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Effective FX-hedge Policy Using Financial Market in Korea

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Introduction

Since the global financial crisis, inflows and outflows of foreign capital increased greatly and this resulted in a higher volatility in exchange rates. In addition, many countries introduced quantitative easing in order to overcome the eurozone financial crisis and the global recession. The value of their national currency declined as a consequence and this triggered concerns for a potential global currency war.

Korea has constantly been exposed to the risk of foreign exchange market as a small open economy with internationally inconvertible domestic currency. Korea always needs to be prepared for foreign exchange risks that ebb and flow with the conditions of the global economy.

Foreign Exchange Risk Management Status and Problems

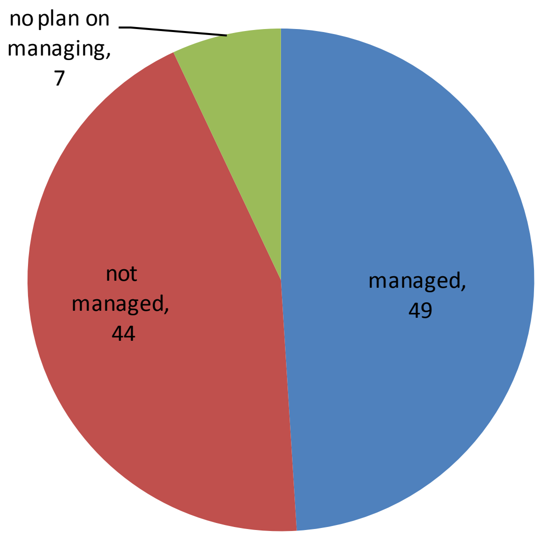
In this paper, authors analyzed the current state of Korean companies' foreign exchange hedging activities to find out whether such hedging is required, by calculating currency exposure of each company. They also examined other cases from around the world to find out the most efficient measure.

In general, Korean firms do appear to be vulnerable to foreign exchange volatility. This is because of low awareness among companies regarding foreign exchange risk management and the fact that there are not enough derivatives that allow firms to hedge foreign exchange risks via financial markets. Also, there is the companies' lack of understanding about foreign exchange risk management methods. The fear of derivatives as a result of the KIKO affair keeps the companies from financial market as well.

The foreign exchange risk insurance, which is the most frequently used exchange risk hedging product in Korea, is provided exclusively by the Korea Trade Insurance Corporation (K-sure). However, it does not fully meet the consumers' demands and was even taken off the market in times of crisis.

Figure 1. Exchange rate risk management

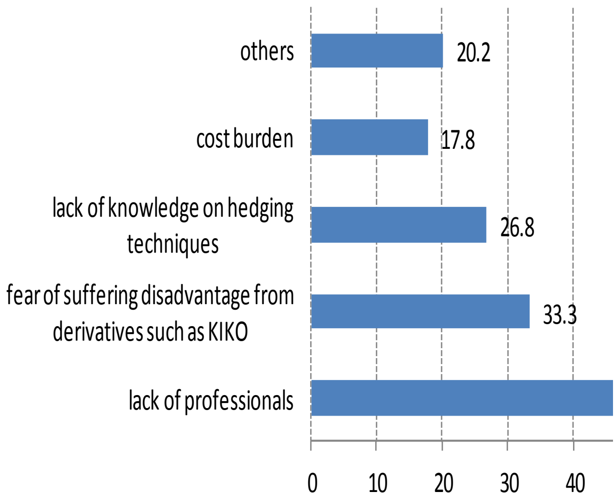
(Unit: %)



Source: K-sure(2010)

Figure 2. Reasons exchange rate risk is ineffectively managed

(Unit: %)



Source: K-sure(2010)

Analysis of Korean Firms' Exchange Exposure

Authors have undertaken an analysis of the effect of exchange rate volatility on the stock price of each industry. According to the result, 37% of the total industry experienced exchange exposure, and above all, the manufacturing and electronics industry showed positive exchange exposure. These two business sectors appear to become more competitive when the Korean Won's exchange rate rises against the U.S. Dollar. These industries show higher exports and increasing stock prices, as a consequence.

Table 1. Analysis of exchange exposure of major Korean industries

Exchange Exposure	Significant	Positive Exposure[1]	Manufacturing, Electronics
		Negative Exposure[2]	Food and Drink, Textile and Apparel, Chemical, Nonmetallic Mineral, Finance
	Insignificant		Paper and Wood, Pharmaceutical, Steel and Metal, Machinery, Medical Care and Device, Transportation Equipment, Distribution Industry, Electricity and Gas, Construction, Warehousing, Communication, Service Industry

Note: 1) Increase in exchange rate is beneficial to firms due to enhanced competitiveness
2) Increase in exchange rate is a disadvantage to firms due to weakened competitiveness
3) Analysis period is from January 2000 to June 2012, exchange rate risk variable is exchange rate change from a month earlier.

When time difference is considered, it can be said that more than half of all business sectors in Korea are heavily affected by the fluctuating exchange rate. If time lag of 1,3, and 12 months, specifically, are taken into consideration, the impact of exchange rates on Korean industry seems to increase.

Table 2. Analysis of exchange exposure of major Korean industries using time lag variable

Exchange Exposure	Significant	Manufacturing, Food and Drink, Textile and Apparel, Chemical, Nonmetallic Mineral, Machinery, Electronics, Transportation Equipment, Electricity and Gas, Communication, Finance, Service Industry
	Insignificant	Paper and Wood, Pharmaceutical, Steel and Metal, Medical Care and Device, Distribution Industry, Construction, Warehousing

Note: Analysis period is from January 2000 to June 2012, exchange rate risk variable is exchange rate change from a month earlier.

The authors have studied the exchange rate exposure and foreign exchange hedging activities of Korea's four major industries. The result shows that exporting firms require more thorough hedging strategies in order to minimize exchange rate exposure.

Those enterprises that showed no exchange rate exposure turned out to be carrying out 100% foreign exchange hedging. The companies practicing partial hedging seemed to experience exchange rate exposure according to the extent of their hedging activities.

Table 3. Analysis of exchange exposure of four major Korean firms and whether they carry out hedging activities

	Firm A	Firm B	Firm C	Firm D
Exchange Exposure	Insignificant	Significant	Significant	Significant
Hedging Ratio	40–70%	30%	Unpublished	100%

Note: Analysis period is from January 2000 to June 2012, exchange rate risk variable is the exchange rate change from a month earlier.

The authors estimated the optimum hedging ratio using foreign exchange forwards and derivatives. The result shows that optimum hedging ratio increased after the global financial crisis as the term of forward contract became longer, unlike in times before the crisis.

Hedging effectiveness decreased as the forward term became longer. This phenomenon is observed for both cases of pre- and post global financial crisis.

Table 4. Optimum hedging ratio pre- and post- global financial crisis (GFC)

	1-month Forward Rate	3-month Forward Rate	12-month Forward Rate
Pre-GFC	0.9952	0.9871	0.9668
Post-GFC	1.0140	1.0344	1.1509

Note: Pre-GFC period is from January 2000 to August 2008, post-GFC is from September 2008 to June 2012.

Table 5. Effectiveness of hedging activities pre- and post-GFC

	1-month Forward Rate	3-month Forward Rate	12-month Forward Rate
Pre-GFC	0.9952	0.9871	0.9668
Post-GFC	1.0140	1.0344	1.1509

Note: Pre-GFC period is from January 2000 to August 2008, post-GFC is from September 2008 to June 2012.

Foreign Countries' FX-hedge Policy and Its Implication

On the basis of the findings in this paper, we suggest the following policies for efficient foreign exchange risk management among Korean firms. For short-term, the information-sharing system of financial derivatives, the knowledge sharing system of exchange rate risk, institutional demand on companies' foreign exchange risk management, and finally the information disclosure system need to be introduced in order to stimulate the financial market for foreign exchange hedging activities. Moreover, exchange risk position on external debt should be closely supervised. In the longer term, the government should internationalize the Korean Won to expand the capacity to stabilize the foreign exchange market.

In particular, introduction of a system for transmission and disclosure of information on derivatives should be regarded as a prerequisite for transparency in derivative price or value. In Sweden, foreign exchange risk hedging through financial markets has been relatively easy because companies fully understand the value of financial commodities that can hedge foreign exchange risk. On the other hand, Korean companies consider the difficulty of evaluating values of derivatives as the most significant obstacle. Therefore, Korea needs to improve its derivatives management system as well so that information on financial commodities can become sufficiently open and explained to the firms.

Just as in Israel, Korea needs to pursue privatization of insurance industries and regulatory reform. The most frequently used foreign exchange risk insurance by Korean firms is monopolized by the Korea Trade Insurance Corporation (K-sure). Although it is being provided as a public good by the public enterprise, there was a time when range forward left the market due to a sudden increase in stress levels following the 2008 financial crisis. To cover all the possible risks and diverse market conditions, there should be an increase in providers as well as in financial commodities. Furthermore, Korea needs to consider the internationalization of the Korean Won, as in the case of the Australian Dollar. It was the internationalization of the Australian currency that allowed Australia to sell derivatives to foreign investors in order to hedge foreign exchange risk. Even though the foreigners' demand for Australian Dollar affected its foreign exchange market, the internationalization of its currency was the prime groundwork for the international use of the Australian dollar. The cost of hedging activities can be cut substantially if hedging through national currency is possible. Hence, authors advise that serious consideration be given to the promotion of the internationalization of the Korean Won.

Table 6. Implications and the order of priority

Implications	The order of priority
First, stimulation of market functions for hedging foreign exchange	short-term
Second, establishment of public standard for financial market management	short-term
Third, application of hedging in reducing the risk to national economy	mid-term
Fourth, introduction of strict regulation regarding external debt position	short-term
Fifth, introduction of information transmission and disclosure system of derivatives	short-term
Sixth, strict supervision on foreign exchange risk position	short-term
Seventh, measure for spreading knowledge regarding foreign exchange risk derivatives	short-term
Eighth, readjustment of regulations for stimulating foreign exchange hedging market	short- to mid-term
Ninth, introduction of a system that can force firms to publicly announce their foreign exchange hedging policy	short- to mid-term
Tenth, promote the internationalization of Korean Won	mid- to long-term