E-ISSN No: 2456-6713 Print ISSN No: 3048-6459

International Educational Applied Research Journal

Peer-Reviewed Journal-Equivalent to UGC Approved Journal

A Multi-Disciplinary Research Journal

The Role of Derivatives in Hedging Financial Risks: A Comparative Study

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Paper Rcevied date

05/05/2025

Paper date Publishing Date

10/05/2025

DOI

https://doi.org/10.5281/zenodo.15603377

IMPACT FACTOR 5.924

Abstract

The risk is inherent in all the activities we do in our day-to-day life, and all of us remain concerned about it. We all would like to eliminate it altogether. In most cases, complete elimination of risk is not possible, but certain steps can be taken to mitigate the risk.

In our personal life, when we buy an insurance policy against theft in the house or for a vehicle, we are attempting to minimize the potential loss we may incur if some unfortunate event takes place. Each one of us in everyday life faces variety of risks and also manages them with appropriate tools and strategies.

Key words :- Activities, Elimination, Insurance, Unfortunate

Introduction

The risk is normally gauged from: (i) the probability of an adverse event happening and (ii) the expected magnitude of loss in case such an event occurs. The preparedness and the measures to mitigate risk are determined by the combined impact of the probability and magnitude of loss.

If there is a high probability of small losses (stock prices, commodity prices) or small probability of large losses (earthquakes, tsunami, etc.), the magnitude of risk may be same but the strategies of risk management may differ. In business enterprises, the management of risk is mainly confined to situations of high probability of small losses. The management of the other kind of risk of small probability of large losses are more strategic in nature such as capital budgeting decisions. We now turn our focus on the management of the risks that emanate from conduct of normal operations of the business.

There are various ways different people manage different kinds of risks. Insurance policy is a classic example of managing risk with which we all are familiar.

\One possible way to avoid the risk is not to undertake an activity at all. There are people who abstain from air travel because they see too great a risk with that mode of transport.

Likewise, certain people do not invest in equity market due to the risk associated with stock market and prefer to invest in safer avenues. While certain activities can be avoided purely on the ground of high risk and one can still live without it, not investing in the equity market for instance, it may not be possible to abstain from mandatory activities. One has to find better avenues to manage risk rather than avoidance of the activity altogether.[1]

Another way of managing risk is to diffuse the risk across the sources of risk. Many call centres prefer to have multi-location operations to protect themselves against natural disasters. Similarly, investors prefer to have investment in many alternatives to protect themselves against fall in expected return from a single investment, as risk of failure of many investments simultaneously is far less than the risk of failing of a single investment. Likewise, firms do not have a single supplier or a single customer to manage business. They prefer to have many suppliers/customers, as it is not possible that all the suppliers would fail to deliver and all the customers would be weaned away by competitors at the same point of time.

Lastly, one can manage the risk by transferring it to another party who is willing to assume risk. Insurance company does not do anything to contain the risk per se, but assumes risk on your behalf. It is the business of the insurance company to assume risk for an income. Similarly, there are people who are willing to assume risks of other kind for a consideration. Risk as such does not and cannot vanish but gets

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transferred from one who wants to avoid it to the one who is willing to accept the risk upon exchange of consideration.[2]

Review of Literature

- **According to Nigam R.K. 2018-** Price risk All markets, be it of commodity, stocks, or materials, Business risks are characterized by small losses but with high probability and concerns about changes in prices, exchange rates, and interest rates. are dynamic. The forces of demand and supply vary continuously. The prices are never stable, though they strive for equilibrium. This change in price causes the profit of a business enterprise change, which is a cause of anxiety for managers of the firm. The investors also face the same situation when they invest in financial securities, the prices of which vary causing uncertainty of returns.
- **According to Gupta P.K. 2019-** Exchange rate risk Exchange rate risk emanates from the transactions pertaining to foreign currency where a firm faces uncertainty regarding the exchange rate at which the foreign currency will be converted in the domestic currency or vice versa. As an example, consider a firm that sells goods on credit and realizes its sales proceeds in foreign currency. Even though the price in foreign currency is frozen, the firm faces an uncertainty regarding the amount that will be realized in domestic currency depending upon the rate prevailing at the time of realization of sales. Similarly, an importer having to pay in foreign currency at a later date would be uncertain about the actual amount to be paid in domestic currency.[3]
- **According to Khan YK 2022-** Interest rate risk Like the changes in the prices and the exchange rates, the interest rates too keep changing depending upon various macro-economic factors, both national and international. All firms needing capital resort to borrowing, while those with surplus funds invest. Both the borrowers and investors face the risk of changes in the interest rates subsequent to the transaction.

Objectives of the Study

- The price at which the exchange of asset will be done is negotiated in advance.
- By doing so, both buyer and seller attempt to avoid the price risk by locking in a price today.
- On due date of the contract, seller makes the delivery and buyer pays the price.
- There is a mutual obligation between the buyer and the seller to perform according to the requirement.

- The seller is committed to make delivery on due date, and the buyer is obligated to pay the consideration.
- The buyer and seller of the contract assume risk, referred as counter-party risk on each other.
- Once a forward contract is booked, both parties are obligated to perform.
- The cancellation can only be done through mutual consent of both the parties any time prior to the maturity of the contract.

Methodology

As per the cost of carry model discussed above, the difference in the futures price and the spot price called basis represents the cost of carry for the remaining period for the expiry of the contract. Accordingly, the futures contract with longer maturity will be priced higher than the contract with shorter maturity.[4]

As maturity nears, the difference between the futures price and spot price shrinks, and on the day of maturity, the two prices must necessarily be identical, as shown in Figure 28-3. The difference of futures price and spot price is called basis. As time progresses, basis declines and becomes zero on the day of maturity, i.e. spot and futures price converge.

Data Analysis and Interpretation

Hedging strategy As hedging strategy, the importer buys the futures contract now and sells close to the delivery date before December. Though he knows the exact amount of dollar to be covered, the importer has to determine the size of the contract that he has to buy. At current spot rate, the exposure in terms of rupee is US $ 50,000 x 45-₹22,50,000.

With one contract in rupee at ₹25,00,000, the number of contracts that the importer must buy is 1.

$$\text{Nos. of contracts bought} = \frac{\text{Exposure amount}}{\text{Value of one contract}} = 1.11$$

(Rounded to 1)

Having bought rupee futures, the importer would cancel the position in the futures by selling the rupee futures at a date close to the actual date of payment in December. Let us examine the two different scenarios of exchange rates at the time when the payment becomes due in December.[5]

A Comparative Study Commodity Futures and Financial Futures

Table-1.1

Respondents	Commodity Futures	Financial Futures
Male	75	55

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Female	25	45
Total	100	100

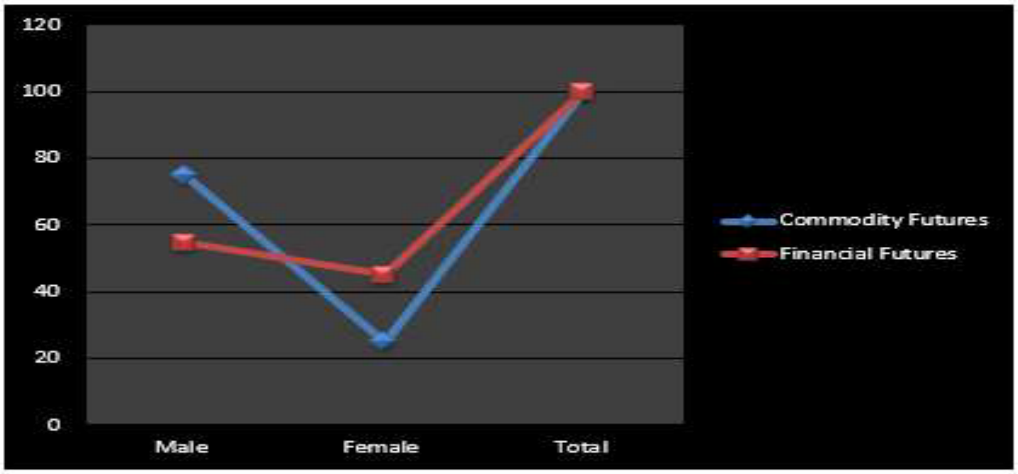

Table 1.1 Has displayed two respondents Male and Female Male has Commodity Futures 75 and Financial Futures 55, Female Commodity Futures 25 and Financial Futures 45 show it applied percentage method.

Findings of the Research

- Futures contracts in various currencies perform the same function as that of currency forwards. As stated earlier, futures contracts are standardized in terms of size (the quantity of currency) and delivery dates so that they become tradable on the exchange.
- The large number of buyers and sellers ensures liquidity and fair price.
- Though the pricing mechanism of forwards and futures remains same in theory, futures are more competitively priced simply because.
- They are tradable and generate a lot more volume than the forward contracts.

Conclusion

The three kinds of risk described in the preceding section can be managed through products that are classified as derivatives. Derivatives are agreements that derive their values on the basis of some asset, called an underlying asset. An example will illustrate the meaning of a derivative product.

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