Invidious Competition or Benevolence: Does Not-for-Profit Status Constrain the Behavior of Credit Unions?

Dr. Maryann O. Keating, Indiana University at South Bend, South Bend, Indiana
Dr. Barry P. Keating, University of Notre Dame, Notre Dame, Indiana

Abstract

If one assumes that individuals who work in nonprofit institutions are no better or worse than others and hence operate in their own interest, an organization can be kept on track and be effective only if the incentives given to individuals in the ordinary performance of their duties reflect the original intent of the organization. Sponsors of not-for-profit institutions must take the time and make an effort to hold administrators to an objective function incorporating such goals.

A model is presented describing two conflicts facing the managers of credit unions. Providing higher rates to large savers could lower cost and expand deposits but does not particularly conform with the democratic intent of credit union founders. Excluding the less creditworthy in favor of higher returns elsewhere will generate more revenue but also seems inconsistent with the original normative goals of credit unions.

A data set for approximately 15,000 credit unions in 1985 is used to measure credit union behavior by size and type. It is argued here that the common bond under which a particular credit union operates acts as a constraint but not a brake on bureaucratic expansionary behavior.

I. Value Conflicts in Credit Unions

"there are no pure profit institutions, there are no pure nonprofit institutions; they all fall in along an array. We recognize that constraints matter, that constraints differ as between institutions, and this has effects on behavior."(1)

Constraints, under which credit union managers operate, may be viewed as values. There is a value in teaching the less affluent to save and borrow prudently. There is also a value in following sound banking practices. The objective function of the organization must incorporate both values.

A credit union which follows sound banking practices to the exclusion of its other goal, which perhaps should have higher priority, cannot justify its institutional subsidy nor its tax free

status. Neither, however, should they make a mockery of banking under the banner of doing good. This is perhaps what Kenneth Boulding meant when he wrote:

...I have discovered the real name of the devil, which is something important to know. The real name of the devil is suboptimization, finding out the best way to do something which should not be done at all...the problem of how to prevent suboptimization is, I think, the great problem of social organization.... Obviously, the deep crucial problem of social organization is how to prevent people from doing their best when the best in particular, in the small, is not the best in the large.(2)

Two important studies deal with the transmis-

sion of values from sponsors to management to employees. The Lacznia and Interrieden study uses the in-basket technique to analyze the influence upon managers' conduct of stated organizational concern for ethical behavior. Results demonstrate that increasing the discussion of ethical values in memos influences decision-making. However, a significant change in behavior appears only when sanctions are threatened. A second study, one by Mills, Turk, and Margulies specifically surveys 337 lower level employees in four not-for-profit organizations. Overall, participants who perceive task uncertainty to be high report both high procedural specifications and values that are oriented to the client.

The work on values in corporate cultures repeatedly emphasizes that the problem is not necessarily a lack of values. Rather, the problems concern the lack of control by leaders who deviate from originally stated values or who refuse to articulate values. The constant articulation of values in a not-for-profit firm is particularly important given the conflicting pursuits incorporated in their objective functions.

Equally important, but beyond the scope of this article, is the inevitable conflict of the professionals who have a contract with the organization but also the right and duty to set aside the needs of the organization and society at large in the interests of protecting clients. In this case, agreement about procedures may be more important than shared values. For example, a manager in a credit union should lend to a member who meets the institution's criterion and who the manager believes is borrowing in good faith, even though reason would dictate that the expected value of the loan to the credit union's stream of income (to say nothing of net profit) is low. It follows, then, that the percentage of loans to assets in a credit union should respond to the borrowing needs of members rather than the possibility of higher returns from holding assets in securities.

The bureaucratic model, however, suggests that managers, in order to justify higher salaries and benefits for themselves, might adopt a strategy of budget maximization. The way for a credit union to maximize the size of its budget is to expand the amount of deposits held. The cost is doing this to raise the interest rate paid on deposits. This is expensive but it can be

made less costly if the credit union pays a lower rate to the smaller, less affluent, saver and pays a higher interest rate to the larger, more affluent, saver whose demand for banking services is more elastic. In other words, the credit union price discriminates among members. There is nothing inherently unethical in this practice. It does not violate sound banking practices and it may be economically efficient. This practice, however, may be contrary to the original stated objective function of encouraging the small saver and may be regressive in the distribution of earnings among members.

II. Methodology

1. The basic normative assumption here is that a not-for-profit firm should respond to the objective function of the sponsoring agency. This implies a rules versus discretion approach. The selection of a normative theory is basically an ethical and intellectual exercise involving the selection of a criterion of what is "good" and evaluation of the internal logic of the theory.

2. The next step is the selection of a set of positive theories about the behavior of different types of institutions in specified conditions. The framework, used here, is the theory of bureaucratic behavior developed by Niskanen.

3. Not-for-profit firms by nature produce more than one good or service, a source of value conflicts. Hence, appropriate targets and indicators to evaluate these multiple objectives must be identified.

There is a significant difference between using behavioral models for profit-seeking versus not-for-profit firms. In both cases, the theories are only proven if the conditional predictions generated are confirmed (or, more accurately, fail to be disconfirmed) by the evidence. If the conditions hold in the profit-seeking case, the firm could be behaving as it should. However, if the conditions of budget maximization or managerial emoluments hold in the not-for-profit case, the firm, although quite dynamic, may be experiencing entropy or degeneration for which there is no automatic or market correction.

III. The Model

The purpose of this section is to outline the

budget and output behavior of a credit union, based on the general model for nonprofit organizations developed by William A. Niskanen.(3)

The demand curve for loans facing a credit union providing one service may take the following form:

$$i_L = a - 2bQ \quad 0 \leq Q < \frac{a}{2b} \quad (1)$$

i_L = interest rate at which the marginal loan is supplied.

Q = number of loans

The credit union receives revenue by providing loans as well as from a lump sum subsidy provided by its sponsor (S):

$$TR = S + i_L Q = S + aQ - 2bQ^2 \quad (2)$$

The total cost (TC), assuming no factor cost discrimination, is:

$$TC = cQ + dQ^2 \quad 0 \leq Q \quad (3)$$

A credit union that can discriminate would have reduced costs:

$$TC = cQ + \frac{d}{2}Q^2 \quad 0 \leq Q \quad (4)$$

The constraint that the budget of the credit union must be equal to or greater than the total cost is represented as follows:

$$TR \geq TC \quad (5)$$

Based on the model, the following conclusions may be made:

1. If the credit union sells its service at a uniform price and receives a lump sum or no subsidy from its sponsor, revenue maximizing behavior could lead the credit union to supply the optimal level of output and to do so at a minimum cost per unit of output.

2. If the managers are not budget maximizers, but act like a profit seeking monopoly, they will supply a slightly lower output at a slightly higher price. The managers could spend the difference between revenues and cost as discretionary

emoluments.

3. Credit unions that have the opportunity to discriminate between suppliers of loanable funds will have lower minimum costs for any given level of output. When the small saver is not strongly represented, interest rate discrimination paid on deposits permits increased output and revenue.

4. If one views the credit union as providing two services: (1) loans to members and (2) securities to other institutions, the budget constraint would be represented by:

$$S + R_1 + R_2 \geq C_1 + C_2 \quad (6)$$

A multi-service credit union will supply a smaller supply of loans for which the marginal costs of loans increase more with output and they will provide a larger output of securities for which the marginal costs increase less than would separate credit unions supplying each service.

IV. Test Description

Two indicators of credit union behavior are calculated using a data set for approximately 15,000 credit unions in 1985.

The first indicator (L) is the percentage of total assets each credit union holds in loans to members. Loans to other credit unions and financial institutions are eliminated. The higher the ratio of loans to members (L), the greater likelihood that credit unions are responsive to members rather than to earning higher returns adjusted for risk in government securities and other assets.

The second indicator (D) is the ratio of the dividend rate paid on share certificates to the dividend rate paid on regular shares. A credit union that does not have share certificates has a ratio equal to zero. The higher the value of the ratio (D), the more regressive the dividends paid. In other words, the small saver is paid less for the use of his or her savings than the larger investor. Although D ratios are calculated and presented, no tests of significance are performed on them. Unlike the loan to asset ratios, the ratios of discrimination are ordinal, and intervals between the numbers are meaningless.

The first test uses confidence levels to compare the loan to asset ratio of not-for-profit credit unions with that of profit-seeking commercial banks.

H_0 : The mean of the loan to asset ratio of all credit unions is the same as that of commercial banks; that is,

$$\mu_{cu} = \mu_{cb}.$$

H_A : The means are not the same; that is,

$$\mu_{cu} \neq \mu_{cb}.$$

If, indeed, not-for-profit firms are different than profit-seeking ones, these ratios would be significantly different from each other. The intent of this test is to reject the null hypothesis at a ninety five percent confidence level and, therefore, to accept the hypothesis that credit unions behave differently than commercial banks.

The second issue is whether or not the institutional constraints under which a not-for-profit firm operates affect behavior. The actual ratio of loans to members as a percentage of assets is calculated for five different types of credit unions depending on their common bond: occupational, religious, cooperative, residential, or associational. The analysis of variance, ANOVA, is used to test whether the means of the quantitative populations are equal. There is reason to believe that the size of the organization affects behavior; therefore, two-way ANOVA is used to derive a more discriminating test of institutional constraints.

H_0 : The mean loan to asset ratio for all types of credit unions is the same; that is,

$$\mu_{O'} = \mu_{rel} = \mu_c = \mu_{res} = \mu_a.$$

H_A : At least one of the population means is different from the others.

However, it is possible to test simultaneously a second hypothesis.

H_0 : The mean loan to asset ratio for all credit unions classified by size is the same for quartiles I, II, III, and IV, respectively; that is,

$$\mu_I = \mu_{II} = \mu_{III} = \mu_{IV}.$$

H_A : At least one of these population means is different from the other.

V. Characteristics of the Data Set

The data used in this study was collected from a survey of all federally insured credit unions, which includes almost all U.S. credit unions. The calculations are based on the actual population of credit unions, not a sample. The data were collected for the Mid Year Call Report of the National Credit Union Administration. It was compiled on a tape entitled "Financial and Statistical Data--December, 1985 (NCUA TAPE FOI85DEC.)." Central credit unions that deal with other credit unions exclusively were excluded from the study.

The Federal Credit Union Act limits credit union membership to groups having a common bond. This study deals with residential, occupational, cooperative, and fraternal and trade association credit unions. The residential classification includes urban and rural community action programs, other community groups, and other unclassified credit unions. The occupational category includes employee credit unions of government agencies. Cooperatives include agricultural, production, and marketing cooperatives as well as consumer, electrical, housing, and other cooperatives. Fraternal, professional, and trade association credit unions are labeled associational in this study. This group includes credit unions sponsored by the Knights of Columbus, the Knights of Pythias, as well as associations of farmers, the blind, feminists, Ukrainians, among others.

VI. Empirical Results

The loan to asset ratio for all credit unions was not significantly different at the 95% level of confidence from commercial banks. However, the average ratio for 960 religious credit unions differed significantly from the mean for all credit unions at the 98% level of confidence. Apparently institutional constraints matter and affect behavior.

Religiously affiliated credit unions do not conform with other credit unions on both criterion (see Table I). They lend a relatively large portion of their assets to members, and they do not engage in large interest differentials in favor of the large saver. In these organizations there is probably an income transfer from the sponsor and large savers to small lenders. Religious

credit unions are the only group with loan ratios significantly different from commercial banks.

Cooperative credit unions are at the other extreme, especially with respect to lending. They seem to function as an intermediary, collecting the savings of members and lending or investing on the outside, much like a mutual fund. Associational or fraternal credit unions, like religious ones, tend to behave benevolently.

The results for occupational credit unions are inconsistent with respect to the chosen criteria. They neither lend a large percentage of their assets to members nor reward savers with large interest rate differentials. It might be conjectured that shareholders use these institutions for convenience rather than to meet their major borrowing and investment needs. As an untaxed fringe benefit they are widely used; their number dwarfs any other common bond type.

Residential credit unions are characterized by the large interest differentials they pay. Unclassified credit unions are included in this group so it is difficult to conclude much from this data. However, one would expect community action programs, some which receive government assistance, to emphasize lending. Yet, on the basis of this study, they are more likely to reward large savers than any other group of credit unions. They may be just one of several organizations that are providing a growing number of investment vehicles for individuals, foundations, or institutions seeking to do good or at least avoid doing perceived evil, while making some money on one's investment. If the residential category in this study consists of a large number

of these groups, "social" or "ethical" investing does good while doing very well.⁽⁴⁾ The loan to asset ratios of occupational, cooperative, residential, associational, and all credit unions in general are not significantly different from commercial banks.

Table II uses the same data base and identifies each credit union by common bond and quartile size. All five common bond types have a significant representation of credit unions in each size quartile. The analysis of variation indicates that there is a significant difference between size quartiles and between common bond types. However, size was slightly more significant at a 97% level compared with common bond type at 95%.

V. Conclusions

The administrators of each credit union confront a conflict between issuing loans to members and higher returns elsewhere. The loan to asset ratio is an indicator used to evaluate how a particular credit union handles this conflict.

Administrative behavior is constrained by market and scale factors. Credit unions, as not-for-profit firms, are also appropriately constrained by the institutional structure under which they operate. Unquestionably, the common bond under which a particular credit union is formed affects behavior. However, at some point, the influence of the common bond weakens and bureaucratic behavior begins to exert a larger effect. The loan to asset ratio of credit unions in general is not significantly different from that of profit-seeking commercial banks.

Footnotes

- 1 James M. Buchanan in *The Economics of Nonproprietary Organizations*, eds. Kenneth W. Clarkson and Donald L. Martin (JAI Press, Inc.: Greenwich, CT, 1980) p. 249.
- 2 "Fun and Games With the Gross National Product: The Role of Misleading Indicators in Social Policy," *Business Ethics: Readings and Cases in Corporate Morality*, eds. W. Michael Hoffman and Jennifer Mills Moore, (McGraw Hill Book Co.: NY, 1984)
- 3 *Bureaucracy and Representative Government* (Chicago: Aldine Publishing Co., 1971).
- 4 Robert Keams, "Do Good While Doing Good With New Funds," *Chicago Tribune*, November 9, 1986.

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- 1 Baulding, Kenneth E. "Fun and Games with the Gross National Product: The Role of Misleading Indicators in Social Policy," *Business Ethics: Readings and Cases in Corporate Morality*, W. Michael Hoffman and Jennifer Mills Moore (eds.) New York: McGraw Hill Book Co., 1984.
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- 3 Cox, William N. and Whigham, Pamela V. "What Distinguishes Larger and More Efficient Credit Unions?" *Economic Review*,

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- 4 Croteau, J. T. "Drop in Interest Rates Bringing End of Golden Age for Managers," *Credit Union News*, January 17, 1985.
- 5 Enz, Cathy A. *Power and Shared Values in the Corporate Culture*, Ann Arbor, MI: UMI Research Press, 1986.
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- 11 Niskanen, William A., Jr. *Bureaucracy and Representative Government*, Chicago: Aldine Publishing Co., 1971.

Table I

Characteristics and Behavior of Credit Unions According to Type

<u>Institutions</u>	<u>Loans/Assets</u>	<u>iCert/ishares</u>
Commercial Banks	.602	—
All Credit Unions	.614 ²	.534
Occupational (11,553)	.605 ²	.545
Religious (960)	.677 ¹	.300 ¹
Co-op (158)	.584 ²	.617
Residential (794)	.643	.792 ¹
Associational (850)	.655	.602 ¹

¹Significantly different from the mean for all credit unions at the 98% level of confidence.

²Not significantly different at the 95% level of confidence from commercial banks. Commercial bank loan/asset ratio calculated from Federal Reserve Bulletin, December, 1985, Table A18 for June, 1985.

Table II

	Smallest Quartile	Second Quartile	Third Quartile	Largest Quartile	Summary Measures of L
Type 1 Occupational occ	# = 2657 D = .114 L = .689	# = 2958 D = .345 L = .721	# = 3088 D = .646 L = .682	# = 3108 D = .966 L = .618	MEAN 0.677500 MED 0.685500 SDEV 0.043147
Type 2 Religious rel	# = 503 D = .097 L = .547	# = 231 D = .330 L = .668	# = 148 D = .592 L = .675	# = 78 D = .962 L = .624	MEAN 0.628500 MED 0.646000 SDEV 0.058836
Type 3 Co-op coop	# = 46 D = .171 L = .629	# = 31 D = .512 L = .629	# = 37 D = .680 L = .559	# = 44 D = 1.106 L = .527	MEAN 0.586000 MED 0.594000 SDEV 0.051342
Type 4 Residential res	# = 181 D = .262 L = .624	# = 145 D = .472 L = .703	# = 183 D = .970 L = .657	# = 285 D = 1.176 L = .615	MEAN 0.649750 MED 0.640500 SDEV 0.039828
Type 5 Associational ass	# = 195 D = .149 L = .572	# = 128 D = .363 L = .642	# = 80 D = .713 L = .670	# = 50 D = .912 L = .599	MEAN 0.620750 MED 0.620500 SDEV 0.043691

$$D = \frac{\text{Share Certificate Rate}}{\text{Regular Shares (Passbook) Rate}}$$

$$L = \frac{\text{R.E. Loans + Other Loans to Members}}{\text{Total Assets}}$$

TWO-WAY ANALYSIS OF VARIANCE FOR L

$$F = 4.319058 \quad \text{DFI} = 3 \quad \text{DF2} = 12$$

(Columns)

$$P = 2.775127E-02$$

There is a significant difference between columns.

$$F = 3.368983 \quad \text{DFI} = 4 \quad \text{DF2} = 12$$

(Rows)

$$P = 4.558683E-02$$

There is a significant difference between rows.