What Caused Conglomerate Formation? An Examination of Managerial Behavior and Internal Capital Markets in the 1960s Conglomerates

Barbara McCutcheon[1]
University of Iowa

In the late 1950s, Gulf + Western was a small car parts corporation. By 1968 this corporation had grown into the 34th largest industrial corporation in America, increasing its assets by 3000% while acquiring more than eighty companies in eight years. Before 1960 Gulf + Western made acquisitions only in its original industry. In 1963 they began to diversify, acquiring firms in the aerospace, musical products, and baking industries. Then diversification accelerated as Gulf + Western acquired firms that produced zinc, railroad equipment, movies, sugar, industrial machines, and cigars. They acquired a supermarket chain and a horse track. This long list does not cover all of Gulf + Western's diversified empire.

Gulf + Western is not a peculiar case. Many corporations grew in this same fashion during the 1960s: by acquiring firms in many different industries. In fact, more than 1/3 of the value of the 1960s merger wave is accounted for by the acquisitions of 12 firms that followed a strategy of undertaking many diversifying acquisitions.

What underlying synergy, if any, led such different firms to merge in this way? My dissertation describes and tests two specific models of firm behavior to answer this question. The first model examines whether or not inefficient behavior on the part of the conglomerate managers led to mergers in which the value of the merging firms was reduced. The second model examines whether or not managers may have sought to increase the value of their firms by reducing the costs of capital through the use of internal capital markets.

To see whether or not managers are value maximizing when they undertake diversifying acquisitions, I develop a model of how the means of exchange used to make an acquisition varies across managers who act in their own interests and in the interest of the shareholders. The model implies that

[1]This dissertation was written at the University of Chicago under the direction of Dennis Carlton, Robert Gertner and Lester Telser. Funding was provided by the Ford Motor Company.

BUSINESS AND ECONOMIC HISTORY, Second Series, Volume Twenty-one, 1992.
Copyright (c) 1992 by the Business History Conference. ISSN 0849-6825.

managers who care about controlling their firm choose between debt and equity, both of which threaten the manager's control, when deciding how to finance an acquisition.

I show that managers who care about control will never finance an acquisition solely with debt. The intuition behind this result is that issuing a small amount of equity doesn't increase the power of outside equity holders enough to threaten the manager's control on the equity side. Issuing equity reduces debt and the probability of the total control loss associated with bankruptcy, so issuing equity will increase the benefit of control on the debt side. Because a manager who cares about control can issue a small amount of equity with no loss of control on the equity side and with a gain in control on the debt side, the manager will always issue some equity to finance an investment project.

I examine a sample of 506 acquisitions by 33 conglomerates and show that a significant number of acquisitions were financed solely with debt. I also test the model by combining information on the means of exchange used in each acquisition with evidence from share price movements associated with the announcement of each acquisition. Because acquisitions financed solely with debt had to be done by value maximizing managers, all debt acquisitions should not be associated with negative stock price movements on the announcement of the acquisition. The model is strongly supported by the test using the means of exchange data and the abnormal returns data. This result shows that a large number of the conglomerate acquisitions were consistent with value maximizing behavior on the part of conglomerate managers.

In the second part of my dissertation, I examine the role of internal capital markets in the formation of the 1960s conglomerates. Because conglomerates were formed by making many diversifying acquisitions, they lack both obvious sources of market power and obvious synergies in production, distribution, or demand. Scholars have long suspected that internal capital markets may have provided a source of synergy for the diversifying mergers. Internal capital markets lead to gains for firms in mergers whenever internal capital is cheaper to use than external capital. Internal capital is cheaper only when there are imperfections in the external capital markets. This fact allows me to test for a role for internal capital markets in mergers by examining whether or not firms face imperfections in external capital markets. Imperfections in external capital markets are identified when firms face financing constraints.

Previous studies of internal capital markets in conglomerates have used summary statistics to examine financing constraints. These studies show that the acquired firms were less leveraged, more liquid, and more profitable than the conglomerates that acquired them. These statistics have been interpreted as evidence that the acquired firms faced financing constraints. However, evidence that the acquired firms were less leveraged and more liquid may also mean that the acquired firms were unable to find good investment projects. The acquired firms may not have been constrained in the capital markets; instead, they did not have high investment demand. Therefore, we need to control for investment demand on the part of the conglomerates and acquired firms when evaluating financing constraints.

In examining financing constraints, I exploit the differences between constrained and unconstrained firms in how investment relates to measures of internal funds available to the firm. If firms are not constrained in the market for capital, investment demand variables explain investment. The internal funds variables do not matter for investment. If firms are constrained in the market for capital, internal funds variables help explain investment because firms rely on internal funds to finance investment. Internal funds variables determine investment for several reasons: cash stocks are a direct substitute for external funding, cash flow may be used by lenders to determine the costs of external funding, and working capital may enter directly into the firm's production function.

The tests of whether or not firms are constrained look for a relationship between investment and internal funds variables, while controlling for investment demand. These tests use regressions of investment on internal funds and investment demand variables. The coefficients on the internal funds variables from these regressions indicate whether or not the firms face capital market imperfections. If the coefficients are positive and statistically significant, firms are constrained in the market for capital.

I compare the coefficients on the funds variables using panel data from 1960 to 1968 on four samples of firms: a sample of conglomerates, firms they acquired, and samples of firms matched by industry to the conglomerates and to the acquired firms. I used Compustat data for the conglomerates and matched to conglomerate firms and collected data from Moody's Industrials to examine the acquired firms and a sample matched to the acquired firms.

The main results indicate that the acquired firms were not constrained in the capital markets prior to merging with the conglomerates. The results are taken from a regression of investment on firm dummies, year dummies, tax-adjusted Tobin's Q, and various measures of internal funds variables. Tobin's Q provides a control for investment demand. It measures the market value of the firm divided by the replacement cost of capital; this measure is the shadow price of capital for firms. Several different variables are considered as measures of internal funds: cash stock is the sum of cash and marketable securities, working capital is the difference between current assets and current liabilities, and cash flow is income after interest and taxes plus depreciation and amortization.

The coefficients on all of the internal funds variables for the acquired firms are not significantly different from zero. We cannot reject the hypothesis that the firms face perfect access to external capital markets. These results contrast to the findings of previous studies, which used summary statistics for these same acquired firms and concluded that the firms were constrained in the capital market. These findings indicate that the acquired firms were not constrained.

The conglomerate firms, in contrast, were constrained. The coefficients on the internal funds variables are positive and significant for the conglomerates. For example, the coefficient on working capital for the conglomerates is 0.335, which is significantly different from zero. For the acquired firms, the coefficient on working capital is 0.018, and this is not significantly different from zero. In fact, the coefficients on the variables for

the conglomerates are significantly higher than the coefficients on the variables for the acquired firms. For working capital, the T-statistic on the difference in coefficients between the conglomerates and acquired firms is 5.15, which is statistically significant. Not only are the conglomerates constrained, they are significantly more constrained than the firms they acquired.

The regression results just described show that internal capital markets may have provided synergies for conglomerate mergers. The results hold even while controlling for investment demand on the part of the acquired and conglomerate firms. The results show that the firms acquired by the conglomerates were less constrained than the conglomerates themselves. These acquired firms may have acted as "cash cows" for the conglomerates, allowing their excess cash to be invested in profitable projects controlled by the conglomerate firms.

The acquired firms examined in this study were all large, publicly traded firms. I exclude smaller firms from the sample because it is not possible to construct data on investment and internal funds for these firms. Selecting large, publicly traded firms should bias the tests against the hypothesis that the acquired firms and the conglomerate firms are differentially constrained in the market for capital. The results, that the groups of firms are different, hold in spite of this bias.

Of course, it may be the case that internal capital markets play a very different role in determining which small firms get purchased. Indeed, the conglomerates could be shifting funds from the large acquired firms to the small acquired firms in order to relax financing constraints for these small firms. Because the small firms do not list information in Moody's, it is impossible to use the method described above to examine this possibility.

This does not mean that the examination of financing constraints for the large acquired firms has not helped to explain the conglomerate mergers, however. These large acquired firms are the same firms that have been examined previously, and this examination contradicts previous discussions of financing constraints for these firms. In addition, these acquired firms account for a large share of the value of the 1960s merger wave, and they were for the most part diversifying acquisitions. Explaining what caused these large firms to merge therefore contributes a lot towards an explanation of the 1960s merger wave. The results of the tests performed in both parts of my dissertation suggest that diversifying acquisitions were chosen by value maximizing conglomerate managers who sought to create synergistic gains by allocating capital within the diversified firms. These results suggest that factors in external capital markets are linked to mergers and diversification in the economy. It is interesting to speculate on what forces in external capital markets caused internal capital markets to be of value during the 1960s. If these forces can be identified, they may help to shed light on what causes changes in the level of diversification of firms while helping to explain historical patterns of merger activity.