Managing foreign exchange risk among Ghanaian firms

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Abstract

Purpose – This paper reports on the foreign exchange risk-management practices among Ghanaian firms involved in international trade. The study focuses on how Ghanaian firms manage their foreign exchange risk and the problems involved in managing exchange rate exposure. It also seeks to ascertain the extent to which these firms use foreign exchange risk management techniques.

Design/methodology/approach – Descriptive statistics were used in the presentation and analysis of empirical results.

Findings – The results indicate that close to one-half of the firms do not have any well-functioning risk-management system. Foreign exchange risk is mainly managed by adjusting prices to reflect changes in import prices resulting from currency fluctuation, and also by buying and saving foreign currency in advance. The main problems the firms face are the frequent appreciation of foreign currencies against the local currency and the difficulty in retaining local customers because of the high prices of imported inputs, which tend to affect the prices of their final products sold locally. The results also show that Ghanaian firms involved in international trade exhibit a low level use of hedging techniques.

Originality/value – The main value of this paper is the analysis of foreign exchange exposure management from the Ghanaian perspective. Relevant recommendations aimed at enhancing the foreign exchange risk-management practices among Ghanaian firms are made. The paper is useful not only to firms involved in international trade, but also to financial institutions interested in providing hedging products to these firms.

Keywords Foreign exchange, Risk management, Hedging, International trade, Ghana

Paper type Research paper

Introduction

Every business activity is confronted with some risk or the other and coping with risk has always been an important managerial function. In recent years, however, risk management has received increasing attention in both corporate practice and literature. This is particularly true for the management of financial risks, i.e. the management of foreign exchange risk, interest rate risk and other financial market risks. This present study focuses on the management of foreign exchange risk.

Foreign exchange risk management has become increasingly important since the abolishment of the fixed exchange rate system of Bretton Woods in 1971. This system was replaced by a floating rates system in which the price of currencies is determined by supply and demand of money. Given the frequent changes of supply and demand influenced by numerous external factors, this new system is responsible for currency fluctuations. These fluctuations expose companies to foreign exchange risk. Moreover, economies are getting more and more open with international trading constantly

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increasing and as a result companies become more exposed to foreign exchange rate fluctuations. Firms involved in international trade are subject to transaction risk arising from payables and receivables in foreign currencies. Also, multinational firms with operations in several countries will have translation risks from having assets and liabilities denominated in foreign currencies (Bradley and Moles, 2002).

Empirical research shows that profits of multinational companies are affected by volatile floating foreign exchange rates. Nevertheless, small firms trading exclusively in their domestic markets also become increasingly exposed to foreign currency fluctuations. Actually, small firms depend on the volatility of the main currencies because many of them outsource their production to foreign countries. This means that they incur costs in foreign currency (wages, taxes, material, etc.) and they also need to manage this exposure. Other small firms are exposed indirectly given that their strategic position can be affected by volatile foreign exchange (Popov and Stutzmann, 2003). Foreign exchange risk management is thus crucial for companies frequently trading in the international market either as multinationals or simply involved in import and export trade.

Previous studies on the subject, however, have tended to focus on exchange risk management practices of multinational corporations (Glaum and Roth, 1993; Batten *et al.*, 1993). Little has been done with respect to firms involved in international trade (import and export). The present study reports the findings on the foreign exchange risk management practices among Ghanaian firms involved in international trade. The study focuses on how Ghanaian firms manage their foreign exchange risk and the problems involved in managing their foreign exchange risk. It also seeks to ascertain the extent to which these firms use exchange risk management techniques for hedging against foreign exchange exposure.

The rest of the paper is organized as follows. In the next section, a brief overview of the main theoretical concepts of foreign exchange risk management is given. In the subsequent section, the research methodology is discussed. The empirical results are presented and discussed after that. Finally, the last section summarizes and concludes the discussion.

Theoretical framework

Risk management is described as the performance of activities designed to minimize the negative impact (cost) of uncertainty (risk) regarding possible losses (Schmit and Roth, 1990). Redja (1998) also defines risk management as a systematic process for the identification and evaluation of pure loss exposure faced by an organization or an individual, and for the selection and implementation of the most appropriate techniques for treating such exposure. The process involves: identification, measurement, and management of the risk. The objectives of risk management include: to minimize foreign exchange losses, to reduce the volatility of cash flows, to protect earnings fluctuations, to increase profitability and to ensure survival of the firm (Fatemi, 2000).

Foreign exchange risk is the risk that an entity will be required to pay more (or less) than expected as a result of fluctuations in the exchange rate between its currency and the foreign currency in which payment must be made. Foreign exchange risk is commonly defined as the additional variability experienced by a multinational corporation in its worldwide consolidated earnings that results from unexpected

currency fluctuations. It is generally understood that this considerable earnings variability can be eliminated partially or fully at a cost, the cost of foreign exchange risk management (Jacques, 1981). Firms are exposed to foreign exchange risk if the results of their projects depend on future exchange rates and if exchange rate changes cannot be fully anticipated. Generally, companies are exposed to three types of foreign exchange risk: transaction (commitment) exposure, economic (operational, competitive or cash flow) exposure and translation (accounting) exposure. Transaction risk occurs where the value of existing obligations are worsened by movements in foreign exchange rates. Economic risk relates to adverse impact on equity/income for both domestic and foreign operations because of sharp, unexpected change in exchange rate. Translation risk is also related to assets or income derived from offshore enterprise (Glaum, 1990; Grant and Soenen, 1991; Madura, 2003).

Managing foreign exchange risk

Foreign exchange risk can be managed in various ways. This section discusses techniques used for hedging against risk. Hedging can also be defined as "all actions taken to change the exposed positions of a company in one currency or in multiple currencies" (Prindl, 1976). According to Clark *et al.* (1993), hedging refers to the technique of making offsetting commitments in order to minimize the impact of unfavorable potential outcomes. The risk manager's choice of the different types of hedging techniques may, however, be influenced by costs, taxes, effects on accounting conventions and regulation. The different types of hedging techniques are discussed below.

Payments netting

This system is used in international transactions by multinational companies and involves reducing fund transfers between affiliates to only a netted amount. It requires the firm to have a centralized organization of its cash management. There are basically two forms of payments netting. These include bilateral and multilateral netting. Bilateral netting involves the transfer of a netted amount between two affiliates. Bilateral payment is valuable only to the extent that subsidiaries sell back and forth to each other (Shapiro, 1978). Multilateral netting involves the transfer of a netted amount among three or more affiliates. The use payments netting reduces the physical flow of funds from one subsidiary to another. As a result, measurable costs such as the cost of purchasing foreign exchange, the opportunity cost of the float (time in transit) and other transaction costs are minimized or eliminated. Netting systems are set up to reduce the costs associated with inter-affiliate cash transfers that result from business transactions. The payoff from multilateral netting systems can be large relative to their expense (Bogusz, 1993; Shapiro, 2002).

Prepayment

This method of payment requires the importer to pay the exporter in full before shipment is made (Hill, 2001). Payment is usually made in the form of international wire transfer to the exporter's bank account or foreign bank draft. This method affords the supplier the greatest degree of protection and it is normally requested of first-time buyers whose credit worthiness is unknown or whose countries are in financial difficulty. If currency is thought to appreciate, then prepaying enables the company to

pay at a lower rate. If the future rate finally depreciates, the firm is worse off than if it had done nothing. This method poses a big risk to the importer as he/she depends totally on the integrity of the exporter but offers the greatest protection for exporters because no credit extension is required. The primary disadvantage of prepayment is that it can limit the exporter's sales potential (Dennis, 1993).

Leading and lagging

A lead strategy involves attempting to collect foreign currency receivables early when a foreign currency is expected to depreciate and paying foreign currency payables before they are due when a currency is expected to appreciate. A lag strategy involves delaying collection of foreign currency receivables if that currency is expected to appreciate and delaying payables if the currency is expected to depreciate (Hill, 2001). Leading and lagging involves accelerating payments from weak-currency countries to strong-currency countries and delaying inflows from strong-currency to weak-currency countries. However, lead and lag strategies can be difficult to implement. The firm must be in the position to exercise some control over payment terms. Leading and lagging is a zero-sum game; that is, while one party benefits, the counterpart loses. Thus, the benefit gained from taking advantage of exchange rates may be outweighed by the cost of losing business due to the zero-sum nature of this method. The practice of leading and lagging has developed as one of many methods of hedging against adverse impacts of exchange rate movements.

Hedging with derivatives

Hedging includes all acts aimed at reducing uncertainty about future (unknown) price movements in a commodity, financial security or foreign currency. Undertaking forward or futures sales or purchases of the commodity, security or currency can be done in over the counter (OTC) forward or in the organized futures market. As an alternative to speculation, many financial managers are turning to hedging strategies and using derivatives to reduce foreign currency risk. Previous studies have shown a widespread use of derivative products among Canadian, US and European firms in managing their risks including long-run exchange rate exposures (Jalilvand *et al.*, 2000; Bradley and Moles, 2002).

Forward and futures contracts

A forward contract involves a commitment to trade a specified item at a specified price at a future date. It is a contract made today for delivery of an asset at a pre-specified time in the future at a price agreed upon today. No money changes hands until the expiry time. Futures contract is a special type of contract with standardized delivery dates and sizes that would allow trading on an exchange. A system of margin requirements is designed to protect both parties against default. Instead of the parties realizing the profit or loss at the expiry date, futures are evaluated every day and margin payments are made across the lifetime of the contract. Forward and futures contracts are relatively similar foreign exchange instruments. Both forwards and futures are agreements that bind two parties to exchange currencies at a fixed exchange rate at a future date. Essentially, both contracts offer the benefit of securing cash flows on imminent transactions (Ricci and Morrison, 1996).

There are, however, a number of significant differences that distinguish forwards from futures. Forward contracts are customized in terms of the amounts and maturities of currencies exchanged, and are negotiated with commercial banks or other financial institutions. Conversely, futures contracts have standard lot sizes (which vary by currency), mature on a standard (quarterly) basis, and are executed by securities brokerage houses on an organized exchange. Moreover, futures contracts are traded for only seven major currencies versus the dollar (the Japanese yen, the German mark, the Canadian dollar, the Mexican peso, the British pound, the Swiss franc, and the Australian dollar) while forward contracts can be established for any currency (Ricci and Morrison, 1996). The difference in the usage level between forward and futures contracts may be explained by the flexibility of forward contracts, which can be tailored to meet customer needs, as opposed to futures contracts, which cannot. In addition, the costs associated with futures contracts tend to be significantly higher than those associated with forward contracts, both in terms of transaction costs and prepayments required (Pasmantier, 1993), resulting in negative benefit-cost analyzes.

Currency options

A currency option gives the right, but not the obligation to buy or sell a specific currency at a specific price within a specific period of time. While American options can be exercised in whole or in part at any time up to expiration, European options can be exercised only at expiration. Options provide a number of advantages. It is used to hedge against foreign exchange rate risk arising from import or export of goods. Secondly, it can be used to hedge against exchange rate fluctuations arising from foreign investments or funding in any currency. Finally, options offer a very high degree of gearing or leverage, which makes them attractive for speculative purposes too (Cowdell, 1993).

Currency swaps

A typical currency swap is an agreement between two parties to exchange two currencies at the spot or current exchange rate, with the agreement that they will reverse the exchange rate that prevailed at the time of the initial exchange (Tygerson, 1993). Currency swaps require the party receiving the currency with a higher interest rate in that country's currency to pay the interest to the counter party at a rate that represents the interest rate differential between the two countries. Currency swaps provide an opportunity for customers to balance currency resources in situations where there are excess funds in one currency and shortage of funds in another (Evans and Malhotra, 1994). Madura and McCarty (1989) indicate that currency swaps may be too sophisticated or intimidating to most companies and often require extensive documentation.

Research methodology

This study is based upon the premise that firms engaged in international trade are often confronted with foreign exchange risk. Foreign exchange risk management is, therefore, crucial for companies frequently trading in the international market. A sample of 100 firms was drawn from the Ghana Customs Excise and Preventive Service's database of importers. The sample was based on firms who are also registered with the Association of Ghana Industries (AGI) and imported at least twice

a year for the last three years. The sample basically included firms involved in the importation of foreign inputs. The essence of including importers is due to the fact that importers are exposed more to foreign exchange risk in a net importing country like Ghana given the volatile nature of the local currency. However, most (60.3 percent) of the sampled firms were also into exports. Out of the 100 questionnaires sent out, 68 were received representing 68 percent response rate. The resulting response rate is high for a survey of this type. The responses were tested for non-response bias using a range of financial variables. This showed that the non-respondents had a somewhat lower proportion of imports and also cut across all the industries represented in this study. Since, there is no evidence of significant non-response bias, the findings of the study are not affected by the non-response bias. This means the results do not underestimate the true extent to which Ghanaian firms manage their foreign exchange risks.

The survey instrument involved both closed-ended and open-ended questionnaires. The open-ended questionnaire sought to encourage respondents to share as much information as possible in an unconstrained manner. The closed-ended questionnaire, on the other hand, involved "questions" that could be answered by simply checking a box or circling the proper response from a set provided by the researcher (Fowler, 1993). While this method allows for easier analysis of the data due to standardized questions, its limitation is that it allows the researcher to determine only what the respondents are doing, not how or why they are doing it. Responses on the foreign exchange risk management (hedging) techniques were measured with a Likert-type rating scale. This helped in determining the extent to which the firms use hedging techniques.

Since, most of the sampled importing firms were also into exports, the level of internationalization is measured by trade intensity (i.e. the ratio of export sales plus import sales to total sales). This definition is also a standard measure of trade intensity in the internationalization theory. Simple correlation analysis was used to establish the relationship between the trade intensity and the mean values of each foreign exchange risk management technique. Data obtained from respondents were entered into an SPSS database application for analysis. Descriptive statistics were basically used in the presentation and analysis of empirical results.

Presentation and discussion of results

This section is devoted to the presentation and discussion of the results.

Characteristics of sampled firms

Tables I and II present the characteristics of the firms based on industry classification, size, age, ownership, trade status, import orientation, export orientation, frequency of imports and frequency of exports. In all, three industries were represented including, agriculture representing 5.9 percent of valid respondents, manufacturing (61.8 percent) and trading (32.3 percent). Three size categories were defined on the basis of number of employees. Firms with less than 30 employees were classified as small firms. Medium-sized firms had between 30 and 99 employees and large firms had more than 100 workers. About 17 (25 percent) of the firms surveyed were in the small firm group, ten (14.7 percent) were medium-sized companies, and 41 (60.3 percent) were in the large-scale group. The firms were also categorized on the basis of date of

	Frequency	Percentage
Industry		
Agriculture	4	5.9
Manufacturing	42	61.8
Trading	22	32.3
Total	68	100.0
Size		
Small	17	25.0
Medium	10	14.7
Large	41	60.3
Total	68	100.0
Age		
Young	12	17.7
Adult	9	13.2
Mature	47	69.1
Total	68	100.0
Ownership		
Wholly Ghanaian-owned	44	64.7
Foreign-participation	24	35.3
Total	68	100.0

Source: Survey data

Table I.
Industry, size, and ownership of sampled firms

establishment. Firms that have been in business for less than six years were labeled "young", those between six and ten years were classified "adult", and those over ten years were also labeled "mature". There were 12 (17.7 percent) young businesses. Adult firms were nine representing 13.2 percent while mature companies were 47 (69.1 percent). Out of the valid respondents of 68, 44 indicating 64.7 percent were wholly Ghanaian-owned businesses and the remaining 24 (35.3 percent) had some foreign participation in the companies. Out of those with foreign participation, 16 representing about 66.7 percent of that number were subsidiaries of foreign companies.

With respect to the trade status of the sampled firms, 27 (39.7 percent) were into only imports while 41 (60.3 percent) were involved in both imports and exports. Firms were classified on the basis of the degree of import intensity, which is measured as proportion of foreign imports to total purchases and the degree of export intensity, which is also measured as the proportion of foreign sales to total sales. Four classifications were made for each orientation. Firms with low import or export intensities had ratios of 25 percent or less. Firms with ratios between 26 and 50 percent were categorized as having moderate import or export intensities. Those with ratios between 51 and 75 percent were categorized as having high import or export intensities and those with intense import or export levels had ratios of more than 75 percent. In terms of import orientation, 25 percent were low importers, 11.8 percent were moderate importers, and 19.1 percent were high importers, while 44 percent fell within the category of intense importers. Most firms imported on monthly (45.6 percent) and quarterly (29.4 percent) basis. Out of the 41 firms involved in both imports and exports, 48.8 percent were low exporters, 26.8 percent were moderate exporters, 9.8 percent were high exporters, and 14.6 percent were intense exporters. They mostly exported on monthly (34.2 percent), quarterly (19.5 percent), and weekly (17.1 percent) bases.

	Frequency	Percentage
Trade status		
Imports only	27	39.7
Both imports and exports	41	60.3
Total	68	100.0
Import orientation		
Low	17	25.0
Moderate	8	11.8
High	13	19.1
Intense	30	44.1
Total	68	100.0
Export orientation		
Low	20	48.8
Moderate	11	26.8
High	4	9.8
Intense	6	14.6
Total	41	100.0
Frequency of imports		
Daily	2	2.9
Weekly	12	17.6
Monthly	31	45.6
Quarterly	20	29.4
Semi-annually	3	4.4
Total	68	100.0
Frequency of exports		
Daily	1	2.4
Weekly	7	17.1
Monthly	14	34.2
Quarterly	8	19.5
Semi-annually	3	7.3
Annually	1	2.4
Rarely	7	17.1
Total	41	100.0

Source: Survey data

Table II.
International trade status

Risk management system

From Table III, 45.6 percent of the firms have no proper risk management department, however 54.4 percent indicated that they have risk management department. A well-functioning risk management system would, clearly and unambiguously, define where and with whom the responsibility for the management of risk lies. Foreign exchange risk is mainly the responsibility of the CEO, Finance Officer or the Accountant. When asked about the problems they face in managing foreign exchange risk, majority (77.9 percent) of the participants responded that their main problem is the frequent increase in the exchange rates. Others (16.2 percent) complained of the problem of retaining local customers because of the high prices of imported inputs that tend to affect especially prices of their final products sold locally. Another problem identified by few of the respondents (5.9 percent) is the difficulty in getting the needed foreign exchange (dollars). In terms of how foreign exchange risks are managed, 36.7 percent of respondents mentioned price adjustments, 7.4 percent reported that they

	Frequency	Percentage
Have a risk management department		
Yes	37	54.4
No	31	45.6
Total	68	100.0
Who is responsible?		
CEO	13	19.1
Finance Officer	13	19.1
Accountant	5	7.3
Treasurer	1	1.5
No one	31	45.6
Missing	5	7.4
Total	68	100.0
Problems in managing exchange risk		
Frequent increase in exchange rates	53	77.9
Retaining customers	11	16.2
Getting the needed foreign currency	4	5.9
Total	68	100.0
Managing foreign exchange risk		
Price adjustment	25	36.7
Forecast future rates	5	7.4
Use swaps	5	7.4
Price negotiation	3	4.4
Buy and save currency in advance	30	44.1
Total	68	100.0
Level of foreign exchange risk decisions		
Corporate	0	0.0
Local	14	87.5
Both	2	12.5
Total	16	100.0

Source: Survey data

Table III.
Management of foreign exchange risk

forecast future exchange rates to set prices, another 7.4 percent mentioned the use of swaps and 4.4 percent said they engage in price negotiations. The remaining 44.1 percent also reported that they buy and save foreign currency in advance. In other words, they buy foreign currency into their accounts from their daily sales to build up in advance. Table III also indicates the level at which foreign multinationals take foreign exchange risk decisions. Out of the 16 foreign subsidiaries, most (14) have their exchange rate exposure decisions being taken locally in Ghana. The other two indicated that such decisions are taken at both the corporate (from parent company) and local levels. This situation supports the position that local operating units have a better feel for local conditions than head office (i.e. parent company outside) and, therefore, can respond more quickly to local developments.

Goals and objectives

The questionnaire was designed to elicit the respondents' assessments of how different goals rank in terms of their importance for risk management. Accordingly, they were asked to indicate the importance of each of the eight listed goals on an increasing scale

of 1 to 5. The results are reported in Table IV. With an average score of 4.08, "ensuring the survival of the firm" turns out to be the most important goal. "Enhancing reported results" ranks as the second most important goal (3.61). Other important goals (with an average score of 3 or higher) in their order of importance, are (3) increasing profitability; (4) reducing cash flow volatility; (5) increasing the market value of the firm; (6) reducing earnings volatility; and (7) influencing the behavior of managerial employees. Consistent with these results, when asked to choose one goal that is the most important, the overwhelming majority (68 percent) chose the survival goal. This is also consistent with the findings by Fatemi (2000). It is interesting to note that Ghanaian firms are very much interested in the business as a going concern knowing that increased foreign exchange risk could result in the collapse of the firm. They would therefore work on minimizing the risk exposure of the firm to ensure continuity.

Hedging and derivatives use

Table V shows that most Ghanaian firms do not practice hedging. Fifty-two, representing 76.5 percent of the firms said they do not practice hedging. Those (23.5 percent) who practice hedging indicated that they mainly hedge against increases in import prices as a result of appreciation of the foreign currency or depreciation of the cedi (local currency). This suggests that the problems Ghanaian firms encounter are mainly in respects of managing their imports. In order to confirm the practice of hedging, respondents were asked whether they use derivative instruments, again only 23.5 percent responded in the affirmative.

Objective	Mean
Ensuring the survival of the firm	4.08
Enhancing reported results	3.61
Increasing profitability	3.55
Reducing cash flow volatility	3.51
Increasing the market value of the firm	3.42
Reducing earnings volatility	3.36
Influencing the behavior of managerial employees	3.05

Table IV.
Goals of foreign exchange risk management

	Frequency	Percentage
Practice hedging?		
Yes	16	23.5
No	52	76.5
Total	68	100.0
Under what circumstance?		
Increases in import prices	16	100.0
Use of derivatives		
Yes	16	23.5
No	52	76.5
Total	68	100.0

Source: Survey data

Table V.
Hedging and derivatives

Table VI illustrates the extent to which the respondents use the hedging techniques. Out of the total of 68 respondents, 61.7 percent has never used the forward market. Some (19.1 percent) rarely use it, while 11.8 percent sometimes use it. Another 7.4 percent often use the forward contract. The results show a mean value of 0.65. The low mean value clearly suggests markedly low usage of forward contracts among Ghanaian firms.

Table VI also shows the use of currency options as a technique for managing risk inherent in the foreign exchange activities among the respondents. Out of a total of 68 respondents, 67.7 percent never use currency options. Some (8.8 percent) rarely use it, while 17.6 percent of the respondents sometimes use it. Further, 5.9 percent often use currency options in the management of foreign exchange risk. A mean of 0.62 suggests that a greater number of respondents do not use currency options in managing their foreign exchange exposure. The extent of use of currency options is, therefore, low among the firms.

Table VI again illustrates the use of currency swaps among the respondents. Out of the total of 68 respondents, 47 representing 69.0 percent have never used it, 11 representing 16.2 percent rarely use it. Five indicating 7.4 percent sometimes use it and another 7.4 percent often use it. The mean of 0.51 as shown in the table demonstrates a low usage of currency swaps among the respondents. This may not seem surprising, given that even in advanced economies currency swap is seen as too sophisticated and intimidating to most companies. Madura and McCarty (1989) suggest that this may be a function of the extensive documentation required with currency swaps.

The use of leading and lagging strategy is also presented in Table VI. Fifty-one (75 percent) of the respondents never use leading and lagging strategy, 8.8 percent rarely use it, while 10.3 percent sometimes use it. Only four respondents representing 5.9 percent often use it. A mean of 0.46 as indicated in the table suggests a relatively low usage of leading and lagging and prepayment as techniques for managing foreign exchange risk among Ghanaian firms.

Table VII includes all firms that use hedging instruments by ascertaining the degree of internationalization (measured by trade intensity) and the use of hedging techniques. With respect to the use of forward contracts, apart from firms with trade intensity of above 75 percent, all firm categories had mean values of less than 2.50.

Table VI.
Hedging techniques, percentages, and means

Technique	Often	Sometimes	Rarely	Never	Mean
Forward market	7.4	11.8	19.1	61.7	0.65
Currency options	5.9	17.6	8.8	67.7	0.62
Currency swaps	7.4	7.4	16.2	69.0	0.51
Leading and lagging	5.9	10.3	8.8	75.0	0.46

Source: Survey data

Table VII.
Internationalization and use of hedging techniques, mean

Trade intensity	Forward market	Currency options	Currency swaps	Leading and lagging
Low	2.00	2.00	1.00	3.00
Moderate	1.00	2.00	3.00	3.00
High	2.00	1.67	1.00	1.00
Intense	2.50	1.33	2.33	1.00

Surprisingly, the use of currency options falls with increasing international activity, though all mean values were less than 2.50. The use of currency swaps registered a mean value of 3.00 among moderate trade level firms, 2.33 among intense trade level firms and 1.00 each for low and high trade intensity firms. Leading and lagging strategy is rather popular among low and moderate trade intensity firms with mean values of 3.00 each, while high and intense trade level firms showed low usage of leading and lagging with mean values of 1.00 each.

Conclusions and recommendations

This study investigated the foreign exchange risk management practices among Ghanaian firms involved in international trade. The results of the study indicated that a little above 45 percent have no department or any one responsible for managing their foreign exchange risk. Foreign exchange risk is mainly managed by adjusting prices to reflect changes in import prices resulting from currency fluctuation and also by buying and saving foreign currency in advance. The main problems firms face are the frequent appreciation of foreign currencies against the local currency and the difficulty in retaining local customers because of the high prices of imported inputs which tend to affect the prices of final products sold locally. The study also revealed that a majority of the respondents never use hedging techniques in managing their foreign exchange risk. Overall, Ghanaian firms involved in international trade exhibit a low level use of the hedging instruments for managing foreign exchange risk. The reason may be attributed to the low level of education and sophistication among the firms' treasury personnel and also because of the under developed nature of the financial markets. Apart from a few banks (about five out of 20), most banks in Ghana do not have developed hedging products. This could be attributed to the volatile nature of the economy. The Ghanaian economy until the last four years was characterized by high inflation, high interest rates and lack of sufficient foreign currency. Even with the few banks (mainly multinationals), the derivative products they provide to their clients are mostly one offs. The elaborate documentations, risks and costs involved in using these hedging instruments could also account for the present situation.

It is recommended that internationally oriented firms in Ghana must learn about these hedging techniques and begin to adopt them in managing their foreign exchange risk exposure. There is the need for Ghanaian firms to establish separate risk management department and engage the services of qualified treasurers and risk experts. It is also important for them to develop and implement a well functioning risk management system necessary for managing their entire risk exposure and ensure the survival of the firms. Ghanaian banks should also educate their clients on the importance of such hedging techniques in managing exchange rate exposure. Banks are encouraged to develop more hedging products to assist firms involved in international trade to manage their foreign exchange risk. The recent launch of the foreign exchange option product by Standard Chartered Bank should serve as a good example for other banks in Ghana.

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