Analyzing Dividend Policy: A Questionnaire Survey

Richard B. Edelman
American University

Gail E. Farrelly
Southern Methodist University

Follow this and additional works at: https://scholar.smu.edu/business_workingpapers

Part of the Business Commons

This document is brought to you for free and open access by the Cox School of Business at SMU Scholar. It has been accepted for inclusion in Historical Working Papers by an authorized administrator of SMU Scholar. For more information, please visit http://digitalrepository.smu.edu.
ANALYZING DIVIDEND POLICY: A QUESTIONNAIRE SURVEY

Working Paper 83-119*

by

H. Kent Baker
Richard B. Edelman
and
Gail E. Farrelly

H. Kent Baker
and
Richard B. Edelman
Kogod College of Business Administration
The American University
Washington D.C.

Gail E. Farrelly
Assistant Professor of Accounting
Edwin L. Cox School of Business
Southern Methodist University
Dallas, Texas 75275

*This paper represents a draft of work in progress by the authors and is being sent to you for information and review. Responsibility for the contents rests solely with the authors. This working paper may not be produced or distributed without the written consent of the authors. Please address all correspondence to Gail E. Farrelly.
Abstract

This paper reports the results of a mail survey on dividend policy. The sample consisted of financial executives of 605 firms in three industry groups: manufacturing, utilities, and retail-wholesale. The three groups showed considerable homogeneity in the overall ranking of factors and issues relating to dividend policy but have distinct differences on specific items. The evidence indicates that firms base their dividend policy decisions on numerous factors, the most important being the anticipated level of future earnings and the pattern of past dividends. The findings are discussed in light of various theories on how dividends affect stock prices.
Analyzing Dividend Policy: A Questionnaire Survey

A long standing controversy in the finance literature involves corporate dividend policy. In fact, Feldstein and Green [11, p. 17] comment that "the nearly universal policy of paying substantial dividends is the primary puzzle in the economics of corporate finance." The dividend controversy centers around whether the dividend payment practices of corporations have different effects on the value of the firm and thus on the value of the shareholders' stake in the firm. One group contends that dividend policy is relevant and consequently has a positive effect on valuation whereas the other group takes the view of dividend irrelevance.\(^1\) Despite extensive research this controversy remains unresolved. Black [5, p. 8] epitomizes the current knowledge about corporate dividend policy by stating "What should the corporation do about dividend policy? We don't know."

Much of the research on corporate dividend policy represents normative finance which seeks to develop models for decision making. The present study, however, is concerned with positive finance which seeks to describe "what is" instead of "what should be."\(^2\) The primary objective of this research is to investigate the differences, if any, between dividend policy in theory and in practice. Specifically, the study examines the factors which financial executives perceive as important in determining their firm's dividend policy. The study also investigates the opinions of these executives regarding several theoretical issues about dividend policy. Hence, the results of this research may be of value in isolating gaps between dividend policy in theory and in practice.

---

\(^1\) For a discussion of the relevance-irrelevance issue of dividend policy, see Copeland and Weston [8, pp. 476-535].

\(^2\) For an explanation and examples of positive and normative finance, see Beranek [3].
practice and in providing inputs into the creation of useful normative models on dividend policy.

The Sample

The data for this study were taken from Corporate Compustat II. The data collection was done in two steps. First, only New York Stock Exchange (NYSE) firms with complete 1981 data were included. NYSE firms were used in order to reflect dividend policy of major U.S. corporations. Second, all firms with missing and outlier data were removed. The objective was to examine firms with flexibility in their dividend decision. Accordingly, attention was placed only on companies with viable financial structures and performance.

The list below shows the screening variables and the 95 percent confidence intervals. Only companies within the confidence intervals were included in the initial sample:

1. Debt to equity ratio between 0 and 20 percent.
2. Market-to-book between 0 and 3.9 times.
3. Payout ratio between 0 and 100 percent.

At the completion of this screening, the sample consisted of 1112 firms.

Since past research by Michel [19] shows that industry classification is a determinant of dividend policy, the sample was divided into SIC groupings. Exhibit 1 illustrates the different mean payouts according to these different groups. In order to highlight firms with large differences in dividend philosophy and to ensure a large enough sample size for survey purposes, three industry groups were selected: (1) manufacturing, SIC 2000-3999, where dividend payout was slightly below average; (2) transportation/utilities, SIC
Exhibit 1. t-Values and Levels of Significance Between SIC Payout Ratios and Grand Mean of NYSE Firms for 1981

<table>
<thead>
<tr>
<th>SIC</th>
<th>Mean Payout</th>
<th>t</th>
<th>Two-tail Significance</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-199</td>
<td>Agriculture</td>
<td>30.4%</td>
<td>.34</td>
<td>NS</td>
</tr>
<tr>
<td>1000-1499</td>
<td>Mining</td>
<td>27.9</td>
<td>2.37</td>
<td>.020</td>
</tr>
<tr>
<td>1500-1799</td>
<td>Construction</td>
<td>33.2</td>
<td>.62</td>
<td>NS</td>
</tr>
<tr>
<td>2000-3999</td>
<td>Manufacturing</td>
<td>33.4</td>
<td>3.10</td>
<td>.007</td>
</tr>
<tr>
<td>4000-4999</td>
<td>Transportation/Utilities</td>
<td>55.6</td>
<td>-10.66</td>
<td>.001</td>
</tr>
<tr>
<td>5000-5999</td>
<td>Wholesale/Retail</td>
<td>28.5</td>
<td>3.53</td>
<td>.001</td>
</tr>
<tr>
<td>6000-6700</td>
<td>Finance</td>
<td>32.0</td>
<td>2.10</td>
<td>.030</td>
</tr>
<tr>
<td>7800-8911</td>
<td>Services</td>
<td>31.2</td>
<td>1.35</td>
<td>.170</td>
</tr>
<tr>
<td></td>
<td>Grand Mean</td>
<td>36.8%</td>
<td>Total</td>
<td>1112</td>
</tr>
</tbody>
</table>
4000-4999, where payout was above average; and (3) wholesale/retail, SIC 5000-5999, where payout was below average. These three groups represented 921 firms.

The sample was further reduced from 921 to 605 as follows. A 25 percent dividend filter was applied in which all firms with a dividend increase or decrease of more than 25 percent between 1980 and 1981 were omitted. This was done in order to eliminate firms with unusually large changes in dividend payouts. From the remaining firms, slightly more than one-half of the manufacturing firms (309) were selected based on a systematic sampling procedure plus all of the transportation/utilities (193) and wholesale/retail (103) firms.

Methodology

A mail questionnaire was used to obtain information about corporate dividend policy. The questionnaire consisted of four parts: (1) 15 closed-end statements and one open-end question about the importance of various factors that each individual firm uses in determining its dividend policy; (2) three closed-end questions about each individual firm's dividend policy; (3) 18 closed-end statements about issues involve corporate dividend policy in general in which the level of agreement-disagreement on each question was sought; and (4) a respondent's profile. The initial questionnaire was pilot tested among 20 firms selected from the three industry groups but not included in the final sample of 605 firms.

The final survey was sent to the chief financial officers, typically financial vice-presidents, of the 605 firms. A second complete mailing was made as a means of increasing the response rate. The survey covered the period between February and April, 1983, and yielded 351 usable responses or an overall
response rate of 58.0 percent. These responses were divided among the three groups as follows: 147 manufacturing firms (47.6 percent), 147 transportation/utilities (76.2 percent), and 57 wholesale/retail (55.3 percent). The transportation/utilities group was subdivided into utilities (114), transportation (13), and another category (20) in which the respondents who had an SIC 4000-4999 indicated that the principal nature of their business was other than transportation or utility. Only the 114 utilities were used from this group because the other sample sizes were considered too small for the purpose of making meaningful comparisons. Hence, the final sample consisted of a total of 318 usable responses representing the three industry groups. Except where noted, the respondents answered virtually all of the questions.

Before examining the findings, it is important to note that this methodology is subject to several potential biases. Any survey research involves the potential of non-response bias. In this study such a potential bias is reduced, but not eliminated, by the high response rate and the fact that respondents were not required to identify themselves. Another question involves whether the views of the chief financial officer represent an accurate consensus of opinion regarding a firm’s dividend policy. Because it was impractical to survey all participants in a firm’s dividend policy decisions, the chief financial officer was viewed as a reasonable proxy. In order to determine the involvement of the respondents in corporate dividend policy, the question was asked, "Were you actively involved in determining your firm’s dividend

3Of the 605 firms, 11 were eliminated because the questionnaires were returned as non-deliverable; 7 were omitted because of mergers or subsidiaries; 12 were deleted because they had a policy of not answering surveys or did not prefer to answer; and 2 indicated that they were restricted from paying dividends or had not paid dividends since the early 1970s. All remaining responses were examined for duplicates. In the case of duplicate responses, the second response was eliminated.
policy?" The results show that of the 313 respondents to this question 258 (82.4 percent) answered affirmatively which broke down by industry group as follows: 115 manufacturing (79.9 percent), 98 utility (87.5 percent), and 45 wholesale/retail (78.9%). Both the high response rate and the extent of the respondents' participation in dividend policy decisions contribute to the validity of the findings. Caution should be exhibited, however, in extrapolating the findings of this study to firms in general or to firms which do not have the characteristics of this sample. It is also important to note that the survey was conducted during a time when the U.S. economy was emerging from a recession. Hence, the results may be influenced by this economic variable.

Results and Evaluation

The results show that the mean dividend payout ratios for 1981 of the responding firms were higher than for the sample of NYSE firms presented in Exhibit 1. The payout ratios for the respondents by industry group were as follow: 36.6 percent payout for manufacturing, 70.3 percent utilities, and 36.1 percent wholesale/retail. The fact that the payout ratio (70.3 percent) for the responding utilities was almost 15 percent higher than the payout ratio (55.6 percent) of the sample represented in Exhibit 1 can be explained, at least partially, by the elimination of the transportation firms, which had much lower payouts. The transportation firms were eliminated as a separate group because of their small size. Including the transportation firms with the utilities was rejected because it was believed that their different payout characteristics could distort the results.

Factors Determining Dividend Policy

Exhibit 2 presents the results of the responses to the 15 closed-end statements involving factors determining dividend policy (identified later
Exhibit 2. Factors Determining Dividend Policy

<table>
<thead>
<tr>
<th>Statement</th>
<th>Manufacturing Mean</th>
<th>Manufacturing Rank</th>
<th>Utilities Mean</th>
<th>Utilities Rank</th>
<th>Wholesale/Retail Mean</th>
<th>Wholesale/Retail Rank</th>
<th>Chi-square level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anticipated level of firm's future earnings.</td>
<td>3.20</td>
<td>1</td>
<td>3.21</td>
<td>1</td>
<td>3.12</td>
<td>1</td>
<td>.4572*</td>
</tr>
<tr>
<td>2. Pattern of past dividends.</td>
<td>2.73</td>
<td>2</td>
<td>2.94</td>
<td>3</td>
<td>2.86</td>
<td>2</td>
<td>.4390*</td>
</tr>
<tr>
<td>3. Availability of cash.</td>
<td>2.70</td>
<td>3</td>
<td>2.35</td>
<td>4</td>
<td>2.42</td>
<td>4</td>
<td>.0273</td>
</tr>
<tr>
<td>4. Concern about maintaining or increasing stock price.</td>
<td>2.30</td>
<td>4</td>
<td>2.96</td>
<td>2</td>
<td>2.47</td>
<td>3</td>
<td>.0001</td>
</tr>
<tr>
<td>5. Availability of profitable investment opportunities for the firm.</td>
<td>2.20</td>
<td>5</td>
<td>1.15</td>
<td>14</td>
<td>2.29</td>
<td>5</td>
<td>.0001</td>
</tr>
<tr>
<td>6. Concern that a dividend change may provide a false signal to investors.</td>
<td>2.10</td>
<td>6</td>
<td>2.10</td>
<td>9</td>
<td>2.16</td>
<td>6.5</td>
<td>.5951</td>
</tr>
<tr>
<td>7. Projections regarding the future state of the economy.</td>
<td>2.06</td>
<td>7</td>
<td>1.84</td>
<td>10</td>
<td>1.74</td>
<td>8.5</td>
<td>.0636</td>
</tr>
<tr>
<td>8. Concern about maintaining a target capital structure.</td>
<td>1.91</td>
<td>8</td>
<td>2.32</td>
<td>5</td>
<td>2.16</td>
<td>6.5</td>
<td>.0144</td>
</tr>
<tr>
<td>9. Cost of raising external funds.</td>
<td>1.88</td>
<td>9</td>
<td>2.21</td>
<td>7</td>
<td>1.74</td>
<td>8.5</td>
<td>.0188</td>
</tr>
<tr>
<td>10. Characteristics and requirements of the shareholders.</td>
<td>1.51</td>
<td>10</td>
<td>2.19</td>
<td>8</td>
<td>1.54</td>
<td>10</td>
<td>.0001</td>
</tr>
<tr>
<td>11. Legal listing (list of &quot;solid&quot; firms available for institutional investment)</td>
<td>1.42</td>
<td>11</td>
<td>1.49</td>
<td>13</td>
<td>1.26</td>
<td>12</td>
<td>.3616</td>
</tr>
<tr>
<td>12. Bond indenture provisions.</td>
<td>1.41</td>
<td>12</td>
<td>1.67</td>
<td>11</td>
<td>1.29</td>
<td>11</td>
<td>.2455</td>
</tr>
</tbody>
</table>
### Exhibit 2. Continued

<table>
<thead>
<tr>
<th>Statement</th>
<th>Manufacturing</th>
<th>Utilities</th>
<th>Wholesale/ Retail</th>
<th>Chi-square level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Preference for dividends rather than risky reinvestment.</td>
<td>1.12 (13) 1.59 (12) 1.09 (14)</td>
<td>.0041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Desire to conform to industry dividend practice.</td>
<td>1.10 (14) 2.30 (6) 1.18 (13)</td>
<td>.0001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Tax position of shareholders.</td>
<td>.73 (15) .68 (15) .77 (15)</td>
<td>.1304*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Spearman's rank order correlation**

<table>
<thead>
<tr>
<th></th>
<th>Manufacturing</th>
<th>Utilities</th>
<th>Wholesale/ Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.66**</td>
<td>.73**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>.98**</td>
</tr>
</tbody>
</table>

*Inadequate cell size -- Chi square test may not be valid.

**Significant relationship at .01 level of significance.
by "F"). The respondents were asked to indicate how important each factor was in determining their firm's dividend policy based on a five-point equal interval scale (0 = of no importance, 1 = of slight importance, 2 = of moderate importance, 3 = of great importance, and 4 = of maximum importance). The mean response for each of these 15 statements was computed and ranked according to the three industry groups.

Before examining the individual factors, it is worthwhile to note that the overall rankings of the 15 statements among the three groups based on their importance in determining dividend policy is relatively consistent. The Spearman's rank order correlation coefficients are all significant at the .01 level using a two-tail test. The most significant coefficient is .98 between the manufacturing and wholesale/retail groups. Coefficients of .66 between manufacturing and utilities and .73 between utilities and wholesale/retail indicate that while there is a significant relationship between these groups in their overall ranking of the 15 statements, the relationship is not as high as between the manufacturing and wholesale/retail groups. This difference may be explained in part by the fact that the latter two groups have more similar dividend payout ratios than the high payout utilities.

The difference in ranking among the groups on two of the factors is particularly noteworthy. For example, regarding the importance of the availability of profitable investment opportunities for the firm (F5) in determining dividend policy, both the manufacturing the wholesale/retail firms ranked this factor fifth versus fourteenth for utilities. In fact, only 8.0 percent of the utilities ranked this factor of great or maximum importance compared with 36.7 percent for manufacturing and 48.2 percent for wholesale/retail.

This difference in ranking may be explained in part by the fact that the need for capital expansion, especially among the electric utilities, has been...
curtailed in recent years due to energy conservation and a moratorium on building nuclear power plants in several states. Utilities also tend to be service-oriented and expand their services based on projected demand. Thus, availability of investment opportunities seems to be of lesser concern for utilities than the other two groups. This reasoning is reinforced by the responses to a related question in the second part of the questionnaire which stated "Because of the pressure to pay dividends, firms may be unable to take advantage of investment opportunities likely to be profitable in the future. How often does this occur in your firm?" Of the four possible responses -- often, sometimes, almost never, and never -- 96.5 percent of the utilities responded "almost never" or "never" versus 91.8 percent for manufacturing and 94.0 percent for wholesale/retail.

A second factor in which a significant disparity exists in ranking involves the desire to conform to industry dividend practice. Utilities ranked this factor sixth in importance versus thirteenth and fourteenth for wholesale/retail and manufacturing, respectively. Although the rationale for the perceived importance of this factor to utilities can only be speculated, a deviation from the high dividend payout characterized by the industry may be viewed as having a negative impact on stock price (F4).4

There are several other factors besides the two mentioned (F5 and F14) in which significant differences exist. Exhibit 2 shows the results of the Chi square test of independence of principles of classification involving the three industry groups. In order to reduce the problem of inadequate cell sizes, the five-point importance scale was collapsed into three classes -- the first containing the responses "of no importance" and "of slight importance,"

4The dividend omission by Consolidated Edison in 1974 caused electric utility stock prices to decline substantially, in some cases by as much as 50 percent.
the second "of moderate importance," and the third "of great importance" and "of maximum importance." These statistical tests show that the responses of the three groups differ significantly at the .05 level regarding 8 of the 15 factors (F3, F4, F5, F8, F9, F10, F13, and F14). Further Chi square test using the same collapsing scheme were performed using pair-wise comparisons between the industry groups. None of these Chi square tests were significantly different between the manufacturing versus wholesale/retail firms at the .05 level but significant differences did exist between the utilities and each of the other two groups. Hence, the differences in responses among the three groups are attributable to the utilities.

Examination of the individual factors shows that the same four factors appear to be the most important in determining a firm's dividend policy. The factor ranked the highest by all three industry groups was the anticipated level of a firm's future earnings (F1). In fact, only 8 of 318 firms ranked this factor as "of no importance" or "of slight importance" which accounts for the inadequate cell size for the Chi square test. The next most important factor was the pattern of past dividends (F2). The high ranking of these two factors is consistent with the behavioral models of dividend policy developed by Lintner [16] and Fama and Babiak [9]. That is, these researchers found that the change in dividends per share is largely a function of a target dividend payout based on earnings and last period's dividend payout. These variables are remarkably similar to the two factors ranked most important by the respondents to the questionnaire.

A third factor cited as important in determining dividend policy is the availability of cash (F3). The importance of liquidity is frequently cited as a managerial consideration in determining dividend policy as shown in Van Horne [23, p. 310] and Weston and Brigham [25, p. 675]. The liquidity of a
firm is often influenced by the firm's investment and financing decisions. Apparently the respondents realize this relationship because they provided relatively high rankings for several factors relating to investment (F5) and financing (F8 and F9).

Another important consideration in the formulation of dividend policy is the concern about maintaining or increasing stock price (F4). As shown in Exhibit 4, the respondents generally agree with the statement that dividend payout affects the price of the common stock. This perception is particularly strong among utilities. Although the respondents perceive a relationship between dividends and value, empirical evidence indicates that dividend yield is not related to the value of the firm.

In order to determine if there are other factors than those specified in the 15 closed-end questions which are important in determining dividend policy, the respondents were asked to list them. These other factors influencing dividend policy are shown in Exhibit 3. Although differences exist among the three industry groups, the most important factors generally involve earnings and yield considerations, sustainability, and the need for cash and growth.

In addition to the question involving factors used to determine dividend policy, several other open-ended questions were asked. The first sought to determine the most influential person in developing the dividend policy ultimately approved by the firm's board of directors. For all three industry groups, this person was the firm's chief executive officer followed by the chief financial officer. Another question concerned the frequency that a firm formally reexamined its dividend policy. The majority of the respondents indicated that this reexamination occurred only once a year. The breakdown of responses by industry groups was as follows: Manufacturing (43.8 percent), utilities (64.9 percent), and wholesale/retail (58.9 percent). The next most
<table>
<thead>
<tr>
<th>Factor</th>
<th>Manufacturing (n = 33)</th>
<th>Utilities (n = 44)</th>
<th>Wholesale/Retail (n = 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Earnings and yield considerations</td>
<td>27.3%</td>
<td>20.5%</td>
<td>23.1%</td>
</tr>
<tr>
<td>2. Sustainability or constant dividends</td>
<td>27.3%</td>
<td>20.5%</td>
<td>15.4%</td>
</tr>
<tr>
<td>3. Need for cash and growth</td>
<td>12.1%</td>
<td>9.1%</td>
<td>23.1%</td>
</tr>
<tr>
<td>4. Political, regulatory, and banking considerations</td>
<td>6.1%</td>
<td>22.7%</td>
<td>7.7%</td>
</tr>
<tr>
<td>5. Obligation to shareholders in meeting objectives</td>
<td>12.1%</td>
<td>-</td>
<td>23.1%</td>
</tr>
<tr>
<td>6. Maintaining payout ratios</td>
<td>12.1%</td>
<td>15.1%</td>
<td>-</td>
</tr>
<tr>
<td>7. Industry practice</td>
<td>-</td>
<td>22.7%</td>
<td>7.7%</td>
</tr>
<tr>
<td>8. Inflationary considerations</td>
<td>3.0%</td>
<td>6.8%</td>
<td>-</td>
</tr>
</tbody>
</table>

n = number of factors given by respondents
frequent response regarding reexamination of dividend policy was four times a year -- manufacturing (37.7 percent), utilities (19.3 percent), and wholesale/retail (26.8 percent).

Issues Involving Corporate Dividend Policy

Another major concern of this study was to investigate the opinions of the financial executives regarding specific issues involving corporate dividend policy. The 18 issues (identified later by "I") were drawn from various finance texts and research studies. The respondents were asked to indicate their opinion about these issues in general, not in relation to their specific firms, based on a seven-point disagreement-agreement scale (-3 = strongly disagree, -2 = moderately disagree, -1 = slightly disagree, 0 = opinion, +1 = slightly agree, +2 = moderately agree, and +3 = strongly agree).

Exhibit 4 shows the mean responses to each of the 18 issues for the three industry groups. Based on a ranking of these means, Spearman's rank order correlation coefficients were computed which indicate that a significant relationship exists at the .01 level among the three pair-wise comparisons. The highest correlation coefficient of .97 is between manufacturing the wholesale/retail followed by .95 for utilities and wholesale/retail and .89 for manufacturing and utilities. These results are similar to those found in Exhibit 2 in which the manufacturing and wholesale/retail firms were more consistent in their ranking on both factors and issues regarding dividend policy than the ranking between utilities and either of the other two industry groups.

Although the overall rankings were similar among the three industry groups, significant differences at the .05 level did exist regarding 9 of the 18 issues (I1, I3, I5, I9, I10, I12, I15, I16, and I18) based on the Chi square tests. In order to perform these tests and to avoid inadequate cell
Exhibit 4. Issues Involving Corporate Dividend Policy

<table>
<thead>
<tr>
<th>Statement</th>
<th>Manufacturing</th>
<th>Utilities</th>
<th>Wholesale/Retail</th>
<th>Chi-square level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Mean based on -3 to +3 disagreement-agreement scale)</td>
<td>Mean Rank</td>
<td>Mean Rank</td>
<td>Mean Rank</td>
<td></td>
</tr>
<tr>
<td>1. A firm should avoid making changes in its dividend rates that might have to be reversed in a year or so.</td>
<td>2.47 1</td>
<td>2.61 2</td>
<td>2.16 2</td>
<td>.0155*</td>
</tr>
<tr>
<td>2. Reasons for dividend policy changes should be adequately disclosed to investors.</td>
<td>2.09 2</td>
<td>2.13 3</td>
<td>2.14 3</td>
<td>.3189*</td>
</tr>
<tr>
<td>3. A firm should strive to maintain an uninterrupted record of dividend payments.</td>
<td>1.97 3</td>
<td>2.63 1</td>
<td>2.28 1</td>
<td>.0001*</td>
</tr>
<tr>
<td>4. A firm should have a target payout ratio and periodically adjust the payout toward the target.</td>
<td>1.47 4</td>
<td>1.42 6</td>
<td>2.09 4</td>
<td>.1715</td>
</tr>
<tr>
<td>5. Dividend payout affects the price of the common stock.</td>
<td>1.41 5</td>
<td>1.99 4</td>
<td>1.46 5</td>
<td>.0059</td>
</tr>
<tr>
<td>6. Investors have different perceptions of the relative riskiness of dividends and retained earnings.</td>
<td>1.38 6</td>
<td>1.62 5</td>
<td>1.34 6</td>
<td>.3286*</td>
</tr>
<tr>
<td>7. Dividend payments provide a &quot;signaling device&quot; of future company prospects.</td>
<td>1.37 7</td>
<td>1.19 10</td>
<td>1.18 7</td>
<td>.6904</td>
</tr>
<tr>
<td>8. The market uses dividend announcements as information for assessing security value.</td>
<td>1.02 8</td>
<td>1.33 8</td>
<td>1.07 8</td>
<td>.2040</td>
</tr>
<tr>
<td>Statement</td>
<td>Manufacturing Mean Rank</td>
<td>Utilities Mean Rank</td>
<td>Wholesale/Retail Mean Rank</td>
<td>Chi-square level of Significance</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-------------------------</td>
<td>---------------------</td>
<td>---------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>9. A change in the existing dividend payout is more important than the actual amount of dividends.</td>
<td>0.86 9</td>
<td>-0.21 16</td>
<td>0.40 12</td>
<td>0.0001</td>
</tr>
<tr>
<td>10. A stockholder is attracted to firms which have dividend policies appropriate to the stockholder's particular tax environment.</td>
<td>0.80 10</td>
<td>1.37 7</td>
<td>0.88 10</td>
<td>0.0225</td>
</tr>
<tr>
<td>11. Capital gains expected to result from earnings retention are riskier than are dividend expectations.</td>
<td>0.76 11</td>
<td>0.85 12</td>
<td>0.51 11</td>
<td>0.2816</td>
</tr>
<tr>
<td>12. Management should be responsive to its shareholders' preferences regarding dividends.</td>
<td>0.68 12</td>
<td>1.22 9</td>
<td>0.91 9</td>
<td>0.0240</td>
</tr>
<tr>
<td>13. Investors in low tax brackets are attracted to high-dividend stocks.</td>
<td>0.50 13</td>
<td>0.86 11</td>
<td>0.39 13</td>
<td>0.1057</td>
</tr>
<tr>
<td>14. New capital investment requirements of the firm generally have little effect on modifying the pattern of dividend behavior.</td>
<td>0.38 14</td>
<td>0.72 14</td>
<td>0.09 15</td>
<td>0.0786</td>
</tr>
<tr>
<td>15. Stockholders in high tax brackets are attracted to low-dividend stocks.</td>
<td>0.24 15</td>
<td>0.83 13</td>
<td>0.29 14</td>
<td>0.0075</td>
</tr>
</tbody>
</table>
Exhibit 4. Issues Involving Corporate Dividend Policy (Continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Manufacturing</th>
<th></th>
<th>Utilities</th>
<th></th>
<th>Wholesale/Retail</th>
<th></th>
<th>Chi-square level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Rank</td>
<td>Mean Rank</td>
<td>Mean Rank</td>
<td>Mean Rank</td>
<td></td>
<td>Mean Rank</td>
<td></td>
</tr>
<tr>
<td>(Mean based on -3 to +3 disagreement-agreement scale)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Dividend distributions should be viewed as a residual after financing desired investments from available earnings.</td>
<td>.13</td>
<td>16</td>
<td>-1.35</td>
<td>17</td>
<td>-.07</td>
<td>16</td>
<td>.0001</td>
</tr>
<tr>
<td>17. Financing decisions should be independent of a firm's dividend decisions.</td>
<td>-.36</td>
<td>17</td>
<td>-.10</td>
<td>15</td>
<td>-.58</td>
<td>17</td>
<td>.7495</td>
</tr>
<tr>
<td>18. Investors are basically indifferent between returns from dividends versus those from capital gains.</td>
<td>-1.33</td>
<td>18</td>
<td>-1.77</td>
<td>18</td>
<td>-1.46</td>
<td>18</td>
<td>.0103</td>
</tr>
</tbody>
</table>

Spearman's rank order correlation: 

- \[.89**\]
- \[.95**\]
- \[.97**\]

*Inadequate cell size -- Chi square test may not be valid.

**Significant relationship at .01 level of significance.
sizes, the seven-point disagreement-agreement scale was collapsed to three classes -- one consisting of "strongly disagree" and "moderately disagree," a second "slightly disagree," "no opinion," and "slightly agree," and a third "moderately agree" and "strongly agree." Pair-wise Chi square tests were also performed which revealed that the manufacturing and wholesale/retail firms had no significant differences in responses for those issues with adequate cell sizes. Hence, the differences occurred primarily as a result of the responses of the utilities in relation to either manufacturing (9 significant differences including I3, I5, I9, I10, I13-I16, and I18) or to wholesale/retail (3 significant differences including I1, I5, and I16). The following sections discuss these issues.

How Companies Decide on Dividend Payments

The first issue involves how companies decide on dividend payments. The results suggest that firms behave as though they have some target dividend payout (I4) but do not apply this rate to each year's earnings, otherwise, using a target rate would cause wild fluctuations in dividends. Instead, managers attempt to smooth dividends and maintain an uninterrupted record of dividend payments (I3). Firms are also reluctant to change their dividend rates if they are likely to be reversed in the future (I1). In other words, firms seek to maintain a reasonably stable dividend policy. These findings are generally consistent with those obtained by Lintner (16) during his interviews with corporate managers about their dividend policies in the mid-1950s.

Lintner also found that managers focus on the change in the existing rate of dividend payout, not the amount of the payout (I9). The respondents to the current survey, however, exhibit significant differences on this issue. The lower payout manufacturing and wholesale/retail firms show some agreement with this statement whereas the higher payout utilities slightly disagree.
Effects of Dividends Announcements

Another issue concerns dividend announcement effects on the value of the firm. This study suggests that firms exhibit behavior which results in stable dividend payouts that are increased only when the new, higher level can be maintained. An increase in current dividend payout may be interpreted by investors as a message that reflects management's assessment of future earnings prospects. Theoretically, an increase in share prices should be associated with the public announcement of a dividend increase. With the exception of the study by Watts [24], the empirical evidence by Fama, Fisher, Jensen and Roll [10], Pettit [22], Laub [15], Kwan [14], Bhattacharya [4], and Ahrony and Swary [1] seems to suggest that dividend changes do convey some unanticipated information to the market. The extent of the influence of dividend announcements on share price is mixed. Some studies show that there is a substantial information effect while others conclude that the effect is small.

The results of this survey indicate that all three industry groups agree with the statements that dividend payments provide a "signaling device" of future company prospects (17) and the market uses dividend announcements as information for assessing security value (18). Based on this belief it would appear that firms would want to provide as much forewarning as possible when it is necessary to make a sharp change in the dividend rate to ensure that the action is not misinterpreted. In fact, there is also a high level of agreement with the statement that the reasons for dividend policy changes should be adequately disclosed to investors (12).

Dividends and Firm Valuation

A third controversial issue deals with the relationship between dividends and value. Brealey and Myers (7) note that there are three opposing points of view. One group believes that an increase in dividend payout reduces value.
A middle-of-the-road group claims that dividend policy makes no difference. Although such studies as those by Friend and Puckett (12), Black and Scholes (6), and Miller and Scholes (21) tend to support the belief that the value of the firm is independent of dividend yield, the respondents generally believe that dividend payout affects the price of common stock (15). The utilities, however, show a significantly higher level of agreement with this statement when compared to the other two industry groups.

Investor's Dividend Preferences

A fourth issue involves clientele effects. That is, various clienteles of investors have different dividend preferences. One of the major reasons for these preferences revolves around different tax brackets. In a world of perfect and efficient capital markets, Miller and Modigliani [20] argue that investors are basically indifferent to returns in the form of dividends and capital gains and hence, dividend policy is irrelevant. Yet, firms operate in a flawed world in which one of the greatest imperfections is the tax consequences of dividend policy. Thus, to the extent that market imperfections exist, dividends are relevant. This would suggest that high tax bracket investors would gravitate towards low-dividend stocks and low tax bracket investors to high-dividend stocks.

The empirical evidence is mixed. For example, Black and Scholes [6] and Gordon and Bradford [13], show that dividend payout is irrelevant even with taxes. On the other hand, Litzenberger and Ramaswamy [17] and Bar-Yosef and Kolodny [2] find a positive relationship between expected before-tax returns on stocks and dividend yields. These latter findings are consistent with high-dividend stocks having to provide higher expected before-tax returns than low-dividend stocks to offset the tax disadvantage.
Several questions relate to the issue of clientele effects (II0, II1, II2, II3, II5, and II8). For example, all three industry groups disagree with the statement that investors are basically indifferent between returns from dividends versus those from capital gains (II8). They also believe that a stockholder is attracted to firms which have dividend policies appropriate to the stockholder's particular tax rate (II0) and that management should be responsive to its shareholders' preferences regarding dividends (II2). In all of these instances significant differences exist among the industry groups with the utilities showing a greater concern for the impact of dividend policy on investors. This concern for dividends by utilities gains some support in the Study by Long [18] of Citizens Utilities Company in which he notes an investor preference for cash dividends rather than capital gains.

The Financing Decision and Dividend Policy

A final issue deals with treating dividend policy as strictly a financing decision and hence the payment of cash dividends as a passive residual. According to Weston and Brigham [25, p. 682-83], the residual theory of dividends implies that investors prefer to have a firm retain and reinvest earnings rather than pay them out in dividends if the reinvested earnings exceed the rate of return the investors can obtain on other investments of comparable risk. Thus, dividends are paid after internal investment opportunities have been exhausted. The treatment of dividend policy as a passive residual determined by the availability of acceptable investment projects implies that dividends are irrelevant and that investors are indifferent between dividends and retention by the firms.

The results of the survey show that the respondents, especially the utilities, generally disagree that dividend distributions should be viewed as a residual after financing desired investments from available earnings (II6).
The three industry groups also slightly disagree with the statement that financing decisions should be independent of a firm's dividend decisions (I17). Finally, the respondents all agree that investors have different perceptions of the relative riskiness of dividends and retained earnings (I6) and that capital gains expected to result from earnings retention are riskier than are dividend expectations (I11).

Summary and Conclusions

Based on these survey results several conclusions emerge regarding how firms determine their own dividend policy and view various dividend policy issues. One of the most important conclusions that can be reached from this survey is that firms believe dividend policy is relevant and impacts on the value of their common stock. Theory suggests that dividend policy is irrelevant and has no effect on shareholders' wealth except when personal taxes are introduced. This finding does not resolve the controversy over whether or not dividend policy matters but it does indicate that firms believe that dividend policy matters.

Another conclusion is that there does not seem to be very much difference in the way that firms determine their dividend policy today versus several decades ago. This study shows that although firms base their dividend policy decisions on numerous factors, the most important are the anticipated level of future earnings and the pattern of past dividends. These variables show little change from those identified by Lintner in the mid-1950s.

A third important conclusion of this study is that firms view dividend policy as an active decision variable as opposed to a passive one. The respondents place relatively little credence in the residual theory of dividends
as an operational concept and perceive that investors have preferences between dividends and capital gains.

Fourth, firms strive to maintain an uninterrupted record of dividend payments and are reluctant to change dividends that cannot be maintained. They tend to have a target dividend payout and to move toward it with a lag. This suggests that firms believe that dividends serve as a signaling device and are careful not to send the wrong signal to investors.

Fifth, the three industry groups show considerable homogeneity in the overall ranking of both factors and issues relating to dividend policy but have distinct differences on specific items. This result suggests that the high dividend payout utilities have a somewhat different view towards dividend policy than the manufacturing and wholesale/retail firms. Thus, it may be worthwhile to examine dividend policy decisions on an industry-by-industry basis.

In conclusion, this study suggests that several differences exist between the theory and other empirical evidence on dividend policy and managers perceptions regarding dividend policy. Although the findings do not indicate what a firm should do about dividend policy, they do indicate how managers actually perceive various factors and issues influencing their dividend policy decisions.
References


The following papers are currently available in the Edwin L. Cox School of Business Working Paper Series.

79-100 "Microdata File Merging Through Large-Scale Network Technology," by Richard S. Barr and J. Scott Turner

79-101 "Perceived Environmental Uncertainty: An Individual or Environmental Attribute," by Peter Lorenzi, Henry F. Sims, Jr., and John W. Slocum, Jr.


80-100 "Implementing the Portfolio (SBU) Concept," by Richard A. Bettis and William K. Hall

80-101 "Assessing Organizational Change Approaches: Towards a Comparative Typology," by Don Hellriegel and John W. Slocum, Jr.

80-102 "Constructing a Theory of Accounting--An Axiomatic Approach," by Marvin L. Carlson and James W. Lamb

80-103 "Mentors & Managers," by Michael E. McGill

80-104 "Budgeting Capital for R&D: An Application of Option Pricing," by John W. Kensinger

80-200 "Financial Terms of Sale and Control of Marketing Channel Conflict," by Michael Levy and Dwight Grant


80-301 "Controlling the Performance of People in Organizations," by Steven Kerr and John W. Slocum, Jr.

80-400 "The Effects of Racial Composition on Neighborhood Succession," by Kerry D. Vandell


80-801 "Comparison of the EEOCC Four-Fifths Rule and A One, Two or Three σ Binomial Criterion," by Marion Gross Sobol and Paul Ellard

80-900 "Bank Portfolio Management: The Role of Financial Futures," by Dwight M. Grant and George Hempel
<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Hedging Uncertain Foreign Exchange Positions,&quot; by Mark R. Eaker and</td>
<td>Dwight M. Grant</td>
</tr>
<tr>
<td>Dwight M. Grant</td>
<td></td>
</tr>
<tr>
<td>&quot;Strategic Portfolio Management in the Multibusiness Firm: An</td>
<td>Richard A. Bettis and William K. Hall</td>
</tr>
<tr>
<td>Implementation Status Report,&quot; by Richard A. Bettis and William K.</td>
<td></td>
</tr>
<tr>
<td>Hall</td>
<td></td>
</tr>
<tr>
<td>&quot;Sources of Performance Differences in Related and Unrelated</td>
<td>Richard A. Bettis</td>
</tr>
<tr>
<td>Diversified Firms,&quot; by Richard A. Bettis</td>
<td></td>
</tr>
<tr>
<td>&quot;The Information Needs of Business With Special Application to</td>
<td>Paul Gray</td>
</tr>
<tr>
<td>Managerial Decision Making,&quot; by Paul Gray</td>
<td></td>
</tr>
<tr>
<td>&quot;Diversification Strategy, Accounting Determined Risk, and Accounting</td>
<td>Richard A. Bettis and William K. Hall</td>
</tr>
<tr>
<td>Determined Return,&quot; by Richard A. Bettis and William K. Hall</td>
<td></td>
</tr>
<tr>
<td>&quot;Toward Analytically Precise Definitions of Market Value and Highest</td>
<td>Kerry D. Vandell</td>
</tr>
<tr>
<td>and Best Use,&quot; by Kerry D. Vandell</td>
<td></td>
</tr>
<tr>
<td>&quot;Person-Situation Interaction: An Exploration of Competing Models</td>
<td>William F. Joyce, John W. Slocum, Jr., and Mary Ann Von</td>
</tr>
<tr>
<td>of Fit,&quot; by William F. Joyce, John W. Slocum, Jr., and Mary Ann</td>
<td>Glinow</td>
</tr>
<tr>
<td>&quot;Correlates of Climate Discrepancy,&quot; by William F. Joyce and John</td>
<td>Slocum</td>
</tr>
<tr>
<td>Solomon and Kerry D. Vandell</td>
<td></td>
</tr>
<tr>
<td>&quot;Project Abandonment as a Put Option: Dealing with the Capital</td>
<td>John W. Kensinger</td>
</tr>
<tr>
<td>Investment Decision and Operating Risk Using Option Pricing Theory,&quot;</td>
<td></td>
</tr>
<tr>
<td>&quot;The Interrelationships Between Banking Returns and Risks,&quot; by George</td>
<td>George H. Hempel</td>
</tr>
<tr>
<td>H. Hempel</td>
<td></td>
</tr>
<tr>
<td>&quot;The Environment For Funds Management Decisions In Coming Years,&quot; by</td>
<td>George H. Hempel</td>
</tr>
<tr>
<td>&quot;A Test of Gouldner's Norm of Reciprocity in a Commercial Marketing</td>
<td>Roger Kerin, Thomas Barry, and Alan Dubinsky</td>
</tr>
<tr>
<td>Research Setting,&quot; by Roger Kerin, Thomas Barry, and Alan Dubinsky</td>
<td></td>
</tr>
<tr>
<td>&quot;Solution Strategies and Algorithm Behavior in Large-Scale Network</td>
<td>Richard S. Barr</td>
</tr>
<tr>
<td>Codes,&quot; by Richard S. Barr</td>
<td></td>
</tr>
<tr>
<td>&quot;The SMU Decision Room Project,&quot; by Paul Gray, Julius Aronofsky,</td>
<td>Michael Levy, Charles Ingene</td>
</tr>
<tr>
<td>Nancy W. Berry, Olaf Helmer, Gerald R. Kane, and Thomas E. Perkins</td>
<td></td>
</tr>
<tr>
<td>&quot;Cash Discounts to Retail Customers: An Alternative to Credit Card</td>
<td>Michael Levy, Charles Ingene</td>
</tr>
<tr>
<td>Performance,&quot; by Michael Levy and Charles Ingene</td>
<td></td>
</tr>
<tr>
<td>&quot;Merchandising Decisions: A New View of Planning and Measuring</td>
<td>Michael Levy, Charles A. Ingene</td>
</tr>
<tr>
<td>Performance,&quot; by Michael Levy and Charles Ingene</td>
<td></td>
</tr>
<tr>
<td>&quot;A Methodology for the Formulation and Evaluation of Energy Goals</td>
<td>Julius Aronofsky, Reuven Karni, and Harry Tankin</td>
</tr>
<tr>
<td>and Policy Alternatives for Israel,&quot; by Julius Aronofsky, Reuven</td>
<td></td>
</tr>
<tr>
<td>Karni, and Harry Tankin</td>
<td></td>
</tr>
</tbody>
</table>
"Job Redesign: Improving the Quality of Working Life," by John W. Slocum, Jr.

"Managerial Uncertainty and Performance," by H. Kirk Downey and John W. Slocum, Jr.

"Compensating Balance, Rationality, and Optimality," by Chun H. Lam and Kenneth J. Boudreaux


"The Chinese-U.S. Symposium On Systems Analysis," by Paul Gray and Burton V. Dean

"The Sensitivity of Policy Elasticities to the Time Period Examined in the St. Louis Equation and Other Tests," by Frank J. Bonello and William R. Reichenstein

"Forecasting Industrial Bond Rating Changes: A Multivariate Model," by John W. Peavy, III

"Improving Gap Management as a Technique for Reducing Interest Rate Risk," by Donald G. Simonson and George H. Hempel


"The Significance of Price-Earnings Ratios on Portfolio Returns," by John W. Peavy, III and David A. Goodman

"Further Evaluation of Financing Costs for Multinational Subsidiaries," by Catherine J. Bruno and Mark R. Eaker

"Seven Key Rules for Successful Stock Market Speculation," by David Goodman

"The Price-Earnings Relative as an Indicator of Investment Returns," by David Goodman and John W. Peavy, III


"Sequential Information Dissemination and Relative Market Efficiency," by Christopher B. Barry and Robert H. Jennings

"Modeling Earnings Behavior," by Michael F. van Breda


"The Price-Earnings Relatives - A New Twist to the Low-Multiple Strategy," by David A. Goodman and John W. Peavy, III

"Risk Considerations in Modeling Corporate Strategy," by Richard A. Bettis


82-103 "A Typology of Small Businesses: Hypothesis and Preliminary Study," by Neil C. Churchill and Virginia L. Lewis

82-104 "Imperfect Information, Uncertainty, and Credit Rationing: A Comment and Extension," by Kerry D. Vandell

82-200 "Equilibrium in a Futures Market," by Jerome Baesel and Dwight Grant

82-201 "A Market Index Futures Contract and Portfolio Selection," by Dwight Grant

82-202 "Selecting Optimal Portfolios with a Futures Market in a Stock Index," by Dwight Grant

82-203 "Market Index Futures Contracts: Some Thoughts on Delivery Dates," by Dwight Grant

82-204 "Optimal Sequential Futures Trading," by Jerome Baesel and Dwight Grant

82-300 "The Hypothesized Effects of Ability in the Turnover Process," by Ellen F. Jackofsky and Lawrence H. Peters

82-301 "Teaching a Financial Planning Language as the Principal Computer Language for MBA's," by Thomas E. Perkins and Paul Gray

82-302 "Put Budgeting Back Into Capital Budgeting," by Michael F. van Breda

82-400 "Information Dissemination and Portfolio Choice," by Robert H. Jennings and Christopher B. Barry

82-401 "Reality Shock: The Link Between Socialization and Organizational Commitment," by Roger A. Dean

82-402 "Reporting on the Annual Report," by Gail E. Farrelly and Gail B. Wright

82-403 "A Linguistic Analysis of Accounting," by Gail E. Farrelly


82-601 "Optimal Land Use Planning," by Richard B. Peiser

82-602 "Variances and Indices," by Michael F. van Breda

82-603 "The Pricing of Small Business Loans," by Jonathan A. Scott

82-604 "Collateral Requirements and Small Business Loans," by Jonathan A. Scott

82-605 "Validation Strategies for Multiple Regression Analysis: A Tutorial," by Marion G. Sobol
"Credit Rationing and the Small Business Community," by Jonathan A. Scott

"Bank Structure and Small Business Loan Markets," by William C. Dunkelberg and Jonathan A. Scott

"Transportation Evaluation in Community Design: An Extension with Equilibrium Route Assignment," by Richard B. Peiser

"An Expanded Commercial Paper Rating Scale: Classification of Industrial Issuers," by John W. Peavy, III and S. Michael Edgar

"Inflation, Risk, and Corporate Profitability: Effects on Common Stock Returns," by David A. Goodman and John W. Peavy, III

"Turnover and Job Performance: An Integrated Process Model," by Ellen F. Jackofsky


"Analytical Review Developments in Practice: Misconceptions, Potential Applications, and Field Experience," by Wanda Wallace

"Using Financial Planning Languages for Simulation," by Paul Gray

"A Look at How Managers' Minds Work," by John W. Slocum, Jr. and Don Hellriegel

"The Impact of Price Earnings Ratios on Portfolio Returns," by John W. Peavy, III and David A. Goodman

"Replicating Electric Utility Short-Term Credit Ratings," by John W. Peavy, III and S. Michael Edgar

"Job Turnover Versus Company Turnover: Reassessment of the March and Simon Participation Model," by Ellen F. Jackofsky and Lawrence H. Peters

"Investment Management by Multiple Managers: An Agency-Theoretic Explanation," by Christopher B. Barry and Laura T. Starks

"The Senior Marketing Officer - An Academic Perspective," by James T. Rothe

"The Impact of Cable Television on Subscriber and Nonsubscriber Behavior," by James T. Rothe, Michael G. Harvey, and George C. Michael


"Integrating Financial Portfolio Analysis with Product Portfolio Models," by Vijay Mahajan and Jerry Wind
82-112 "A Non-Uniform Influence Innovation Diffusion Model of New Product Acceptance," by Christopher J. Easingwood, Vijay Mahajan, and Eitan Muller

82-113 "The Acceptability of Regression Analysis as Evidence in a Courtroom - Implications for the Auditor," by Wanda A. Wallace

82-114 "A Further Inquiry Into the Market Value and Earnings' Yield Anomalies," by John W. Peavy, III and David A. Goodman

82-120 "Compensating Balances, Deficiency Fees and Lines of Credit: An Operational Model," by Chun H. Lam and Kenneth J. Boudreaux

82-121 "Toward a Formal Model of Optimal Seller Behavior in the Real Estate Transactions Process," by Kerry Vandell


82-123 "Compensating Balances, Deficiency Fees and Lines of Credit," by Chun H. Lam and Kenneth J. Boudreaux

83-100 "Teaching Software System Design: An Experiential Approach," by Thomas E. Perkins


83-102 "An Interactive Approach to Pension Fund Asset Management," by David A. Goodman and John W. Peavy, III


83-105 "Robust Regression: Method and Applications," by Vijay Mahajan, Subhash Sharma, and Jerry Wind

83-106 "An Approach to Repeat-Purchase Diffusion Analysis," by Vijay Mahajan, Subhash Sharma, and Jerry Wind

83-200 "A Life Stage Analysis of Small Business Strategies and Performance," by Rajeswararao Chaganti, Radharao Chaganti, and Vijay Mahajan

83-201 "Reality Shock: When A New Employee's Expectations Don't Match Reality," by Roger A. Dean and John P. Wanous

83-202 "The Effects of Realistic Job Previews on Hiring Bank Tellers," by Roger A. Dean and John P. Wanous


83-204 "Differential Information and the Small Firm Effect," by Christopher B. Barry and Stephen J. Brown
83-300 "Constrained Classification: The Use of a Priori Information in Cluster Analysis," by Wayne S. DeSarbo and Vijay Mahajan


83-400 "Small Businesses, the Economy, and High Interest Rates: Impacts and Actions Taken in Response," by Neil C. Churchill and Virginia L. Lewis


83-500 "A Closer Look at Stock-For-Debt Swaps," by John W. Peavy III and Jonathan A. Scott

83-501 "Small Business Evaluates its Relationship with Commercial Banks," by William C. Dunkelberg and Jonathan A. Scott


83-503 "Differential Information and the Small Firm Effect," byChristopher B. Barry and Stephen J. Brown

83-504 "Accounting Paradigms and Short-Term Decisions: A Preliminary Study," by Michael van Breda


83-506 "Initial Observations from the Decision Room Project," by Paul Gray


83-800 "Multiple Key Informants' Perceptions of Business Environments," by William L. Cron and John W. Slocum, Jr.


83-803 "Business Synergy and Profitability," by Vijay Mahajan and Yoram Wind

83-804 "Advertising, Pricing and Stability in Oligopolistic Markets for New Products," by Chaim Fershtman, Vijay Mahajan, and Eitan Muller

83-805 "How Have The Professional Standards Influenced Practice?," by Wanda A. Wallace

83-806 "What Attributes of an Internal Auditing Department Significantly Increase the Probability of External Auditors Relying on the Internal Audit Department?," by Wanda A. Wallace

83-807 "Building Bridges in Rotary," by Michael F. van Breda

83-808 "A New Approach to Variance Analysis," by Michael F. van Breda


83-810 "Taxes, Insurance, and Corporate Pension Policy," by Andrew H. Chen


83-900 "Networks with Side Constraints: An LU Factorization Update," by Richard S. Barr, Keyvan Farhagian, and Jeff L. Kennington

83-901 "Diversification Strategies and Managerial Rewards: An Empirical Study," by Jeffrey L. Kerr


83-903 "Network Generating Models for Equipment Replacement," by Jay E. Aronson and Julius S. Aronofsky

83-904 "Differential Information and Security Market Equilibrium," by Christopher B. Barry and Stephen J. Brown

83-905 "Optimization Methods in Oil and Gas Development," by Julius S. Aronofsky

83-907 "Security Price Reactions Around Corporate Spin-Off Announcements," by Gailen L. Hite and James E. Owers


83-110 "Microcomputers in the Banking Industry," by Chun H. Lam

83-111 "Current and Potential Application of Microcomputers in Banking -- Survey Results," by Chun H. Lam and George H. Hempel


83-114 "The Effect of Stock-for-Debt on Security Prices," by John W. Peavy, III and Jonathan A. Scott

83-115 "Risk/Return Performance of Diversified Firms," by Richard A. Bettis and Vijay Mahajan


