Analysis on the Impact of Foreign Exchange Differences on the Financial Performance of Malaysia Public Listed Companies

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Abstract

The management of a company cannot afford to leave the profits generated from its operation to be eroded by any unforeseen currency turmoil. If unprotected, the company may face drastic cost escalation on account of higher exchange rates for imported components during a currency crisis. In this respect, multinational companies traditionally rely on the expertise of its treasury department to manage its exchange risk exposure through undertaking various hedging measures against their forward foreign exchange commitments and export receipts. This study aimed to identify the relationship between foreign exchange differences and financial performance of public-listed companies in Malaysia as well as to determine the existence of any protection measure taken against foreign exchange risk.

Keywords: *Foreign exchange differences, Accounting profit, Earnings per share, Return on equity, Correlation and relationship*

1. INTRODUCTION

Exchange risk exposure arises when local firms enter into foreign currency operation or transactions. Exchange losses will be incurred due to adverse fluctuations of exchange rates of foreign currencies against the Malaysian Ringgit (RM). The depreciation or appreciation of the RM relative to the foreign currencies to a large extent depends on the Malaysian economy in general. The management of a company cannot afford to leave the profits generated from its operation to be eroded by any unforeseen currency turmoil. If unprotected, the company may face drastic cost escalation on account of higher exchange rates for imported components during a currency crisis. In this respect, multinational companies traditionally rely on the expertise of its treasury department to manage its exchange risk exposure through undertaking various hedging measures against their forward foreign exchange commitments and export receipts.

Hedging is made possible through the development of various sophisticated financial products coupled with the advanced communication technology in the world. Foreign exchange market is gaining popular with ease globally. Apart from its typical purpose, it serves to assist cross-country border trade and investment. There is approximately USD2 trillion in averages being traded daily in the foreign exchange market, viz. the largest and liquid capital market in the world (GoCurrency, 2010). With this evidence, it is clear that the foreign exchange market is one of the most active trading sectors. Undeniably, there will be some people earning money and some people losing money. Volatility, this word is always closely linked to foreign exchange market as the foreign exchange rates fluctuate. Exchange rate fluctuation is one of the global conditions, which affects a firm's financial performance. A firm entering into foreign currency transactions or foreign investments might need to settle the arrangements using foreign currency. It, thus, needs to consider the exchange rate movements; perhaps, to some extent, tracking the exchange rate trend.

As the business world gradually grows to be borderless, the effects of changes in foreign exchange rates are no longer only important for multinational firms, but also the domestic firms as quoted by Chang et al. (2008) using the study done by Adler and Dumas (1984). Apart from market situation and economic condition of the countries involved, government policy plus political condition without mentioning accounting standards, also can give rise to the exchange rate risk (Wikipedia, 2010). Likewise in Malaysia, it is not surprising that the companies especially the public listed companies, with the ability to manage diversified portfolio of investments, want to minimize their exchange rate risks. To lessen foreign exchange risk, a company can use assorted hedging choices, for instance, forwards, futures, swaps, options and derivatives.

This study aimed to identify the relationship between foreign exchange differences and financial performance of public-listed companies in Malaysia as well as to determine the existence of any protection measure taken against foreign exchange risk. With these two objectives, this study serves to provide an insight for Malaysia public-listed companies on the significance of hedging in foreign exchange management in order to maximize shareholders' values. Furthermore, the findings add to the existing study on foreign exchange fluctuations on corporate financial performance in the Malaysian perspective.

1.1 Financial Reporting Standard 121 – The effects of changes in foreign exchange rates

Since financial statements presented in Malaysia are required to be denominated in Ringgit Malaysia, a firm that entered into a foreign currency transaction or settling transaction using foreign currency should have foreign exchange difference recorded due to the changes in the currency exchange rates. FRS121 dictates the compliance of corporate financial reporting in Malaysia on the effects of changes in foreign exchange rates. Under FRS121 (para 23), at each balance sheet date:

a. Foreign currency monetary items shall be translated using the closing rate;
b. Non-monetary items that are measured in terms of historical cost in a foreign currency shall be translated using the exchange rate at the date of the transaction; and
c. Non-monetary items that are measured at fair value in a foreign currency shall be translated using the exchange rates at the date when the fair value was determined.

FRS121 (para 28) stipulates that exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous financial statements shall be recognized in profit or loss in the period in which they arise. Under FRS121 (para 32), exchange differences arising on a monetary items that forms part of a reporting entity's net investment in a foreign operation shall be recognized in profit or loss in the separate financial statements of the foreign operation. In the financial statements that include the foreign operation and the reporting entity (e.g. consolidated financial statements when the foreign operation is a subsidiary), such exchange differences shall be recognized initially in a separate component of equity and recognized in profit or loss on disposal of the net investment.

2. LITERATURE REVIEW

There are a few studies conducted previously to investigate on whether to hedge or not. Morey and Simpson (2000) presented a study, for the period 1989 to 1998, on decision whether to hedge or not. When the forward rate is at historically large premium, their study revealed that forward rate would be the best hedging technique in the long term period. On the other hand, hedging based on selection or when a forward rate is at premium, is a better choice than other strategies like to always hedge or not to hedge at all, in the short-term

period. This could serve as a guide for international firms. Furthermore, Papadamou and Tsopoglou (2002) reported on hedging for international fund portfolios. Looking at the performance of hedged international funds, they pointed out that the risk of foreign fund portfolios is lessened through hedging. Nevertheless, there are situations whereby the outcomes are unfavorable like in the case of equity funds and in exceptional economic situations. Apart from that, Nelson et al. (2005) examined the relationship between hedging and annual stock value for 14,261 samples of firms for the period 1995 to 1999. They focused mainly on the use of derivatives as hedging tool. Their end result shows that firms that hedge perform better on average than others which are not hedger. This shows the importance of using hedging tools to minimize the foreign exchange risk in foreign exchange management. Using hedging, a firm can lessen the risk of changes in foreign exchange rates on its financial performance. Given various alternatives of hedging devices, the impact of each strategy employed would be different. Maurer and Valiani (2007) focused on using forward as a strategy as compared to put option. Their findings indicated that currency forward results in a much better performance.

Using a group of publicly-listed, non-financial UK firms as sample, the study conducted by Bradley and Moles (2000) shows that there is direct impact of exchange rate fluctuation on the future cash flows of almost all types of firms; which also means that there is indirect competitive effect. On the whole, however, they found that firms are practically not exposed to exchange rate fluctuation as much as theoretically-found result. In addition, Bartram et al. (2008) studied on the foreign currency exposure and hedging, which focused on foreign acquisition, they found that there is no significant impact of hedging on the estimated exposure of foreign exchange risk. They discovered that foreign acquisition often further reduce the estimated exposure of foreign exchange risk though. On the other hand, Kolari et al. (2005) carried out a study to investigate the relationship between foreign exchange risk exposure and the cross-section of stock returns for U.S. firms. The results of their research show that the more a firm is sensitive to foreign exchange, the lower it is the stock returns. This means there is a negative risk premium for foreign exchange risk for firms which are sensitive to foreign exchange. Cherry and Raymond (2002) investigated the relationship between exchange rate inconsistency around the 1997 Asian financial crisis and instability of stock return using samples of U.S. multinational companies (MNCs) that have overseas sales in the Asia-Pacific region. They concluded that there is positive association between exchange rate fluctuation during the crisis and stock return irregularity for the MNCs. Given that the irregularity exists, the controversial question is whether there is a relationship between foreign exchange differences and financial performance, in our case, the public-listed companies in Malaysia.

3. METHODOLOGY

The sample companies used for this study are 100 public companies listed on the Main Board of Bursa Malaysia. The selected public-listed companies were the top 100 companies as per their market capitalization as published in the STAR newspapers on 6 July 2009. Our samples include cross-sectional industries namely, construction, plantation, properties, industrial product, consumer product, IPC, trading/service, finance and technology. The group Profit after Tax (PAT), Earnings per Share (EPS) and Return on Equity (ROE) are parameters used for our study purpose. The relevant financial data from the annual reports of these companies for the years ended 2007 and 2008 were extracted at the group level information on ground that the consolidated figures reflect the companies' overall efficiencies in managing their own group resources. All data extracted is processed using SPSS statistical software as the analysis tool. Normality test of data was conducted. Correlation Coefficient is generated to assess the strength of relationship between foreign exchange differences and financial performance indicators which include PAT, EPS and ROE.

Hypothesis testing is performed to test the existence of any relationship between foreign exchange differences and financial performance.

4. OBSERVATION AND ANALYSIS

4.1 Sample distribution

Table 1 depicts the distribution of the 100 top public listed companies on the Main Board of Bursa Malaysia in term of their market capitalization (as per STAR newspapers dated 6 July 2009), classified by industries. Trading/service sector tops the table with 33 companies and 15 companies come from the finance sector.

Table 1: Sample distribution by industry

No.	Industry	Frequency	Percent (%)
1	Construction	5	5.0
2	Plantation	9	9.0
3	Properties	8	8.0
4	Finance	15	15.0
5	Trading/Service	33	33.0
6	Infrastructure Project	6	6.0
7	Industrial Product	11	11.0
8	Consumer Product	11	11.0
9	Technology	1	1.0
10	REITS	1	1.0
	Total	100	100.0

4.2 Reliability testing

The financial data extracted was first measured for internal consistency using reliability test. The outcome in Table 2 shows that the reliability of the data is acceptable since the overall Cronbach's alpha coefficient is 0.68, which is close to 1. The Cronbach's alpha coefficient measures how well the variables are positively correlated to one another.

Table 2: Reliability analysis using Cronbach's alpha reliability

Cronbach's Alpha	Number of parameters
0.680	8

4.3 Descriptive statistics of mean and standard deviation by industry

Table 3 reports the mean and standard deviation for all the industries involved in this study. The Technology and REIT sectors with only one company in the sample are excluded from the table. The mean and standard deviation were generated for the proportion of exchange differences to PAT for years 2008 and 2007 respectively. In term of the average exchange differences measured by the mean of exchange difference over PAT ratio, both the finance and trading/service sectors consistently exhibit the higher mean among all industries for both years. The readings show that firms in these sectors have greater exposure to the fluctuation of foreign exchange rate with an extensive scope of international trading. The property sector did exhibit a significant mean in 2007. One of the possible reasons could be due to a more aggressive purchase of foreign property in that year. The plantation sector has a low mean generally. This sector is least affected by exchange rate movement. This may imply that the foreign currency receipts and payments of firms in this sector are probably covered by hedging measures such as forward contracts. The trading/service, finance and property sectors have wider dispersion measured by standard deviation in relation to the mean of the industry. Hence, the computed mean may not be so closely representative of the mean of firms in the sector! The higher standard deviation of these sectors could be due to the high frequency in the sample size.

Table 3: Descriptive statistics

No.	Industry	Mean		Standard Deviation	
		2008	2007	2008	2007
1	Construction	0.0264	0.0070	0.05646	0.03238
2	Plantation	-0.0110	0.0027	0.05068	0.04377
3	Properties	0.0348	-0.0867	0.09619	0.21756
4	Finance	0.0981	0.0883	0.10625	0.11380
5	Trading/Service	-0.1965	0.0448	0.72914	0.14963
6	Infrastructure Project	0.0013	0.0048	0.01931	0.01583
7	Industrial Product	0.0448	0.0189	0.08293	0.05915
8	Consumer Product	-0.0239	-0.0222	0.08520	0.03144

4.4 Normality test

Normality test was performed on the various series of financial data collected to assess whether they follow normal distribution or Gaussian distribution. Based on the result of normality test, we would then decide on the type of statistical test for analysis. To determine whether the normality of data is violated, we look at the significance level of the Kolmogorov-Smirnov (KS) statistic and Shapiro-Wilk (WS) statistic by referring to their respective significance (Sig.) columns in Table 4. Based on 5% level of significance, it is not significant statistically since the results obtained are less than 0.05. Hence, the series of data do not follow a normal distribution.

Table 4: Tests of normality

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Profit after Tax 2008	0.208	100	0.000	0.773	100	0.000
Profit after Tax 2007	0.211	100	0.000	0.723	100	0.000
Earnings per Share 2008	0.160	100	0.000	0.842	100	0.000
Earnings per Share 2007	0.158	100	0.000	0.826	100	0.000
Equity 2008	0.227	100	0.000	0.710	100	0.000
Equity 2007	0.241	100	0.000	0.671	100	0.000
Exchange Differences 2008	0.302	89	0.000	0.589	89	0.000
Exchange Differences 2007	0.305	89	0.000	0.565	89	0.000

Note: a. Lilliefors Significance Correction

Table 5: Coefficient of skewness

Variables	Statistics
Profit after Tax 2008	2.138
Profit after Tax 2007	2.330
Earnings per Share 2008	1.703
Earnings per Share 2007	1.696
Equity 2008	2.267
Equity 2007	2.383
Exchange Differences 2008	3.490
Exchange Differences 2007	3.586

Similarly, looking at the skewness coefficient results in Table 5, the coefficient of skewness does not approximate to zero. Hence, the same conclusion of not having a normal data distribution is drawn. The factor leading to the non-Gaussian data could be due to the method of sampling. Instead of random sampling, the sample firms are taken from the 100

top public companies listed on the Main Board of Bursa Malaysia based on their market capitalization. This it introduces a certain degree of 'biasness' in the sample selection.

4.5 Correlation measurement using Spearman correlation coefficient and tests of hypothesis

As stated in GraphPad (1995), "select the Pearson (parametric) correlation coefficient if you can assume that both X and Y are sampled from Gaussian populations. Otherwise choose the Spearman nonparametric correlation coefficient". In view of the data's departure from normality, we use the non-parametric test, Spearman correlation coefficient, to measure the strength of the relationship between foreign exchange differences and the respective financial variables, namely PAT, EPS and ROE. These financial performance indicators are measured on their correlation with Exchange Differences for 2 years, 2007 and 2008. The Spearman Correlation Coefficient values would range between +1 and -1. A positive coefficient indicates that the variables are positively correlated and vice versa. A zero coefficient would be the result if there is no relationship between the two variables.

The hypotheses of testing the relationship between the parameters are stated as follows:
H1: PAT and Exchange Differences are significantly related
H2: EPS and Exchange Differences are significantly related
H3: ROE and Exchange Differences are significantly related
Based on the 5% level of significance, if the resulted significance level or ρ-value is less than 0.05, it would not be significant statistically to reject the hypotheses. This would suggest that PAT/EPS/ROE and Exchange Differences are related. On the contrary, with a significant level of larger than 0.05, we would reject the hypothesis.

Table 6: Correlation between Exchange Differences and PAT/EPS/ROE

Variables	Exchange Differences			
	Spearman Coefficient		Significance level (2-tailed)	
	2008	2007	2008	2007
Profit after Tax	0.224	0.374	0.035	0.000
Earnings per Share	0.069	0.062	0.518	0.564
Return on Equity	0.101	-0.090	0.347	0.403

The results in Table 6 show that PAT consistently has the highest Spearman coefficient for both year 2007 and year 2008 as compared to EPS and ROE. Nevertheless, the correlation coefficient of PAT is only moderate. With the significance level of less than 0.05, it implies that there is a relationship between PAT and exchange differences. This remains the same for both years 2007 and 2008. Hence, the exchange difference which is an element item of the income statement, does has a direct impact on the PAT. On the other hand, EPS has weaker correlation with exchange differences with lower correlation coefficients of 0.069 for year 2008 and 0.062 for year 2007. This is consistent with the result of the hypothesis test. The significance levels of EPS are higher than 0.05 for both years. We thus conclude that there is little or no relationship between EPS and exchange differences.

Similarly, it is also clear that the correlation between ROE and exchange differences for year 2008 is relatively low. The negative correlation coefficient of ROE for year 2007 suggests that there is only a minimal or no correlation between them. In addition, the significance levels of ROE are higher than 0.05 for both years, we conclude that there is no relationship between ROE and exchange differences based on statistical evidence. The different observations obtained for PAT and, EPS and ROE could be due to the reason that PAT is an absolute measurement for performance whereas EPS and ROE are both relative measurements. EPS and ROE are expressed with reference to another variable. Besides, the disclosure of EPS is subject to *FRS 133 Earnings Per Share*, which prescribes the

numerator and denominator used in EPS computation. The impact could have been diffused by the denominator used in the computation.

5. LIMITATION

The findings of this study were interpreted with certain limitations. The data used for this study was extracted from the financial statements for the years ended 2007 and 2008. Observations of data for a longer time period might be more revealing. Furthermore, the exchange differences were taken from what is disclosed in the financial statements. Exchange difference might have been hidden or included in other revenue items which are not separately disclosed! In other words, the observations made depend on the accuracy of the recognition and measurement of exchange differences by the companies. Besides, this study includes only the companies that are listed on the Main Board of Bursa Malaysia and the sample under study confines only to the top capitalized firms! In addition, the equity used in the ROE was an extracted book value figure instead of market value!

This study does not extend to exchanges differences which are dealt directly through reserves instead of the income statement.

6. CONCLUSION

Findings from the study indicate that only PAT has a moderate correlation with exchange differences. However, the statistical generated evidence supports that there is a minimal or no relationship between EPS and exchange differences. This is also the same for the test on ROE. This result implies that PAT is affected by the exchange rate movement for public listed companies in Malaysia. This is particularly evident in the case of finance and trading/service sectors which involve volumes of cross border trading activities. The findings have indeed put forward a message that there are rooms for Malaysia public-listed companies to further minimize their foreign exchange risk exposure! Expertise on hedging measures should be put in place in the firms' treasury department in order to shield the firms' operating profits from adverse exchange rate movement. With the rising exchange risk factor for firms in globalised business, the effects of changes in foreign exchange rates on the financial performance are worth noting. In summary, it is essential for a company to employ various available hedging options to lessen the foreign exchange risk on the financial performance.

7. RECOMMENDATION FOR FUTURE STUDIES

Data for observations can be increased to more than two year years in future research. The impact of exchange differences on other parameter such as return on assets and return on market value based equity could shed light to a more in-depth perspective! Additionally, a similar study on companies listed on the Second Board of Bursa Malaysia and unlisted companies might highlight the urgency of incorporating hedging measures in their treasury management.

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