

The Release of AASB 1041 "Revaluation of Non-Current Assets" and Stock Price Behaviour

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This paper examines stock price behavior during the release of Australian Accounting Standards Board (AASB) 1041 "Revaluation of Non-Current Assets". AASB 1041 requires frequent revaluations (the standard suggests a three-year cycle) of a class of assets once revaluation is adopted for that class of assets. Assets revaluations are expensive due to the revaluation fees; hence, the requirement to revalue at least once in three years will increase the cost of revaluation activity. It is therefore expected that stock prices will react negatively towards the release of AASB 1041. The paper hypothesizes abnormal returns to be significantly lesser in the months surrounding the announcement month. The finding confirms the prior expectation that stock prices performed negatively during the release of AASB 1041. The statistical test found the abnormal returns surrounding the months of announcement to be significantly lesser than the months leading and subsequent to the announcement months.

Key words: stockprices, revaluation, current assets

INTRODUCTION

This paper examines stock price performance during the release of Australian Accounting Standards Board (AASB) 1041 "Revaluation of Non-Current Assets" in December 1999. AASB 1041 requires firms to measure and report a class of assets at either cost or revalued amount. When a firm chose to measure and report a class of assets at revalued amount, it is required by the standard to revalue frequently (the standard suggests at least once in three years). Furthermore, the standard does not permit firms to change to cost basis once revaluation basis is adopted (this was later permitted in June 2001). Upward asset revaluations are expensive due to cash outflow related to revaluation fees. Furthermore, upward asset revaluations require accounting adjustments that do not have direct impact on future cash inflow. Implication of upward asset revaluations, it is interesting to know that upward asset revaluation has been a normal practice in Australia. Prior research found that asset revaluations were used for signalling purpose and to increase financial slack, and hence, borrowing capacity (Brown et al, 1992; Whittred & Chan, 1992). Prior to AASB 1041, standard on asset revaluations. In other words, management was given discretion to decide how often to revalue. Given the incentives for upward asset revaluations and the discretion that management had on the frequency, arguably, management would only revalue assets upward when there is the need to improve borrowing capacity.

The requirement to revalue frequently (at least once in three years) when revaluation is adopted will increase the cost associated with upward asset revaluations, and hence, given the efficient market

hypothesis, the release of this standard (AASB 1041), arguably, will negatively affect stock prices. Prior research on asset revaluations looked at the value relevance of asset revaluation activities by relating them to stock prices (Barth & Clinch, 1998; Easton & Eddey, 1997; Easton, Eddey, & Harris, 1993; Emanuel, 1989). This paper contributes to the literature on asset revaluations by looking at the reactions of stock prices to the release of AASB 1041.

Related Literature. Numerous researches into value-relevance of fair value accounting were done in the 1980's and generally the event approach was used. These studies tried to examine the affect of the fair value requirements deliberated by United States of America (US) accounting governing bodies (such as Financial Accounting Standards Board (FASB) and securities and Exchange Commission (SEC) on share prices. Studies conducted during this period provided mixed results. Some studies suggested that the deliberations made by the US accounting governing bodies did affect stock prices; and therefore concluded that fair value accounting was value relevant (Bublitz, Frecka, & McKeown, 1985; Lobo & Song, 1988; Noreen & Sepe, 1981). In contrast, other studies concluded that fair value accounting did not consistently provide information relevant to share prices (Beaver, Christie, & Griffin, 1980; Beaver, Griffin, & Landsman, 1982; O, 1980).

There was no consensus as the value relevance of the fair value accounting. It should be noted that the studies during this period were done in the US economy, which was not inflationary in nature; therefore, the importance of fair value accounting is understandably difficult to measure. Studies in the 1990's provided results that were more positive with respect to the value relevance of asset revaluations. These studies examined the value

relevance of fair value reporting, particularly with respect to financial instruments. Some of the studies provided evidence suggesting that an investment security's fair value had explanatory power beyond historical cost (Barth, 1994). It was reported that inflation-adjusted measures of earnings significantly reduced the forecast error of security returns over two test periods, therefore, inflation adjusted earnings were argued to be value relevant (Sami & White, 1994).

Other studies found that disclosures required under statement of financial statements a more comprehensive source of value-relevant information (Eccher, Ramesh, & Thiagarajan, 1996). Barth et al. (1996) investigated the value-relevance of fair value disclosures under SFAS 107 and their related book values could be used to explain, in a predictable way, differences between the market and book value common equity. The findings provided evidence that fair value estimate of loan securities and long term debt, disclosed under SFAS 107, provided significant explanatory power for bank share prices is explained by fair value have incremental explanatory power over and above the national/contractual amounts of derivatives (Venkatachalam, 1996).

Although the FSAB has been focusing on a more extensive use of fair value accounting, it should be noted that (so far) the focus is on the application of fair value to financial instruments rather than non-financial assets (Barth, 2000). The reason to this might be that it is more difficult to obtain reliable fair value estimates for non-financial assets. Especially intangible assets and some tangible assets where their value-in-use varies significantly from their exit or entry value (ASB) 1999 "Statement of Principles for Financial Reporting". They pointed out that for financial assets which were actively traded, their replacement cost (entry value), value in use, and net realizable value (exit value) could be similar with only slight differences due to transaction costs (Miller & Loftus, 2000) however, this is not generally the case with respect to non-current non-financial assets.

Emanuel (1989) tried to provide evidence on the value relevance of asset revaluations in New Zealand. He found that ninety percent of firms listed on the New Zealand stock exchange had revalued their assets upward at some time. The approach he used was to measure the reaction of the market to asset revaluation announcements. The announcement date was taken as the date on which the company released its annual report. Prior to the release of the annual report, listed firms would have released their preliminary annual announcements containing a contemporaneous release of earnings and dividend information (but no announcement on revaluations). Assuming the market is efficient, the information content of the

price and dividend announcement would have been impounded in the price prior to the release of the annual report, thus, the market would have reacted to this preliminary reporting, and share prices would have adjusted accordingly. Therefore, any price change upon the release of the annual report was taken as a reflection of the market's reaction to any revaluations. His study found little evidence that asset revaluations generated share price revisions. Therefore, he concluded that asset revaluation in NZ. However, Emanuel (1986) suggested that the desire to present a more true and fair financial figure could have been the reason behind this phenomenon. Aboody et al. (1999) studied the value relevance of upward asset revaluations in the United Kingdom (UK). They associated upward revaluations with future performance of firms as proxied by operating income and cash from operations. They related upward revaluations to future performance since many past studies had evaluated asset revaluations based market-data that provides indirect evidence of future performance.

Aboody et al. observed the relationship between upward fixed asset revaluations by UK firms over a thirteen year period (1983-1985) and any changes in operating performance as proxied by operating cash flows and operating income net of depreciation, amortization, and gains on asset disposals over the following one to three years. They also controlled for any change in the current year's operating performance, risk, growth, and size. Their findings provided evidence suggesting that upward asset revaluations are value relevant as indicated by a positive association with future performance and share prices. As they expected, UK firm's upward, fixed asset revaluations were also found to be timely, as evidenced by their positive association with share returns (Aboody, Barth, & Kasznik, 1999).

Sharpe and Walker (1975) focused on the share price movements of relatively large Australian public companies that announced upward asset revaluations during the public companies that announced upward asset revaluations during the period of 1960-1970. Their examination revealed that the announcement of an asset revaluation was associated with a substantial upward movement in stock prices (Sharpe & Walker, 1975). However, Brown (1989) suggested an alternative interpretation to Sharpe and Walker findings. Brown (1989) suggested that the current value of assets examined by Sharpe & Walker's could be irrelevant or not 'newsworthy' and that in fact, other contemporaneous relevant events that took place at the same time could explain the revision in share prices (Brown & Finn, 1989).

Brown and Finn (1989) pointed out that the majority of Sharpe and Walker's revaluations were related to revaluations of property or investments

that were relatively large and, therefore, most likely they would have come under the security analysis. It is then arguable that the market would have taken into account the changes in the value of assets even before the revaluation announcements were made. Furthermore, Brown & Finn highlighted the fact that 30 out of 33 cases of revaluations examined by Sharpe and Walker either released an annual or interim report containing earnings and dividend details in the month of the revaluation announcement; or announced a bonus issue in that month. Brown and Finn (1989) pointed out that out of the 33 revaluations examined, 25 firms announced bonus issues, 29 announced increased earnings per share (EPS), and 24 increased their dividend per share. They argued that their alternative interpretation could not be dismissed as a possible explanation for Sharpe and Walker's findings because of the fact that the announcements on bonus issues, increases earnings per share, and dividends happened at relatively the same time-period as the asset revaluation happened at relatively the same time-period as the asset revaluation announcements. Brown and Finn further suggested that whether asset revaluations per se affect stock prices could better be understood if we understood why asset revaluations occur, and how they are related to bonus issues, dividends, and earnings reports.

Later studies have tried to provide information on the value relevance of non-current physical asset revaluations as governed by Australian Generally Accepted Accounting Principles (GAAP). The findings suggested that asset revaluations have strong explanatory power over returns (Easton & Eddey, 1997; Easton et al. 1993). Easton et al. (1993) and Easton (1997) covered a complete Australian economic cycle, including periods of declining and rising asset values. The approach they used was to measure the alignment between book value of owner's equity and stock prices when an asset revaluation reserve is included in the sockholder's equity. If the ratio of book value to market price is closer to one when an asset revaluation reserve is included in the sockholder's equity then it could be concluded that fair value accounting, as governed by Australian GAAP, better reflects the current value of a firm compared to the use of historical cost. The results of their study suggested that book value of equity that included asset revaluation reserves were more aligned with market value of the firm. Thus, they concluded that inflationary adjustments of non-current assets value provide a better picture of the current state of the firm.

Easton et al. (1993) expected revaluation reserve increments to have no explanatory power over current year returns if the market had know increments in asset value in prior period. However, they expected the explanatory power to increase as

the return interval is increased (longer return-interval). Their evidence suggested that the reported asset revaluation increments did not reflect change in value in the year that it occurred. In other words, asset revaluations in Australia were not timely. However, as they expected, when the return interval was increased to three years, revaluation increments were found to have significant explanatory power for returns (Easton et al. 1993).

Barth and Clinch (1998) examined the relevance, reliability, and timeliness of Australian asset revaluations. They went further in an attempt to determine whether relevance, reliability, and timeliness differed across different types of assets; including: investments; property; plant and equipment; and intangibles. Their findings suggested revaluations of tangible, intangible and financial assets to value-relevant. In terms of different asset classes, they found that revalued investments were significantly associated with share prices, as were revalued intangible assets. Less consistent results were found regarding revalued property, plant and (PPE), al thought aggregate PPE was significantly associated with share prices for all firms. However, revalued plant and equipment were value-relevant for mining firms, insignificant for no-financial firms. Revalued property was only significantly associated with share prices for non-financial firms. Overall, their study revealed that asset revaluations were value relevant (Barth & Clinch, 1998).

RESEARCH QUESTION AND HYPOTHESIS

This paper sought to provide evidence on the stock price performance during the release frequently, stock prices would react negatively due to the hypothesis that abnormal return would be significantly lesser in the months surrounding the announcement date (date of issuance of AASB 1041). **Research Design.** The study uses the event approach in determining the value relevance of AASB 1041. This approach requires the prediction of abnormal returns in the month of announcement (time 0), and the surrounding months (11 months prior to and 12 months after announcement date). The abnormal return, the actual return for a stock is the ratio of the value of the security form month to month; taking into accounting any capitalization changes and dividends that became effective between the price dates of successive months. This is best illustrated in the following equation.

$$R_{jt} = \frac{P_t / \text{Cap. Adjustment} / \text{Div}}{P_{t-1}} \quad (1)$$

R_{jt} is the return of firm j at month t ; P_t is the closing price of firms j at month t ; P_{t-1} is the closing price of firm j at month $t-1$; Div is the dividend paid during the month; Cap. Adjustment is any

adjustment for changes in capital structure that take effect during the month. Examples of capitalization changes are bonus, rights, and consolidations, splits, repayments of capital and other non-dividend distributions. The expected return is calculated using the market model.

Market modal. The market modal views the total risk of a security as being split between two components; the systematic, and unsystematic. The systematic component of risk is related to the market as a whole and effects firms in general. Systematic risk is an unavoidable risk, and therefore, non-diversifiable. The unsystematic risk is the component of total risk that is unique to a firm, and is diversifiable or avoidable. In the market modal. The expected return of a security is the function of systematic risk and market return. It is expressed in the following equation:

$$ER_j = \alpha_j + \beta_j R_{mt} + U_{jt} \quad (2)$$

ER_j is the security's expected returns during time t , α_j is the constant, β_j is the security's beta coefficient which is the measure of systematic risk, R_{mt} is the return on the market at time t , and U_{jt} is the residual or unsystematic component of risk. The assumptions behind this model is consistent with the assumption behind this modal is consistent with the assumption behind ordinary least square equation. It assumes that the expected mean value for the error term is zero; the covariance between the error term and the independent variable is zero; and the covariance between the error term for firm i at time t and the error for firm j at time t is zero, given i is different from j .

Beta Estimation. For each listed firm, the intercept (constant) and the beta in the market modal is estimated based on a 30-month historical return. This does not include the 12-month observation included in the observation period. Including the 12-month observation period in the beta estimation is likely to violate the assumption behind ordinary least square that the expected value of the error term is zero (McMillan, 1990). Estimating beta with an observation period that is too long may result in an inaccurate beta estimate, since a firm's risk is not likely to be stationary. In contrast, an observation period that is too long short may result in an unreliable beta estimate (Van Horne, Wachowics Jr, Davis & Lawriwsky, 1995). This approach in estimation of beta assumes that the risk nature of the firm within the observation surrounding the announcement date. They are calculated in the following manner:

$\frac{R1 - \mu R1}{\sigma R1}$ \rightarrow Z , then, the null hypothesis should be rejected. $\mu R1$ is the mean of abnormal returns in the months leading and subsequent to the announcement date, while $\sigma R1$ is the standard deviation of abnormal returns in the

period including the announcement date does not change significantly. The parameters α and β are calculated using an ordinary least squares regression. The rate of return of a firm, R_{jt} is regressed on the rate of return of the market return, R_{mt} , over a 30-month observation period. It is estimated using the following regression.

$$R_{jt} = \alpha + \beta R_{mt} + U_{jt} \quad (3)$$

R_{mt} is aggregate rate of return of all securities listed with ASX at time t , R_{ft} is the risk free rate at time t , and R_{jt} is the rate of return of firm j at time t . the study uses the share Price-price Relative (SPPR) compiled by the Australian Graduate School of Management (AGSM). The result of this regression provides a measure of the sensitivity of the firm's security over changes in market return. Once the parameters α and β have been estimated the expected return is calculated and the abnormal return calculated using equation (1). **Sample.** Firms that are included in the sample are firms that were listed with Australian Stock Exchange (ASX) since June 1996 and were still listed as of December 2000. The firms need to continually listed on the market because of the need to calculate their risk based on their historical return. On the have been continually listed or changed name without any change in their business nature until the 29th of December 2000. Therefore, these firms were included in the sample since they fulfill the criteria.

Test of Hypothesis. Australian returns were skewed to the right (Van Horne et al, 1995). Hence, suggesting that a non-parametric test should be used in testing the hypothesis. To test the hypothesis that the abnormal returns are significantly different on the months surrounding the announcement date (October; November; December 1999; January 2000; and February) and the months leading to the announcement date (January; February; September 1999; March 2000; April; December), the Mann-Whitney test of two medians was used. The Mann-Whitney test the null hypothesis that the median of mean abnormal returns in the months leading and subsequent to the announcement months are significantly lesser or equal to the months surrounding the announcement date. The null hypothesis is tested against the alternative hypothesis that the median of abnormal returns in the months leading and subsequent to the announcement date, while $R1$ is the standard deviation of abnormal returns in the months surrounding the announcement date. They are calculated in the following manner:

$$\mu = \frac{n1(n1+n2+1)}{2} \quad (4)$$

$$\sigma R1 = \frac{\sqrt{n1n2(n1+n2+1)}}{12} \quad (5)$$

n_1 is the number of mean abnormal returns observed in the months leading to the announcement date, and n_2 is the number of mean abnormal returns observed in the months surrounding the announcement date. **Findings.** The abnormal returns and cumulative abnormal returns (CAR) 11 months before the month of announcement and 12 months after are presented in Table 1 and Figure 1. The abnormal returns during the first 9 months prior to the announcement month (starting January to September 1999) were positive, though there are evidence of some significant fluctuations around the month March and June. Overall, there was a slight upward trend in the abnormal returns leading to the month of announcement. However, nearing the month of announcement (October) the abnormal return dropped sharply from 5.7 percent in September to 0.3 percent in October. It then continued to fall to a negative abnormal return in November, - 23.3 percent, increased to 0.9 percent in the month of announcement (December) and again fell to -0.3 and -0.2 percent in January and February 2000.

Table 1. Abnormal Return and Cumulative Abnormal Return

No.	Months	Abnormal Return
-11	January	0.020
-10	February	0.032
-9	March	0.037
-8	April	0.014
-7	May	0.006
-6	June	0.034
-5	July	0.013
-4	August	0.049
-3	September	0.057
-2	October	0.003
-1	November	-0.233
0	December 1999	0.009
1	January 2000	-0.003
2	February	-0.002
3	March	0.003
4	April	0.083
5	May	0.066
6	June	0.041
7	July	0.018
8	August	0.057
9	September	0.062
10	October	0.063
11	November	0.070
12	December 2000	0.055

It can be seen from table 1 that abnormal returns increased in March and April and then showed a downward trend in the month of May, June, and July. However, in the following months there was a constant increase of abnormal returns.

The fluctuations in abnormal returns can also be observed in Figure 1. As was expected, abnormal returns dropped sharply in the months prior to the announcement month. This suggested that the market might have known in advance the possibility of the release of AASB 1041. This is quite reasonable, considering the due process related to the release of a new standard. A standard has to be brought to the Australian houses of Parliament with fifteen days of its making, and a further fifteen days should be allowed, in which, any motion to disallow the standard may be raised.

The drop in abnormal returns surrounding the release of AASB 1041 was as expected. Stock prices would react negatively to the release of AASB 1041. This may increase the cost associated with revaluation activities, because the standard requires frequent asset revaluation (to ensure that the revalued amounts are up-to-date) once revaluation was adopted. This may be the reason behind stock prices behavior surrounding the announcement month. The Mann-Whitney test was used to test the hypothesis that abnormal returns in the months leading and subsequent to the announcement month are lesser compared to its counterpart surrounding the announcement month.

The calculated $\frac{R_1 - \mu_{R1}}{\sigma_{R1}}$ is 3.193. This is greater than the Z criteria at 0.05 standard error which is 1.645. Hence, the null hypothesis that the median of abnormal returns in the months leading and subsequent to the announcement month is significantly lesser or equal to the median of abnormal returns in the months surrounding the announcement date is rejected. This leads to the acceptance of the months leading and subsequent to the announcement date is significantly larger than their counter-part in the months surrounding the announcement date. Given the result of the test of significance, the hypothesis that abnormal returns would be significantly lesser in the months surrounding the announcement date is accepted.

CONCLUSION AND RECOMMENDATIONS

This study sought to examine the performance of stock prices during the release of AASB 1041 “Revaluations of Non-Currents Assets”. The study found evidence that suggested stock price to react negatively in the months surrounding the release of AASB 1041. The test of significance suggested abnormal returns to be lesser in the months surrounding the announcement date, and thus confirms prior expectation. The lack of robustness test limits the ability to make inferences on possible reasons behind the negative stock price performance. However, this paper is able to provide exploratory information on the stock price behavior

surrounding the release of AASB 1041. There is a possibility for future studies to correlate abnormal performance surrounding the release of AASB 1041 with any variables that are unique to revaluer (revaluing firms). The findings of such future studies may be able to confirm the exploratory to make inferences on the reason behind the negative stock prices behavior during the release of AASB 1041.

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