

## **THE VALUE RELEVANCE OF THE FOREIGN CURRENCY TRANSLATION DIFFERENCES : A STUDY OF MULTINATIONAL OIL AND GAS COMPANIES IN AUSTRALIA**

**Ph.D. Student Svetalna Vlady  
Department of Accounting, Finance and  
Economics, Business School, Griffith  
University, Australia**

**Abstract:** This paper investigates the relationship between foreign currency translation differences and changes in firm's market equity value of the Australian multinational firms in the oil and gas industry. The paper empirically examines this relationship under the former Australian accounting standard AASB 1012 "Foreign Currency Translation". The paper thereby supports the new accounting standard AASB 121 "The Effects of Changes in Foreign Exchange Rates" that adopted a functional currency approach. Since, AASB121 is equivalent to International Financial Reporting Standard IFRS 21 this paper could be useful to understand the effects of foreign currency translation process not only on Australian firms but worldwide

**Key words: International Accounting Standards, Current and Temporal Methods, Foreign Translation Differences, Functional Currency, Value Relevance**

### **Introduction**

This paper examines the relationships between foreign currency translation adjustment (differences) and change in firm's market value across a sample of Australian multinational firms in oil and gas industry. Oil and gas industry operates worldwide and plays an important role in any economy. The high exploration costs and worldwide selling price in US dollar are unique characteristics of this industry. The profits and costs of the oil and gas multinational companies likely to be affected by foreign exchange rate fluctuations.

The main purpose of the translation is to prepare the consolidated statements, which are used by managers and investors for decision – making process and enable them to compare results across different countries. Also the recent Asian, Brazilian and Russian financial crises show the critical roles of the currencies in global economy. Inadequacies in the economic, financial and accounting systems were the main reasons of the crises. However, from year 2005 the International Financial Reporting Standards (IFRS) have been adopted by many countries from Asia Pacific region, Australia, European Union and many other countries around the world. This important step towards convergence of accounting standards should improve the reported information, comparability of financial statements and provide better access to international capital markets. Since, the new Australian accounting standards (A-IFRS) are the equivalents to international financial reporting standards (IFRS), this research contributes to an improve understanding of the effects and significance of the accounting standard that governing foreign currency translation process and the rational underlying the functional currency in all countries that adopted IFRS.

The foreign currency translation process should produce results that consistent with economic effects of exchange rate changes. Research in this area has been mainly undertaken in United States of America. However, while some authors ( Bartov, 1997; Griffin & Castaias, 1987) predict a positive association between the value of the firm and foreign currency adjustment, an analysis of the effects of currency fluctuation leads other authors to predict an inverse relationship (Louis, 2003; Pinto, 2005). Liu and Maddala (1992), Baillie and Bolerslev (1989), Selling and Sorter (1983) and Rogalski and Vinso also found that foreign currency translation adjustment is value relevant but in opposite direction. Louis (2003) raises concern about accounting rules governing foreign currency translation that produce results opposite to the economic effect of foreign exchange rate changes. Under accounting rules multinational firms report a foreign translation gain (loss) if subsidiary has a net exposure asset position in an appreciating (depreciating) currency. A positive (negative) foreign translation adjustment implies an increase (decrease) in firm value. However, consistent with economic theories, the depreciation of the subsidiary currency is likely to result in increasing profits and lower production costs, with sales in appreciation currency leading to an increase in the value of the multinational firm.

However, non research has been focused on the oil and gas industry. This paper contributes to existing literature by examine the one of the most important sector of economy in any country and the effects of the translation process governing by worldwide adopted international accounting standard IFRS 21. Since, international financial reporting standard IFRS 21 is largely duplicates United States FASB 52, this paper and analyses the accounting versus economic effect and market versus book value relevance of foreign exchange differences under the new Australian standard AASB 121 which is based on IFRS 21 and testes the value relevance of the foreign currency translation differences empirically under the old Australian accounting standard AASB 1012.

The paper addresses these relationships empirically and asks: In equity markets, is a positive (negative) translation adjustment associated with a loss (gain) of value rather than an increase (decrease) in value? Notwithstanding that a translation adjustment represents a “paper” gain or loss, such gain or loss impacts on headline reported figures and is likely to impact on the usefulness of accounting information to analysts in setting fair prices for a firm’s stocks.

Our results demonstrate that on average an inverse relationship exists between change in share prices and foreign translation adjustments under the former Accounting standard AASB 1012. In summary, our results are supported the new Australian AASB 121and international standards IFRS 21, which adopted a functional currency approach and requires the entity identify the functional currency that affects the economic wealth of the entity. Many Australian-base multinational oil and gas companies selected the UD dollar, Australian dollar and/or Pound in which the sales are denominated as the functional currencies. The analysis of accounting versus economic effect and value relevance of the foreign exchange differences indicates that the association between foreign exchange differences and change in the market value of the firms has been changed for large and profitable firms. For the firms that carried the high exploration and operating costs, analysis indicates an inverse relationship under the accounting standard AASB 1012 and under the new accounting AASB 121. However, the results also indicate that the capital market reacted favorably to the aggressive exploration firms and the new oil and gas discoveries.

The remainder of the paper is arranged as follows. The following section discusses the similarities and differences between accounting standards. The next section presents a series of two regression analyses and interpretations aimed at determining the inter-relationship between the market's assessment of the firm and the recording of the translation adjustment in the firm's accounts. Another section analyses the effect of the new standard AASB 121 and the value relevance of the foreign exchange differences, profits and book value. The final section summarizes the paper's conclusions and recommendations.

## **1. Similarity and differences between accounting standards**

### **1.1 Similarities and differences between Australian accounting standards AASB 1012 and AASB 121**

In 2004, the Australian Accounting Standard Board (AASB) issued a new accounting standard, AASB 121 "The Effects of Changes in Foreign Exchange Rates", which took effect on 1 January 2005. AASB 121 (A-IFRS 121) is an equivalent to international financial reporting standard IFRS 21 "The Effects of Changes in Foreign Exchange Rates". IFRS 21 is largely duplicated United States accounting standard FASB 52 which following a functional currency approach.

The former approach to accounting for foreign currency transactions and operations prescribed by former Australian accounting standard AASB 1012 "Foreign Currency Translation" assumes that the reporting currency is a single currency. AASB 1034 "Financial Report Presentation and Disclosures" required entities to use the Australian currency as a reporting (presentation) currency. Under the AASB 121 each entity to present its financial reports in any currency (currencies) that it chooses.

Australian accounting standard AASB 1012 "Foreign Currency Translation" required the temporal or current methods to be used in Australia for the consolidation purpose. An integrated foreign operation's results are translated using the temporal method and self-sustained foreign operation's results are translated using the current rate method.

AASB 121 requires the entity to identify the functional currency that affects the economic wealth of the entity and re-measure its results and financial position in that currency with foreign exchange differences recognized in profits/losses or some exchange differences equity. Significantly, it does not recognize the distinction between "integrated" and "self-sustaining". An overseas operation with the same functional currency as the presentation no longer requires translation (AASB, 2004, p. 25).

Thus, a single translation method is to be applied for foreign operations that prescribed IAS 21 in paragraph 39 (IASB, 2003) and AASB 121 in paragraph 39. The entity is now required to translate its financial report into the presentation currency with assets and liabilities translated at the closing rate, and income and expenses at the average rate or rates that applied at the date of each transaction. The foreign translation adjustment should not be included in the income statement "because the changes in exchange rates have little or no direct effect on the present and future cash flows from operation" (AASB, 2004, p.20). Rather all resulting differences shall be recognized as a separate component of equity.

The translation provisions in AASB 121 differ from the current rate method with respect to the translation of equity. In contrast to prior accounting rules, the new

accounting standards do not specify the rate at which equity items should be translated and do not specify the name of the separate equity account where all foreign translation differences shall be recognized. However, AASB 101 “Presentation of Financial Report Statement” requires each entity present a statement of change in equity and titled as a “Statement of Recognized Income and Expenses”. FASB 52 requires recognize the foreign currency translation gain/loss as a component of comprehensive income. Moreover, in September 2007 a revised IASB issued IAS 1 “Presentation of Financial Statements” which introduced the statement of comprehensive income and bring IAS1 (IFRS 1) largely in line with US standard 130 “Reporting Comprehensive Income”.

### **1.2 Similarities between Australian accounting standards AASB 1012, AASB 121 and international financial standard IFRS 21**

AASB 121 is the equivalent of IFRS 21. The entities that comply with AASB 121 will simultaneously be in compliance with IFRS 21 (IAS 21). However, there are some differences between these two sets of standards relating mainly to the extent of guidance provided. AASB 121 requires additional disclosure in certain areas. For instance, if the presentation currency is different from Australian currency, the entity should disclose the reason and justification for not using Australian currency.

The translation provisions in AASB 121 and IFRS 21 differ from the current rate method required by AASB 1012 with respect to the translation of equity. Thus, an entity that translates equity at historical rates will simultaneously be in compliance with standard AASB 1012 in regard to the current rate translation method. Moreover, an entity that selects the subsidiaries currencies as the functional currencies and Australian dollar as a presentation would simultaneously be in compliance with standard AASB 1012.

## **2. The Research Design and Regression Analyses**

### **2.1 The Data**

The statistical sample is limited to the Australian multinational firms in oil & gas industry, which is more likely to be affected by foreign exposure. Choice of a single industry offers an advantage in cross-sectional analysis by allowing identification of effects against a common background with more closely identical features and comparable data. This allows a controlled setting to examine how stock markets respond to foreign translation adjustments.

The research is aimed at observing how changes in the stock market equity value of oil and gas firms are correlated with their translation adjustment over the relatively stable five-year period 1999 to 2003 for the industry. The sample does not include the year 2004 when share prices were significantly influenced by increasing worldwide oil prices. 20 multinational public corporations had five years of data available (100 observations). The sample consisted of the firms that applied a current method (55 initial observations over 5 years and 47 final observations) and the firms that used a temporal method (45 initial observations over 5 years and 41 final observations). This amounts to 25 per cent of the whole industry. The oil and gas multinational companies are tent to merge than compete.

All the firms analyzed are listed on the Australian Stock Exchange (ASX). The numerical data of the foreign translation adjustment, foreign transaction gains/losses,

net income, and beginning market value were collected from the annual reports available on the company's website. The Datastream provided the historical share prices as well as dividend information.

Descriptive statistics are reported in Table 1. The equity returns and earnings yields (*NI*) are negative over the period reflecting that many oil and gas companies reported substantial losses due mainly to a combination of still curtailed oil prices (held at fixed prices by futures contracts) and continuing high exploration costs. The median of the foreign currency adjustment is zero and reflecting that some companies have foreign currency exchange gains, while other losses. The statistics indicate that the equity returns have strong positive skewness while the translation adjustments (*ADJ*) have a strong negative skewness.

**Table no. 1 Descriptive Statistics**

	Return	NI	ADJ
Mean	- 3.3	- 9.5	- 0.7
Median	- 4.7	- 7.6	0.00
Std.Dev.	46.5	33.7	6.45
Skewnes	3.1	1.14	- 3.0
Kurtosis	19.85	5.3	15.4

Source: Data according to the financial-accounting situations

The removal of extreme observations reduced but did not entirely correct for skewness and kurtosis (provided there are sufficiently many scores in the centre, a significant measure of kurtosis is not problematic). A strong skewness in the variables nevertheless compromises the integrity of the regressions. It was felt, however, that any transformation aimed at reducing the impact of such effects also distorts the interpretation of the data. The normal probability plots, scatter plots and histograms were investigated and revealed that the standardized residuals are quite reasonably normally distributed. Deviations from normality should not therefore be a major problem for the multivariate analysis. For this reason, consistent with Louis (2003) and Pinto (2005), we settled for scaling all variables by beginning market value (to create dimensionless percentages) and minimize heteroscedasticity.

## **2.2 The Regression Models**

### **(i) Regression Model 1**

If foreign translation gains/losses provide relevant information on firm value, the inclusion of the foreign translation adjustment is expected to change the association of earnings with returns (Lipe, 1986). The change in the value of the firm is represented by the dependent variable (*R*) which is a percent age of the change in shareholder's wealth or in the value of the firm.

Consistent with Dhaliwal, Subramanyan and Trezevant (1999), the foreign currency translation adjustment as a component of comprehensive income included as net income for comparison. Following Dhaliwal et al. (1999) we use the return/earning association approach to test whether the foreign translation adjustment is explanatory of stock returns. This result in the following regression models (for each firm *i* over each time interval of five years, *t*):

$$R_{it} = b_0 + b_1 NI_{it} + e_{it} \quad (1a)$$

$$R_{it} = b_0 + b_1 NI_{it}^* + e_{it} \quad (1b)$$

where:  $R_{it}$  is firm  $i$ 's return calculated for period  $t$  as:  $[P_t - P_{t-1} + D_t] / P_{t-1}$ , where  $P_t$  and  $D_t$  are respectively, the firm's share price and dividend at time  $t$ ;  $NI_{it}$  is the ported net income divided by the beginning market value;  $NI_{it}^*$  is net income *inclusive* of the foreign currency translation adjustment (*ADJ*) divided by the beginning market value, and  $e_{it}$  represents the error terms.

Thus, the model tests the proposition that a positive translation adjustment is recognized as an increase in income. Table 2 presents the regression results.

The association between the firm's equity return and reported earning is positive and significant at the one per cent level. It is, however, affected *adversely* by the inclusion of the currency adjustment in net income as indicated by the reduced Pearson correlation from 0.40 ( $p = 0.000$ ) to 0.35 ( $p = 0.000$ ). Further,  $R^2$  is reduced (from 16.0 per cent to 12.0 per cent). The adjusted  $R^2$  is also reduced (from 12.0 per cent to 11.0 per cent) and confirms that inclusion of the adjustment gives no improvement in predicting the reaction of the market for these firms.

**Table no. 2 Summary of Regression results: Model 1(a) & Model 1(b)**

Parameter	$R_{it} = b_0 + b_1 NI_{it} + e_{it}$	$R_{it} = b_0 + b_1 NI_{it}^* + e_{it}$
$b_1$	0.55** (.000)	0.51** (.001)
$t$	4.08** (.000)	3.42** (.001)
$R^2$	0.16	0.12
Adj. $R^2$	0.12	0.11
$F$	16.6 (.000)	11.7 (.001)
$r$ (unique)	0.40	0.29
$r^2$ (unique)	0.16	0.082
Pearson $r$	0.40** (.000)	0.35** (.000)

Two-tailed p-values are reported in brackets.

\*\*Correlation is significant at the 0.01 level (one-tailed).

Source: Data according to the financial-accounting situations

The estimate of the coefficient on the earnings is also reduced (from 0.55 to 0.51). The standardized coefficient is reduced from 0.40 ( $t = 4.08$   $p = 0.000$ ) to 0.29 ( $t = 3.42$ ;  $p = 0.001$ ). The unique contribution  $r^2$  of "net income plus adjustment" is halved (from 16.0 per cent ( $0.40^2$ ) to 8.2 per cent ( $0.29^2$ )). Thus the results strongly suggest that the translation adjustment as a component of comprehensive income is not a source of economic value-added for oil and gas firms under AASB 1012.

### (ii) Regression Model 2

Consistent with Louis (2003) we again examine the prediction that the foreign translation adjustment is associated with a loss of value rather than a gain in value. The

regression model 1 (b) is represented to test whether the changes in firm value and translation adjustment are correlated over time:

$$R_{it} = b_0 + b_1 NI_{it} + b_2 ADJ_{it} \quad (2)$$

where:  $NI_{it}$  is the reported net income and  $ADJ_{it}$  is the foreign translation adjustment, for firm  $i$  at time  $t$ .

Table 3 presents the overall regression results. The regression results illustrate that the association between the return and foreign translation adjustment is negative and significant at the one per cent level. Over the data sample, net income and foreign translation adjustment account for 23 per cent of the variance in the market value of the firm ( $F(2, 86) = 12.8; p = 0.000$ ). The  $p$ - and  $t$ -values both indicate significant relationships.

Each of the two independent variables of income and translation makes a unique contribution with net income  $r^2 = 0.26^2 = 7.0$ , ( $t(100) = 2.76, p = 0.007$ ) and foreign translation adjustment  $r^2 = -0.26^2 = 7.0$ , ( $t(100) = -2.78, p = 0.007$ ). The  $p$ - and  $t$ -values indicate that net income and adjustment are associated with the change in the value of the firm and differ from zero at the 5 per cent level.

The standardized coefficient on the adjustment  $b_2$  for foreign translation adjustment,  $-0.29$ , is negative and significant ( $p = 0.000$ ) and indicates a decrease in foreign translation adjustment associated with an increase in return. The Pearson coefficient indicates a negative sign ( $-0.40; p = 0.000$ ).

The coefficient on translation adjustment under the AASB 1012 is negative and highly significant and indicates that an inverse relationship exists between the foreign translation adjustment and the change in value of the firm. The multinational firms reported a foreign translation gain (loss) if the foreign subsidiary has a net exposure assets position in an appreciation (depreciation) currency. A positive (negative) translation adjustment should imply an increase (decrease) in firm value. However, the depreciation of the subsidiary's currency is likely to result in increasing profits and lower production costs leading to an increase in the value of the multinational firms.

In general, oil-production subsidiaries are located in areas to extract and process the raw materials, whereas the refining and marketing operations occur in parent or in other industrialized nations. For this reason, the integrated foreign operations are likely to incur production costs in the subsidiary country, but generate revenue in the parent country. It is well known for example that costs of the subsidiaries of oil and gas companies are affected favorably (from the host oil and gas firm's perspective) by a decline in the subsidiary's currency.

Under the new accounting standard AASB 121 some oils and gas companies have chosen the different presentation currencies while other companies with the same functional currencies as presentation require not translation. These new requirements affected a sample size and comparability of the data. Thus, this paper examines the value relevance of the foreign currency translation differences by analyzing two multinational firms for the period 2001 -2006. The analysis includes period of time when AASB 1012 and AASB 121 standards have been applied and its gives an opportunity to compare variables and reveal the differences. *Santos Limited* and *ROC Oil Company Limited* are two Australian-based multinational companies that have subsidiaries around the world and in European countries with the strong currencies.

**Table no. 3 Summary of Regression Results: Model 2**

$$R_{it} = b_0 + b_1 NI_{it} + b_2 ADJ_{it} + e_{it}$$

Parameter	Expected	Actual	Sample
$b_1$	+	+	0.29 (.000)
$b_2$	-	-	- 0.29 (.000)
$t_1$	+	+	2.76 (.007)
$t_2$	-	-	- 2.78 (.007)
$R^2$			0.23
$Adj.R^2$			0.21
$F$			12.8 (.000)
$r_1$			0.26
$r_2$			0.07
$r_2^2$			0.07
Pearson $rR$ & ADJ	-	---	- 0.40** (.000)
Pearson $rNI$ & ADJ	-	---	- .40** (.000)
Pearson $rR$ & NI	+	+++	+0.40** (.000)

Two-tailed p-values are reported in brackets.

\*\* Correlation is significant at the 0.01 level (one-tailed)

Source: Data according to the financial-accounting situations

Moreover, under AASB 121 greater emphasis is given to the currency of the economy that determines the pricing of the entities transactions. The worldwide oil and gas prices and sales that denominated in US dollars is an important economic characteristic of the oil and gas industry. Under the new standard many Australian MNC in oil and gas industry selected the US dollar or Pound and/or Australian dollar as their functional currencies for the reporting period 2006-2006.

### 3.1 The effects of the Australian Standard AASB 121 on Santos Limited

The analysis of data of Santos Limited in Table 4 indicates an inverse relationship between the foreign exchange differences (adjustment) and earnings and hence, market value of the firm, but positive association between adjustment and book value of the firm under the AASB 1012. However, under the new accounting standard AASB 121 the relationships between foreign exchange differences and market value have been changed to the positive. Under the new standard the association between foreign exchange differences, earnings, book market value of the firm and also market value of the firm is a positive.

In year 2005-2006, the US dollar and Australian dollar have been selected as the functional currencies. The company selected the currencies of economies that determined the pricing of transactions as opposed to the currency in which transactions are denominated.



**Table no. 4** Financial and accounting data Santos Limited

	2006	2005	2004 restated	2004 original	2003	2002	2001
<b>Standard</b>	AASB 121	AASB 121	AASB 121	AASB 1012	AASB 1012	AASB 1012	AASB 1012
<b>NetIncome (\$ml)</b>	643,4 decrease	762,1 increase	354,7	379,9 increase	327,0 increase	322,1 decrease	445,9
<b>Foreign differences</b>	(81.6) losses	57,1 gains	(52,7) losses	(12,3) losses	(91,1) losses	(25,5) losses	(13,0) losses
<b>ROE% market value</b>	(19.42) losses	44.4 gains	23.4	23.4 gains	14.12 gains	3.0 gains	4.65 gains
<b>ROE book value %</b>	19.17	25.72	15.04	10.86	10.59	11.24	16.35
<b>EPS cent</b>	102.8	124,4	54,2	58,6	52,1	51,2	72,9

Comparatives for corresponding prior period were required and the financial statements for year 2004 were restated on the new basis in accordance with the standards.

Source: Data according to the financial-accounting situations

Thus, an appreciation (depreciation) of selling currency is increased (decreased) a profit of the firm, book value and, hence, and market value of the firms. In year 2005, the investors reacted positively to the increase in profit. However, in year 2006, the depreciation of the selling currency, US Dollar, adversely affected the profits of the firm and, hence, the market value of the firm.

### **3.2 The effects of the Australian Standard AASB 121 on ROC Oil Company Limited**

ROC Oil Company Limited is an aggressive explorative multinational firm that operates in UK, UK North Sea, Mauritania, Equatorial Guinea, Angola, China, Australia and New Zealand. The consolidating entity's principal activities are oil and gas exploration, development and production. Each subsidiary records its transaction in its functional currency. Annual report is presented in Australian currency. The consolidating entity's sales revenue mainly denominated in UK pounds (gas sales) and United States dollars (sale of oil and NLG's).

The following data in Table 5 indicate that in period 2001-2003 the inverse relationships existed between foreign currency exchange differences (adjustments) and profits, book value and hence, market value of the firm under accounting standard AASB 1012. However, in year 2004 company carried the huge losses due to the high exploration costs, which should be increase due to the appreciation of the subsidiaries currencies. Nevertheless, the capital market ignored the losses and reacted positively to the new discovers of the gas and oil fields.

In year 2005, the capital market positively reacted on the increased profits in year, even the depreciation of the functional currencies should reduce the sales revenues. Thus, in year 2005, the foreign exchange differences inversely associated with the earnings, book value and, hence, market value of the firm. In year 2006, the foreign exchange losses associated positively with the high losses and, hence, book

value. However, the investors reacted positively to the new oil discovery and the new oil field development of the exploration firm. Thus, market valued the aggressive explorative firms positively, despite losses, foreign exchange losses and negative book value or return on equity (ROE).

**Table no. 5** Financial and Accounting Data ROC Oil Company Limited

	2006	2005	2004 restated	2004 original	2003	2002	2001
Standard	AASB 121	AASB 121	AASB 121	AASB 1012	AASB 1012	AASB 1012	AASB 1012
NetIncome (\$ml)	(59,612) decrease	45,563 increase	(26,239)	(38,798) decrease	2,976 increase	(20,994) decrease	(9,156)
Foreign differences	(5,262) losses	(2,996) losses	0,700 gains	3,768 gains	(13,175) losses	0,238 gains	10,748 gains
ROE% market value	22.1 gains	39.8 gains	18.3	18.3 gains	6.25 gains	(1.98) losses	(1.9) losses
ROE book value %	(12.61)	21.2	(15.3)	(17.1)	1.7	(11.5)	(4.5)
EPS cent	(25.8)	24.5	(16.1)	(23.8)	2.7	(19.3)	(8.5)

Comparatives for corresponding prior period were required and the financial statements for year 2004 were restated on the new basis in accordance with the standards.

Source: Data according to the financial-accounting situations

**(i) DuPont Model**

The importance of return on equity (ROE) as an indicator of performance makes it possible to break down of into several components that provide insight into the causes of firm's ROE or any changes in it. This breakdown of ROE into component ratios is generally referred to as the Du Pont System. The following estimations and ratios in Table 6 indicate the reasons if ROE is unsatisfactory by some measure.

$$ROE = NI/Sales \times Sales/T. Assets \times T. Assets/T. Equity = NI/T. Equity$$

ROE (2006) =	(39.35)%	x	0.16	x	2.00	=	(12.60)%
ROE (2005) =	52.9 %	x	0.32	x	1.25	=	21.19 %
ROE (2004r) =	(68.52)%	x	0.169	x	1.32	=	(15.28) %
ROE (2004) =	(101.4)%	x	0.138	x	1.22	=	(17.10)%
ROE (2003) =	5.19 %	x	0.234	x	1.41	=	1.71 %
ROE (2002) =	(38.86)%	x	0.2	x	1.48	=	(11.50)%
ROE (2001) =	1.56 %	x	0.336	x	1.49	=	0.78 %

The comparison between year 2004 (restated) and 2004 indicates that ROE has not been affected by an increase in operating efficiency or use of assets efficiently. Adoption of the new standards impacts the profit margin. In year 2005, a significant increase in profit margin and assets turnover indicates a high increase in return in assets.

**Table no. 6 DuPont Identity Ratios of ROC Oil Company Limited**

Ratio	2006	2005	2004 ReStated.	2004 origin	2003	2002	2001
Profit Margin	(39.35)	52.9	(68.52)	(-01.32)	5.19	(38.86)	1.56
ROA	(6.29)	17.23	(-11.59)	(-14.0)	12.15	(7.75)	0.52
ROE	(12.60)	21.19	(-15.28)	(-17.10)	1.71	(11.50)	0.78
Assets Turnover	0.16	0.32	0.169	0.138	0.234	0.2	0.336
Equity Multiplier	2.00	1.25	1.32	1.22	1.41	1.48	1.49
Profit Margin	(39.35)	52.9	(68.52)	(-01.32)	5.19	(38.86)	1.56
ROA	(6.29)	17.23	(-11.59)	(-14.0)	12.15	(7.75)	0.52
ROE	(12.60)	21.19	(-15.28)	(-17.10)	1.71	(11.50)	0.78

Profit margin = NI / Sales; ROA = NI / T. Assets; ROE = NI / T. Equity; Assets Turnover = Sales / T. Assets; Equity Multiplier = T. Assets / T. Equity

Comparatives for corresponding prior period were required and the financial statements for year 2004 were restated on the new basis in accordance with the standards.

Source: Data according to the financial-accounting situations

However, a decrease in equity multiplier suggests that possible sale of assets affected ROE. Actually the company sold a gas field. In year 2006, an increase in equity multiplier and decrease in assets turnover indicate the new acquisitions, new oil discovery and the new oil field development.

### Conclusion

The analysis in the context of Australian oil and gas companies has demonstrated an inverse relationship between foreign translation adjustment and impact on the firm's share price for the period when Australian accounting standard AASB 1012 governing the foreign currency translation process. The results lend robustness to the findings of such as Louis (2003), Liu and Maddala (1992), Baillie and Bolerslev (1989), Selling and Sorter (1983) and Rogalski and Vinso (1977): "The foreign translation adjustment is not a source of value added" (Louis, 2003, p. 1027).

Significantly, the findings support the new Australian and International Accounting Standards AASB 121 and international accounting standard IAS 21 (IFRS 21), which following a functional currency approach. The analyses of the results produced under the new Australian accounting standard AASB 121 indicates that oil and gas multinational companies tend to select \$US dollar as a functional currency that affects the economic wealth of the entity. The relationship between foreign exchange differences and income and, hence, the value of the firm have been change from inverse to the positive. However, capital markets valued the aggressive explorative firms and the new oil and gas discoveries firms positively despite huge losses.

In general, a strong \$US, high world prices, price-inelastic demand and subsidiaries' currencies depreciation would increase the profits and market value of the oil and gas multinational firms. However, macroeconomic and other events influence share prices and exchange rates. Also oil and gas industry is unique industry that following a specific practices. An interesting extension of this research would be examine the effects of the accounting standard AASB 121 (IRFS 21) that governing the foreign currency translation process in conjunction with accounting standard for the

extractive industries AABS 6 (IFRS 6) “Exploration for and Evaluation of Mineral Resources”.

**REFERENCES**

1. Canals, J. Competitive Strategies in European Banking”, Claredon Press, Oxford, 1994
2. Australian Accounting Standard Board AASB 121 *The Effect of Change in Foreign Exchange Rates*, AASB, Australian Government. Retrieved August 15, 2004 from <http://www.aasb.com.au>
3. Baillie, R., & Bolerslev, T. Common stochastic trend in a system of exchange rates. *Journal of Finance*, 44, 167–187, 1989
4. Bartov, E. Foreign currency exposure of multinational firms: Accounting measures and market valuation. *Contemporary Accounting Research*, 14, 263–652, 1997
5. CPA Australia *Accounting Handbook 2005*. Australia: Pearson Australian Group Pty Ltd, 2005
6. Dhaliwal, D., Subramanyam, K., Trezevant, R Is comprehensive income superior to net income as a measure of firm performance? *Journal of Accounting and Economics*, 26, 43-46, 1999
7. Griffin, P.A., & Castanias, R.P. Accounting for translation of foreign currencies: The effect of statement 52 on equity analysis. Norwalk. CT: FASB, 1987
8. IASB and AASB *The Australian Convergence Handbook* (2<sup>nd</sup> ed.). Australia: IASB and AASB, 2004
9. Kolb, R.W. *The Corporate Finance Reader* (2<sup>nd</sup> ed.). New York: Blackwell, 1995
10. Lipe, R. The information contained in the components of earnings. *Journal of Accounting Research*, 24, 37–64.
11. Liu, P., & Maddala, G. Rationality of survey data and tests for market efficiency in foreign exchange markets. *Journal of International Money and Finance*, 16, 366–381, 1992
12. Louis, H. The value relevance of the foreign translation adjustment. *The Accounting Review*, 78, 1027–1045, 2003
13. Pinto, J.A. How Comprehensive is Comprehensive Income? The Value Relevance of Foreign Currency Translation Adjustments. *Journal of International Financial Management and Accounting*, 97-122.
14. Radebaugh, L.H., & Gray, S.J. Foreign currency translation. *International Accounting and Multinational Enterprises* (5<sup>th</sup> ed.). New York: John Wiley & Sons, Inc., 2002
15. Rogalski, R., & Vinso, J. Price level variation as predictors of flexible exchange rates. *Journal of International Business Studies*, 8, 71–81, 1977
16. Selling, T.I., & Sorter, J.H FASB statement N 52 and its implications for financial statement analysis. *Financial Analysts Journal*, 39 (3), 64–69, 1983