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The Conversion of Cooperatives to Publicly Held Corporations: A Financial Analysis of Limited Evidence

Robert A. Collins

Recent reorganizations of agricultural cooperatives have created concern that the cooperative form of business may not be well suited to the agribusiness environment of the 1990s. Potential institutional changes in the cooperative form of organization require objective analysis of the etiology of these reorganizations. Previous research evaluated internal features of the cooperative that may create economic incentives to convert the co-op to a corporation. This article focuses on external factors that may also be related to cooperative conversions. Informal evaluation of the limited evidence suggests that these factors merit further study.

Key words: cooperatives, finance, risk.

In recent years five large, successful American agricultural cooperatives have followed the lead of a group of Irish dairy co-ops by taking on characteristics of publicly held corporations. These financial reorganizations have taken several different forms. American Rice converted directly from an agricultural marketing cooperative to a publicly held corporation in 1988. Rockingham Poultry Marketing Co-op merged with Wampler-Longacre, Inc., with an exchange of equities to form WLR Foods, Inc., in 1988. Capitol Milk Producers Co-op was purchased by Southland Corporation in 1986. The Gold Kist and Land O' Lakes cooperatives formed publicly held subsidiary companies, Golden Poultry, Inc., (1985) and Country Lake Foods, Inc., (1987). While the details of these reorganizations differ substantially, they share the common characteristic of converting agricultural marketing cooperatives, which had previously obtained equity only from members and earnings, to firms with publicly held equity.

While previous research (Schrader) on the etiology of these reorganizations has focused on internal structural factors of cooperatives, this article examines the possibility that factors external to the firm may also be significant. This work adds little insight to the factors considered in Schrader but considers additional factors relating to corporate management, personal portfolio management, and risk. While the empirical evidence is insufficient for any formal hypothesis testing, the limited evidence available is used to evaluate the potential importance of various possible causes of cooperative reorganization. These preliminary results may be important because the recent restructuring of cooperatives has created concern that the basic organizational structure of cooperatives may not be suited to the current agribusiness environment. A broader understanding of the etiology of these reorganizations may assist those interested in designing institutional change.

Hypotheses of Causality for Cooperative Conversions

There are many reasons why members of a cooperative may wish to reorganize. For any specific proposal, there may be as many stated reasons to support or oppose it as there are members. It is also clear from careful scrutiny

Robert A. Collins is Naumes Family Professor, Institute of Agribusiness, Santa Clara University.

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of the public documents associated with these conversions that, in at least some cases, the reasons stated by the cooperative are not credible. As a result, it is prudent to stay with the usual presumption of economists that aggregate economic choices may be predicted by economic incentives. A thorough examination of possible economic motivations by Schrader caused him to propose the hypothesis that (p. 41): "... the nature of patron's equity in cooperatives may predispose high performance cooperatives to restructure as investor-oriented firms. . . ." He points to two specific features of cooperative equity that may cause such a predisposition: the method cooperatives use to liquidate a member's equity (p. 44) and the problem of equity access (p. 50).

When individual cooperative members liquidate their equity, they generally receive no more than its accounting book value. It is possible for the market value of a member's equity to considerably exceed its book value. Since accounting rules require assets to be valued at the lesser of cost or market, if there is growth in the market value of assets due to inflation or other market forces, the liquidating value of a member's equity will eventually exceed its book value. In addition, when the cooperative has an income stream that is larger, adjusted for systematic risk, than the assets would produce in their best alternative use, the capitalized value of the income stream will exceed the book value of equity, even if the assets are valued at market. In either of these cases, a sale or corporate reorganization of the cooperative will produce more value for members than liquidating their individual positions. Thus, the equity liquidation hypothesis suggests that cooperative members have an economic motive for approving a sale or corporate reorganization when the market value of members' equity exceeds book value.

An alternative hypothesis is the equity access hypothesis. Many managers see growth as essential for survival. Growth of the cooperative's assets requires growth of its debt and/or equity. If limitations on return to cooperative equity make members unwilling to provide additional investment, all equity must be raised internally. In this case the capital required for growth may require a substantial debt burden. Cooperative managers may prudently wish to avoid financing with excessive financial leverage in the volatile agribusiness environment. Therefore, the existence of profitable investment opportunities for the cooperative along with the limited ability to generate internal equity may create a rational choice to restructure the cooperative as a publicly held corporation with access to external equity.

Two additional hypotheses are considered here, the corporate acquisition hypothesis and the cost-of-equity hypothesis. The corporate acquisition hypothesis suggests that the impetus for the conversion of cooperatives may in some cases come from the corporate sector rather than from the cooperative. The cost-of-equity hypothesis suggests that perhaps the motive for conversion of cooperatives is not lack of access to equity financing but rather that the cooperative may have equity that is attractive to investors and, therefore, publicly held equity may be cheaper than member-provided equity.

The corporate acquisition hypothesis suggests that the primary motivation for converting cooperatives to corporations may come from the corporate sector. Cooperatives may have sources of product supply and processing capacity that fit a corporation's plans for vertical integration. Alternatively, a corporation may wish to acquire a vertically integrated cooperative simply to expand its scale and spread the costs of central management functions. In other cases, a corporation may wish to acquire the cooperative's share of a finished product market. The corporate acquisition motive may be bolstered by the member liquidation mechanism of cooperatives. When a corporation buys another corporation, it must pay the market value of the equity. Therefore, a corporate takeover of a corporation is profitable only if the value of the two firms together exceeds the sum of the two individual firms. This occurs only if there is a positive synergism from combining the two firms. However, when a majority of the members of a cooperative have a short time horizon until they plan to liquidate their shares, the capitalized stream of benefits from cooperative membership will be small and any bid by a corporation in excess of the book value will be advantageous to these members. When a continuum of ages of members exists, a successful corporate bid would have to exceed the book value of the equity plus the capitalized value of the benefits of being a member for a majority of the members. It is certainly possible that even this could be much less than the true market value of the

cooperative equity. As a result, corporations may find cooperatives easy prey for takeovers compared to taking over a comparable corporation.

The cost-of-equity hypothesis may be considered an alternative to the equity access hypothesis. The cooperative always has access to equity from its members. Therefore, the real issue may not be access to equity but access to cheap equity. The cooperative could raise equity from economically rational members if the return expected by the member exceeded the opportunity cost of the funds. It is very likely, however, that the income of the cooperative is highly correlated with the income of the members, especially if a large proportion of the members' product is marketed by the co-op. Therefore, the risk premium required by the member may exceed the premium required by a well-diversified external investor and external equity may therefore be cheaper to acquire than equity from members. This would occur if the farmer is poorly diversified and the cooperative has low systematic risk for a broadly diversified portfolio. In this case, the equity of the cooperative would have high systematic risk for the member but low systematic risk for an outside investor, and a powerful incentive would exist for the cooperative to issue publicly held stock.

An Evaluation of the Evidence

Although 12 cooperatives can be identified that have recently reorganized, complete data only exist for the four that have issued equity to the public. Even though Capitol Milk did not issue public securities, enough information is in Schrader to allow some analysis of five firms. Aggregate analysis of the remaining seven in Collins (1990) indicated that all were relatively small and may have been business failures or near failures. Since the focus is on conversions of large, successful cooperatives, these are not relevant. Therefore, only five conversions are available for evaluation of the above hypotheses. Even though the evidence is extremely limited, it provides uniform support for only one hypothesis.

An Evaluation of the Equity Access Hypothesis

Only Gold Kist and Land O' Lakes may have realized an infusion of equity from their reorganizations, and this is true only if the corporate spinoff company and the parent cooperative are viewed as an entity. When just the parent cooperatives are examined, it is doubtful that any of them realized any significant additional equity from their restructuring. The assets of American Rice, Capitol Milk, and Rockingham Poultry all ended up in a more highly leveraged environment. Therefore, the available evidence suggests that the need for additional equity financing is not the reason for these reorganizations.

An Evaluation of the Equity Liquidation Hypothesis

In three of these cases, Rockingham Poultry, Capitol Milk, and American Rice, cooperative members at least had reason to believe that they would be able to liquidate their equity for substantially more than book value. Since in two of these three cases cooperative members received corporate stock as at least partial payment for their cooperative equity, they may or may not have realized these gains depending on when they chose to sell their stock. Schrader gives details on what members may have expected to receive, and Collins (1990), using subsequent data, shows a range for what they actually might have received. In the cases of Gold Kist and Land O' Lakes, however, the members have realized no additional liquidity, and in fact the potential for future equity liquidation problems has been exacerbated since the success of these corporate spinoffs has added a great deal to the market value of the members' equity but no mechanism has been created to allow them to realize this gain. Therefore, while three of the five cases are consistent with the equity liquidation hypothesis, there are also substantial inconsistencies.

An Evaluation of the Corporate Acquisition Hypothesis

The available evidence supports the corporate acquisition hypothesis equally as well as the liquidation hypothesis. The same three cooperatives that support the liquidation hypothesis also exhibit characteristics of a leveraged buy out. This supports the assertion that there may be a synergism between the liquidation motive of cooperative members and the acquisition motive of corporations. But the cases of Gold Kist and Land O' Lakes have no elements of either the liquidation motive or the

acquisition motive, suggesting that other factors are important in explaining the creation of publicly held subsidiaries by cooperative firms.

Evaluation of the Cost-of-Equity Hypothesis

This hypothesis suggests that a cooperative will be more likely to find a way to issue public equity if it has an equity that is attractive to the general investor. This also implies that the cooperative can get cheap equity from a public offering. The capital asset pricing model[1] (CAPM) suggests that equity with low systematic risk will be attractive to investors and a cheap source of financing for the firm. Where K is the rate of return a well-diversified investor requires to hold a security, R is the riskless rate of interest, and M is the expected rate of return for an average share of stock, the CAPM states that when the market is in equilibrium,

$$K = R + \beta(M - R),$$

where beta is a regression coefficient obtained by regressing returns from the security on market returns. The beta coefficient is a measure of systematic risk. All nonsystematic risk may be costlessly diversified away and, therefore, the investor only requires compensation for systematic risk. If a security return is independent of the returns to the market, the value of beta is zero, and the investor is willing to bid up the price of the security until only the riskless rate of return is expected.

The beta coefficients were estimated for all four cooperatives that have issued stock as a result of a conversion, merger, or creation of a publicly held subdivision. The data were collected for the daily price changes of each of these stocks and the daily price changes for the Standard and Poors 500 Index for all trading days in the first three months of 1990. The daily stock price changes were regressed on a constant and the daily SP 500 price changes. The results are shown in table 1.

These estimates support the cost-of-equity hypothesis for all four firms. All four stocks exhibit virtually no systematic risk and, therefore, should be attractive to investors and a source of cheap equity to the firm. This absence of systematic risk suggests that the factors that affect the prices of these stocks are independent of the factors that affect the average share of stock. The very low level of systematic risk of these four stocks is not a characteristic, however, of publicly held agribusiness firms in general. Analysis of a limited number of stocks of firms with agribusiness components by Collins (1988) indicated that these firms in general exhibit average systematic risk. Therefore, it is reasonable to conclude that there is an investor demand component associated with the creation of these cooperative stocks.

Table 1. Estimates of CAPM Systematic Risk Coefficients for Four Publicly Held Stocks of Firms Associated with Agricultural Cooperatives

Company	Estimate of Beta	Standard Error
Golden Poultry, Inc.	−.000273	.0112
American Rice, Inc.	.00140	.00459
Country Lake Foods, Inc.	.0143	.0124
WLR Foods, Inc.	.0291	.0223

Concluding Comments

While the evidence available for examining the financial reorganizations of successful cooperatives is very limited, it is not consistent with the hypothesis that cooperatives sell stock because they need equity that is not otherwise available through the cooperative organizational structure. The hypothesis that these reorganizations are encouraged by the liquidation restrictions on member equity finds some support in the data as well as the hypothesis that current cooperative structure makes a successful cooperative easy prey for corporate acquisition. However, substantial exceptions may also be found. The only hypothesis that is consistent with all available data is the hypothesis that cooperatives will find a way to issue public equity if their equity is extremely attractive to the investing public. However, the current number of cases available for study is too small to allow any concrete conclusions, and there is no reason to expect a single causal factor to dominate future cooperative reorganizations. If it is verified that the cost of equity is an important factor, a shift of focus from cooperative access to public equity to the more gen-

[1] A good explanation of the CAPM may be found in Brigham and Gapenski.

eral problem of the cost of maintaining a prudently balanced capital structure may have significant policy implications. If the focus is on the cost of financing rather than access, the policy response could be to focus on innovative financial instruments issued by cooperatives rather than conversions of cooperatives to business forms that have access to conventional capital markets. Some potential innovations are suggested in Collins (1990).

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