STOCK INDEX FUTURES

By: Shruti Aurora
Assistant professor, IMS
University of Lucknow

INTRODUCTION

These are derivative contracts.

The future contracts are an agreement between two parties to buy or sell the value of an underlying asset at a specific price on a specific date.

The underlying asset for these contracts are stock indices.

These bet on direction of equity market as a whole.

Cont.

They are like any other future contract, the only difference lies in the fact that the underlying asset is 'INDEX'. These are also known as 'equity index futures' or index futures.

These contracts are only cash settled as index can't be delivered at the expiration and therefore are settled daily on mark to market basis.

Cont...

Index futures are traded across the world. For example – Dow Jones, S&P, NASDAQ, NIFTY50, SENSEX FUTURES etc. NIFTY 50 futures is the most traded and most liquid futures contract in India. In fact it is one of the top 10 futures contract in the world.

NSE commenced trading in index futures on June 12th, 2000.

Since the underlying asset is index itself, therefore when index goes up, the NIFTY FUTURES also go up and when nifty comes down, then NIFTY FUTURES also comes down.

Cont....

Like any other FUTURE contract, these contracts also come with 3 variants – current month, mid month and far month. For example –

Current month is – 26 March 2020

Mid month – 30 April 2020

Far month – 28 May 2020

Future contracts are also traded in lot sizes and the lot size of NIFTY 50 Future is 75

Contract Specifications
Security descriptor
The security descriptor for the Nifty 50 futures contracts is:
Market type : N
Instrument Type : FUTIDX
Underlying : NIFTY
Expiry date : Date of contract expiry

Instrument type represents the instrument i.e. Futures on Index.
Underlying symbol denotes the underlying index which is Nifty 50
Expiry date identifies the date of expiry of the contract

Cont….

The value of the contract is calculated as follows 8263.45 * 75 = 619758.75

The contract value is calculated using the following formula : Futures price* lot size

The initial and mtm margins are calculated on this contract value.

These are popular because of the liquidity in these contracts.

Liquidity means the ease with which the buying and selling is done in a particular stock or index. The following points are worth noted –

1. Impact cost is used to measure liquidity
2. Higher liquidity means low impact cost
3. Higher liquidity leads to lower volatility
4. The spread between bid ask spread is also a measure of liquidity. Higher spread means higher impact cost and vice versa.

What is Impact cost?

To calculate an impact cost, a round trip trade is executed, which means that if a trader makes an arbitrary trade by executing a buy trade at best ask price available and selling the same a moment later at the best bid price. It can be understood with the help of an example given in the screenshot previously shown.

Buy price – 8215.00 (the price at which seller is selling and a trader is buying)

Sell price – 8211.05 (the price at which buyer is ready to buy and trader is ready to sell to the buyer)

Cont…

- In executing a round trip here, a trader buys at 8215 and immediately sells at 8211.05. thereby incurring a loss of 3.95 Rs. (8215 – 8211.05)

  Impact cost = Round trip loss/Average of bid ask spread

Here round trip loss is 3.95 and average bid ask spread is (8211.05+8215)/2 = 8213.025

Therefore, impact cost is 3.95/8213.025 = .00048 =0.048%

Interpretation of impact cost

If a trader wish to buys or sells Nifty Futures at market price instead of limit order, he may likely to loose just about 0.048%.

Since market price varies therefore by placing market order, a trader may loose about 0.048% due to impact cost. Therefore impact cost is a loss associated by executing a 'round trip'.

Cont…

- When the stock market was at peak in 2007, SEBI introduced a concept of mini derivatives to allow retail investors to access the market at lower cost. So, to increase the liquidity of index futures, mini index futures were introduced where less capital is required for taking position in index futures. Such contracts had a small lot size.
- For example : mini nifty has a lot size of 20
- This did not gain popularity in India therefore they have been discontinued after 2013.

Trade and Settlement

These are traded through stock brokers on stock exchanges by putting buy or sell order. A long position is initiated when a trader wants to buy the index in the expectation of rising markets in a near future. Similarly, when trader is bearish (ie. In general the stock prices are coming down), he would like to take a short position in the futures contract. For taking any position, the trader has to pay a required amount of margin known as 'initial margin' to the exchange.

Cont…

Further, a maintenance margin is also set. It means that the value of the contract must not drop beyond a certain point, else a margin call is initiated by the broker and trader has to infuse more funds in his account to keep his position open in the market.

Use of stock index futures

1. Hedging
2. Speculation
3. Arbitrage
4. Spread trading

Reasons for the popularity of Stock index futures

1. Nifty index is a barometer of economic activity, and is also a basket of 50 stocks. Therefore in general, the positive investor sentiments are reflected in rising Nifty 50 and thereby nifty futures and vice versa. So it becomes a good hedge rather then hedging with an individual stock. It is because of it's diversified nature.

Cont…

2. No chances of manipulation which may be a possibility in individual stocks just like yes bank recently.
3. Extremely liquid
4. Less margins are to be parked with exchange due to its high liquidity. Approx. 8 – 12% initial margins are charged for index futures whereas 40-60% margin is required for individual stocks.

Cont…

5. Less volatile and hence less risky to trade.
6. Technical analysis best suits for most liquid stocks and nifty futures is one such product.
7. Cost of trading index futures is much lower ie. Commission rates and STT rates are lesser as compared to equities.

Thank you

For any query contact at
aurorashruti@gmail.com