

**AN INVESTIGATION OF THE RELATIONSHIP  
BETWEEN MULTINATIONAL COMPANIES'  
ATTRIBUTES AND THE MARKET EFFECTS OF SFAS NO. 52**

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**Abstract**

This study examines the relationship between firms' attributes and the market effects of SFAS No. 52. The accumulation of abnormal residuals during the eleven-day test period is used as a dependent variable and the firms' size and leverage as independent variables. The results suggest that the market effects of SFAS No. 52 depend on firm size and leverage. Stock price changes are directly attributed to the increase in contractual constraints defined in terms of political costs and financial information.

**INTRODUCTION**

The Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 8 in 1975 in an attempt to unify the treatment of foreign currency translation, SFAS No. 8 required the use of the temporal method which treats all foreign subsidiaries as dependent extensions of the U.S. parent company. The temporal method also requires immediate recognition of translation gains and losses in the income statement. The accounting profession and business community opposed SFAS No. 8 because reported income figures were highly vulnerable to changes in foreign exchange rates (Selling and Sorter 1983). Dissatisfaction with SFAS No. 8 guided the FASB in 1981 to revise the standard and issue SFAS No. 52, which essentially reversed the major provisions of SFAS No. 8.

Capital market reactions and information content of both SFAS No. 8 and 52 have been extensively, although inconclusively, investigated in the accounting literature. Ziebart and Kim (1987) examined market reactions to SFAS No. 8 and SFAS No. 52, and found that the market reacted negatively to SFAS No. 8 and positively to SFAS No. 52. Garlicki, et al. (1987) also examined the impact of earnings under SFAS No. 52 on equity returns; however, they found no market reaction to announcements related to SFAS No. 52. Cheng (1986) detected positive market reactions around the dates of the appointment of the task force and issuance of the exposure draft of SFAS No. 8. Thompson (1986) found inconclusive results with respect to the capital market reaction to the same events. Salatka (1989) found negative excess returns in response to the issue of the Exposure Draft of SFAS No. 8, even after adjusting for the January size effect. Rezaee et.al (1993) detected positive market reaction to the exposure draft of SFAS No. 8 and negative market reaction to the revised exposure draft of SFAS No. 52. Rezaee et.al (1993) did not find significant market reactions to the actual issuances of SFAS Nos. 8 and 52. Kim and Ziebart (1991) found significant positive price reactions for the initial exposure draft and the final issuance of SFAS No. 52 while they detected a significant negative price reaction for the revised exposure draft of SFAS No. 52.

Previous studies (e.g., Ziebart and Kim, 1987; Rezaee et.al ,1993; Garlicki, 1987; Kim and Ziebart, 1991) in this area examined the information content of SFAS No. 52 by using a time-series model. This study examines economic consequences of SFAS No. 52 by using standard event-study methodology in determining the cross-sectional response to three events leading to the final issuance of SFAS No. 52. These events are: (1) the initial exposure draft, issued August 28, 1980, set forth new proposals for foreign currency translation; (2) the revised

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exposure draft, issued June 30, 1981, established criteria for determining the new concept of functional currency; and (3) SFAS No. 52, issued December 8, 1981. The remainder of this paper is presented in three sections. The first section examines the financial statement effects of SFAS No. 52. Section Two discusses the methodological issues. The empirical results and conclusions are presented in section three.

### **THE FINANCIAL STATEMENT EFFECTS OF SFAS No. 52**

The objectives of translation under SFAS No. 52 (p. 3) are: (1) to have financial statements provide information that is compatible with the expected economic effects of a rate change on an entity's cash flows and equity; and (2) to cause financial statements to reflect the financial results and relationship of the individual consolidated entities as measured in their functional currencies. To achieve these objectives, SFAS No. 52 adopted the functional currency translation method. The functional currency is defined (p. 3) as the currency in which the foreign subsidiary realizes most of its cash flows. Selection of the functional currency is a key feature of SFAS No. 52 because it determines the translation method and the disposition of exchange gains and losses.

Management determines the functional currency by evaluating six indicators (i.e., cash flow, sale price, sale market, expense, financing, and intercompany transactions) set by SFAS No. 52 (Para. 42). The functional currency can be either the local currency of the subsidiary, the U.S. dollar or, in rare situations, the foreign currency of another country. If management determines that the functional currency of a foreign entity is local currency (i.e., an independent foreign subsidiary), then the foreign currency financial statements of this entity will be translated into the U.S. dollar using the current method. Any resulting translation gains or losses should be included in the owners' equity. If the functional currency is the U.S. dollar (i.e., a dependent foreign subsidiary), the temporal method under SFAS No. 8 should be used and resulting translation gains or losses should be included in the determination of net income.

SFAS No. 8 seriously distorted the underlying economics of transactions for independent subsidiaries which generated cash locally, borrowed in the local currency, and repaid their loans from internal operations. In compliance with SFAS No. 8 many parent companies reported large gains or losses from translation as a major adjustment to net income while the true economic earnings remained relatively constant from one period to the next. This exposure to fluctuations in translation adjustments might have encouraged management to make suboptimal decisions in an attempt to eliminate firm's accounting exposure even at the risk of increasing economic (real) exposure.

SFAS No. 52 relies heavily on management judgement regarding the choice of functional currency. Management is able to use its discretionary power to derive the foreign risk management practice in the direction of effective usage of corporate resources. The accounting changes from SFAS No. 8 to SFAS No. 52 trigger changes in management practices for foreign exchange risk, especially the hedging activities and, accordingly, the cash flows and value of the firm will be changed. Management attitudes and desires toward hedging translation exposure under SFAS No. 52 should be different from the situation that existed under SFAS No. 8. Evans and Douppnik (1986) concluded hedging activities of companies, especially forward contracts to hedge balance sheet exposures has substantially (27 percent) reduced after the issuance of SFAS No. 52. SFAS No. 52 does not encourage companies to hedge the net exposed position in accounting value; and, accordingly, the need for management to spend extra resources for income smoothing purpose is reduced.

Economic consequences of SFAS No. 52 may result from either the cost of changes in the reporting requirements or the impact on the foreign exchange risk management (i.e., hedging financing, other operating and financial practices). Management may use resources suboptimally in an attempt to counteract financial statements' effects of SFAS No. 52 or make suboptimal decisions based upon accounting rather than economic considerations. If investors perceived these costs as material, the adoption of SFAS No. 52 should result in some impacts on security prices.

## METHODOLOGY

### Hypothesis Tested

While the impact on any firm of replacing SFAS No. 8 with No. 52 should depend on the extent of that firm's international involvement, firm-level data are not available for sales or income outside the U.S. Even if they were available, such data would be an imperfect measure of a firm's vulnerability to changes in accounting for foreign currency translation due to the following reasons. First, the appropriate measure of international involvement is value added, not sales or income. In 1976, the FASB issued SFAS No. 14, dictating an arbitrary cutoff of 10 percent in the disclosure of foreign operations. Substantial problems arise in identifying the location of foreign assets from the disclosure mandated by SFAS No. 14. For example, the geographical grouping of foreign assets differs widely across firms. These differences weaken empirical tests aimed at detecting the extent of international involvement effects across MNCs. Second, a firm's foreign-currency income itself depends on exchange rates. Third, the reaction of a firm's stock depends on the reference currency of the marginal investor [Solnik, 1989]. Thus, this study examines cross-sectional relationships between abnormal returns and a firm's size and leverage.

For each event, the reaction of a firm's stock price to the adoption of SFAS No. 52 is related to leverage and size. Leverage is measured as total debt divided by the book value of equity. Leverage typically involves covenants that may limit a firm's financing, investment and operating activities. These covenants are usually expressed in terms of financial information (accounting numbers). SFAS No. 8 affected reported financial information by requiring to include all translation gains and losses in income, while SFAS No. 52 allowed more discretion in the choice of functional currency. To the extent that debt covenants constrain management's decisions (Leftwich, 1981), highly leveraged firms are more likely to be affected by the issuance of SFAS No. 52. On the other hand, Fatemi (1988) concluded that multinational firms are less leveraged than are purely domestic firms. Since the translation method used under SFAS No. 52 could affect the restrictiveness of bond covenants, the proportion of debt financing might have some impact on security prices. Any changes in debt-to-equity ratios due to the adoption of SFAS No. 52 might have induced managers to take costly action to avoid a possible default and restrictions in financing and investment activities of the firm. These costs reduce the present value of future cash flows to shareholders and, accordingly, decrease stock price. Thus, the first hypothesis examined in this study is:

Hypothesis 1: The abnormal returns of firms directly affected by SFAS No. 52 are negatively correlated with financial leverage.

Size is positively related to both international involvement and information [via institutional holdings (Hessel and Norman, 1989)] and/or analyst following. Because information on international involvement may not be publicly available, only strong-form efficiency would imply that the effects of SFAS No. 52 be fully and immediately reflected in the price of a small company's stock. The proportion of foreign operations typically affect the amount of attention that management pays to provisions of SFAS No. 52. Large firms are more likely to invest internationally and, accordingly, more capable of mitigating the effect of translation gains or losses on financial statements. Political costs, as described by Watts and Zimmerman (1978), are another form of contracting costs associated with the financial impact of SFAS No. 52. Since larger firms are expected to have larger decreases in political costs, they will have a more positive stock price effect (Watts and Zimmerman, 1986, pp. 287, 295). Furthermore, large firms would be more likely to have an international business and be aware of the hedging cost savings possible under SFAS No. 52. Therefore, the second hypothesis examined in this study is:

Hypothesis 2: The abnormal returns of firms directly affected by SFAS No. 52 are positively correlated with the firm size.

### Measuring Abnormal Returns

Several sources are utilized to identify MNCs for this study. First, the prior selection procedures of Dukes (1978) and Griffin (1982 and 1983) are used to identify 520 MNCs. Second, Moody's Industrial Manual and the Wall Street Journal Index are utilized to search for confounding events during the test period. Any firm with a "significant" news announcement (other than news of the release of SFAS No. 52) is excluded from the original

sample of 520 firms. This screening resulted in the final sample size of 156, 158, and 152 for events 1 through 3, respectively.

For each event, a test period of eleven days is used in measuring abnormal returns. The eleven-day test period consists of the eight days before, the day of, and the two days following the event. This test period should be long enough to capture anticipatory and subsequent market reactions to each event, yet short enough to attribute security price changes to the events.<sup>1</sup> The estimation period is the 150 days prior to the test period.<sup>2</sup> Daily stock return data were available from 1979 through 1981 from a 1988 revision of the CRSP Daily Returns tape.

The mean-adjusted returns model is used to measure the abnormal returns of firms in the final sample.<sup>3</sup> By removing the effects of economy-wide events from the return on an individual security, that portion of the stock's return which reflects the effects of SFAS No. 52 on stock *j* can be detected.

The average cumulative abnormal returns  $CAR_j$  for each firm, averaged over the 11-day test period, is used as the dependent variable in separate regression models for each of the three events.<sup>4</sup> For each event, the dependent variable is calculated as follows:

Equation 1

$$E(R_{jt}) = \left( \sum_{t=-158}^{-9} R_{jt} \right) / 150$$

Equation 2

$$\sigma(R_{jt}) = \left[ \left( \sum_{t=-158}^{-9} (R_{jt} - E(R_{jt}))^2 \right) / 149 \right]^{1/2}$$

Equation 3

$$AR_{jt} = [R_{jt} - E(R_{jt})] / \sigma(R_{jt}), \quad t = -8, \dots, +2$$

Equation 4

$$CAR_{jt} = CAR_{jt-1} + AR_{jt}$$

where:

- $R_{jt}$  = The observed daily return for security *j* on day *t*.
- $E(R_{jt})$  = Expected returns based on 150-day estimation period.
- $\sigma(R_{jt})$  = Standard deviation of returns during the estimation period.
- $AR_{jt}$  = Standardized abnormal return on day *t* of the 11-day test period.
- $CAR_j$  = Average cumulative abnormal returns for days -8 through +2.

Two independent variables (size and leverage) standing for the contracting and political costs imposed on MNCS as a result of the issuance of SFAS No. 52 are used in cross-sectional regression models. Complete data for each of the independent variables in the cross-sectional regressions are obtained from the 1987 Annual Compustat tape. For each event, the firm's average cumulative abnormal returns are regressed on its size and leverage as follows:<sup>5</sup>

Equation 5

$$CAR_j = \beta_0 + \beta_1 x_{1j} + \beta_2 x_{2j} + e_j$$

where:

- $x_{1j}$  = natural logarithm of total consolidated assets for firm *j*.
- $x_{2j}$  = Total book debt/book value of equity for firm *j*.
- $e_j$  = the random error for firm *j*.

The statistical significance and sign of the estimates for the regression coefficients ( $\beta_1$  and  $\beta_2$ ) furnish the necessary information for testing the hypotheses. The purpose is to determine whether the firm's attributes (size and leverage variable) explain a statistically significant portion of the cross-sectional abnormal returns around each of the three events.

## EMPIRICAL RESULTS

The empirical results presented in Table 1 suggest that the capital market reacted to events 1 and 2. The average  $CAR_t$  for these events are significantly different from zero at the .90 and .95 significance level for a two-tail test, respectively. The average  $CAR_t$  for event 3 is not statistically significant, indicating that the capital market did not react to this event. Consistent with Rezaee (1990) and Ziebart and Kim (1987), a significant negative price reaction is observed for the test period of the initial exposure draft (event 1) and the revised exposure draft (event 2). Evidence of no price reaction to the issuance of SFAS No. 52 (event 3) suggests that the market participants may have had differing interpretations of the magnitude and/or the direction of the impacts of SFAS No. 52, or they adjusted their portfolios to mitigate the possible financial effects of SFAS No. 52.

The coefficients of variables' size and leverage are highly significant in the three regression models presented in Table 1. For event 1, size and leverage coefficients are significantly different from zero at the .99 significance level, while the significance level for these coefficients for events 2 and 3 is at the .90 for a two-tail test. The adjusted R-square of events 1 through 3 are 0.063, 0.032, and 0.031, respectively.<sup>6</sup> All regressions have F-values significant at  $P \leq 0.10$ .

**TABLE 1**  
**CARS As A Function Of Size And Leverage**  
**(t-Statistics In Parentheses)**

| Event                   | 1                    | 2                  | 3                  |
|-------------------------|----------------------|--------------------|--------------------|
| Mean CAR                | -0.058*              | -0.086**           | 0.112              |
| Constant                | 0.0084<br>(0.978)    | 0.662<br>(1.334)   | -0.229<br>(0.845)  |
| Size                    | -0.028<br>(2.987)*** | -0.032<br>(1.632)* | 0.013<br>(1.736)*  |
| Leverage                | 0.185<br>(3.254)***  | 0.131<br>(1.531)*  | -0.467<br>(1.838)* |
| Adjusted R <sup>2</sup> | 0.063                | 0.032              | 0.031              |
| F-Statistic             | 4.973<br>0.011       | 2.762<br>0.082     | 2.912<br>0.051     |

\* Significant at the .10 level for a two-tailed test.

\*\* Significant at the .05 level for a two-tailed test.

\*\*\* Significant at the .01 level for a two-tailed test.

## SUMMARY AND CONCLUSIONS

This study examines the relationship between MNCs' attributes and the effects of SFAS No. 52 on firms' stock. Significant abnormal returns are observed on the SFAS No. 52 Revised Exposure Draft release date and to a lesser extent on the Exposure Draft release date. Although the market reaction to the actual issuance of SFAS No. 52 is positive, it is not statistically significant. Empirical results suggest that the market effects of all three events depend on leverage and firm size.<sup>7</sup> The size coefficients were positively correlated and leverage coefficient negatively correlated with average cumulative abnormal returns. This finding of more extreme results for large firms is to be expected, as it may result from both better information and larger foreign involvement.

Market effects are less extreme (i.e., closer to zero) for highly leveraged firms. This indicates that low leverage (as a proxy for high international involvement) outweighs the direct effect of accounting policy on managerial decision-making via debt covenants. The small effects for highly leveraged firms, then, are the net result of a potentially large effect of leverage itself, offset by the negative association between leverage and international involvement. In summary, results suggest that studies of market reactions to changes in accounting standards should take account of differences between firms, as well as the usual average results across firms. The results of this study are relevant to policy makers and parties interested in the impact of accounting standards on firms' attributes. It suggests that the firms most affected are large firms with high debt-equity levels.

## ENDNOTES

1. Dann, Meyers and Raab (1977, pp. 3-22) and Foster (1979, pp. 326-337) found that the available evidence indicated that the impact of new information is fully reflected in stock prices within a few days.
2. A potential problem may be that the event dates are clustered in calendar time (See Brown and Warner, 1980 and 1985). While the cross-sectional design of the study should mitigate this problem, some effects of clustering may remain.
3. Mean-adjusted returns is a version of the CAPM; see Masulis (1980), Brown and Warner (1980 and 1985), and Dyckman, et al. (1984).
4. None of the event windows includes any day in January. Hence there is no need to adjust for the January size effect [as there was in Salatka (1989)].
5. Salatka (1989) relates abnormal returns for each of 16 events to nine firm-level variables. Thus, he estimates  $16 \times 9 = 146$  slope coefficients. Of these, 16 have t-values exceeding 1.28 ( $p < .10$  for a one-tailed test). In comparison, one might expect 14 or 15 slope coefficients to be "significant" in the absence of any economically meaningful relationship. To reduce the probability of getting meaningless but statistically significant results, this study restricts the cross-sectional variables to size and leverage.
6. The low values of  $R^2$  are typical for cross-sectional studies, especially those that have "abnormal performance as the dependent variable" (Holthausen and Leftwich, 1983).
7. The ratio of foreign to consolidate assets for each of the three events was used in regression models. Nevertheless, this ratio was uniformly nonsignificant, even at the 10 percent level and, therefore, is not reported in Table 1.

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