

## FUTURES TRADING IN INDIAN FINANCIAL MARKET

\*DR. SOUMITRA CHANDRA

Associate Professor in Commerce  
Veer Bahadur Singh Government Degree College,  
Campierganj, Gorakhpur, Uttar Pradesh

Financial innovations over the past two decades have rapidly brought about revolutionary changes in financial instruments and process. More emphasis is given on the ability of the financial institution to, design new products, develop better process and implement more effective solutions for increasingly complex financial problems. A major source of risks in financial investments is the fluctuations in security prices, interest rates and exchange rates. Among these, security prices are most volatile in India. Many people dislike volatility because of its financial implications. Derivative instruments such as, options, futures, forwards, swaps etc. are designed to beat the said volatility.

Objectives of the present paper is to have a study on :

- Concepts of the interest rate futures, currency futures and stock index futures.
- Functions of futures.
- Introduction of futures contract in Indian financial market.
- Conclusion.

### WHAT ARE FINANCIAL FUTURES

A financial futures contract is an agreement between two parties, for the deferred delivery of financial instruments (both parties are obliged to perform the contract). The futures contract is standardized in terms of quantity, type of instrument and guaranteed for performance by clearing corporation or clearing house. The contract also specifies the delivery date and method for closing the contract. So we can define a financial futures contract, “as a standardized agreement to deliver or receive a specified amount of a specified financial instrument at a specified price and date”.

---

\* Associate Professor in Commerce, V.B.S. Govt. Degree College, Campierganj, Gorakhpur.

---

Financial futures are traded on organized exchanges, which establish and enforce rules for such trading. Various futures contracts are purchased and sold through an open outcry auction. For every buyer of a futures contract, there is a corresponding seller. Brokers act as intermediaries. A clearing house facilitates the trading process by recording all transactions and guaranteeing timely payment on futures contracts. Only the members of a futures exchange can engage in futures transactions on the exchange floor, unless such privileges have been leased to someone else. Customers who request financial futures transaction are required by the exchange to establish a margin deposit with their respective brokers before the transaction can be executed.

### **Types of Financial Futures**

On the basis of the type of risk each contract is intended to cover financial futures can be categorized as follows:

- interest rate futures,
- currency futures and
- stock index futures

### **Interest Rate Futures**

Interest rate futures contracts refer to trading of interest-bearing securities, like bonds, debentures, treasury bills, Euro dollar deposits, etc. Futures trading on interest-bearing assets started only in 1975<sup>1</sup> but it has grown tremendously due to its usefulness. Interest rate futures contracts are used for hedging by banks, financial institutions, pension funds and others whose assets or liabilities can be affected by changes in interest rates.

An Example of hedging through interest rate futures :

Assume an industrial corporation has planned to issue Rs.20 lakh, 15 year bond in 60 days. The long-term rates for such an issue are currently 12.75 per cent, and there is concern that interest rates will go up by 0.25 percent by the time of the issue. The corporate treasurer has figured out that the extra 0.25 per cent would have a present value cost of Rs.32,310 over the life of the issue (on a before-tax basis)

Rs. 20,00,000

0.25%

---

Rs. 5000

6.462 Present value factor for 15 years at 13%

---

Rs. 32,310 Present value of future casts.

---

To establish a hedge position, he sells 2500 treasury bond futures short. It is assumed that the treasury bonds are currently selling at Rs.800 (80% of Rs.1000). The total value of the hedge would be Rs.20,00,000. This is equal to the Rs.20 lakh size of the corporate bond issue. If interest rates go up by 0.25 percent, the profit, as a result of fall in prices with short position on the Treasury bond futures contract will probably offset the present value of the increased cost of the corporate bond issue.

### Currency Futures :

These contracts are also known as foreign exchange futures. Currency futures are future contracts involving two foreign currencies. These contracts are used for hedging by exporters and importers, banks, financial institutions and companies with heavy foreign exchange exposures. Assume a corporate treasurer closes a deal today to receive payment in two months in Japanese yen. If the Yen goes down relative to the dollar, he will have less value than the anticipated amount. One solution would be to sell a yen futures contract (go short). If the value of the yen goes down, he will make money on his futures contract that will offset the loss on the receipt of the Japanese yen in two months.

### Stock Index Futures:

A stock index futures contract is a legally binding contract, that fixes the level at which the underlying index can be purchased or sold at a specific future date. The stock index is a figure calculated for the purpose of representing a collection of individual stock prices. Stock index futures contract allows the investor/trader to participate in the movement of an entire index rather than an individual security. If an investor purchases a futures contract on a stock market index, he puts down the required margin, and gains or losses on the

transaction based on the movement of the index. This contract safeguards the hedger from market risk arising out of the normal course of dealing in the capital market segment.

The stock index futures market is purely a cash settlement market. This lack of choice is not present in other futures market. One who is trading in Tea or Treasury bonds could actually decide to deliver the commodity to close out the contract. But in case of the index futures, actual delivery is not possible. An investor simply closes out (or reverses) his position prior to the settlement date. If he does not, his account is automatically credited with his gain or debited with his losses and the transaction is completed. As other futures contracts the trader's account is adjusted daily to reflect the gains and losses, which is known as marking to market.

**Use of Stock Index Futures :** The motivation behind the use of stock index derivatives may be either to speculate or to hedge. Speculators may use stock index futures to make profit from major movements in the market. They may have developed a prediction/conviction about the next move in the market through utilizing fundamental or technical analysis. Which helps them to bet on the market movements.

Most important use of stock index futures is to hedge risk. A portfolio manager who believes that the market will decline, may decide to sell a part or all of the portfolio. But this involves a lot of problems. There are large transaction costs associated with the selling and then repurchasing it at a later point of time. It may be difficult to liquidate a position in certain securities those are thinly traded. Furthermore, there may be the same type of problem in re-acquiring the stock after the overall market decline is over. So, the portfolio manager may follow a more easily executed defensive strategy, which involves selling of one or more stock index futures as a hedge against the portfolio. If the stock market goes down, the loss on the portfolio will be partially or fully offset by the profit on the stock index futures contract, because they are bought back at a lower price than the initial sales price.

By using stock index futures, portfolio managing can adjust their portfolio beta<sup>2</sup> keeping with the changes in the risk and return offered by the stock market. When they believe that the stock market will offer a relatively high expected return, for a given level of risk, they

would increase the beta values of their portfolio. On the other hand, when they presume greater market risk, they would tend to lessen their portfolio betas. The changes in portfolio beta can also be effected by selling or buying a part of the portfolio and substituting them by risk free securities. But this may involve much transaction cost.

### **FUNCTIONS OF FUTURES :**

As we have discussed earlier, at this point it will be useful to summarize the benefits served by financial futures to the economy. Interest rate futures are useful to protect a financial firm's assets or liabilities, from adverse change in interest rates. With currency futures; exporters, importers, the traders who borrow or lend in the foreign exchange market, banks and all sorts of financial institutions, are protected against exchanges rate depreciation. Stock index futures protect large scale market investors from adverse changes in portfolio value. Stein studied the overall economic impact of financial futures trading in the U.S. economy using sophisticated statistical tests. He found that the use of interest rate futures and stock index futures raises the rate of capital formation in the economy. This effect is primarily due to the reduction in risk premium charged by financial intermediaries as a result of their ability to offload risks<sup>3</sup>.

### **Social Functions of Futures Markets :**

Futures markets have been recognized as meeting the needs of three groups of users: firstly, those who wish to discover information about future prices of securities; secondly, those who wish to hedge and lastly those who wish to speculate. Among these three groups of market participants, speculators' intention is not desirable from the society point of view. Speculators take position in the market with the intention to make profit from the price fluctuations (rather than to hedge), which is very risky. Sometimes manipulators in the disguise of speculators manipulate market by his private power to bring about rise or a fall in price in such a fashion as to produce personal gain at the expenses of others. Such manipulation of market undermines confidence in the pricing system and interferes with the efficient allocation of resources. Still, there are many arguments that can be made in favour of the activities of speculators some of them are given bellows:

*Firstly*, by gathering information, analyzing it and taking positions, speculators bring information to the market and they help the market to properly evaluate the information. By this process, speculators assist the market in its price discovery function. *Secondly*, futures contracts of speculators help to allocate resources across time. This also leads to check in huge fluctuation in security prices. *Finally*, they bear the hedger's risk. In this regard they perform the vital economic service of risk bearing. For this service, they deserve some reward, which comes in the form of profits.

Come to the social functions performed by futures markets. If we turned down the speculation, then there are two main social functions of futures markets- price discovery and hedging.

**Price Discovery:** Price discovery is the revealing of information about future cash market prices through the futures market. There is a relationship between the futures price and the price that people expect to prevail for the security or the underlying instrument at the delivery date specified in the futures contract. By using the information contained in futures prices today, market observers can make estimates of what the price of a given security will be at a certain time in the future. Futures market serve a social purpose by helping people make better estimates of future prices, so that they can make their consumption and investment decision more wisely.

**Hedging:** A hedge is a position taken to offset the risk associated with some other position (called the cash position). The risk associated with the cash position may be due to fluctuations interest rate, exchange rate, security prices, etc. Futures markets have provided several futures derivative to eliminate such risks through hedging. Thus futures markets serve a social purpose by helping the risk averse investors to minimise their risks.

## INTRODUCTION OF FINANCIAL FUTURES IN INDIA

The idea to introduce financial derivatives (i.e. options, futures, swaps etc.) in organised stock exchanges was for the first time proposed by BSE in September, 1994. The NSE submitted a proposal to SEBI for introducing futures trading in May 1996. In November 1996 SEBI set up L.C. Gupta Committee in order to develop an appropriate regulatory framework for derivatives trading in India. In May 1998 SEBI approved the Gupta

---

Committee report and recommend a phased launch of derivatives trading beginning with stock index futures. The legal hurdle was removed in January 2000, when Bajpayee Government brought necessary legislation by passing Securities Contract (Regulation) Amendment Bill 1998. After it Government of India has lifted a three decade old ban on forward trading in securities with effect from March 1, 2000, because according to it the securities market had improved a lot. The Government also had issued a notification delineating the areas of responsibility between the RBI and SEBI<sup>4</sup>. The notification said, the contracts for sale and purchase of Government securities, gold-related securities, money market securities and securities derived from these securities and ready forward contracts in debt securities will be regulated by RBI. Such contracts, if executed on stock exchanges will however, be regulated by SEBI in a manner that is consistent with the guidelines issued by RBI<sup>5</sup>.

In June 2000, index futures have been launched by the BSE and NSE to flag off derivatives trading in India. The stock exchange index would be the underlying asset in such trading. Sensex futures are traded in minimum multiples of 50 while Nifty in multiples of 200. Therefore, the value of one Sensex contract at the market price of 4000 is Rs.2 Lakhs. Thus by keeping a deposit of Rs.20,000 (suppose initial margin is 10 per cent) the investor can buy or sell one Sensex contract worth Rs.2 Lakhs. It is the first step to hedge Orisk of unfavourable movement in the market. The RBI has amended the SEBI (FII) Regulations, 1995, along with the Securities contract (Regulation) Act, 1957, to pave the way for FIIs to invest in index futures on the BSE and NSE. This will help in lifting volumes, which are currently languishing in the region of Rs.3 to Rs.10 Crore a day. A private circular issued by RBI to FIIs and banks states, “the RBI has capped the overall open interest of an individual FII not to exceed 100 per cent of market value of its total investment.” This means the central bank has permitted FIIs to invest in index futures, only to the extent of hedging their portfolios. It will ensure that risky hedge funds are prevented from entering the market.

## CONCLUSION

In spite of the transformation of the capital market in terms of; autonomy to SEBI, better trading facility, transparency and balanced regulatory framework the market sentiment is

---

not high. The main reasons behind such negative sentiment may be the risk of high volatility in stock market, illiquidity and non-availability of proper risk hedging equipment. The introduction of derivatives aimed to fill up the major set-backs of our capital market. The derivatives such as futures contracts are designed to provide an opportunity to hedge the market risk; that is, fluctuation in market index, interest rates, foreign exchange rates. Along with the hedging facility, derivatives also facilitate speculative and arbitrage activities. These features of derivatives help to revive both segments of the capital market. So the derivative instrument is not only facilitate the investors to earn without putting much money at stake, it also helps the corporates to raise their required funds.

Moreover derivatives are like aircraft, in that; they are mostly useful, and make headlines when things go wrong. Yet a focus on plane crashes does not accurately convey the extent to which thousands of planes fly safely every day. We could not afford to abandon flying just because it has a remote possibility of crash. We build up systems to avoid recurrence of such crash. Many of the disasters are wrongly associated with derivatives and many of others have occurred due to lack of internal controls and / or outright fraud either by the employees or promoters. So the futures trading will show the desired results only when it is provided with a perfect regulatory and trading system; well-informed market players and investors.

---

#### END NOTES

<sup>1</sup> Kolb, Robert W. (1991), **Understanding Futures Market**, p.11.

<sup>2</sup>The total risk of a portfolio of securities can be divided into systematic and non-systematic risk. The total risk is a function of the number of securities in a portfolio. Non-systematic risk is diversifiable in nature, so it can be reduced by increasing number of securities in a portfolio. On the other hand, the systematic risk is not diversifiable by adding securities to the portfolio. The beta ( $\beta$ ) of a security measures the security's sensitivity of market movement. A security with a  $\beta$  of 1.5 will, on an average, move 1.5 times or 1.5 % for each 1% move in the market. The beta value for a portfolio can be obtained by using equation-1.

$$\beta_p = W_1\beta_1 + W_2\beta_2 + \dots + W_n\beta_n \text{-----(1)}$$

$W_1, W_2, W_3, \dots, W_n \Rightarrow$  the fractions of total investments placed in the respective securities.

$\beta_1, \beta_2, \dots, \beta_n \Rightarrow$  Corresponding beta factors.

When the portfolio  $\beta$  is greater than 1, then in a rising market, the portfolio would rise faster than the market, so, expectedly outperform the market. On the other hand, a portfolio with a low beta will not lose as much value as the market average and the losses will be considerably lower than for a portfolio with a high beta.

3 Somanathans T V (1998), p.129.

4 ..... (2000), **Ban Lifted on Forward Trading in Gilts**, The Economic Times (Calcutta), March 3, p.1.

5 Ibid.