



Hedging

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Introduction

There are two parts to this article. In the first part of this article I will briefly examine the key reasons why companies finance projects through hedging. Secondly I will focus on three key hedging derivatives: Currency Forwards; Currency Futures; Currency Options. In this section of the article I will briefly examine the benefits and disadvantages of each of the later hedging instruments.

Rationale of Hedging

In its simplest form hedging refers to any technique a company can use in order for the company to minimise risk or indeed eliminate risk that is associated with any adverse movement of its finance. Hedging is particularly important for companies who are dealing with foreign exchange rate transactions. Thus currency hedging is where the company uses hedging instruments to eliminate the risk of exchange rates moving in the direction opposite to their positions in the future market by purposefully taking on the offsetting position in the related currency. Companies use hedging by entering into guaranteed contractual foreign currency contractual commitments.

Another key reason that companies use hedging instruments is to help the company maintain its competitiveness. Hedging can be particularly beneficial where there are many players in a global market all selling similar goods and services. If the company can manage through hedging to have its key operating expenses in depreciating currencies it will place the company in a more competitively advantageous position than its main rivals.

A third key reason for hedging for a company is to enable the company to obtain the estimated advantage of anticipated transactions. Hedging is particularly useful here where a volatile monetary market exists and hedging can be very helpful for a company in stabilising the volatilities.

A fourth major reason for hedging is to assist companies in eliminating translational risk. This occurs by protecting the home currency value of foreign assets and profits when financial statements of foreign operations from local currency are translated into the accounts of the home company for the purpose of reporting and consolidation.

The second part of this article will examine some of the key hedging derivatives used by companies.

Derivatives

In its most basic form a derivative instrument is a contract between two parties which gives the right, and sometimes the obligation, to buy or sell an underlying asset, and specifies conditions in which the payment has to be made between the parties.

Currency forwards

According to Bodie et al (1) "A Currency forward is an non-standardized contract entered by two parties or more with the intention of exchanging one currency for another at an agreed upon rate and at a certain quantity on a specified future date".

Thus the rate on which one currency is based to be converted to another currency as the contract is exercised is called the strike price and the certain date at which the contract is due to be exercised is called expiration date. Finally the action to perform the obligation to deliver currency under the terms of contract is called the exercise.

Some key benefits of Currency Forwards

One key benefit for a company using forwards is to be assured certainty of a future outcome. This is particularly beneficial in situations of a fluctuating currency market, where neither of parties is able to predict accurately what actual exchange rate in the future will be. Therefore forward contract offers both parties the protection on unfavourable exchange rate movements. According to Stephens (2) ... "the fluctuation of unfavourable exchange rate movements can lead companies to loss of million pounds from the dramatic decrease in over sale price or from the sudden rise in imported material cost."

Thus this key benefit of currency forwards will enable companies to set accurate budgets and stick to their financial plans because the exact value of future transaction are calculated. In other words, it enables companies to focus on their business activities to reap the huge profit instead of wasting time, capital and resources on keeping a constant track of fluctuation of exchange rate.

According to Daigler (3) "a significant advantage of using currency forwards relates to lower cost arising from the absence of a third party. Because the agreement is possibly arranged by contract owners, they certainly would not be charged the premium fee or commission fee. The absence of cash deposit requirement is another merit. Cash is not required to change hands until the underlying asset is delivered".

Some disadvantages of currency forwards

When the parties enter into a forward contract they are obliged by law (through a legally binding agreement) to carry out what they are supposed to carry out at the maturity date. If, for example, there is a significant change in the business circumstances, and as a consequence the demand for the exchange disappears, the holder who seeks to withdraw from the contract will certainly suffer from the relatively high cost of cancellation. According to Watson 4 "the exchange rate in the market moves against the holder's interest, the firm is not allowed to escape from its contracted position to grab profit from such a profitable movement".

A second main weakness of forward contracts involves its high degree of credit risk arising from two sources. Firstly, there is no initial cost or deposit requirement when undertaking the contracts. Secondly, the gains and losses between two parties are figured out at the time the contract becomes mature and related currency are delivered at the pre-determined price. Hutchinson (5) contends that.... "it is quite an inducement to the party going to suffer from the loss, or to the party which no longer need to trade the contractual currency, to default on the forward contract".

Currency futures

A currency future is a standardized contractual agreement in which two parties promise to exchange one currency for another at a pre-determined rate and at a certain quantity on a specified future date.

In general, currency futures are seen as a more up market version of currency forwards and designed to solve the difficulties encountered with currency forwards.

According to Arnold (6)... "the future contracts which are traded on organized exchanges, offer a number of standardized features regarding from contract size, maturity date, quoting convention (i.e: USD/EUR), position limits (the number of contracts which a party is allowed to buy or sell) and price limit (i.e. the maximum daily price fluctuation)".

Another key difference stems from the delivery price on future contracts, which relies primarily on the market demands, and as the result, tends to be determined on an exchange. In addition, contrary to forward contracts in which there is no need of cash deposit, in futures, at the outset of undertaking the contract, traders are required to open a futures account and both payer and seller need to make security deposits (called an initial margin), which are aimed at providing the guarantee that the traders will fulfill their obligations in accordance with the contract.

According to Sharpe et al (7)... "currency options positions will be tracked and adjusted on a daily basis to reflect gain or losses so that if the amount in the account drops below a threshold level, called maintenance margin, the trader has to top up the account after receiving the margin call from his/her broker. An additional amount of cash to bring up the equity to initial margin is called as variation margin".

Benefits of currency futures

The standardized quantity and time to expiration features, combined with organized exchanges enables futures to increase the possibility of matching transactions and to speed up the process of executing future trading. Daigler (8) contends that... "since there are a large number of participants on central market, the difficulties in seeking for suitable counterpart are addressed. As the result, this increases significantly the liquidity of market, a characteristic which enhances a very active trading environment".

The involvement of organized exchanges, so-called exchange clearing house guarantee, and of daily cash adjustments to account balances, known as margin account, is aimed at ensuring that the default on delivery and payment will not take place.

Riley (9) states that... "the relatively unknown players without any long-lasting reputation or good credit standing are given chance to participate in such future market".

Another important merit which is introduced by a means of exchange-traded contracts player associates with the chance of closing out position. The traders who have already taken on the position in secondary market are able to escape from contractual obligation by substituting another party in their place or by undertaking opposite transaction. Again according to Hutchinson (10) "Such easy withdraw brings much more convenience to the participants compared with forward contracts".

Some disadvantages of currency futures

It could be argued that the first big drawback of future contracts results from such standardized characteristics as size, expiration date, price and so on, all of which cause traders a low likelihood of obtaining the perfect hedging. Thus before future contracts are listed for trading in the secondary market, public exchanges are the only decision-maker on what terms and conditions should be included.

This can mean that the contents of documents are not customized to individual need. It's unavoidable that the traders have to take on the transaction in which some required parts are left un-hedged whereas other unnecessary parts are over hedged. According to Daigler (11) "...future contracts often fail to satisfy the needs of the potential small traders".

Another key disadvantage is the substantial amount of deposit at the outset and the additional cash which is demanded to inject if margin account falls below the safety level.

Currency options

A Currency option is the agreement that confers to the holder the right to purchase or sell currency for an agreed-upon price and at a certain amount of currency at a specified time in the future. However according to Pike (12) ...“the option holder is not compulsory to exercise the contract. For this right to choose, at the outset, the holder has to pay a premium to the broker, a firm or individual who executes orders to buy or sell currency option contracts on the behalf of holder”.

There are two parties engaged in the contract. One party grants another one the option to do or not to do something. Option holder, sometimes known as option buyer or option taker, refers to the party who has a right to choose to purchase or sell currency at specified price within a certain period of time. Option writer, sometimes called as option seller or option granter, refers to the party who is obliged to fulfill that choice in accordance with the terms of contractual option.

Benefits of Currency Options

One primary benefit of trading in currency options involves the fact that it offers holders not only the protection, when the market shows adverse exchange rate movement, but also the flexibility to benefit when the market shows favourable trend. Specifically, once the option takers have officially decided to cover transaction with option, they are given a second chance to reverse the position.

Watson (13) claims that“ if the currency fluctuates in the direction which favours against the owners' interest , they are allowed to escape its contractual position to take advantage of such movement without shouldering any commitment such as, making any opposite transaction or paying cancellation fee”.

The second potential benefit is that it is advantageous for a company which are expecting to engage in foreign currency denominated transactions but are uncertain about its implementation. Watson (14) states that if... “for some unpredictable commercial reason, as the need for the exchange disappears, the holder has a legal right to let the option expire without trading or to earn some profit by selling it to another party if it still has any value”.

According to buying or selling currency, option can be classified into 2 types:

- Call option gives the holder the right to buy a certain quantity of currency at the exercise price at a specified time.
- Put option gives the holder the right to sell a certain quantity of currency at the exercise price at a specified time.

Based on the terms on exercise in the contract, option can be divided into two types:

- European style options allow the holders to exercise the option only on the expiration date.
- American style options allow the holders to exercise the contract at any time up to the expiration date.

Some disadvantages of currency options

Similar to future contracts, the standardized features in option contracts can cause traders some difficulties in finding a perfect match in terms of duration and the size of company's exposure.

Stephens (15) states that.... "in general, trading options is regarded as complicated, and as the result, poses some difficulties to those who lack of advanced financial competency. Furthermore, the indirect cost incurred, including commission and bid, normally charges the holders higher rate per one pound invested. In addition, under the same currency, there are a wide range of strike prices and expiration dates available in the market. This means particular options become unfavourable and have to suffer from the low level of liquidity".

Thus it could be interpreted that the lack of liquidity tends to lead to the higher spread, meaning that the traders are likely to pay much more for indirect costs while performing option trade. Again according to Stephens (16).... "option trading is thought to be time-sensitive in nature because it just valid within a short time. Consequently, the significant proportion of options expire worthless to the holders".

The following is a simple example:

Imagine we are exporters of American mechanical goods to global markets. It's summer but we know that in December we will receive one million euro. In order to plan our future business, we'd like to ensure an exchange rate with which we'll exchange euros for dollars. At the moment, one contract for 125,000 euro due in December has a value of 150,000 USD. This corresponds to an exchange rate of 1:1.2. We would receive 1,200,000 USD for our million euros. We are satisfied with this exchange rate and we will sell eight contracts (1,000,000/125,000). We are now in a 'short' position, which means we are committed to sell one million euro in three months. We deposit the initial margin to our broker's (bank) account, in the minimal amount of 32,400 USD ($8 \times 4,050$).

In three months, one euro costs 1.3 dollars. In this case, we lost 100,000 USD on our contracts, because if we hadn't bought them, we would receive 1,300,000 USD at the spot/cash market instead of the agreed 1,200,000 USD. On the other hand, for three months we were sure that we would receive exactly one million two hundred thousand dollars for our million euros. Technically the process means we must deposit an additional 100,000 USD over the course of the contract to our broker's account to top up our margin. On the day our position closes (contract expiration), we sell our million euro on the spot market for the 1,300,000 USD. We lost 100,000 USD and received 1,200,000 USD for our million euros.

Please also see the core text Arnold/ Corporate Financial Management 5th edition/ Pearson 2012/ ISBN-13: 9780273758839 for further examples on managing risk.

Conclusion

This article briefly examined some of the advantages and disadvantages associated with three key hedging derivatives.

In relation to forward contracts the contract terms are tailored to suit each participant's specific needs, so it offers the perfect match. Also there are no upfront fees required because of the absence of a third party. Forward contracts also involve a single future payment but because of the nature of binding agreement, it is difficult or impossible for participants to withdraw to back out to benefit from any favourable movement in the currency market. There is also a high level of credit risk associated with forward contracts.

In relation to future contracts they offer the closing out position where unknown players are given a chance to participate. Futures are said to enhance liquidity of the market and are claimed to reduce default risk. However future contracts offers a low possibility of obtaining perfect hedging due to

standardized features. Also futures require a huge amount of deposit and additional money, when required to maintain margin account.

Finally in relation to options the Option holders are given the chance to close the position where the maximum loss from which the buyer possibly suffers is limited to a premium. Options are often regarded as the most complicated instrument with high upfront costs, a short maturity duration and they have difficulty in finding the perfect hedging due to Standardization.

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