is by no means tied to the evolution of an EFTS. Rather, competitive developments within the past decade have resulted in fundamental imbalances in the present system of depository financial intermediaries, and reform will be required to offset them.

¹¹ Important legal and ethical problems are associated with computerized access to individuals' credit records, and safeguards to prevent abuse certainly have to be designed. This implication of EFTS technology has, however, been frequently ignored in discussions of the system.

¹² The First National City Bank of New York currently operates an on-line check and credit authoriza-

the future. Any consideration of regulatory reform proposals for the credit union sector must recognize these differences and react specifically to them.

While a detailed discussion of regulatory reform is far beyond the scope of this paper, it is possible to conclude with several general principles that are consonant with the analysis of credit union operations presented above.

Most generally, it should be recognized that credit unions are in many ways directly competitive with other depository financial intermediaries. Horizontal equity considerations may require that any expansion of credit union powers (e.g., the issuance of multi-maturity time deposits or checking accounts) be accompanied by increased regulatory burdens (such as required reserves against deposits or income taxation). This will be especially pertinent as other intermediaries come to augment credit unions' supply of smaller short-term consumer loans under the EFTS.

The opportunity for charter conversions (e.g., allowing a credit union to become a mutual savings bank) should be made easily avail-

able to credit union institutions. As the EFTS causes them to lose many of their unique advantages, many individual credit unions will find it difficult to continue operating as specialized consumer lenders. In order to protect depositors and abet competition in the financial sector, provision should be made to preserve viable institutions.

Finally, the tax-exempt status of credit unions should be seriously reconsidered in light of two points presented above. First, the residential bond of association is the least effective basis on which to form a credit union. It seems entirely possible that this tax exemption is the primary reason certain new (residential) financial intermediaries have been chartered as credit unions. Second, the continued extension of special public subsidies to credit unions in order to promote consumer lending may become unnecessary (or at least *less* necessary) in the long run if the EFTS has its expected impact on consumer lending.

Detailed study of this issue will certainly be an important component of credit union reform proposals in the future.

R ESEARCH Report No. 56, *Problems in Liability Management: Case Studies of Attitudes at Seven Banks* by Stephen Duckworth will be available shortly on request to the Research Department of this Bank.

This timely report is a study of the attitudes of the managements of seven regional banks in New England toward modern liquidity management. This study presents, first, measures of the need for external funds, that is, the difference between loan demands and funds supplied by demand and savings deposits. Next, the study reviews the opinions of bank management toward meeting their customers' loan requests and the problems of not accommodating customers in periods of tight money. The major part of the study is a review of changing attitudes toward liability management in general and toward the various forms of liabilities. Some of the difficulties that are currently encountered by banks in "rolling over" their liabilities were already foreseen by managements in 1972 when the survey was made.

The study was adapted from a 1973

Harvard Business School doctoral dissertation entitled "Post CD Liquidity Management: A Study of New England Regional Commercial Banks." Mr. Duckworth is currently an assistant professor at the School of Business Administration of Northeastern University.

In the same field, as announced in the May/June issue of this *Review*, this Bank has recently published Research Report No. 55 by Donald M. DePamphilis entitled *A Microeconomic Econometric Analysis of the Short-term Commercial Bank Adjustment Process*.

This Bank also publishes *The Federal Funds Market: Its Origin and Development* by Parker B. Willis as well as a practical, instructional pamphlet aimed primarily at smaller member banks entitled *The Reserve Position, Methods of Adjustment* by Edward J. McCarthy. All these publications are available without charge on request to the Research Department, Federal Reserve Bank of Boston, 30 Pearl Street, Boston, Massachusetts 02106.

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The Pattern of U.S. Tariffs: the myth and the reality

NORMAN S. FIELEKE

U.S. citizens have long been known for their inclination to support the underdog. Thus it may be surprising that stagnant industries with strong import competition generally receive no more tariff protection than healthy industries with little or no import competition.

More generally, it is commonly assumed that an industry must possess certain attributes in order to qualify for high tariff protection in the United States. This article indicates that these attributes actually bear little or no relationship to the height of an industry's tariff.

Candidacy for Tariff Protection

Some U.S. industries have much higher tariff protection than others. Among the industries included in this study, one (weaving and finishing mills, wool) has a protective tariff of about 50 percent, while a number of other industries have no tariff protection whatsoever.¹ What

¹ This article uses nominal tariff rates rather than "effective" rates of protection (on value added) for several reasons. First, the difficulties of computing reliable effective rates are quite formidable. Second, the effective rates which have been computed are generally highly correlated with the counterpart nominal rates, *even when protection from nontariff barriers such as quotas is included in the effective rates*. Third, the nominal rates are appropriate for this article because the political process, including international trade negotiations, has focused on them.

are the reasons for such disparities? First, we shall state the reasons that are commonly given; then we shall investigate their accuracy.

It is commonly assumed that an industry must display certain fairly well-defined attributes in order to be a successful candidate for high tariff protection. First, the industry should experience stronger foreign competition than most other industries. A widely accepted summary measure of foreign competition is the ratio of competing imports² to total sales (or shipments) of the industry's product; as a rule, the higher this ratio is, the more severe is the competition from imports, and the more salable the industry's case for protection would presumably be.

Second, it seems that an industry's plea for protection would be more successful if import competition were clearly damaging to the industry. For purposes of judging whether such damage is being inflicted, a number of statistical measures could in theory be employed, including the rate of return on invested capital, the rate of unemployment, and the frequency of plant closings. However, perhaps the best available summary measure of an industry's health is the rate of growth in its output. Thus,

² More precisely, it is competing imports minus the industry's exports that are commonly scrutinized.

the slower the growth in an industry's output, the more effective the industry might be in achieving tariff protection.

Third, the Government might use tariffs as a device to raise wages in low-wage industries, or as a device to reduce unemployment among the relatively unskilled workers in such industries. If so, the industry which could plead low wages would stand a better chance of receiving a high tariff. Finally, it seems that an industry's case for protection would be enhanced if the industry were important to the national security. Even before the time of Adam Smith, countries were adhering to his maxim that "defence . . . is of much more importance than opulence . . ." and were putting up with the inefficiencies associated with tariffs in order to preserve essential industries. Consequently, if a large share of an industry's shipments were purchased by the Government for purposes of national defense, the industry presumably would receive a more sympathetic hearing on the issue of tariff protection.

The foregoing considerations, having to do with foreign competition, general health, the wage rate, and the national security, are usually stressed by spokesmen for industries seeking protection from foreign competition. Indeed, the law provides that these considerations are to be weighed by Government officials responsible for granting or denying the appeals of particular industries for relief from foreign competition. Moreover, U.S. negotiators have been under the obligation to bear such considerations in mind when agreeing to tariff reductions during trade negotiations with other countries. Therefore, there is substantial basis for assuming that these considerations should have left their imprint on the pattern of U.S. tariffs.

However, there is another consideration. Elected officials who want to be reelected can

hardly ignore the number of votes which an industry can marshal, so that an industry with considerable vote-gathering power would appear more likely to secure high tariff protection than other industries. One fairly obvious index of an industry's vote-gathering power is the number of employees in the industry. In addition, the political influence of an industry may depend upon how the industry is organized. If management of the industry is concentrated in a few firms, it may be easier to focus the influence of management during lobbying efforts; a common measure of concentration among firms is a "concentration ratio" expressing the shipments of the four largest firms as a ratio of total shipments of the industry. Similarly, employees may be more effective in the political process if they are organized into unions; because production workers are more commonly unionized than are office and other workers, the ratio of production workers to total employees provides a crude index of the degree of unionization of an industry. In summary, consideration of political influence suggests that an industry will enjoy a higher tariff if the industry has a large number of employees, many of whom are production workers, and if production is concentrated in the hands of a few firms.

The preceding paragraphs have outlined the attributes which it is commonly assumed would make an industry a successful candidate for high tariff protection. In the next section of this article, the evidence is examined to ascertain whether industries with these attributes do in fact receive higher tariff protection than other industries.

The Facts Versus the Assumptions

This part of the article presents the results of an analysis of tariffs for some 180 manu-

facturing industries, which are all of the industries for which the necessary data could be obtained.³ The analysis consisted of a series of statistical tests, using well-known "regression" techniques.

The years 1965 and 1972 are of special interest for the analysis. A comprehensive reduction of the Nation's tariffs was completed in 1972 as a result of the Kennedy Round of trade negotiations, and the specific reductions to be made were decided upon in the early and mid-1960s on the basis of data available in those years. Therefore, it seems reasonable to expect that the height of an industry's tariff in 1972 would reflect the industry's situation in about 1965 with respect to import competition, general health, and other attributes supposedly influencing the height of the tariff.

In fact, the statistical analysis shows that these attributes generally have little or no discernible influence on an industry's tariff. The height of an industry's tariff bears little or no relationship to the degree of import competition, to the general health of the industry, to the industry's involvement with the national defense,⁴ to the number of employees in the industry, to the degree of unionization, or to the degree of concentration among the firms in the industry. Of all the attributes tested, only the wage rate seems to have a clear influence on the height of the tariff, and it explains only a small part of the variation in tariffs from industry to industry.⁵ Thus, with this one exception, the seemingly reasonable assumptions

about tariffs appear to be refuted by the facts.

It is conceivable that the present *level* of an industry's tariff is the result largely of actions taken many years ago. If so, the aforementioned industrial attributes might be more successful in explaining the tariff *reductions* which were recently decided upon in the course of the Kennedy Round. However, further statistical tests show that these attributes are no more successful in explaining the Kennedy Round reductions than in accounting for tariff levels.

One aspect of these results on tariff reductions is of particular interest. We have pointed out that industries with high tariffs generally experience little or no more import competition than other industries. It would not necessarily follow, however, that tariffs were set by the Government without regard to the strength of foreign competition; indeed, high-tariff industries might experience no more than the typical import competition precisely because of tariffs designed to achieve that result. However, the Kennedy Round tariff reductions were generally as great for industries with strong import competition as for other industries, and this finding tends to confirm the view that foreign competition has little to do with the height of an industry's tariff. Further confirmation of this view is offered by the fact that the level of the tariff is low for a number of industries which face relatively strong import competition.

Of course, tariffs are not the only devices which governments employ to protect industries from foreign competition. Some industries receive significant protection from "nontariff barriers" such as quotas which limit the amount

³ "Industries" were defined at the four-digit level of the Standard Industrial Classification.

⁴ With respect to national defense, however, it should be noted that sufficient data were not available to include the ordnance industries in the analysis.

⁵ These and other statistical tests underlying this article are contained in a technical paper which is available upon request from the Research Department

of this Bank. The technical paper also reports that no relationship could be found between the tariff and the *change* in the degree of import competition between 1963 and 1965.

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of competing foreign goods that may be imported during a specified period of time. Because of difficulties with the data, this study does not explicitly include such nontariff barriers. However, the omission probably is not serious, since measures of protection that do include nontariff barriers reveal about the same pattern of industrial protection as tariff measures that do not include such barriers.⁶

The data for analyses such as this one are never perfect.⁷ If better data were available, some of the attributes tested might appear to have an important influence on the height of the tariff. This, however, remains to be shown.

Conclusions

Reasonable theories do not always jibe with the facts. Certain theories about U.S. tariffs may be a good illustration. It seems reasonable that an industry would be granted relatively high tariff protection if it experienced

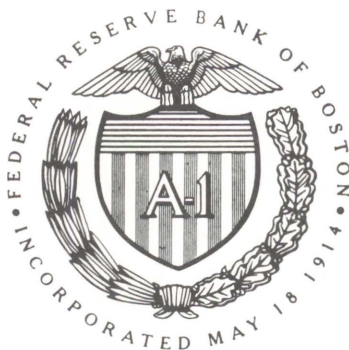
severe import competition, was rather unhealthy, was important to the national security, and could muster a large number of votes. In fact, these characteristics apparently have little or nothing to do with the height of the typical industry's tariff.

Apart from these negative findings, one affirmative finding is that the lower wage industries tend to have somewhat higher tariffs. Perhaps the Government sometimes accords high tariffs to such industries for the purpose of supporting wages, or for the purpose of preventing unemployment among the unskilled workers whom such industries primarily employ. But even though the wage rate is important enough to mention, it accounts for only a small part of the total variation in tariffs between industries.

On September 14, 1973, over 100 countries joined in opening a new round of comprehensive trade negotiations. One goal of these negotiations is a general reduction in tariffs. The analysis presented in this article suggests that it would be very difficult to predict the nature of the tariff reductions which might result, simply because the traditional explanations of tariff levels do not seem to fit the facts.

⁶ See footnote 1.

⁷ The technical paper mentioned in footnote 5 discusses problems with the data and lists the sources of the data.



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