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CURRENCY DERIVATIVES AND FIRM VALUE OF MULTINATIONAL CORPORATIONS: A LITERATURE REVIEW

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Abstract: *Exchange rate risk is a major problem for firms that deal in international business, which may affect their financial value. International business managers have to make an effort to mitigate this exchange rate risk. Foreign currency derivatives is one method of reducing the exchange rate risk in an effort to maintain and enhance the value of firms. The purpose of this paper was to review empirical literature to establish the relationship between the use of foreign currency derivatives and the value of multinational firms. The paper was a critical review of empirical journal articles to establish the relationship between the use of foreign currency derivatives and the value of multinational firms. The study examined the meaning of derivatives, derivatives usage and the relationship between derivative usage and financial performance of multinational firms. The study concluded that firms use derivatives to reduce foreign exchange rate risk. The major determinants of derivative usage include; under-investment, size of firm, debt, investment growth, liquidity, cost of hedging, profitability, and developed derivatives market while managerial ownership was not a determinant. Many studies showed that there was a significant positive relationship between derivatives usage and firm value but only a few had either negative relationship or a positive relationship that is not significant. It is expected that the findings of the study will justify the usage of derivatives in order to enhance the value of the firm.*

Keywords: *currency derivatives, firm value, multinational firms*

Introduction

The managers of multinational firms have the duty of ensuring that they increase shareholder value. But this objective is difficult to achieve when the firms are faced with the risks they encounter in their area of operation. Studies have confirmed that multinational firms are faced with foreign exchange rate exposure (Yip & Nguyen, 2009). Therefore, the managers should use methods that mitigate the risk they encounter.

According to Modigliani and Miller, in the absence of market imperfections hedging does not affect the value of the firm (Bashir, 2013), because the firms have information on risks they are exposed to and the risk management tools available and hence there is no need for hedging. But markets are imperfect and hence, the need to hedge foreign exchange rate risks to enhance the value of the firms.

The determinants of derivatives usage include under-investment, size of the firm, debt, investment growth, liquidity, cost of hedging, profitability, and developed derivatives market (RH & PS, 2014; Kamau, Inanga, & Rwegasira, 2015; Shaari, Hasan, Palanimally, Kumar, & Haji, 2013; Nyamweya & Ali, 2016). The above mentioned factors are the major determinants of multinational firms using derivatives to mitigate against the foreign exchange rate risk.

The derivatives market is a key determinant of derivatives usage since they facilitate the interaction between the providers (financial institutions) and the buyers (users of financial derivatives). The economies with developed financial systems may be more inclined to have more derivatives usage, but the economies with less developed financial systems may have less usage of financial systems. A study recommended the establishment of a derivatives market to facilitate the usage of the foreign currency derivatives (Murungi, Murage, & Wanjau, 2014).

The usage of foreign currency derivatives has been found to affect the value of the firm. Hedging by using the derivatives enhances the firm value due to the reduction of fluctuation of cash flows, revenue and expenses. Studies (Singhvi & Pandya, 2016; Kihara & Muturi, 2016; Simpson, 2016; Kiio & Ambrose, 2017; Gómez-gonzález, Rincón, & Rodríguez, 2014) have found a significant relationship between derivative usage and the value of the firm. The studies recommended that usage of the firms enhances firm value and hence should be used by multinational firms faced with foreign exchange rate risks.

Other studies (Li, Visaltanachoti, & Luo, 2014; Bashir, 2013) found that there is no significant relationship between derivative usage and firm value. Their findings pointed to the fact that usage of derivatives does not affect the value of the firm. This in in contrast to the many other studies that have found that derivatives usage affects the firm value. Therefore, the findings are not conclusive on the effect of derivatives usage on firm value.

The purpose of this study was to review empirical literature on the relationship between usage of derivatives and firm value. The empirical literature review will be on the derivatives use, the relationship between derivative usage and the value of the firm. Thereafter, a conclusion will be made and recommendations to the managers of multinational firms on the importance of using the foreign currency derivatives (FCD).

Literature Review

Derivative Usage

Firms operating in the international environment are faced with risks that threaten to affect the firms' value. There are two types of risks that firms are faced with; the diversifiable risks and the undiversifiable risks. Diversifiable risks are the risks that can be eliminated through the investments in many firms (diversification) while the undiversifiable risks are those risks that cannot be eliminated by investing in many firms (cannot be diversified). There are many methods that managers of international firms can use to reduce or eliminate the foreign exchange risks.

Firms use the derivatives "to minimize foreign exchange risk" by being "involve[d] in either currency hedging or operational hedging or both to reduce their exchange rate exposure"(RH & PS, 2014, p. 1). A study (RH & PS, 2014) found that there was a significant positive relationship between the usage of derivative and under-investment (using price earnings ratio as proxy) and size (using total assets as proxy). The study also found that derivative usage had a positive relationship with research and development expenses, foreign sales to total sales, taxation and current ratio but the relationship was not significant. The derivative usage had also a negative relationship with revenue, debt ratio debt equity ratio and EPS but the relationship was not significant. Therefore, the major determinants of derivative usage were under-investment and size of the firm. This study established that only large firms use derivatives for risks management. Another study (Kamau et al., 2015) established that the size of the firm determines the usage of derivatives in the management of risks. Therefore, the usage of derivatives increases with the increase in the size of the firms.

A study (Murungi et al., 2014) established that non-financial firms in Kenya do not use derivatives for risk management because of the managerial skepticism, lack of derivative market, knowledge on how to use and account for the derivatives. The study recommended for an establishment of a derivatives market and provision of education programs on the use of derivatives. A derivatives market improves the trading on derivatives and hence will encourage multinational firms to use the derivatives for hedging exchange rate risk.

A study (Njoroge, Matumo, & Maina, 2013) found that four variables (legal and regulatory framework, market environment, operational efficiency and financial markets intermediaries) determine the development of the financial derivatives market in Kenya. Therefore, these variables should be worked on to enhance the development of the derivatives market in Kenya.

The value of the firm does not determine the usage of the derivatives (Sheikh, Gekara, & Muturi, 2015). The study used 31 non-financial and non-investment firms listed at NSE as the sample. It was a quantitative study and regression analysis was used to analyze the data to answer the objective of the study. This probably could be due to the fact that derivative usage affect the firm value and not the other way.

A study (Yip & Nguyen, 2009) found that 56.7% of the sampled firms have foreign exchange rate exposure especially during the global financial crisis. The sampled firms included 97 Australian resource firms that were listed. This necessitated the use of foreign currency derivatives (FCD) to mitigate the foreign currency exposure although there was no sufficient evidence to establish that the increased use of FCD lowered the foreign exchange exposure.

The derivatives usage is determined by debt, investment growth, liquidity and profitability while managerial ownership was found to be insignificant (Shaari et al., 2013). The sample of the study was 97 non-financial firms of Malaysia. Profitability and investment growth showed a positive relationship with derivative usage while debt and liquidity showed a negative relationship with derivative usage.

A study (Jacob, Kattookaran, & Vj, 2015) found that the use of foreign currency derivatives significantly contributes to the growth of the financial system in a country. The use of foreign currency derivatives shows the performance and the development of the financial system. Therefore, financial system which is highly developed will exhibit a highly developed derivatives market.

Nyamweya and Ali (2016) conducted a study on the determinants of the hedging foreign currency risk in Kenya. The sample was 30 respondents from 10 tea exporting companies. The study found that firm size, firm liquidity and the cost of hedging were the major determinants of hedging foreign currency risks. The degree of leverage was found neither to be an enabler nor a hindrance to hedging foreign currency risks.

A study (Bin, Nisham, Mohammad, & Binti, 2017) found weak evidence of exchange rate exposure in developed economies due to low export and import while on the hand the developing economies show high level of exchange rate exposure. This may indicate that the developing countries have a higher need for use of the derivatives to mitigate the foreign exchange rate exposure.

Derivative Usage and Firm Value

A study by Singhvi and Pandya (2016) found that the usage of currency derivatives has a significant effect on the value of currency. Therefore, they justified the use of currency derivatives in managing the foreign currency risks. Another study conducted by Belghitar, Clark, and Mefteh (2013) found that use of derivatives enhances firm value. The effect of derivative use on firm value was positive and significant. The sample for the study was 176 non-financial large French firms. The study was quantitative and they employed secondary data. Regression analysis was used to analyze the data.

Another study (Kihara & Muturi, 2016) found that the use of foreign exchange risk management techniques such as currency swaps, options and forwards has led to the growth of financial performance of banks. The currency swaps, options and forwards were found to have positive effect on the financial performance of commercial banks. The study was a sample of 39 commercial banks with secondary data available. The study used both primary and secondary data. Regression analysis was used to the objectives of the study.

Using 134 New Zealand non-financial firms Li, Visaltanachoti and Luo (2014) found that there is no significant relationship between the use of foreign currency derivatives and firm market value for firms which do not have foreign sales. On the other hand, firms with foreign sales the relationship is not certain. Therefore, foreign currency derivatives usage will affect the firm value. Simpson (2016) reviewed literature across the world and established that the usage of derivatives affect the value of the firm positively. This confirms what other studies have found that derivatives usage enhances the value of the firms.

Using all the 64 listed firms at NSE, Kiio and Ambrose (2017) found that the hedging practices influences the performance of the firm. The study found that 39.1% of the variation in financial performance of the firms is explained by the hedging practices of the firms. When the central bank controls was introduced as the mediating variable the variation of firm performance that was explained by the hedging practices of firms increased to 60.9%.

A study (Gómez-gonzález et al., 2014) found that with increased hedging practices the value of the firm increased, after controlling for the following variables; firms profitability, leverage, age and firm size.

A study (Chanzu & Gekara, 2014) found that risk management, efficiency in trading, price stabilization and price discovery positively affected the performance of the firms and that all the variables had a significant effect. The study used 47 managers from 11 listed firms at NSE. The study recommended for the establishment of a derivatives market in Kenya and also conducting of educational programmes on the use of derivatives market.

Internal hedging techniques were more preferred to the external techniques for the non-banking firms listed at the NSE. The internal techniques were also found to be more effective than the external techniques on the effect they had on the financial performance of the non-banking firms listed at the NSE (Nzioka & Maseki, 2017). The internal techniques consisted of netting, leading and lagging, invoicing in foreign currency and money market hedges. The external techniques consisted of the forwards, spots, futures, options and SWAPs.

Bashir (2013), in a study to investigate the impact of derivative usage on the firm value found that use of derivatives does not add value to the firm. Specifically, the use of foreign currency derivatives (FCD) does not affect the value of the firm. The study maintained the following as the control variables; firm size, leverage, liquidity, growth, return on assets, dividend and geographic diversification. The sample was 105 non-financial firms from Pakistani.

Conclusions and Recommendations

The aim of the study was to establish the relationship between foreign currency derivative usage and the value of multinational firms. The study concluded that firms use derivatives to reduce foreign exchange rate risk. The major determinants of derivative usage include; under-investment, size of firm, debt, investment growth, liquidity, cost of hedging, profitability, and developed derivatives market while managerial ownership was not a determinant. Many studies showed that there was a significant positive relationship between derivatives usage and firm value but only a few had either negative relationship or a positive relationship that is not significant.

The conclusion that can be made is that the use of foreign currency derivatives positively affects the financial performance of the firms which determines the value of the firm. The study therefore recommends that managers of multinational firms should employ foreign currency derivatives (FCD) to mitigate against the foreign currency exchange rates risk.

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