

Financial and Investment Risk Management

INTRODUCTION

In the age of free market trade, an organization in one country operates its business by involving with companies in another country. Transactions are taken place in foreign currency and since the economy, size, growth are not like one country to another and exchange rate risk arises. Here in this report, we will highlight the key reasons for which exchange rate risks arose and hedged techniques both internal and external to mitigate the risks. We will go through also some calculations regarding the given problems.

TASK (A)

Exchange rate risk simply denotes a potential gain or loss that occurs as a result of exchange rate fluctuation (Bekaert and Hodrick, 2009). For example, if an investor invests in a Japanese market and the value of the yen drops while receiving the investment amount, in that circumstances the investor may pose a potential loss of the decreased value of the yen. Foreign exchange rate risk arises for many reasons and broadly these are categorized into three major types: transaction risk, translation risk, and economic risk. All these major risks are described herein below:

Transaction risk: in the case of international business transactions are often made in foreign currency especially exports and imports are often settled with foreign currency payment. The transaction date and the payment of transaction in most of the cases are not taken place in same date (Folsom, Gordon, and Spanogle, 2009). As a result, a risk arise called transaction risk. Since the payment of the transaction remains due for a certain period on a specific currency payment, a deviation of that currency may generate a potential gain or loss (Eun and Resnick, 2007). For example, a European investor invests in a US stock for three months period worth £1 million while the spot rate was \$1.2 / €. Now after three months later the spot rate is \$1.3 / € which simply means euro gets stronger and for that reason, the investor will get higher expected amount of money just because of the currency fluctuation. Transaction risk is short term in nature.

Translation risk: in international business, the organization holds several subsidiaries in different countries. The performances of the subsidiaries are translated into a home currency

where the parent company located. This thing is done just because of the consolidation purpose so that the reporting would be done in a single currency and users can take a decision based on the reported currency (Hakala and Wystup, 2002). In the case of a subsidiary's currency fluctuation compare to the home currency, a significant translation risk may occur. For example, X Ltd is a UK based firm, and it has a subsidiary located in Australia, and the value of the subsidiary is reported AUS\$ 5 million. When the exchange rate between these two currencies rises from AUS\$ 1.5/ £ to AUS\$ 1.6/£ which means the Australian dollar value drops in compare to UK pound sterling, the value of the subsidiary will be reported at a less amount in home currency. The effect of translation risk is generally short and medium term in nature.

Economic risk: this risk is considered as a systematic risk since this risk cannot be measured with certainty. The economic risk arises because of a country's political, social or economic reasons (Bekaert and Hodrick, 2009). Economic risk affects the future cash flows and the market value of a firm. This unexpected consequence may lead to losing the competitive position of the company. The effect of economic risk is long term in nature while the other two risks are short term and medium term in nature.

External hedging tools: since the above risk factors can distort the company performance especially in the case of international trading, some hedging tools can be applied to minimize the risk exposure. Here in below some widely used external hedging tools are described briefly:

Forward contract: under forward contract agreement a present exchange rate is determined to buy or sell a foreign currency at a certain date. Under this agreement, a seller is assured to receive a number of sales at a fixed spot rate (Bennett, 1997). By this agreement seller and buyer, both can eliminate the exchange rate risk that might generate during this transaction settlement period. The forward rate is determined based on the supply and demand of the currency.

Futures contract: a future contract is made to eliminate the foreign exchange risk which offers seller or buyer to set a predetermined exchange rate to buy or sell a commodity at a future date. The objective is clear which is only to avoid the exchange rate risk which might generate at the future date where either buyer or seller can be traded off just because of the exchange rate fluctuation (Hakala and Wystup, 2002).

The money market hedge: money market hedge is an alternative approach of the forward contract. Under money market hedge, an investor uses money market or financial market to deposit or borrow short term financial instrument like commercial paper, treasury bills, etc. to reduce foreign exchange risks (Hill, 2005). By depositing or borrowing the foreign currency, investors eliminate the foreign exchange rate risk until the actual cash flows of the transaction occurred. The conversion of financial instruments and other complexities most often demotivate the investors to go for money market hedge rather go for a forward contract.

Option contracts: under option contract, a seller or buyer of a foreign currency achieve a right to sell or buy the currency at a future specified date whereas they are not ought to buy or sell the currency. In the case of a favourable exchange rate movement a company allows to terminate the contract otherwise, they can hold the contract. A call option gives the holder to buy a currency, and a put option gives the holder to sell the currency (Jacque and Jacque, 1996).

TASK (B)

Inflation rate to forecast exchange rate:

Exchange rate, interest rate, and inflation rate both are interrelated to determine the foreign exchange risk. Under Purchasing Power Theory (PPP), the rate of change of exchange rate must be equal to the inflation rate differential of an economy (Shapiro, 2006). When the relative price levels of the two countries are not equal which indicates an unequal variety of inflation rate, a higher exchange rate risk arises. When the price of the same commodity of two different countries are same assuming a free trade agreement exists, the inflation rate risk is near to zero which leads the least exchange rate risk (Madura, 2003). The ‘law of one price’ of a commodity can be applied to the whole economic scenario, and the conclusion can be drawn that level price differential (inflation rate) has the direct impact on the exchange rate. When the inflation rate of a country is higher in compare to another country, there is a possibility of higher exchange rate risk and vice versa.

TASK (C)

Expected sterling receipts using forward contract for Nedwen Co Plc:

Time period	Forward rate	Expected receipt
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		In \$	In £
One month	\$1.7829 / £	240000	134612
Three months	\$1.7846 / £	300000	168105

TASK (D)

Expected sterling receipts in three months period using money market hedge for Nedwen Co Plc:

The money market hedge process will be going through the following stages:

1. First of all, we have to borrow the present value of the US dollar receivable which proceeds

$$300000 / (1.035)^{[5.4\% / 4]}$$

$$= \$289855$$

Here, one-year dollar borrowing rate is converted to 3 months period.

2. Now the present value of the US dollar needs to be converted in UK pound sterling using current spot rate

$$\frac{\$289855}{1.7820} = \text{£}162657.13$$

3. Now the converted amount must be deposited to the UK market at a rate of 4.6% and the proceeding after three months period would be:

$$\text{£}162657.13 * (1.15)^{[4.6\% / 4]}$$

$$= \text{£}187055.70$$

Here, one-year pound deposit rate is converted to 3 months period.

4. Now the aggregated pound is to be converted to US dollar to pay the borrowing amount using three months forward rate:

$$£187055.70 * 1.7846 = \$333820$$

This amount is more than the US dollar receivable amount. So the money market hedge is successfully worked out to eliminate foreign exchange rate.

Recommendation: expected pound sterling amount received would be higher in the case of money market hedge than forward contract. So money market hedge is preferred.

TASK (E)

Use of future contract to hedge three months dollar receipt:

Sterling currency future contracts could be used in the following ways to hedge the three months dollar receipt:

First of all, it needs to set up the future hedge by addressing three main questions, and these are:

- Number of contracts
- Initial buy or sell futures
- Choosing appropriate expiry date

Secondly, it needs to contact the exchange and pay the initial margin and then wait until the due date.

Finally, it needs to calculate the gain or loss in the future market by sorting out the future contracts and calculate the transaction using the spot rate on the transaction date.

TASK (F)

Internal hedging options to mitigate foreign exchange risks: like external hedging options, some internal hedging options can be applied to mitigate the foreign exchange risks and here in below some of these hedging options are described:

Home currency invoice: whenever a sales or purchase transaction took place it is always wise to receive or pay the amount in home currency rather than foreign currency (Agarwal, 2009). But the problem of this system is an organization which regularly deals with such type of organization may be reluctant to receive of pay in foreign currency. Since Newden Co Plc and the US firm regularly deals with one another, this strategy might not be fruitful.

Matching: By offsetting the receivable with the payable, organization can easily manage the foreign exchange risks. Newden Company Plc and the US firm both have receivable and payable to each other. So matching strategy can be effective for them to avoid foreign exchange risk.

Leading and lagging: leading and lagging is a concept where an importer perceives that the currency value may depreciate so he tries to lengthen the credit policy or the payment policy and vice versa (Shapiro, 2006). An exporter view is quite opposite.

CONCLUSION

In this above report, we highlighted the key exchange rate risks for which the foreign exchange rate risks arise and the mitigation techniques are also discussed in a descriptive manner with relevant context. Both the internal and external hedging techniques are described, and some relevant calculations are done as per the requirement of the assignment.

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