The Impact of Consumer Boycotts on The Stock Prices of Target Firms

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Abstract

This research study employs a standard event-time methodology in an effort to assess the impact of consumer boycott initiation and termination announcements upon the wealth of stockholders of target firms. A major finding of the study is that consumer boycott announcements are followed by statistically significant decreases in the stock prices of the target firms. The results of the study also suggest that boycott termination announcements are associated with statistically significant wealth increases for these same firms. Policy implications of the findings are drawn for corporate financial managers.

Introduction

Despite the emergence of the firm-specific boycott as a standard tool of organized consumer protest, no empirical research has yet appeared in the economics or finance literature examining the impact these actions have on target firms. The only research which has been conducted has been qualitative in nature and has been directed toward determining whether boycotts result in operational changes in target firms congruent with the stated desires of the protesting organizations. As an example of research of this type, Friedman (1985, pp. 96-117) examines 90 separate consumer boycotts occurring in the United States over the years between 1970 and 1980. Friedman's findings, which largely result from a series of interviews with both boycott leaders and corporate officials, as well as members of the popular press, fail to support the hypothesis that consumer boycotts are an effective protest tool. Indeed, only 24 of the 90 studied boycott actions (26.7 percent) were successful or even partially successful in attaining the consequences desired by the boycotting group.

This study will investigate the effectiveness of consumer boycotts by examining the stock market reaction to boycott announcements. The claims of 'success' by boycotting groups, as well as the claims of 'failure' by target corporations are bound to be subjective because of the vested interests of the two parties. But investors in the stock market, interested solely in maximizing their wealth, are far more likely to be unbiased arbiters in this issue. If investors believe that an event like a consumer boycott would affect the target company's financial performance, their belief would be reflected in their reaction to the announcement, which would depress the price of the common stock of the target company. On the other hand, if investors believe that the boycott will be ineffective, the price of the common stock of the target company would not be affected. Thus, the analysis of the stock price movement of the common stock of the target company should provide an <u>independent</u> and <u>unbiased</u> judgement of the effectiveness of the boycott.

I. The Boycott Phenomenon

Consumer boycotts can scarcely be considered of recent origin. Indeed, effective and widespread boycotts of British tea by the American colonies were almost solely responsible for the

repeal of the Stamp Act in March 1766. A similarly effective boycott of British manufactured goods preceded the repeal of the Townshend Acts in April 1770.

Despite such a lofty historical heritage, contemporary consumer boycotts have, until recently, often been considered economic weapons of the downtrodden and underprivileged. The fact that boycotts served as an effective catalyst of social change in the early days of the labor and civil rights movements has probably lent more credence to such labelling than any other single factor.

Interestingly, over the eleven year interval investigated by Friedman (1970-1980), less than 50 percent of all boycotts were launched by labor or traditional civil rights organizations. Others initiating boycott actions included religious organizations, consumer groups, environmental groups, and organizations concerned with issues as diverse as homosexual rights and abortion. Further, despite the apparent failure of the vast majority of boycotts to achieve their intended objectives, boycott frequencies are apparently increasing over time. Except for an observation that national boycotts appear to be marginally more successful in attaining the consequences desired by the boycotting groups, no research has yet uncovered which boycott attributes appear to more closely correlated with eventual success than others.

Individual firms targeted by boycotting groups have resorted to very different courses of defensive action, ranging from hardline positions of corporate defiance to conciliation and compromise. Often, as was the case of the Nestle infant formula protest, corporate reactions change substantially over the course of lengthy boycotts. Thus far, no research has documented to what extent boycotts damage target firms or which courses of defensive action appear to be most closely correlated with the goal of shareholder wealth maximization. It is to these and other issues that this study has been specifically addressed.

II. Data

The initial sample for this study consists of all consumer boycott initiation and termination announcements listed in the annual indexes of *The Wall Street Journal*, *The New York Times*, *The Washington Post*, *The Chicago Tribute*, *The Christian Science Monitor*, *The Los Angeles Times*, and *Newsbank* over the years from 1962 to 1986(1). Boycotts for which positive dates of either initiation or termination are not available are eliminated from the sample.

From the initial sample, several announcements are excluded from further consideration because the boycotted firm's stock return information is not available on the University of Chicago's CRSP daily returns file from which all return information is obtained. The final sample consists of 41 boycott announcements (see Appendix 1) and 6 boycott terminations (see Appendix 2).

A few comments concerning potential sample biases are in order. First, although the initial sample is drawn from a wide range of both regional and national newspapers, it seems clear that the analyzed sample consists mainly of major, or at least newsworthy, boycotts for which there was some media coverage. Whether the results obtained from the analysis of these events may be generalized to less publicized boycotts is, of course, impossible to determine. Second, many of the boycotts identified in the sample search were directed toward privately-held and other non-CRSP listed firms. However, since most of these unlisted firms are considerably smaller and less diversified than their CRSP counterparts, the absence of these firms in the study may actually lead to an underestimation of the true impact of the 'average' consumer boycott(2). Third, while 6 boycott termination announcements are included in the tested sample, this number is but a fraction of the total number of boycotts announced over the 24 years encompassed by the study. Apparently, boycotts are very much like old soldiers--they never die, they just fade away. Obviously, this small number of boycott termination announcements reduces the

extent to which inferences from these results may be extended to boycott terminations as a whole. Finally, while the majority of consumer boycotts are directed toward specific corporate targets, a few focus on entire commodity classifications, such as meat, lettuce and coffee. Since these boycotts typically are launched in an effort to violate the economics of commodity pricing in competitive markets (a dubious proposition at best), such boycotts are not included in the present analysis.

III. Empirical Methodology

A market model event-time methodology similar to that selected by Rogers and Owers (1985, pp. 18-26), Hite and Owers (1983, pp. 409-436), and Brown and Warner (1985, pp. 3-31) is employed to generate the expected returns for each security that would have transpired in the absence of a boycott-related announcement. Thus, the abnormal return for security j on event day t, AR_{jt}, is defined as:

$$AR_{jt} = R_{jt} - (\hat{a}_j + \hat{B}_j R_{mt}), \quad t = -20 \text{ to } +100, \tag{1}$$

where $\hat{a}_j$ and $\hat{B}_j$ are ordinary least squares coefficients for security j estimated over the 200 day interval from t = -220 to -21 relative to each boycott announcement date of t = O, R_{jt} is the observed return for security j at time t, and R_{mt} is the return on the CRSP value-weighted market index with dividends at time t (3).

Cumulative abnormal returns for security j from event day T_1 to T_2, CAR, is given by:

$$CAR = \sum_{t=T_1}^{T_2} AR_{jt} \tag{2}$$

The mean cumulative abnormal return for a sample of N securities, CAR, is given by:

$$\overline{CAR} = 1/N \sum_{j=1}^{N} CAR_j \tag{3}$$

For each security j and for each event day t, the abnormal return is standardized by the square-root of its estimated forecast variance, yielding a standardized abnormal return, SAR_{jt}, defined as:

$$SAR_{jt} = AR_{jt} / s_{jt} \tag{4}$$

where

$$s_{jt} = [s^2_j \, [1 + 1/198 + ((R_{mt} - \overline{R}_m)^2 / \sum_{\tau=-220}^{-21} (R_{m\tau} - \overline{R}_m)^2)]]^{1/2}, \tag{5}$$

where

$$s^2_j = 1/199 \sum_{\tau=-220}^{-21} (\hat{R}_{j\tau} - \hat{a}_j - B_j R_{m\tau})^2 \tag{6}$$

and where $R_{j\tau}$ is the return on security j for event day τ, $R_{m\tau}$ is the return on the market index for event day τ, $\overline{R}_m$ is the average return on the market index for event days -220 to -21 and R_{mt} is the rate of return on the market index for event day t.

The standardized cumulative abnormal return for security j for the event interval from days T_1 to

T_2, $SCAR_j$, is calculated in the following manner:

$$SCAR_j = \sum_{t=T_1}^{T_2} SAR_{jt} / \sqrt{T_2 - T_1 + 1} \quad (7)$$

For a sample of N securities, the mean standardized cumulative abnormal return, SCAR, is given by:

$$\overline{SCAR} = 1/N \sum_{j=1}^{N} SCAR_j \quad (8)$$

If it is assumed that $SCAR_j$ is distributed unit normal, then the following test statistic, t, is also distributed asymptotically unit normal:

$$t = \overline{SCAR} \cdot \sqrt{N}$$

IV. Empirical Results

Table I presents the results of the analysis on the stock price data for the 41 firms targeted for boycott by various groups. The table shows the mean abnormal return, the t-statistic measuring the statistical significance of the mean abnormal return, and the cumulative mean abnormal return over a 120 day period surrounding the boycott announcement. Since the announcements reported in the surveyed newspapers may have been released to these publications either before or after the close of trading the previous day, a two-day event interval comprising event days -1 and 0 is examined. The exact technical procedure followed in the creation of the two-day returns is described in detail in Dann and Mikkelson (1984, pp. 157-186).

The results in Table 1 reveal an interesting pattern of stock price movements. The cumulative abnormal returns from day -20 t0 day -2 0f -0.232 (t= -0.543, p>.10) are not significant. However, the mean abnormal return on the announcement date (day -1/0) is statistically significant and negative. This suggests that the stock market interprets the boycott announcements as unfavorable events. There is evidence that this result is not caused by 'outlying' observations since 27 firms out of the boycott sample of 41 firms exhibited statistically significant abnormal declines over days -1 and 0. Under the a priori assumption that a particular firm's stock has an equal chance to rise as decline abnormally on any given day, the binomial proportionality t-statistic testing the hypothesis that 27 stocks out of a sample of 41 stocks would show abnormal declines purely by chance was a statistically significant -2.030 (p<0.05)(4).

As discussed earlier, the cumulative abnormal returns over the period were observed to be -0.232 percent and statistically not significant (t = 0.543, p>.10). Thus, it appears that there was no leakage of information regarding the forthcoming boycott announcement prior to the announcement date. However, although the abnormal returns on the common stocks of boycotted firms declined substantially over the two-day announcement interval, they also continued to decline for approximately the next 10 trading days, as the cumulative abnormal return over this interval is -1.673 percent (t = -2.373, p. < 0.05). Again, this result is not driven by the presence of a few 'outliers', as 29 of the 41 firms (t = -2.655, p. < 0.05) experienced cumulative abnormal return declines over event days 1 to 10. Beyond this window, however, the market appears to have fully discounted the information concerning the boycott actions, as the cumulative abnormal return over event days 11 to 100 totals only -0.646

Table 1.

Cumulative Abnormal Returns, Abnormal Returns, and Associated Test Statistics for Days Surrounding the Announcement of Consumer Boycott Actions

Event Day	Percent Abnormal Return	Test Statistic (t)	Percent Cumulative Abnormal Return
-20	-0.344	-1.151	-0.344
-10	0.072	0.065	0.151
-9	0.272	1.780	0.423
-8	-0.093	-0.218	0.330
-7	-0.277	-0.798	0.053
-6	0.169	-0.104	0.222
-5	0.501*	2.112	0.723
-4	-0.574	-1.709	0.149
-3	-0.085	-0.466	0.064
-2	-0.296	-0.395	-0.232
-1/0	-0.863*	-2.359	-1.095
1	-0.156	-1.197	-1.251
2	-0.396	-1.984	-1.647
3	-0.131	-0.576	-1.778
4	0.146	0.140	-1.632
5	-0.133	-0.396	-1.765
6	-0.384	-1.113	-2.149
7	-0.209	-0.661	-2.358
8	-0.076	-0.627	-2.434
9	-0.203	-0.637	-2.637
10	-0.131	-0.455	-2.768
20	0.225	0.965	-1.716
50	0.180	0.279	-1.415
100	-0.161	-1.016	-3.414

* - Significant at the 5 percent level, two-tailed test.

percent ($t = -0.089$, $p > 0.10$).

The size of the abnormal returns and their statistical significance is surprising. Indeed, according to Friedman's qualitative assessments, only 26.7 percent of the boycotts occurring between the years 1970 and 1980 were successfully or even partially successful in attaining the consequences desired by the boycotting groups. In Friedman's interviews, corporate officials were almost unanimous in their assessments that the boycotts of their firms had little, if any measurable effects. Apparently, the corporate officials employed non-capital market criteria in judging boycott effectiveness. Or, alternatively, they lied.

The results of this study provide researchers a measure to assess the impact of the boycott announcement on the owners of a firm, namely its stockholders. The mean market value of the firms in the data sample (on day -21) was estimated to be $3.179 billion (calculated by multiplying the total number of shares outstanding for each boycotted firm by the price of its common stock on day -21). The immediate impact of the boycott was observed to be a decline of .863 percent, and a total of 2.535 percent over the period from day -1 to day 10. This translates into a decline of $27.44 million and $80.60 million, respectively, in the stockholder wealth due to the boycott action.

Unfortunately, the availability of records indicating what the corporation viewed the likely costs of acceding to the boycotts would be does not allow direct comparison with the dollar losses calculated above. However, it does seem highly unlikely that the present value of the costs of acceding to the demands of the 'average' boycott could reach over $80 million (5).

Looking at the magnitude of the losses suffered by stockholders due to consumer boycotts, it would appear that the management of a target corporation should carefully weigh the costs and benefits of avoiding a consumer boycott. This is not to suggest that the target firms should go to any length to avoid potential boycotts. Careful consideration of the costs and benefits of alternative courses of action in avoiding boycotts would be desirable, instead of ignoring the demands of the boycott sponsors altogether.

The results presented and discussed above concern the stock price impact of boycott initiation announcements. These results are primarily negative in nature and provide at least a general hint of the equity damage that a corporation is likely to suffer in the face of a well-organized boycott effort. The results presented below, on the other hand, concern the valuation effects of a much more positive event---boycott termination announcements.

Although, as was mentioned above, few boycotts actually ever have well-defined termination announcements, such a strategy is likely to be in the corporation's best interests. This is particularly true following the end of long and bitter conflicts such as the Nestle infant formula boycott. However, despite the expense to which some corporations have gone in order to present an effective media display of an 'end to the hostilities', no empirical research has yet documented whether such announcements lead to increases in the share prices of the effective firms. The following analysis attempts to fill this void.

Table 2 presents information similar to that presented in Table 1 for the six consumer boycott termination announcements. Only results over the time interval from event days -5 to 5 are presented. It was decided not to present these results in a greater detail because only three of these six firms are also included in the boycott announcement sample. This leads to an extremely small sample of firms for which both the announcement and termination dates are available. Also, the lapsed time between the announcement and the termination of the boycotts ranged from a few months to several years making it impossible to analyze the behavior of abnormal returns between the two dates in a statistically meaningful manner.

As can be seen from the results presented in Table 2, boycott termination announcements are clearly interpreted by the financial markets as positive informational events. Indeed, despite the small sample size, the test statistic for the two-day announcement period of event days -1 and 0 is significant at the 10 percent level. Thus, although the boycott initiation announcements were clearly associated with statistically significant decreases in shareholder wealth, it is equally clear that the major media coverage of boycott-ending settlements leads to substantial increases in shareholder wealth. Indeed,

Table 2.

Cumulative Abnormal Returns, Abnormal Returns, and Associated Test Statistics for Days Surrounding the Termination of Consumer Boycott Actions

Event Day	Percent Abnormal Return	Test Statistic (t)	Percent Cumulative Abnormal Return
-5	-0.665	-0.557	-0.665
-4	-1.379	-1.745	-2.044
-3	0.579	0.406	-1.465
-2	0.739	0.669	-0.726
-1/0	6.770*	2.409	6.044
1	-0.987	-1.291	5.057
2	-0.833	-0.096	4.224
3	-0.561	-0.478	3.663
4	0.352	0.895	4.015
5	-0.045	0.469	3.970

* - Significant at the 10 percent level, two-tailed test.

although impossible to test due to the fact that several of the boycott termination announcements were not preceded by well-defined initiation announcements, it is possible that the positive wealth gains associated with boycott termination announcements may have entirely erased the negative wealth effects of the initial announcements of these boycotts.

V. Conclusions

This research study employs a standard event-time methodology in an effort to assess the impact of consumer boycott announcements upon the wealth of the stockholders of target firms. A major finding of the study is that consumer boycott announcements appear to have a statistically significant negative effect on stock prices. Indeed, the overall market value of the target firms dropped by over $80 million following boycott initiation announcements. Unfortunately, data availability constraints prohibit any comparison of these dollar value losses with the likely present value of the costs of acceding to the boycotter's demands. It does, however, seem highly implausible that these costs could even approach the $80 million damage figure reported here.

In addition to examining the equity damage associated with the initial announcements of consumer boycott actions, the study also reported the shareholder wealth effects of media-covered boycott termination announcements. The results of these tests strongly suggest that boycott termination announcements are associated with statistically significant increases in the share prices of the firms involved.

The results of this study have important ramifications for financial managers of a firm targeted for consumer boycott. The financial managers, who are charged with the responsibility of maximizing the stockholders' wealth, may not be fulfilling their duties if they reject out-of-hand the demands of

sponsors of a potential boycott. A more prudent course for the managers would appear to be to carefully compare the costs and benefits of any actions taken to avoid the potential boycott before the boycott announcement. The actions of financial managers may save the stockholders from losing millions of dollars in the value of the stock.

If corporate managers initially decide that acceding to the boycotter's demands is not in the best interests of the firm's shareholders, but later decide that either the capital market and/or sales or publicity damage inflicted by the boycotters is severe, an alternative policy of compromise and conciliation may be required. In this case, the fact that the boycott termination announcements are associated with increases in shareholder wealth strongly suggests that the corporation go to great lengths to insure substantial major media coverage of the final settlement announcement.

Notes

1 *Newsbank* provides an index to articles appearing in newspapers published throughout the United States. The articles themselves are available on microfiche transparencies.

2 Although, to our knowledge, no empirical research has yet documented the hypothesis that boycott damage and firm size tend to be negatively correlated, the fact that smaller firms tend to be less diversified strongly suggests that the boycotted products or services provided by smaller firms would represent a substantially larger portion of corporate revenues that the boycotted products provided by larger, more diversified corporations.

3 This was also replicated under the mean adjusted return methodology and the market adjusted returns methodology. Virtually no differences in the results were evident.

4 The binomial proportionality test statistic is calculated in the following manner: $t = (P - 0.5).(N / 0.25)^{1/2,}$ where P is the observed ex post proportion of data points meeting a specified criteria.

5 As Friedman (1985, pp. 96-117) notes, many of the boycotts occurring the United States over the years between 1970 and 1980 were launched due to the fact that corporations were merely perceived as being insensitive and unsympathetic to the boycotter's concerns. In one case, women's rights groups cited four national advertisements which they perceived offensive to women. In still another, a large corporation made a campaign contribution to a legislator whom a homosexual rights group felt was antagonistic to its concerns. Still, the majority of the boycotts occurred because the 'offending' corporation was not perceived as treating racial minorities or workers evenhandedly. Typically, only minor changes in corporate hiring or advertising practices were all that was required to meet the boycotter's demands.

References

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3 Friedman, M., "Consumer Boycotts in the United States, 1970-1980: Contemporary Events in Historical Perspective," *Journal of Consumer Affairs*, Vol. 19, No. 1, , Vol. 19, No. 1, pp. 96-117, 1985.

4 Hite, G. L. and J. E. Owers, "Security Price Reactions Around Corporate Spinoff Announcements," *Journal of Financial Economics*, Vol. 12, No. , pp. 409-436, 1983.

5 Rogers, R. C. and J. E. Owers, "Equity for Debt Exchanges and Shareholder Wealth," *Financial Management*, Vol. 14, No. 3, pp. 18-26, 1985.

Appendix 1

Consumer Boycott Sample & Announcement Dates of the Boycotts

Company Name	Announcement Date
AMF, Inc.	8/7/75
Amerada Hess	8/28/84
American Airlines	11/21/78
Anheuser Busch	9/2/82
Atlantic Richfield	6/25/78
Coca Cola Company	6/5/73
Coca Cola Company	2/4/80
Coors (Adolph)	5/11/76
Delta Airlines, Inc.	9/3/70
Food Lion, Inc.	7/7/84
General Foods Corporation	1/11/79
The Great Pacific & Atlantic Tea Co., Inc.	8/18/68
The Great Pacific & Atlantic Tea Co., Inc.	1/28/71
Hasbro-Bradley	12/16/84
Hormel	1/27/86
Lucky Stores	1/26/80
Lucky Stores	7/31/83
Mobile Oil Company	8/7/83
Nestle Le Mur Company, Inc.	11/10/78
Pepsico, Inc.	6/5/73
Pittsburgh Brewing Company	8/24/85
Proctor & Gamble Company, Inc.	1/11/79
Proctor & Gamble Company, Inc.	1/5/80
Proctor & Gamble Company, Inc.	11/15/81
Proctor & Gamble Company, Inc.	5/7/82
Safeway Stores	10/7/71
Joseph Schlitz Brewing Company, Inc.	6/2/72
Sears, Roebuck & Company, Inc.	9/25/78
Shell Oil Company, Inc.	2/23/73
Shell Oil Company, Inc.	9/25/78
Shell Oil Company, Inc.	6/7/78
Shell Oil Company, Inc.	12/18/80
Shell Oil Company, Inc.	1/10/86
Squibb Corporation	4/24/79
Standard Oil of California	8/8/73
J. P. Stevens & Company, Inc.	3/8/76
Tandy Corporation	12/21/78
United Airlines	9/18/79
Warner Communications, Inc.	8/7/77
Warner Communications, Inc.	9/11/78
Winn Dixie Stores, Inc.	12/21/77

Appendix 2

Consumer Boycott Sample & Termination Dates of the Boycotts

Company Name	Termination Date
Coca Cola Company, Inc.	8/11/81
Coors (Adolph)	4/10/84
Farah Manufacturing	2/25/74
Food Lion, Inc.	9/14/84
Nestle Le Mur Company, Inc.	10/5/84
Schenley Industries	4/14/66
J. P. Stevens & Company, Inc.	10/20/80