# Market Reactions to Accounting Policy Deliberations: The Inflation Accounting Case Revisited

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# Market Reactions to Accounting Policy Deliberations: The Inflation Accounting Case Revisited

A recent study by Noreen and Sepe (N&S, 1981) attempted to investigate the effect of FASB inflation accounting deliberations on security prices. Employing a correlation-based "price reversal" methodology, the authors focused their analysis, principally, on three events associated with these deliberations: (1) the report in January 1974 that the inflation accounting disclosure issue had been placed on the FASB agenda; (2) the report in November 1975 that the FASB had decided not to issue a standard that year in connection with its December 1974 exposure draft; and (3) the report in January 1979 that the FASB had once again proposed that inflation accounting disclosures be required. On the basis of their empirical results, N&S concluded that, indeed, there was a market reaction to each of these three announcements. Furthermore, they noted that the correlation-based methodology used in their paper "may prove to be useful in other situations where there was vacillation by accounting (or other) policymakers over time."

The purpose of the present paper is to point out several shortcomings of the N&S study and to suggest an alternative framework for testing for potential market reactions to a series of events such as the FASB deliberations on inflation accounting. Furthermore, some empirical evidence relating to the robustness of the correlation test results to the use of alternative methodological approaches such as analysis of variance and Hotelling's test of means is presented and discussed.[1/] These results appear to question the propriety of some of N&S's correlation test findings and suggest that further research concerning the potential market effects of FASB inflation accounting deliberations is warranted before definitive conclusions can be reached.

## Experimental Design and Methodological Issues

### Some Shortcomings of the Price Reversal Methodology

The general research approach employed by N&S is premised on the argument that market reactions to FASB inflation accounting deliberations can be determined, appropriately, by examining the association between abnormal returns of firms for the various announcements (events). They credit this correlation-based methodology with the advantage that it does not require the researcher to specify, ex ante, the direction or magnitude of a price reaction to any particular event. Yet, as will be demonstrated shortly, this is not a unique property of the correlation approach. More importantly, however, a closer examination of the methodology reveals at least three potentially serious shortcomings in the N&S paper:

1. Variable (Event) Selection and Experimental Structure. Perhaps the most significant of these limitations stems from the fact that the correlation approach is an awkward, if not inappropriate methodology for application to research problems where the number of variates (i.e., events or announcements in the N&S paper) under consideration exceeds three or four.[2/] Attempts to employ it under these circumstances may not be theoretically defensible since they may require the researcher to artificially reduce the number of variates by a selection process that is necessarily arbitrary or ad hoc. But, this is precisely the situation encountered in the N&S experiment. Observe that of the nine inflation accounting disclosure events identified in Appendix A[3/], only three that were announced by the FASB (months R2, R24 and R62) were selected for primary consideration. The other six - three announced by each of the FASB (months R3, R14 and R31) and the SEC (months R18, R21 and R28) - in turn were assumed to be of secondary interest, and the experiment was designed to incorporate this hierarchical structure.[4/] Even if one agrees with the authors that the SEC announcements are incidental to

their study, the classification of the six FASB announcements into the two groups cannot be defended or justified conceptually - it is ad hoc! To some extent N&S recognize this shortcoming when they acknowledge that the specific dates of primary market reaction (months R2, R24 and R62) were selected because "a priori, it was felt...that these events would result in the largest probability revisions by market traders."[5/]

2. Interpretation of Economic Significance of Results. A second important shortcoming of the correlation-based approach is that it yeilds a metric which cannot be conveniently interpreted in economic terms. For instance, Table 2 in the N&S paper shows the coefficients of correlation for months {R2, R24} and {R2, R62} to be -0.25 and 0.43 respectively in the case of the sample of affected firms. But, specifically what is the economic significance of these results for capital market participants and others? In particular, do they indicate that market traders, who had inside information regarding FASB inflation accounting announcements, were able to exploit the opportunities and earn superior or abnormal returns? In other words, do the results imply that firms favourably (unfavourably) affected by the initial proposal - as evidenced by positive (negative) abnormal returns in month R2 - experienced, on average, abnormal returns which are not only negative (positive) and positive (negative) in months R24 and R62 respectively, but are sufficiently large to absorb market trading costs? No unequivocal answers can be provided. The point is that the correlation measure is an association metric that sheds little light on issues pertaining to the magnitude of abnormal returns earned by the affected and exempt firms.

3. Statistical Test Results. Finally, readers should exercise some caution in accepting the levels of statistical significance reported in the N&S paper. The problem arises because while significance tests employed in connection with

the correlation-based price reversal methodology, by and large, reflect a univariate testing perspective, the structure of the hypotheses and the number of variates (events) investigated in the N&S paper indicate that statistical testing in a multi-variate context is more appropriate. Under these circumstances, significance levels based on the univariate framework can be expected to be overstated, perhaps by a considerable amount. All of the statistical results reported in Tables 1-3 of the N&S paper appear to be affected by this shortcoming. To be sure, however, N&S attempted to deal with the problem via the construction of joint confidence intervals for the three events of primary market reaction. Unfortunately, these efforts were not extended to include the other six events.[6/]

In short, the preceding discussion indicates that the use of the correlation-based price reversal approach does introduce some important limitations in the N&S paper. The exclusive reliance on that methodology by the authors, therefore, is surprising since there exist alternative research paradigms which, although not free of shortcomings, avoid some of the problems described above.

Alternative Methodological Frameworks

In order to illustrate these alternative frameworks, consider the following scenario. Suppose that the sign[7/] of the abnormal return in month R2, $\delta_{j,R2}$, is used to classify firms into two groups:[8/] firm j is assigned to Group A if $\delta_{j,R2} < 0$ and to Group B if $\delta_{j,R2} > 0$. To the extent the initial FASB release in month R2 did, indeed, convey information to traders, Group A can be expected to include firms that, on average, were unfavourably affected by the announcement, while Group B can be expected to contain firms that, on average, were favourably affected. On the other hand, if the initial release had no announcement effect, then Groups A and B might be viewed as consisting of securities that experienced unfavourable and favourable abnormal returns because of unknown random factors in

month R2 with no further revaluation implications since $E(\delta_{j,t+K}|\delta_{j,t} \neq 0) = E(\delta_{j,t+K}) = 0$, K = 1,2...N. In contrast, if the price reversal hypothesis does, in fact, have descriptive validity, then the following relatiohships can be hypothesized given the discussion in Section 1.2 of the N&S paper:

| Group A | Group B |
|---|---|
| (1a) $E(\delta_{j,I}\|\delta_{j,R2} < 0) < 0$ | (2a) $E(\delta_{j,I}\|\delta_{j,R2} > 0) > 0$ |
| (1b) $E(\delta_{j,D}\|\delta_{j,R2} < 0) > 0$ | (2b) $E(\delta_{j,D}\|\delta_{j,R2} > 0) < 0$ |

where $\delta_{j,I}$ = abnormal return of firm j for the month in which an event that <u>increases</u> the probability of supplementary inflation disclosures is announced, i.e., I = R3, R14, R18, R21, R28 and R62; and

$\delta_{j,D}$ = abnormal return of firm j for the month in which an event that <u>decreases</u> the probability of supplementary inflation disclosures is announced, i.e., D = R24 and R31.

Next, these hypothesized relationships for the two groups of firms can be combined, quite conveniently, by subtracting (1a) and (1b) from (2a) and (2b) respectively:[9/]

(3a) $E\{(\delta_{j,I}|\delta_{j,R2} > 0) - (\delta_{j,I}|\delta_{j,R2} < 0)\} > 0$

(3b) $E\{(\delta_{j,D}|\delta_{j,R2} > 0) - (\delta_{j,D}|\delta_{j,R2} < 0)\} < 0$

The null and alternative hypotheses to be tested, accordingly, may be stated more succinctly as:[10/]

(4) $H_o$: $E(\delta'_{j,D}) = E(\delta'_{j,I}) = 0$ j = 1,...N firms
D = R24, R31
vs. $H_a$: $E(\delta'_{j,D}) < 0 < E(\delta'_{j,I})$ I = R3, R14,...R62

where
$$\delta'_{j,t} = \begin{cases} -\delta'_{j,t} & \text{if } \delta_{j,R2} < 0 \\ \delta_{j,t} & \text{if } \delta_{j,R2} > 0 \end{cases} \qquad t = D,I$$

From a methodological viewpoint, a test of the above hypothesis requires the researcher not only to have determined the transformed abnormal returns, $\delta'_{j,t}$, but also to have identified an appropriate statistical methodology that can handle,

simultaneously, all of the variables and relationships implied by (4). At least two multivariate statistical frameworks appear to be particularly suitable in this regard - analysis of variance and Hotelling's $T^2$ test of means. Each of these is now considered briefly:

1. Analysis of Variance (ANOVA). The two-way ANOVA layout (with one observation per cell) is an ideal methodology for testing the above hypothesis if one is willing to postulate that the $\delta'_{j,t}$ can be represented by a linear model. The non-parametric version of this model is specified by Hollander & Wolfe [1973] as:[11/]

(5) $\delta'_{j,t} = \mu + \beta_j + \alpha_t + e_{j,t}$ $\qquad$ $j = 1,\ldots N$ firms, $t = 1,\ldots K$ events

$\mu$ = unknown overall mean;

$\beta_j$ = the effect of block (firm) j, $\Sigma\beta_j = 0$;

$\alpha_t$ = unknown treatment (event/FASB announcement) effect in month t, $\Sigma\alpha_t = 0$;

$e_{j,t}$ = error for firm j in month t, which is assumed to be mutually independent and from the same continuous population.

At least three facets of the above layout should be noted. First, observe that there are N independent blocks (firms) each with K distinct treatment - events or announcements relating to FASB inflation accounting disclosures. To the extent one wished to examine the market reaction to FASB (as opposed to SEC) announcements only, the treatments would be restricted to months R3, R14, R24, R31 and R62. Similarly, if the incorporation of a control treatment was viewed as desirable, it could be accomplished by including a randomly selected month into the analysis.

Second, hypotheses concerning the effect of FASB announcements ($\alpha$) on the abnormal returns ($\delta'$) can be tested in the context of the distribution-free Friedman rank-sum test. In the event the overall (joint) test of the null hypothesis that the $\alpha$'s are all equal (i.e., $\alpha_1 = \alpha_2 = \ldots\alpha_K$) is rejected, then

the multiple comparisons test based on Friedman rank sums (see Hollander & Wolfe [1973]) can be employed to identify which specific treatment (event) or set of treatments has a differential effect on abnormal returns.

Finally, it should be noted that the propriety of using the two-way ANOVA layout, by and large, hinges on the assumption that the abnormal returns, $\delta'_{j,t}$, can be characterized by the model in (5) above.[12/] This, admittedly, is a shortcoming of the ANOVA methodology.

2. Hotelling's $T^2$ Test of Means. Perhaps, the dominant advantage of the Hotelling's $T^2$ test of means over the two-way ANOVA methodology is that it avoids the shortcoming just described. More specifically, the Hotelling's $T^2$ methodology does not require the researcher to indicate, or for that matter to assume a specific functional relationship betweeen abnormal returns and the FASB announcements (events or treatments).[13/]

Employed quite extensively in previous capital market-based accounting research (see, for example, Gonedes [1975]), this multivariate statistical methodology enables one to test whether the vector of mean abnormal returns observed in connection with the K events (or FASB announcements) differs from a vector of hypothesized values or constants, i.e., zero in the case of the null hypothesis in (4). Moreover, multiple comparison procedures allow the researcher to test secondary hypotheses concerning specific linear combinations of elements in these vectors while simultaneously maintaining a uniform experiment-wise error rate or level of significance (see Morrison [1967]).

It would appear, therefore, that the ANOVA and Hotelling's multivariate frameworks are well suited for the task for assessing potential market reactions to FASB inflation accounting announcements. The issue as to whether or not N&S's correlation-based results (and related conclusions) are robust with respect

to the use of these alternative methodologies, however, is one which can only be resolved empirically.

## Some Empirical Evidence on the Robustness of Correlation Tests Vis-a-vis Alternative Methodologies

Accordingly, an attempt was made at the outset to replicate the N&S experiment by employing procedures described in their paper. Two deviations in this regard should be noted. First, while N&S relied on the COMPUSTAT PDE tape for security price data, the replication reported here is based on data obtained from the CRSP file of New York Stock Exchange (NYSE) firms. Second, Fisher's Investment Performance Index, which includes all firms traded on the NYSE, is assumed to be the surrogate for the market portfolio. Moreover, both the "equally weighted" and "value weighted" versons of this index are employed for sensitivity analysis[14/], even though capital market theory suggests that the latter version is the more appropriate one. This compares with the value weighted Standard & Poor's 500 Index used by N&S.

### Correlation Test Results

Table 1 shows for each of the groups of affected (Panel A) and exempt firms (Panel B), the product moment coefficients of correlation between the composite abnormal returns applicable to the months surrounding the three events of primary interest to N&S - initial consideration (months R1 + R2), postponement of decision (R23 + R24) and reissuance of exposure draft (R61 + R62). Note that these findings are based on samples of 100 NYSE firms with the smallest pre-deliberation period residual variance[15/], and the corresponding results reported in the N&S paper are indicated, for comparative purposes, in parentheses.

Consider, initially, the results for the sample of affected firms. A survey of Panel A reveals that the correlation between the abnormal returns for months {R1 + R2} and {R23 + R24} is not only negative, as predicted, but its magnitude

or level of significance is virtually identical to that reported by N&S. This remark is applicable regardless of whether the equally weighted or value weighted Fisher Index is used. Contrary to N&S's findings, however, the correlation between abnormal returns in {R61 + R62} on the one hand and the corresponding returns in months {R1 + R2} and {R23 + R24} on the other, do not appear to be significantly different from zero at any reasonable probability level. In fact, the signs on the coefficients for the value weighted case are inconsistent with the price reversal hypothesis.

Although these results suggest a lack of a market reaction to the reissuance of the FASB ED (months R61 + R62), the findings presented in Panel A of Table 2 indicate that this inference is premature. Observe from columns (3) and (4) in Table 2 that the abnormal returns applicable to the individual months R61 and R62 are, indeed, significantly associated with those applicable to month R2. However, while the abnormal returns in month R2 are positively associated with those in month R62, they are simultaneously negatively associated with those in month R61. This seemingly differential market reaction between months R61 and R62, or more specifically, the negative association between the excess returns in months R2 and R61, of course, represents an inconsistency with predictions. It, nonetheless, helps explain the findings pertaining to the composite abnormal returns in {R61 + R62} that were discussed previously.

A closer examination of the correlation coefficients in Panel A of Table 2 indicate that the effect of the FASB postponing its decision regarding the GPL exposure draft (months R23 and R24) is, at best, marginal. In particular, note that of the four sets of correlations which N&S found to be significant - $\rho$(R2, R23), $\rho$(R2, R24), $\rho$(R23, R62) and $\rho$(R24, R62) - only the first appears to be statistically different from zero for the NYSE sample of affected firms.[16/]

Finally, Table 3 presents the coefficients of correlation between abnormal returns for month R2 and other events announced by the FASB and the SEC that were identified by N&S in Appendix A to their paper. It will be readily noted from columns (1) - (4) in Panel A that the correlation coefficients pertaining to the FASB events are similar to those reported by N&S. This, however, does not seem to be the case for the SEC events : while all three coefficients in columns (5) - (7) appear to be marginally significant, two of them - $\rho$(R2, R18) and $\rho$(R2, R28) - have the incorrect sign.

The preceding remarks have been directed to the sample of affected firms. An examination of the correlations in Panel B of Tables 1 - 3, however, reveals that by and large the results for the exempt NYSE firms are statistically indistinguishable from the corresponding findings reported in the N&S paper.

Results for Alternative Methodologies

In order to test the robustness of these correlation test results vis-a-vis the ANOVA and Hotelling methodologies, the abnormal returns for the months (events) examined by N&S were initially transformed: firms with negative abnormal returns in month R2 have all of their subsequent abnormal returns multiplied by -1. Additionally, a control treatment was incorporated into the analysis by including for each firm the abnormal return in a randomly selected control month.[17/] Results of the Hotelling and Friedman tests relating to the overall null hypothesis of no differential (announcement) effect are included in Table 4.

A survey of Table 4 reveals that the null hypothesis of no differential effect can be rejected, unequivocally, for the sample of affected firms - regardless of whether the equally weighted or value weighted market index is employed. For the sample of exempt firms, in contrast, the null hypothesis can

be rejected only in the case of the value weighted index. This latter finding coupled with a comparison of the magnitude of the test statistics in columns (1) and (3) of Table 4 indicates that the results are quite sensitive to the choice of surrogate for the market portfolio.[18/]

Although these overall test results are important in their own right, they do not shed light on the question as to whether or not the specific configuration of market reactions for at least the affected firms is consistent with N&S's price-reversal hypothesis. Consequently, they are not particularly informative with respect to the robustness issue. Table 5 overcomes this deficiency and presents the mean net abnormal returns and related F-statistics[19/] for linear combinations - components of the overall null hypothesis in (4) above - that are of direct interest. Consider, at the outset, the results for the sample of affected firms.

An examination of columns (1) and (2) of Panel A indicates that with the exception of month R14 (value weighted index), the mean net abnormal returns are not significantly different from zero in any of the other 10 months investigated by N&S. In other words, the abnormal return experience of the affected firms in each of these months is statistically indistinguishable from that in a randomly selected control month. This finding, of course, is inconsistent with the correlation test results which indicated that a significant reaction occurred between R2 and months R23 and R62 in particular (see $\rho$(R2, R23) and $\rho$(R2, R62) in Table 2).

Turning to Panel B one finds the results for linear contrasts between events of primary interest to N&S. Note that these results can be viewed as the analogs of the correlation test findings reported in the lower half of Table 2, i.e., the four correlations involving R23, R24, R61 and R62. A comparison of

the two sets of results, however, reveals a disturbing inconsistency. Observe that while the correlation between the abnormal returns in months R24 and R61 is not statistically significant, Table 5 indicates that the difference between the mean abnormal returns in those two months is, indeed, significantly different from zero (value weighted case).

The results for the sample of exempt firms (column (3) of Table 5) appear to be affected by these inconsistencies as well. For instance, Panel A in Table 5 shows that R14 is the only month in which the mean net abnormal return is significantly different from zero. The correlation results, on the other hand, lead to the inference that while a statistically significant reaction did not occur in month R14 (Table 3), it did occur in month R24 (see $\rho$(R2, R24) in Table 2).

## Concluding Remarks

Hotelling's $T^2$ test and ANOVA methodologies are well suited for assessing the potential market reactions to FASB inflation accounting announcements. The empirical results determined in the context of those methodologies are consistent with the statement that the market did react to the FASB deliberaitons on inflation accounting: the pattern of responses to the overall set of events was statistically different from random for at least the affected firms. Contrary to N&S's findings, however, no statistically significant reaction was observable for most of the <u>individual</u> events. Similarly, in a few instances the use of the Hotelling and ANOVA methodologies yielded statistically significant results for both the affected and exempt samples, while the N&S correlation tests indicated the lack of a significant market reaction to the specific events. These inconsistencies question the robustness of N&S's findings and suggest that further research on the topic is warranted before any definitive conclusions can be reached.

## References

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## Footnotes

1/ An extension along these lines is recommended by N&S.

2/ This arises largely because the approach entails an examination of the cross-sectional correlations between abnormal returns on a pair-wise basis and its application is inconvenient, if not intractible in those cases where the number of variates is large. Note that the number of cross-sectional correlations for 3,4,5 and N variates is 3,6,10 and N(N-1)/2 respectively.

3/ The event and the announcement thereof (i.e., report of event) are treated as one item, e.g. months R13 and R14.

4/ This is attested to by the sequential structure of N&S's two sets of hypotheses. Observe that the hypothesis relating to the secondary events is tested only after a rejection of the one pertaining to the dates of primary market reaction.

5/ Some might argue that these three events can be viewed as a sample (albeit non-random) from the population of available dates that is the direct result of the author's desire to reduce the costs of testing hypothesis. While this line of reasoning may ordinarily have some merit, it is untenable in this instance since the two sets of test hypotheses formulated by N&S in Section 3 of their paper do, in fact, include the population of inflation accounting events.

6/ In addition, readers should note that the lack of readily available software (tests and related routines) represents a significant impediment to hypothesis testing in a multivariate setting for this methodology.

7/ To the extent one believes that the sign throws away relevant information, one would employ the magnitude of the abnormal return instead.

8/ The alternative methodological frameworks that are described here require the *a priori* selection of one event (month) for the purpose of classifying firms. This, admittedly, is a serious limitation, but one which is also implicit in the N&S methodology. Recall that the test of the hypothesis relating to secondary events relies on the author's arbitrary choice of month R2 from the events of primary consideration.

Generally, however, the arbitrary choice of the partitioning month for the alternative methodologies can be viewed as being analogous to the arbitrary choice of events in the context of the correlation methodology.

9/ Note that this procedure yields a composite portfolio in which the trader has a "long" position in the securities included in Group B and a "short" position in those included in Group A.

10/ Alternatively, one could test the null hypothesis that $E(\delta'_{j,D}) = E(\delta'_{j,I}) = E(\delta_{j,C})$, where $\delta_{j,C}$ is the abnormal return for a randomly selected control month $C(C \neq D,I)$.

11/ The parametric version differs only with respect to the assumptions regarding the distribution of the error term: the errors, $\{e_{j,t}\}$, are assumed, in addition, to be normally distributed with zero mean and constant variance, i.e. $N(0,\sigma^2)$. See Scheffé [1959].

12/ The propriety of this assumption cannot be evaluated since the authors have failed to formulate a theoretical relationship between abnormal returns and inflation accounting events.

13/ The methodology, however, assumes that the abnormal returns, $\delta'_{j,t}$ ($j = 1,\ldots N$ firms, $t = 1,\ldots K$ events) are drawn from a multivariate normal density, $N_K(\mu,\Sigma)$ where $\underline{\mu}$ is a K-dimensional vector of mean abnormal returns and $\underline{\Sigma}$ is a KxK non-singular variance-covariance matrix. Furthermore, the observation vectors on each of the N firms are assumed to be mutually independent. For an elaboration, see Morrison [1967] or Gonedes [1975].

14/ It would appear that the effect of the alternative weighting schemes is more pronounced in the inflation accounting deliberation period (December 1973 - January 1979) than in the pre-deliberation period (January 1969 - November 1973):

| | Summary Statistic | 1/69-11/73 | 12/73-1/79 |
|---|---|---|---|
| (a) | Coefficient of correlation (between the two versions) | 0.9560 | 0.8720 |
| (b) | Mean absolute deviation | 0.0186 | 0.0232 |
| (c) | Mean square error | 0.0005 | 0.0013 |

The deviation between the two versions of the Fisher Index is quite large in some of the months investigated by N&S.

15/ This was accomplished by following the procedures described in N&S. Observe however, that since the use of alternative market indexes does not necessarily yield identical "residual variance" rankings, the same affected (or exempt) firms are not necessarily included in both the equally weighted and value weighted cases.

16/ Admittedly, the reverse seems to be the case for $\rho$(R1, R24). The importance of this finding can be discounted since R1 does not appear to be significantly associated with the other months.

17/ For each firm, a control month was selected randomly from the period including February 1974 - January 1979, but excluding the months identified in note (a) of Table 4. A uniformly distributed random number generator was used for this purpose. Sensitivity analysis reveals that the results are unaltered if the randomly selected control month was excluded from the analysis.

18/ In addition, these results may be sensitive to the choice of R2 as the partitioning month. Although this issue can be resolved by classifying firms on the basis of alternative months of interest, the related analysis is not directly relevant to this paper since our objective is to examine the robustness of N&S's correlation results and those results involve principally month R2.

19/ The multiple comparison results pertaining to the Friedman ANOVA test parallel those F-statistics (Hotelling framework) and are omitted because of space limitations.

TABLE 1

Coefficients of Correlation for Composite Abnormal Returns Applicable to Months Dec. 1973 & Jan. 1974 (R1 + R2), Oct. & Nov. 1975 (R23 + R24), Dec. 1978 & Jan. 1979 (R61 + R62)

| | Sample[a/] | Market Index[b/] | Product Moment Coefficients of Correlation[c/] (N & S results are indicated in parentheses) | | |
|---|---|---|---|---|---|
| | | | (R1 + R2) & (R23 + R24) | (R23 + R24) & (R61 + R62) | (R1 + R2) & (R61 + R62) |
| | | | (1) | (2) | (3) |
| PANEL A | Affected Firms | E | -0.402** | -0.068 | 0.117 |
| | | V | -0.389** | 0.031 | -0.079 |
| | | | (-0.393)** | (-0.325)** | (0.201)* |
| PANEL B | Exempt Firms | E | -0.215* | -0.069 | -0.026 |
| | | V | -0.263** | -0.055 | -0.062 |
| | | | (-0.182)+ | (0.029) | (-0.142) |

a/ Each sample consists of 100 NYSE firms with smallest pre-deliberation period residual variance.

b/ E = Equally weighted version of the Fisher Index, V = Value weighted version of the Fisher Index.

c/ Nominal significance levels (non-directional) are indicated as follows : + for 10% level, * for 5% level and ** for 1% level of significance.

TABLE 2

Coefficients of Correlation for Abnormal Returns Applicable to Selected Individual Months

| Month[a/] | Market Index[b/] | Product-Moment Coefficients of Correlation[c/] (N & S results are indicated in parentheses) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PANEL A : AFFECTED FIRMS | | | | PANEL B : EXEMPT FIRMS | | | |
| | | R23 | R24 | R61 | R62 | R23 | R24 | R61 | R62 |
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| R1 | E | -0.104 | -0.243** | -0.104 | -0.009 | 0.053 | -0.165+ | -0.132 | 0.046 |
| | V | -0.127 | -0.142 | -0.103 | -0.084 | 0.026 | -0.132 | -0.074 | 0.050 |
| | | (-0.147) | (-0.151) | (-0.126) | (-0.108) | (0.011) | (-0.142) | (-0.126) | (-0.108) |
| R2 | E | -0.207* | -0.039 | -0.243* | 0.373** | -0.043 | -0.255* | -0.040 | 0.011 |
| | V | -0.223* | -0.077 | -0.242* | 0.271** | -0.106 | -0.226* | -0.091 | -0.020 |
| | | (-0.213)* | (-0.253)** | (0.050) | (0.433)** | (0.106) | (-0.339)** | (-0.111) | (-0.005) |
| R23 | E | | | 0.043 | -0.153 | | | -0.085 | -0.024 |
| | V | | | 0.011 | -0.065 | | | 0.020 | -0.042 |
| | | | | (-0.019) | (-0.236)* | | | (0.008) | (-0.076) |
| R24 | E | | | 0.141 | -0.037 | | | -0.006 | -0.014 |
| | V | | | 0.125 | 0.021 | | | 0.010 | -0.054 |
| | | | | (0.046) | (-0.294)** | | | (0.126) | (0.075) |

a/ R1 = Dec. 73, R2 = Jan. 74, R23 = Oct. 75, R24 = Nov. 75, R61 = Dec. 78, R62 = Jan. 79.

b/ E = Equally weighted version of the Fisher Index, V = Value weighted version of the Fisher Index.

c/ Nominal significance levels (non-directional) are indicated as follows : + for 10% level, * for 5% level, and ** for 1% level of significance.

TABLE 3

Coefficients of Correlation Between Abnormal Returns for January, 1974 (R2) and Other Events Announced by the FASB and the SEC

| | Sample | Market Index[b] | Product-Moment Coefficients of Correlation Between R2 &:[c] (N & S results are indicated in parentheses) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Other FASB Events[a] | | | | SEC Events[a] | | |
| | | | R3 | R13 | R14 | R31 | R18 | R21 | R28 |
| | | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| PANEL A | Affected | E | 0.224* | 0.029 | 0.326** | 0.039 | -0.189+ | 0.171+ | -0.167+ |
| | Firms | V | 0.145 | 0.135 | 0.240* | -0.097 | -0.220* | 0.194+ | -0.199* |
| | | | (0.238)* | (0.048) | (0.377)** | (0.024) | (-0.141) | (0.063) | (0.116) |
| PANEL B | Exempt | E | -0.097 | -0.034 | 0.092 | -0.050 | -0.069 | -0.040 | 0.160 |
| | Firms | V | -0.143 | -0.154 | 0.141 | -0.152 | 0.125 | 0.063 | 0.185+ |
| | | | (-0.048) | (-0.243)* | (-0.057) | (0.045) | (-0.047) | (0.060) | (0.266)** |

a/ As identified in Appendix A of the N & S paper : R3 = Feb. 74, R14 = Jan. 75, R18 = May 75, R21 = Aug. 75, R28 = Mar. 76, R31 = June 76.

b/ E = Equally weighted version of the Fisher Index, V = Value weighted version of the Fisher Index.

c/ Nominal significance levels (non-directional) are indicated as follows : + for 10% level, * for 5% level and ** for 1% level of significance.

TABLE 4

Some Multivariate Test Results for Abnormal Returns Applicable to Months Surrounding FASB/SEC Inflation Accounting Events

| Test Statistic a/, b/ | Equally Weighted Market Index | | Value Weighted Market Index | |
|---|---|---|---|---|
| | Affected | Exempt | Affected | Exempt |
| | (1) | (2) | (3) | (4) |
| Hotelling's Test of Means: | | | | |
| Maximum $T^2$ Statistic | 30.68** | 7.79 | 119.85** | 79.61** |
| (Related F-statistic in parentheses: 11 and 89 df.) | (2.51) | (0.64) | (9.79) | (6.51) |
| Friedman's Two-Way Analysis of Variance: Chi-square Statistic (12 df.) | 28.95** | 5.06 | 146.20** | 89.41** |

a/ Based on transformed abnormal returns ($\delta'_{j,t}$) in months R3, R13, R14, R18, R21, R23, R24, R28, R31, R61 and R62, as well as the abnormal return for a randomly selected control month. The transformed abnormal returns, $\delta'_{j,t}$, were determined as follows : $\delta'_{j,t} = -\delta_{j,t}$ if $\delta_{j,R2} < 0$ and $\delta'_{j,t} = \delta_{j,t}$ if $\delta_{j,R2} > 0$. For purposes of the Hotelling's test, abnormal returns for the randomly selected control month were deducted from $\delta'_{j,t}$.

b/ Nominal significance levels are indicated as follows : + for 10% level, * for 5% level and ** for 1% level of significance.

TABLE 5

Hypothesis Testing in the Context of Hotelling's $T^2$ Test Framework : Results for Selected Linear Combinations

| | Null Hypothesis[a/] | | MEAN NET ABNORMAL RETURN (F-Statistics in Parentheses)[b/] Affected Firms: Equally Wtd. Index | Affected Firms: Value Wtd. Index | Exempt[c/]: Value Wtd. Index |
|---|---|---|---|---|---|
| | | | (1) | (2) | (3) |
| PANEL A | (A1) | $\delta^*_{R3} = 0$ | 0.0078<br>(0.15) | 0.0120<br>(0.36) | 0.0138<br>(0.11) |
| | (A2) | $\delta^*_{R13} = 0$ | 0.0065<br>(0.06) | -0.0050<br>(0.04) | -0.0247<br>(0.32) |
| | (A3) | $\delta^*_{R14} = 0$ | 0.0300<br>(0.47) | 0.1035<br>(3.25)** | 0.1213<br>(2.61)** |
| | (A4) | $\delta^*_{R18} = 0$ | -0.0088<br>(0.10) | 0.0006<br>(0.00) | 0.0065<br>(0.02) |
| | (A5) | $\delta^*_{R21} = 0$ | 0.0051<br>(0.05) | 0.0037<br>(0.03) | -0.0198<br>(0.29) |
| | (A6) | $\delta^*_{R23} = 0$ | -0.0171<br>(0.28) | 0.0006<br>(0.00) | -0.0382<br>(0.59) |
| | (A7) | $\delta^*_{R24} = 0$ | -0.0026<br>(0.01) | 0.0048<br>(0.04) | 0.0002<br>(0.00) |
| | (A8) | $\delta^*_{R28} = 0$ | -0.0103<br>(0.20) | -0.0225<br>(1.05) | -0.0082<br>(0.04) |
| | (A9) | $\delta^*_{R31} = 0$ | -0.0039<br>(0.02) | -0.0100<br>(0.22) | -0.0272<br>(0.56) |
| | (A10) | $\delta^*_{R61} = 0$ | -0.0084<br>(0.14) | -0.0264<br>(1.60) | 0.0005<br>(0.00) |
| | (A11) | $\delta^*_{R62} = 0$ | 0.0109<br>(0.20) | 0.0223<br>(0.80) | 0.0469<br>(0.71) |
| PANEL B | (B1) | $\delta^*_{R61} - \delta^*_{R23} = 0$ | 0.0087<br>(0.07) | -0.0270<br>(0.96) | 0.0387<br>(0.77) |
| | (B2) | $\delta^*_{R61} - \delta^*_{R24} = 0$ | -0.0058<br>(0.06) | -0.0312<br>(2.40)* | 0.0003<br>(0.00) |
| | (B3) | $\delta^*_{R62} - \delta^*_{R23} = 0$ | 0.0280<br>(0.98) | 0.0217<br>(0.74) | 0.0851<br>(1.89)+ |
| | (B4) | $\delta^*_{R62} - \delta^*_{R24} = 0$ | 0.0135<br>(0.34) | 0.0175<br>(0.71) | 0.0467<br>(0.66) |

a/ $\delta^*_t$ = mean transformed abnormal return in month t, net of the mean abnormal return for a randomly selected control month.

b/ Nominal significance levels {F(11,89)} are indicated as follows: + for 10% level, * for 5% level, and ** for 1% level of significance.

c/ Results for the equally weighted index are omitted since the maximum $T^2$ statistic was not significant.

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