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An Investigation to Infer Social Welfare  
Implications from the Market Reactions to SFAS No. 52

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An Investigation to Infer  
Social Welfare Implications From  
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AN INVESTIGATION TO INFER SOCIAL WELFARE IMPLICATIONS FROM  
THE MARKET REACTIONS TO SFAS No. 52

ABSTRACT

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The intent of this study is to attempt an inference of the welfare effects associated with three events regarding the promulgation of Statement of Financial Accounting Standards Number 52, Foreign Currency Translation. It is expected that favorable welfare implications resulted from this change in the accounting for foreign currency translation.

This study presumes that the change in accounting methods for foreign currency translation prompted changes in the investment activities of multinational firms. Therefore, as pointed out by Lev and Ohlsen [1982], a simultaneous examination of price and volume reactions may allow the social welfare effects of the pronouncement to be inferred.



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## 1.0 Introduction

The intent of this study is to attempt an inference of the welfare effects associated with three events regarding the promulgation of Statement of Financial Accounting Standards Number 52, Foreign Currency Translation. Accordingly, this study is motivated by the lack of empirical evidence regarding the extent to which social welfare implications can be inferred from the observation of abnormal price and trading reactions regarding a change in required accounting methods promulgated by the FASB. It is expected that favorable welfare implications resulted from the change in accounting for foreign currency translation due to the switch from SFAS No. 8 to SFAS No. 52; this notion is tested empirically.

Unlike previous studies which have focused on the market reaction to an accounting pronouncement from an "information content" perspective, this study presumes that the change in accounting methods for foreign currency translation (due to SFAS No. 52) prompted changes in the investment activities of multinational firms. Therefore, as pointed out by Lev and Ohlson [1982], a simultaneous examination of price and volume reactions may allow the social welfare effects of the pronouncement to be inferred.

The welfare effects of an accounting pronouncement are an important issue. Most empirical research which has focused on accounting regulation has only been able to document that the market has or has not reacted in some manner. In order for the FASB to evaluate their pronouncements (post event) it is essential

that research be conducted on the welfare effects. Feedback from a financial market perspective regarding the FASB's action is required for evaluation of the accounting standard.

We do not intend to examine the viability of the approach to inference of welfare effects suggested by Lev and Ohlson [1982]. Instead, we assume its propriety and attempt to determine the welfare effects regarding three periods in the SFAS No. 52 promulgation process: (1) the initial exposure draft; (2) the revised exposure draft; and (3) the statement issuance.

Prior to SFAS No. 52 the accounting requirements for foreign currency translation were dictated by SFAS No. 8. SFAS No. 8 forced many multinational firms to include gains or losses on foreign currency translation in their reported income. This increased the volatility of the income number and made it dependent on events outside the control of corporate management. To overcome these adverse effects on income, many multinational firms may have undertaken costly hedging activities which impacted the firms' production and investment activities.

In 1981, the Financial Accounting Standards Board revised the current accounting practice for foreign currency translation, SFAS No. 8., and eliminated the pressure on multinational firms to hedge their translation gains or losses due to changes in exchange rates. This was expected to eliminate the need for the multinational firms to undertake costly hedging activities and allow the production and investment decisions of the firms to revert to more optimal levels.

The results of this study (volume effects regarding the three promulgation events of SFAS No. 52) in conjunction with the

results of Kim [1985] (price effects regarding the same three events) indicate a significant positive price reaction to the original exposure draft of SFAS No. 52. This price reaction was accompanied by significant trading activity. Therefore, welfare effects can not be readily assessed for the initial exposure draft of SFAS No. 52 since the necessary condition of insignificant above-normal trading activity, pointed out by Lev and Ohlson [1982], is violated.

The revised exposure draft, which postponed the effective date of the pronouncement, was accompanied by a significant negative price reaction and negligible abnormal trading activity. Therefore, social welfare implications can be assessed for the revised exposure draft.

This revision of the exposure draft pushed back the effective date of the pronouncement and effectively delayed the change. Since the exposure draft resulted in a positive market reaction the postponement of its effective date can easily be deemed an unfavorable situation. The revision of the exposure draft was interpreted negatively by the market and the negligible trading activity implies a significant degree of unanimity in the interpretation. Accordingly, the revised exposure draft can be interpreted as driving a decline in the overall social welfare of the financial market. To the extent that the multinational firms adjusted their production and investment strategies after the initial exposure draft to a more optimal level (based on the new accounting requirement of the proposed SFAS No. 52), the postponement of the effective date of SFAS No. 52 may have



resulted in these new strategies being suboptimal. This resulted in an overall decline in welfare. To the extent that the multinational firms had not yet changed their investment decisions, this postponement prompted the firms to remain at the less optimal investment/production positions.

The third promulgation event studied, the actual issuance of the pronouncement, was accompanied by neither a significant price nor a significant trading reaction. No welfare implications can be drawn from these results.

In the next section of this paper the welfare effects and the conditions for making inferences are discussed. A brief history of the accounting requirements for foreign currency translation is provided in the third section. Section 4.0 contains the research methodology followed by the analysis of the results in Section 5.0. A summary is provided in the final section.

## 2.0 Welfare Criterion and Conditions for Inference

Lev and Ohlson [1982] point out that the social welfare effects of accounting regulations can be inferred from the observed price and volume reactions when the regulation or a change in a previous regulation stimulates a change in the affected firms' production or investment decisions. They argue that a "no above-normal" trading reaction resulting from the regulation is a key condition for the assessment of welfare implications since an "above-normal" trading reaction reflects the possibility of redistributive effects. Lev and Ohlson argue this position after reviewing the financial theory of stockholder unanimity in order to determine the conditions which are necessary

for the improvement of stockholders' welfare.

Under fairly relaxed assumptions, Lev and Ohlson point out that in cases in which the economy of focus is productive and an exogenous event disturbs the firms' production/investment activities, then the neoclassical theory of the firm provides a link between observed price reactions, observed volume reactions, and welfare effects underlying the exogenous event. Welfare implications can only be inferred when one can postulate that the change in share values represents a unanimous concensus regarding the percieved impact of the exogenous event (in effect, the accounting change). Lev and Ohlson stress that trading activity reflects this degree of concensus and, accordingly, welfare effects can be inferred from observed price reactions when there exists no increase in trading activity.

To assess the welfare implications of the change in accounting requirements for foreign currency translation which resulted from SFAS No. 52 one must observe a significant price reaction with no accompanying significant trading reaction. This paper reports an assessment of the trading reactions which accompany the price reactions regarding SFAS No. 52 studied by Kim [1985].

### 3.0 Reporting Requirements for Foreign Exchange

SFAS No. 8 was issued in 1975 to alleviate the problems associated with the use of many diverse methods of foreign currency translation. SFAS No. 8 allowed only the temporal method to be used and required translation gains and losses to be recognized immediately in the income statement.

The promulgation of SFAS No. 8 was met with strong opposition from the financial community since it caused income figures to be highly vulnerable to changes in foreign exchange rates. This prompted many multinational firms to undertake costly hedging activities in order to offset the income statement effects of SFAS No. 8; multinational firms undertook hedging practices which had real economic costs in order to offset potential "paper" profits or losses which resulted from the foreign currency translation. Massaro [1978] surveyed 117 corporate executives familiar with SFAS No. 8 (after two years of experience with it) and found 84 executives (72% of the sample) favoring repeal or substantial modification.

Numerous other researchers examined the effect of SFAS No. 8 on the exchange risk management activities of multinational firms and also found evidence that SFAS No. 8 caused management to overemphasize reported earnings. Using various research approaches Evans, Floks, and Jilling [1978], Shank, Dillard, and Murdock [1979], Morsicato [1980], and Wilner [1982] found evidence that SFAS No. 8 adversely affected the management of many multinational firms.

Given this adverse effect of SFAS No. 8 on foreign exchange risk practices of multinational firms, the financial community was displeased with SFAS No. 8. Therefore, a modification of the accounting requirements that would eliminate the need for costly hedging activities should have been welcomed by the financial community.

SFAS No. 52 permits the use of alternative translation methods which are based on the functional currency of the foreign



subsidiary. If the functional currency is the local currency of the foreign subsidiary, then all the assets and liabilities are translated at the current rate while the translation gains and losses are included in owners' equity. This effectively eliminates the problems of SFAS No. 8 for many firms in which the functional currency is the local currency. In addition, firms not meeting the local currency requirement can modify their mode of operations such that the functional currency becomes the local currency and the problems with SFAS No. 8 are eliminated. In a market-based study of returns, Ziebart and Kim [1987] find significant negative market reactions to SFAS No. 8 and significant positive market reactions to SFAS No. 52. This evidence supports the notion that SFAS No. 8 was interpreted negatively by the market whereas SFAS No. 52 resulted in a positive reaction.

#### 4.0 Research Methodology

Kim [1985] reports the results of a price study regarding the market reactions to (1) the initial exposure draft for SFAS No. 52, (2) the revision of the exposure draft which postponed its effective date, and (3) the actual issuance of SFAS No. 52. The event dates for each of these events are August 28, 1980, June 30, 1981, and December 8, 1981, accordingly. Kim uses an eight week observation period; week -6 to week +1 based on the week which contains each event date as week 0. A sample of 425 multinational firms are selected from a population of multinational companies consisting of all U.S. multinational firms listed in Stopford's The World Directory of Multinational Enterprises 1982-1983 and all

of the 479 multinational firms used in the study by Duke [1978]. To be included in the sample, a firm must have the requisite return and trading activity data needed to estimate market model parameters and conduct the analysis for each of the three test periods.

Kim uses a standardized residual test (Patell [1976], Hong, Kaplan, and Mandelker [1978], and Ziebart [1985]) to test for positive abnormal returns during the three test periods. Cross-section dependence among the standardized abnormal returns, due to industry factors, is minimized since the sample chosen spans 133 different industries (based on the 4 digit SIC code).

Kim's results indicate a significantly positive standardized cumulative average excess return accompanying the initial exposure draft and a significantly negative reaction regarding the revised exposure draft. No significant reaction is observed for the test period of the actual issuance of SFAS No. 52. Two alternative abnormal return methods, the market return adjusted model and the mean adjusted return model, provide similar results. (See Brown and Warner [1980] for a discussion of these alternative approaches.)

Given these significant market price reactions, inferences regarding the social welfare effects can only be drawn when there is no significant abnormal trading activity accompanying the abnormal returns (Lev and Ohlson [1982]). To assess the trading effects for each of the three test periods, weekly trading data is obtained for each of the 425 sample firms from the Media General tape and the ISL Daily Stock Record. A market model type

of an approach is employed to control for the effects of market-wide events on the trading activity of the individual firms. The method used to compute standardized abnormal trading volume corresponds to the approach used by Kim except the focus is on trading activity rather than returns.

For each of the three test periods, a benchmark period consisting of the previous 52 weeks is used to estimate the following regression via OLS:

$$V_{it} = a_i + b_i V_{mt} + u_{it}$$

where;

$V_{it}$  = weekly percentage of shares traded for firm  $i$  during week  $t$ ,

$V_{mt}$  = weekly percentage of shares traded for the market during week  $t$ ,

$a_i$  and  $b_i$  = the constant and the regression coefficient estimates.

For each week of the three event periods the expected trading activity is calculated as follows:

$$E(V_{it}) = a_i + b_i V_{mt}$$

where;

$a_i$  and  $b_i$  are the estimates from above,

$V_{mt}$  is the weekly percentage of shares traded for the market during the period of observation.

The unexpected or abnormal volume is computed for each week as the difference between the actual trading volume observed and that expected via the model above. For a more complete discussion regarding the use of this approach in trading activity research see Beaver [1968] or Bamber [1986]. The weekly abnormal trading



activity is used to compute for the portfolio of sample firms a standardized average excess volume and a standardized cumulative average excess volume using the standardized residual approach.

## 5.0 Analysis

The results for the test period of the initial exposure draft are reported in Table 1.

### **Insert Table 1**

The standardized average excess volume (SAV) is significantly positive for weeks -6, -5, -3, and -2. Accordingly, the standardized cumulative average excess volume (SCAV) is significantly positive for all eight weeks of the test period. Coupled with the positive price reaction observed by Kim [1985] (a standardized cumulative average excess return of +7.6616) the observation of significant trading activity implies that the possibility of redistributive effects exists and therefore no clear social welfare effects can be inferred from the positive price reaction.

To some extent the observed reactions, both positive abnormal returns and positive abnormal trading activity, may be explained by the effect the pre-SFAS No. 8 method of accounting has on the observed market reactions to SFAS No. 8 and SFAS No. 52 (reported in Ziebart and Kim [1987]). Ziebart and Kim [1987] find that the method of accounting used prior to SFAS No. 8 impacts the observed market reactions (standardized abnormal returns) to the promulgation events leading up to the issuance of the SFAS No. 52 exposure draft. To the extent that differential market reactions are observed based on the pre-SFAS No. 8 accounting method, the

implications of SFAS No. 52 on the various firms and their stockholders may not be consistent and this could drive the lack of unanimity regarding the effect of SFAS No. 52 across the multinational firms in this sample.

The revision of the Exposure Draft by the FASB resulted in the effective date of SFAS No. 52 being postponed for one year. Given that this event occurred more than a year after the initial exposure draft, one might expect that the multinational firms reacted rather quickly to the initial exposure draft by changing their investment and/or production decisions to be congruent with the proposed new reporting practices required by SFAS No. 52. The deferral of the effective date by one year adversely affected these plans and one might expect the market to be in unanimous regarding the interpretation of this deferral.

The SAVs and SCAVs for the test period of the revised exposure draft are presented in Table 2.

#### **Insert Table 2**

These results indicate no evidence of abnormal trading activity in any of the eight weeks nor is there a significant trading reaction cumulatively. This occurrence of insignificant trading activity implies that the observation of a negative price reaction to the revision of the exposure draft can be interpreted in a social welfare context. The market reacted negatively (Kim's [1985] results indicate a standardized cumulative average excess return of -3.6008 for the eight week test period surrounding the revised exposure draft) and overall a decline in social welfare may be indicated. These results denote that the revision of the exposure

draft to delay its effective date was not beneficial and in actuality was harmful.

To complete the analysis, the volume effects for the test period of the SFAS No. 52 issuance are provided in Table 3. Given the lack of statistically significant price reactions (standardized cumulative average excess return of .1690 [Kim (1985)]) it is not surprising to find little volume reaction. However, the individual weeks in which some trading reaction is observed do coincide with the weeks in which a price reaction is observed by Kim [1985].

### **Insert Table 3**

#### **6.0 Summary and Conclusions**

The intent of this study is to determine the extent to which social welfare implications can be inferred from the statistically significant observed price reactions reported by Kim [1985] regarding the exposure draft of SFAS No. 52 and the revision of the exposure draft. Using a market model approach to control for market wide trading effects and a standardized residual test, the results of this study indicate that social welfare implications can not be drawn with regard to the positive price reaction observed for the issuance of the initial exposure draft of SFAS No. 52. Significant trading activity is found and the implication is that redistributive effects may have occurred.

However, insignificant abnormal trading activity is found for the revised exposure draft test period and in conjunction with the negative price reaction found by Kim [1985] one may infer social welfare effects of a negative nature. Given that the FASB had



issued the initial exposure draft more than a year prior to the revision, it seems that most multinational firms would have adjusted their production and investment plans accordingly based on the planned effective date in the initial exposure draft. The revised exposure draft contained the same major contents as the initial exposure draft but delayed the effective date for one year. Therefore, the anticipated favorable consequences of SFAS No. 52 were delayed and this delay detrimentally impacted the investment and production decisions of the MNCs. In this case, the deferral of a change in accounting practices by the FASB was not beneficial; it resulted in a decline in share values which can be interpreted as a decline in overall welfare from a market perspective.

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Table 1. Standardized Average Excess Volume (SAV) and Standardized Cumulative Average Excess Volume (SCAV) for the Test Period of the Initial Exposure Draft Issuance

---

<u>Week</u>	<u>SAV</u>	<u>SCAV</u>
-6	4.6071	4.6071
-5	3.4833	5.7208
-4	1.8898	5.7621
-3	3.8367	6.9333
-2	4.2563	8.1048
-1	1.2850	7.9232
0	.6791	7.0788
+1	1.1509	7.0285

significance levels: 1.65=.05, 2.33=.01, and 3.30=.0005 for n=425 and a one-tailed test.

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Table 2. Standardized Average Excess Volume (SAV) and Standardized Cumulative Average Excess Volume (SCAV) for the Test Period of the Revised Exposure Draft Issuance

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<u>Week</u>	<u>SAV</u>	<u>SCAV</u>
-6	-1.1069	-1.1069
-5	-1.7213	-1.9999
-4	.4948	-1.3472
-3	-.9761	-1.6548
-2	-1.2061	-2.0194
-1	1.3756	-1.2819
0	-.5486	-1.3942
+1	.3194	-1.1912

significance levels: 1.65=.05, 2.33=.01, and 3.30=.0005 for n=425 and a one-tailed test.

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Table 3. Standardized Average Excess Volume (SAV) and Standardized Cumulative Average Excess Volume (SCAV) for the Test Period of the Statement Issuance

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<u>Week</u>	<u>SAV</u>	<u>SCAV</u>
-6	-2.0318	-2.0318
-5	.6209	-.9976
-4	.0346	-.7945
-3	.5624	-.4068
-2	1.8021	.4420
-1	2.0154	1.2263
0	1.5317	1.7142
+1	1.0659	1.9804

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significance levels: 1.65=.05, 2.33=.01, and 3.30=.0005 for n=425 and a one-tailed test.

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