CHAPTER 9

The Nifty Futures

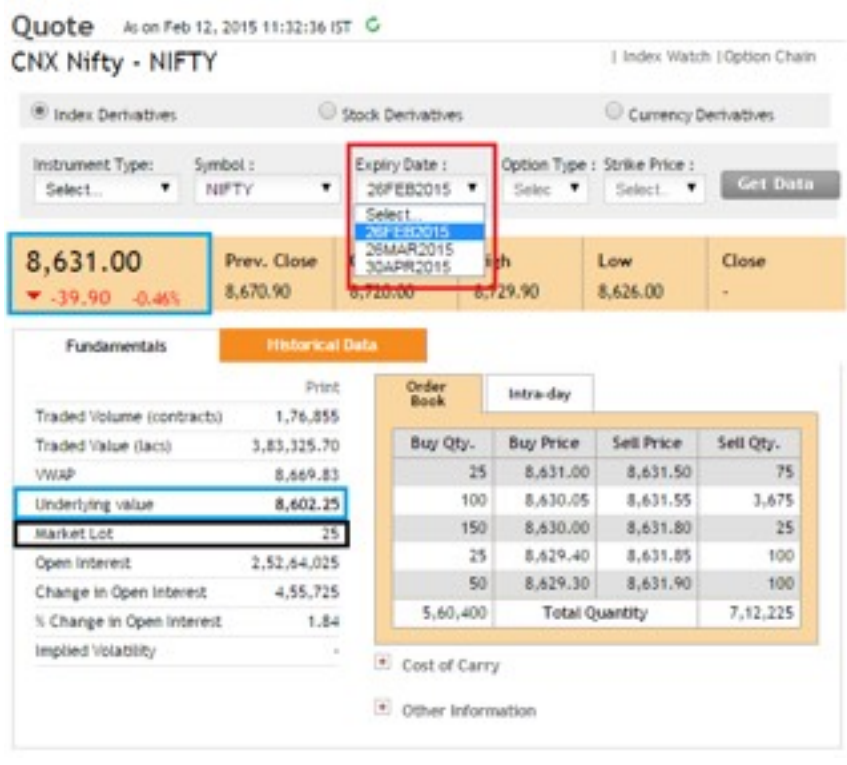
9.1 – Basics of the Index Futures

Within the Indian derivatives world, the Nifty Futures has a very special place. The 'Nifty Futures' is the most widely traded futures instrument, thus making it the most liquid contract in the Indian derivative markets. In fact you may be surprised to know that Nifty Futures is easily one of the top 10 index futures contracts traded in the world. Once you get comfortable with futures trading I would imagine, like many of us you too would be actively trading the Nifty Futures. For this reason, it would make sense to understand Nifty futures thoroughly. However before we proceed any further, I would request you to refresh your memory on the Index, we have discussed the same **here**.

I assume you are comfortable with the basic understanding of the index; therefore I will proceed to discuss the Index Futures or the Nifty Futures.

As we know the futures instrument is a derivative contract that derives its value from an underlying asset. In the context of Nifty futures, the underlying is the Index itself. Hence the Nifty Futures derives its value from the Nifty Index. This means if the value of Nifty Index goes up, then the value of Nifty futures also goes up. Likewise if the value of Nifty Index declines, so would the Index futures.

Here is the snapshot of Nifty Futures Contract –



Like any other futures contract, Nifty Futures is also available in three variants – current month, mid month, and far month. I have highlighted the same in red for your reference. Further in blue I have highlighted the Nifty Futures price which at the time of taking this snapshot was Rs.8631 per unit of Nifty. The corresponding underlying value (index value in spot) was Rs. 8602.29. Of course there is a difference between the spot price and the futures price, which is due to the futures pricing formula. We will understand the concepts related to futures pricing in the next chapter.

Further, if you notice the lot size here is 25 (this has been reduced to 25 from 50). We know the contract value is –

CV = Futures Price * Lot Size

= 8631 * 25

= Rs.215,775/-

Here are the margin requirements for trading Nifty Futures; I've used Zerodha Margin Calculator to get the margin values –

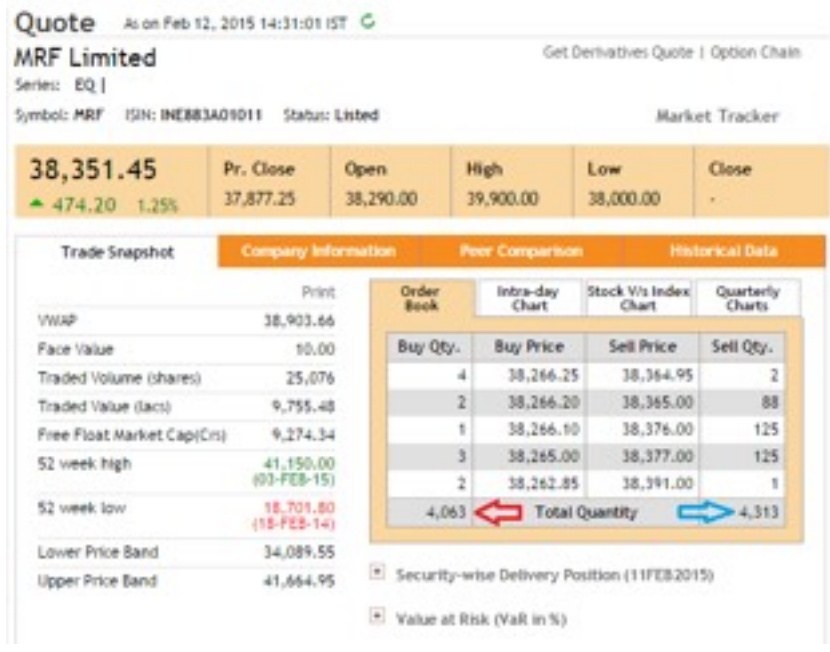
Order Type	Margin
NRML	Rs.17,323/-
MIS	Rs.6,937/-
BO & CO	Rs.6,233/-

These details should give you a basic overview of the Nifty Futures. One of the main features of Nifty Futures that makes it so popular is its liquidity. Let us now proceed to understand what liquidity is and how one would measure it.

9.2 – Impact Cost

You would often hear the term 'liquidity' while trading the markets. Liquidity is the ease at which one can buy or sell a particular stock or futures. If a stock is highly liquid (read it as very easy to buy/sell) then it would attract seasoned traders to trade in large quantities at ease, without really affecting the stock prices. A highly liquid stock/contract invariably attracts a lot of institutional interest as well. Besides if stock/futures is highly liquid then it usually translates to lesser volatility. Most importantly, if the stock is liquid then placing a 'market order' is hassle free.

Let us take up the example of MRF Limited to understand liquidity. Assume a foreign institutional investor intends to buy 5000 shares of MRF Limited. As you may know MRF Limited is probably the most expensive stock (in terms of price and not valuation) in the Indian markets. MRF stock is currently trading at Rs.38,351/- per share. Therefore buying 5000 shares at this price would translate to a transaction worth around 20 Crs (38351*5000). Do note a transaction of 20 Crs is not really a large one for a typical Foreign Institution. Anyway given that they want to buy 5000 shares let us look into MRF's liquidity in the market. Here is the snapshot of MRF Limited's order book / market depth as taken from NSE India website –



If you wish to buy large quantity of shares, then you need to look at how many shares are being offered in the market. As you can see from the snapshot above there are only about 4313 shares in the market (highlighted by blue arrow). Clearly the number of shares in the market is lesser than what is required, hence the MRF counter is considered shallow or illiquid. Liquidity can also be measured by looking at the bid-ask spread and estimating the impact cost. Knowing about the impact cost is particularly helpful while placing a market order.

Impact cost is the loss associated by executing a '**round-trip'** trade. The loss is expressed as a percentage of the average of the bid and ask price. Round-tripping is an instantaneous arbitrary

trade you carry out by buying at the first best available sell price and selling at the first best available buy price. Let us execute this on MRF (please refer to the order book snapshot above) –

Buy Price – Rs.38,364.95

Sell Price – Rs.38,266.25

So if I were to do a round trip, I would clearly lose money on it. In fact all round – trip trades result in a loss. The loss in this case would be –

= 38,364.95 – 38,266.25

= **Rs. 98.7**

Further, the average of bid and ask is calculated as follows –

= (38,364.95 + 38,266.25) / 2

= **Rs.38,315.60**

Hence the impact cost would be –

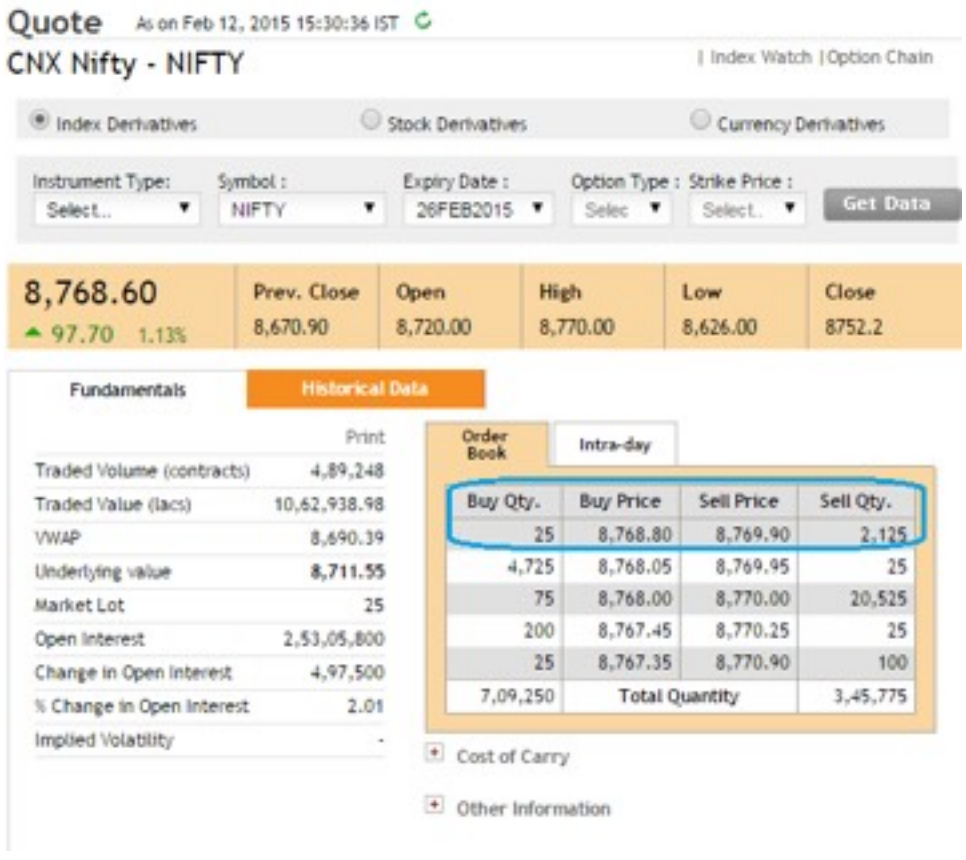
= Round Trip loss / Average of bid ask spread

= 98.7 / 38315.6

~ **0.3%**

So how do you use this information? Well, it simply means if you were to place a market order to either buy or sell the stock, **you are likely** to lose 0.3% due to impact cost. This may not always be true but you need to be aware that based on the number of shares you wish to transact in, you are likely lose about 0.3% owing to impact cost while placing a market order. Next time you call your broker to buy or sell a stock at market, the price you see on your screen and the price at which the trade executes may vary, do remember this is attributable to the impact cost!

Now a 0.3% loss due to impact cost is extremely high. To give you a perspective, let us run through the same exercise on Nifty futures –



Price at which you can Buy = Rs. 8,769.9

Price at which you can sell = Rs. 8,768.8

Round trip Loss = Rs. 1.1 (8769.9 – 8768.8)

Average of Bid Ask = (8769.9 + 8768.8)/2

= 8769.35

Impact Cost = 1.1 / 8769.35

= 0.0125%

This means if you buy or sell nifty futures at market price, you are likely to lose just about 0.0125%. Contrast Nifty's impact cost of 0.0125% with MRF's impact cost of 0.3% and you will know the importance of liquidity. The few key messages that I want you to take away from this discussion are these –

1. Impact cost gives a sense of liquidity
2. The higher the liquidity in a stock, the lesser is the impact cost
3. The spread between the buying and selling price is also an indicator of liquidity
    a. Higher the spread, the higher the impact cost
    b. Lower the spread, the lower is the impact cost

4. Higher the liquidity, lesser the volatility
5. If the stock is not liquid, placing market orders is not a great idea

Considering Nifty Futures is the most liquid contract in India, it is safe to set 0.0125% as a benchmark for impact cost. Going by this, MRF's 0.3% is way higher than Nifty's impact cost hence it is right to say that MRF is highly illiquid.

You may also be interested to know that besides Nifty Futures there are few other future contracts that are quite liquid in the Indian markets such as the Bank Nifty Futures, Reliance Industries, Tata Motors, SBIN, Infosys, TCS, ITC, DLF, Cipla etc. Maybe you can calculate the impact cost for a few of these futures contracts to get a sense of their liquidity.

9.3 – Why trading Nifty makes sense

As you know the Nifty Index is a basket of 50 stocks. These stocks are selected to represent a wide section of the India economic sectors. This makes Nifty a good representative of the broader economic activity in India. This naturally means if the general economic activity is going up or at least expected to go up then Nifty's value also goes up, and vice versa. This also makes trading Nifty Futures a much better choice as compared to single stock futures. There are many reasons for this, here are some –

1. **It is diversified** – At times taking a directional call on a single stock can be a tough task, this is mainly from the risk perceptive. For example let us just say I decide to buy Infosys Limited with a hope that the quarterly results would be good. In case the results don't impress the markets, then obviously the stock would take a knock and so would my P&L. Nifty futures on the other hand has a diversified portfolio of 50 stocks. As it is a portfolio of stocks, the movement of the Index does not really depend on a single stock. Of course occasionally a few stocks (index heavy weights) can influence Nifty to some extent but not on an everyday basis. In other words when you trade Nifty futures you completely eliminate 'unsystematic risk' and deal with only with 'systematic risk'. I know these are new jargons being introduced here, we will discuss these terms in more detail at a later stage when we talk about hedging.

2. **Hard to manipulate** – The movement in Nifty is a response to the collective movement in the top 50 companies in India (by market capitalization). Hence there is virtually no scope to manipulate the Nifty index. However the same cannot be said about individual stocks (remember Satyam, DHCL, Bhushan Steel etc)

3. **Highly Liquid (easy fills, less slippage)** – We discussed liquidity earlier in the chapter. Since the Nifty is so highly liquid you can literally transact any quantity of Nifty without wor-

rying about losing money on the impact cost. Besides there is so much liquidity that you can literally transact any number of contracts that you wish.

4. **Lesser margins** – Nifty futures require much lesser margins as compared to individual stock futures. To give you a perspective Nifty's margin requirement varies between 12-15%, however individual stock margins can go as high as 45-60%.

5. **Broader economic call** – Trading the Nifty futures requires one to take a broad based economic call rather than company specify directional calls. From my experience, doing the former is much easier than the latter.

6. **Application of Technical Analysis** – Technical Analysis works best on liquid instruments. Liquid stocks are hard to manipulate, hence they usually move based on the demand supply dynamics of the market, which obviously is what a TA mainly relies on

7. **Less volatile** – Nifty futures are less volatile compared to individual stock futures. To give you perspective the Nifty futures has an annualized volatility of around 16-17%, where as individual stocks like say Infosys has annualized volatility of upwards of 30%.

Key takeaways from this chapter

1. Nifty Futures derives its value based on the Nifty Index in spot, which is its underlying
2. At present the Nifty futures lot size is 25
3. The Nifty futures is the most liquid futures contract in India
4. Just like other future contracts, Nifty Futures contracts are also available with three different expiry options (Current month, Mid Month, and Far Month)
5. A round trip trade is an arbitrary quick instantaneous trade which involves buying at the best available sell price and selling at the best available buy price
6. A round trip trade always results in a loss
7. Impact cost measures the loss of a round trip as a % of average of bid and ask
8. Higher the impact cost, lesser the liquidity and vice versa
9. When you place a market order to transact, you may lose some money owing to impact cost
10. Nifty has an impact cost close to 0.0125%, which makes it the most liquid contract to trade