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Source: *The Academy of Management Journal*, Vol. 21, No. 3 (Sep., 1978), pp. 479-486

Published by: Academy of Management

Stable URL: <http://www.jstor.org/stable/255728>

Accessed: 26-02-2017 20:38 UTC

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Research Notes

CORPORATE SOCIAL RESPONSIBILITY AND STOCK MARKET PERFORMANCE

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The relationship between the market performance of a firm's common stock and its social responsibility has been the subject of contradictory views in the past. One view is that a socially aware and concerned management will also possess the requisite skills to run a superior company in the traditional sense of financial performance, thus making its firm an attractive investment. (The Dreyfus Third Century Fund is based on this view. The fund invests in companies that not only meet traditional investment criteria, but which also in their view make contributions to the enhancement of the quality of life in the U. S. relative to other companies in the same industry.) This view has been suggested by Moskowitz (1972), who subsequently attempted to validate it empirically. Moskowitz first selected 14 firms that possessed what he believed were good social responsibility credentials, and then calculated the rate of return on their common stock for the first half of 1972. After noting that the 14 stocks had appreciated an average of 7.28 percent while major market indices such as the Dow-Jones Industrials had appreciated by much smaller amounts, Moskowitz interpreted these results as support for his view.

A contradictory view is that socially responsible firms will be at a competitive disadvantage due to the added expense incurred by such behavior. This view has received support in a study by Vance (1975). Vance's study was based on two surveys previously taken by *Business and Society Review* ("How Business School Students . . .," 1972; "Industry Rates Itself," 1972) where businessmen and students rated 45 and 50 leading firms, respectively, on their perceived degree of social responsibility. Each of these surveys yielded a ranking of the firms as to their degree of social responsibility. (Both surveys indicated a wide range of social responsibility, as there were firms rated from outstanding to poor.) Using these two rankings, Vance observed a negative correlation between rank and stock market performance during 1974.

Thus these two studies came to different conclusions regarding social responsibility and stock market performance. Both, however, have certain empirical deficiencies. First, they evaluated stock performance for only a

short period of time — six months in the Moskowitz study and 12 months in the Vance study. Second, neither study evaluated stock market performance on a risk-adjusted basis. This study will correct for these deficiencies, allowing a more definitive statement to be made regarding the relationship between social responsibility and stock market performance.

Performance Measurement

When evaluating security returns, it is insufficient to only consider rates of return. Securities are generally described in terms of two parameters, return and risk, and it is generally accepted that higher risk securities should have higher returns than lower risk securities. In evaluating security performance, therefore, it is necessary to incorporate both risk and return in the analysis.

Jensen (1968) has devised a method for measuring security performance on a risk-adjusted basis. It involves a regression model based on the Sharpe-Lintner (Sharpe, 1964; Lintner, 1965) capital asset pricing model:

$$R_{jt} - R_{ft} = \alpha_j + \beta_j [R_{Mt} - R_{ft}] + \epsilon_{jt} \quad (1)$$

where R_{jt} denotes the rate of return on security j at time t ; R_{ft} is the risk-free rate of return; and R_{Mt} is the rate of return on the market. Here α_j and β_j are the regression parameters with random error term ϵ_{jt} . The intercept term α_j can be interpreted as a measure of stock market performance on a risk-adjusted basis. Frequently called differential return, it measures the return on security j earned above or below a hypothetical portfolio of similar risk formed from a linear combination of the market portfolio and risk-free asset. A positive differential return indicates the security earned more than the market on a risk-adjusted basis, and a negative differential return indicates the security earned less than the market on a risk-adjusted basis. The parameter β_j , frequently called the beta coefficient, can be interpreted as a measure of the risk of security j , with higher values being associated with higher risk securities.

The Data

The social responsibility rankings used in this study were the same as those used in the Vance study. The first two columns of Table 1 reflect the firm rankings. Four of the firms in the two surveys were eliminated from consideration in this study, as they were mutual life insurance companies and hence had no common stock. These firms were Equitable Life, Prudential, Metropolitan Life and John Hancock. Since 40 of the remaining firms were surveyed by both businessmen and students, the rank order correlation coefficient between the two surveys was calculated. Its value of .6584 (significantly positive at the .05 level) shows a fairly strong degree of agreement between the two surveys. Security returns for each of these

firms were calculated monthly over the five-year period 1970-1974, as shown by Fama (1976, p. 12), using:

$$R_{jt} = (P_{jt} - P_{jt-1} + D_{jt}) / P_{jt-1} \quad (2)$$

where P_{jt} denotes the price of security j at the end of month t and D_{jt} denotes all dividends received during month t . (The businessmen survey was taken in the fall of 1971 and the student survey was taken in the spring of 1972. Since these ranks may change through time, the five-year period 1970-1974 surrounding the survey dates was chosen for analysis. The three-year subperiod 1971-1973 was also analyzed.) All prices were adjusted for stock dividends and splits.

Since (1) was used to measure the differential returns of the securities, it was necessary to have monthly rates of return on both the market (R_{Mt}) and risk-free asset (R_{Ft}). The Standard and Poor's 500 Composite Index and the 30-day Treasury bill rate respectively, were used for this purpose.

Empirical Results

Differential returns and risk measures of the securities in the social responsibility surveys were calculated for the five-year sample period 1970-1974 and a three-year subperiod 1971-1973. As shown in Table 1, few securities had differential returns significantly different from zero — two in the five-year period and three in the three-year subperiod. It appears from this analysis that there is no significant effect of social responsibility on stock market performance.

The measures of differential return were ranked in descending order over both the five and three-year periods, and then rank order correlations were calculated between survey rank and differential return rank. These correlations, shown in Table 2, generally indicate a low insignificant relationship between risk-adjusted performance and degree of social responsibility. [Since the measure α_j of differential return is an estimate based on the regression equation (1), it is subject to an errors-in-variables bias (Johnston, 1972, pp. 281-291). Hence tests of significance using α_j may be inaccurate, but are reported here for the reader's information. These comments are also applicable to the measure β_j of risk.]

The beta coefficient in (1) can be interpreted as a measure of risk of the firm. In order to see whether there was a relationship between security risk level and the degree of social responsibility, rank-order correlations were calculated between survey rank and beta coefficient rank. As shown in Table 2, these correlations generally indicate a low insignificant relationship between risk and degree of social responsibility.

An interesting observation in Table 1 involves the correlations reported for the three and five-year periods analyzed. In certain instances, such as First National City Bank, the correlation drops as the estimation interval is shortened. In other instances, such as Ford, the correlation rises. A possible reason for this, as reported by Blume (1975), is that the betas may change

TABLE 1
Stock Market Performance and Social Responsibility Rank

| Company Name | Survey Rank | | Differential Return | | Beta Coefficient | | Correlation | |
|-------------------------------------|-------------|----------|---------------------|-------------------|-------------------|-------------------|-------------|---------|
| | Businessmen | Students | 1970-74 | 1971-73 | 1970-74 | 1971-73 | 1970-74 | 1971-73 |
| Chase Manhattan | 1 | 8 | -.0039 (-.45) | .0053 (.45) | .6541 (3.67)* | .4109 (1.39) | .4338 | .2316 |
| First Pennsylvania | 2 | 2 | .0008 (.08) | .0118 (1.01) | 1.0747 (4.94)* | .8155 (2.80)* | .5443 | .4324 |
| IBM | 3 | 2 | -.0038 (-.58) | -.0009 (-.11) | .7812 (5.80)* | .5520 (2.71)* | .6057 | .4210 |
| General Electric | 4 | 19 | .0069 (1.07) | .0098 (1.25) | 1.0958 (8.29)* | .9157 (4.70)* | .7363 | .6272 |
| Sears Roebuck | 5 | 5 | .0013 (.24) | .0020 (.36) | .9587 (8.31)* | .9156 (6.47)* | .7372 | .7429 |
| Ford | 6 | 20 | .0055 (.71) | -.0046 (-.55) | .8047 (5.07)* | 1.1833 (5.72)* | .5540 | .7004 |
| American Telephone and Telegraph | 7 | 18 | .0054 (.98) | .0036 (.56) | .6110 (5.35)* | .4805 (3.01)* | .5751 | .4583 |
| Bank America | 7 | 5 | .0094 (.96) | .0102 (1.20) | .9427 (4.71)* | .3810 (1.81) | .5263 | .2962 |
| Chemical Bank | 9 | 17 | -.0002 (-.03) | -.0076 (-.78) | 1.0228 (6.28)* | .9069 (3.72)* | .6361 | .5383 |
| General Motors | 10 | 37 | -.0045 (-.68) | -.0107 (-1.61) | .7568 (5.56)* | .9196 (5.55)* | .5899 | .6896 |
| First National City Bank | 11 | 13 | .0169 (1.61) | .0284 (2.62)* | .7587 (3.54)* | .2434 (.90) | .4217 | .1529 |
| Mobil | 11 | 21 | .0042 (.52) | .0017 (.17) | .7165 (4.34)* | .8642 (3.50)* | .4955 | .5143 |
| Standard Oil of Indiana | 11 | 33 | .0163 (2.25)* | .0201 (2.58*) | .6762 (4.56)* | .4489 (2.31)* | .5134 | .3686 |
| Chrysler | 14 | 24 | -.0116 (-1.01) | -.0090 (-.72) | 1.1318 (4.82)* | 1.5902 (5.10)* | .5344 | .6580 |
| RCA | 14 | 9 | -.0055 (-.57) | -.0031 (-.27) | 1.2276 (6.28)* | 1.6851 (5.99)* | .6365 | .7167 |

| | | | | | | | | |
|--|----|----|-------------------|-------------------|-------------------|-------------------|-------|-------|
| Westinghouse | 14 | 11 | -.0091 (-.90) | -.0035 (-.28) | .7960 (3.86)* | 1.0957 (3.51)* | .4519 | .5155 |
| Exxon | 17 | 40 | .0070 (1.04) | .0091 (1.32) | .5466 (3.93)* | .4457 (2.62)* | .4590 | .4095 |
| Dupont | 18 | 16 | .0040 (.54) | .0071 (1.01) | .6480 (4.34)* | .8505 (4.86)* | .4950 | .6405 |
| Shell | 18 | 23 | .0150 (1.34) | .0130 (1.42) | 1.1779 (5.14)* | .5702 (2.49)* | .5593 | .3934 |
| J. C. Penney | 18 | 9 | .0034 (.49) | .0092 (1.22) | 1.0887 (7.73)* | 1.1294 (6.06)* | .7122 | .7205 |
| Proctor and Gamble | 21 | 32 | .0117 (1.87) | .0135 (1.99) | .7424 (5.83)* | .7941 (4.70)* | .6076 | .6279 |
| Union Carbide | 21 | 38 | .0142 (1.76) | .0023 (.24) | 1.1351 (6.89)* | 1.5034 (6.09)* | .6709 | .7222 |
| Consolidated Edison | 21 | 46 | -.0071 (-.55) | -.0061 (-1.01) | .6306 (2.39)* | .3710 (2.46)* | .2999 | .3883 |
| Commonwealth Edison | 21 | 42 | .0010 (.14) | -.0042 (-.56) | .7506 (5.19)* | .4395 (2.39)* | .5629 | .3796 |
| International Telephone and Telegraph | 25 | 27 | -.0100 (-1.05) | -.0117 (-.94) | 1.2231 (6.28)* | 1.5556 (4.99)* | .6361 | .6504 |
| Pacific Gas | 25 | 31 | .0008 (.10) | -.0080 (-.86) | .6997 (4.36)* | .4248 (1.84) | .4964 | .3008 |
| General Telephone | 27 | 26 | .0014 (.18) | -.0017 (-.24) | .9451 (6.13)* | .8608 (5.01)* | .6268 | .6518 |
| Aetna | 27 | 15 | .0165 (1.71) | .0146 (1.45) | 1.2848 (6.52)* | .7081 (2.81)* | .6503 | .4342 |
| Gulf Oil | 29 | 36 | .0007 (.10) | -.0039 (-.44) | .8753 (6.03)* | .9426 (4.28)* | .6209 | .5919 |
| Boeing | 29 | 30 | .0064 (.42) | .0065 (.37) | 1.2377 (3.98)* | 2.1230 (4.85)* | .4629 | .6398 |
| Bethlehem Steel | 31 | 41 | .0102 (1.08) | .0172 (1.30) | .9410 (4.89)* | 1.2779 (3.89)* | .5407 | .5550 |
| Goodyear | 31 | 25 | -.0045 (-.58) | -.0147 (-1.53) | .9811 (6.10)* | 1.4850 (6.19)* | .6251 | .7281 |
| Safeway | 31 | 22 | .0138 (2.04)* | .0052 (.62) | .8757 (6.34)* | .8389 (4.09)* | .6399 | .5740 |

TABLE 1—Continued

| Company Name | Survey Rank | | Differential Return | | Beta Coefficient | | Correlation | |
|----------------------------|-------------|----------|---------------------|--------------------|-------------------|-------------------|-------------|---------|
| | Businessmen | Students | 1970-74 | 1971-73 | 1970-74 | 1971-73 | 1970-74 | 1971-73 |
| Standard Oil of California | 34 | 45 | .0073 (.79) | .0120 (.99) | .7771 (4.15)* | .8901 (2.95)* | .4789 | .4509 |
| American Electric Power | 35 | 28 | -.0031 (-.41) | .0004 (.05) | .6625 (4.27)* | .5776 (3.00)* | .4892 | .4581 |
| U. S. Steel | 36 | 44 | .0111 (1.32) | .0095 (.81) | .7450 (4.35)* | .8998 (3.07)* | .4957 | .4656 |
| Kroger | 36 | 29 | .0044 (.46) | -.0117 (-.99) | 1.2322 (6.26)* | 1.3902 (4.75)* | .6351 | .6315 |
| LTV | 38 | 43 | .0116 (.55) | .0190 (.66) | 2.0340 (4.66)* | 2.6616 (3.70)* | .5218 | .5354 |
| Texaco | 39 | 33 | .0023 (.32) | -.0005 (-.05) | .7574 (5.04)* | .8801 (3.56)* | .5520 | .5214 |
| Atlantic and Pacific | 39 | 39 | -.0127 (-.99) | -.0282 (-2.48)* | -.6638 (2.54)* | .7319 (2.59)* | .3158 | .4057 |
| Esmark | 41 | 33 | .0059 (.60) | -.0014 (-.11) | .7994 (3.98)* | 1.0147 (3.19)* | .4632 | .4804 |
| Xerox | — | 1 | -.0057 (-.68) | .0095 (1.12) | .8676 (5.06)* | .6988 (3.31)* | .5532 | .4937 |
| Cummins Engine | — | 4 | .0012 (-.10) | .0010 (.08) | 1.0846 (4.54)* | 1.1602 (3.46)* | .5118 | .5100 |
| McGraw-Hill | — | 5 | -.0114 (-1.01) | -.0215 (-1.70) | 1.1861 (5.12)* | 1.1622 (3.70)* | .5578 | .5357 |
| Kaiser Industries | — | 12 | -.0053 (-.33) | -.0020 (-.09) | 1.5073 (4.67)* | 2.0296 (3.69)* | .5224 | .5345 |
| Honeywell | — | 14 | -.0179 (-1.49) | -.0007 (-.06) | 1.2398 (5.05)* | 1.4648 (5.34)* | .5525 | .6753 |
| Atlantic Richfield | — | 20 | .0119 (1.16) | .0180 (1.58) | 1.0860 (5.21)* | 1.1172 (3.94)* | .5648 | .5599 |

* $p < .05$

TABLE 2
Correlation Coefficients of Stock Market Performance
and Social Responsibility Rank

| | <i>Rank Order Correlation Coefficient</i> | |
|----------------------------|---|------------------|
| | <i>1970-1974</i> | <i>1971-1973</i> |
| <i>Differential Return</i> | | |
| Businessmen Rank | .1733 | .3390* |
| Student Rank | — .2569 | .0471 |
| <i>Beta Coefficient</i> | | |
| Businessmen Rank | .1884 | .0505 |
| Student Rank | .2924* | — .0134 |

* $p < .05$

over time in response to certain changes in the structure (e.g., operating and/or financial leverage) of the companies. Inclusion of companies such as First National City Bank and Ford should not bias the results presented here, as these changes in correlation seem to be fairly evenly distributed, both in direction and size, throughout the range of survey ranks.

Conclusion

The results of this study indicate that the degree of social responsibility as measured by the rankings of businessmen and students bears no significant relationship to stock market performance. Furthermore, there seems to be no significant relationship between stock risk levels and degree of social responsibility. These findings suggest that the interpretations of both Moskowitz and Vance are invalid.

A possible third view on the relationship between stock market performance and social responsibility, consistent with the findings of this study, assumes that stock markets are efficient, as described by Fama (1970). In an efficient stock market, new information relevant to the earnings outlook of a firm is immediately reflected on the current stock price. Thus any positive or negative effects associated with the degree of social responsibility of a firm are reflected immediately in its stock price. Since a large majority of the firms sampled in this study had stock returns which were no different from the market on a risk-adjusted basis, under this view the effects of the degree of social responsibility on stock prices were either non-existent or had occurred prior to 1970.

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Academy of Management Journal
1978, Vol. 21, No. 3, 486-492.

IDENTIFICATION MODES OF PROFESSIONALS: RELATIONSHIP WITH FORMALIZATION, ROLE STRAIN, AND ALIENATION

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There has been much research concerning identification of professionals in organizations, particularly in industrial or nonprofessional organizations. Initially, it was thought that identification of professionals is bipolar, that is, the professional either identifies with the organization or his profession but not both (e.g., Gouldner, 1958). Furthermore, it was contended that identification with professional but not organizational norms and values results in alienation from the organization and other dysfunctional outcomes for the professional (e.g., Gouldner, 1958; Kornhauser, 1962). While the question about alienation has by no means been resolved empirically, speculation about the bipolarity of identification largely has. Glaser (1964), among others subsequently (see Hall, 1976), found that the two forms of identification are separate dimensions. Indeed, Miller and Wager's (1971) investigation revealed that identification may take several forms—identification with one's profession and not with the employing organization ("professional" identification), identification only with the organization ("organizational" identification), identification with both ("mixed"), or with neither ("indifferent").

This particular trend in research results has led to increased investigation of conditions under which the two major forms of identification may be related or unrelated or, more specifically, identifying correlates (often