

#### OBJECTIVES OF THE STUDY :

- To study the procedure of technical analysis
- To identify and analyse the chart and trend patterns
- To identify and assess the risk part by applying statistical tools
- To identify hidden opportunities for the traders and investors
- To research and implement derivative-strategies to mitigate the risk or to encash the situation

## CHAPTER 5

### PROCESS DESIGN AND METHODOLOGY

# **PROCESS DESIGN AND METHODOLOGY**

## **Source of data**

To do technical analysis, Most of the data has extracted from Bombay stock exchange and National stock exchange (NSE) Official websites.

Tools used: Tools used for the purpose is MS EXCEL

## **Process Design**

### **Introduction**

Technical analysis is a systematic disciplinary trading system. According to most of the research papers, Technical analysis has a high success rate on top large-cap companies (Sensex 30 companies ). So three companies are selected from the Sensex index.

As we have seen in introduction types of charts, patterns and popular statistical technical tools, here, we will discuss these elements involved in technical analysis after we will make target price and stop-loss, once we assign the target it would be a good idea to enter in derivative to encash the opportunity. If it reaches the target price, it generates the exit point.

Technical analysis detailed Process

Step1- Select top large-cap companies from Sensex index with a duration of 1 year and make resistance & support level points basis on 1-year data.

Step 2 – Once We make chart we need to look at the current trend, 52 weeks price band and industry growth after trend identifies we need look patterns along with conditions ( volumes and candlesticks )

Step 3- On the other side, we need to analyse the statistical technical tools for the last 1-year data Tools are like Moving averages, Moving average convergence and divergence, Relative strength Index, Volume patterns

Step 4 – Make sure that technical tools and models must support one direction Either upside or downside, If both are the same direction we need to make stop loss and target price based on next best support level price and resistance level price.

Step 5 – Once we made targets, we need to enter in derivatives to encash the opportunities After it reaches our goal exit the derivatives with a reasonable profit.

NOTE – Every time while deciding the target price, it would be a great idea to look at market sentiment, movement of particular stock and news.

## **CHAPTER 6**

### **DATA ANALYSIS**

Most of the research papers have proved that reliable technical analysis will give great result in top large companies

## TECHNICAL ANALYSIS

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NSE:MARUTI, D 6747.40 ▼ -37.30 (-0.55%) O: 6775.00 H: 6839.00 L: 6727.35 C: 6747.40



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Chart 6.1 Overview of Maruti

### MARUTI SUZUKI

Maruti Suzuki India Limited

It is also known as Maruti Udyog Limited it deals with the manufacturing automobile. In the year 2018, it had a market share of 53% in manufacturing automobiles.

The above chart represents the last 1-year chart of Maruti Suzuki. Resistance level and support level has created based on this chart.

A resistance level is **9922** and Support level for 6420. Technical acceptable for last one year in Maruti Suzuki. In June month 2018 it has formed a rising wedge chart pattern

## Situation 1- Rising wedge



Chart 6.2 Rising wedge

**Price action** – Generally wedges are formed between two boundary lines that we can observe in the above chart. These converging lines were made from June to August in 2018

For rising wedge, both tracks are shown upward direction, but the lower boundary is steeper than upper limit And break out take place at more than 70% of the way of the apex of converging boundary lines.

**Technical Indication** – The Rising wedges Indicates that stock is going to be weaker from the professional view. Once price falls from the lower line of Rising wedge, it usually falls in earnest and sells signal has generated. This situation is more accurate in bearish markets. In the above diagram break, out has taken place at 9623

**Time duration** – 1 to 3 months

**Volumes** - Volumes are gradually decreasing until reach the apex of wedge and then dramatical rise we can observe on the breakout. In the above diagram break, out has taken place at 9623 Generated sell signal.

Other technical tools implication

INDICATORS	INDICATION	IMPLICATION
MACD	Under Redline and below signalline	Macd gave bearish signal it will continune further days
RSI	53.29	Indication of bearish and sell signal had generated
VOLUMES	Gradually increased	Volumes indicates strong bearish
CANDLESTICKS	Bears hold the the stock (bearish marubuzo)	Strong bearish movement

Table 6.1 Other technical tools Rising wedge

All Technical tools had shown downtrend to encash this indication as an analyst; it is the right time to enter in **PUT option**.

Current market price 9623 (break out point)
At the money option
Exercise price 9600 expiry on 30 Aug 2018
Option Premium 320 on July 26, 2018, and <b>stop-loss for the share price is 9816</b>

Target price is 9007 which next support level for Maruti

### **Derivative-Put Option**

Suppose one rational person who has 1,00,000 entered into a put option

Purchased two put option expiry on 30 Aug 2018

**Total payable Premium  $75 \times 2 \times 320 = 48000$**  Target price 9007

This target price has reached on 9 Aug 2018 we can sell off the contract

560 is Premium on 9 Aug 2018



**Total Premium receivable on  $75 \times 2 \times 560 = 84000$**

**Total Profit = 3600**

### **Situation2 -Bearish Movement**

The strong bearish movement we can observe on 30 Aug 2018 This Movement has initiated by the strong bearish marubozu candle

**Technical Indication** - Bearish Marubozu indicates great amount of bearishness. In this pattern, the open price of the stock is equal to the high and close price is equal to low.. This downtrend is carry forward a few more days it is highly effective in downside

**Volumes** – Before this pattern volumes were gradually decreased that indicates a trend is going to be reversal Once this pattern has formed we can see a dramatical rise in selling pressure

**Time duration** -1 week to 4 weeks



Chart 6.3 Bearish Movement

### Other Technical Tools

INDICATORS	INDICATION	IMPLICATION
MACD	Under Redline and below signalline	Macd gave bearish signal it will continue further days
RSI	44.26	Potent bearish signal generated RSI less than 50
VOLUMES	Gradually plunged	Volumes indicates strong bearish
CANDLESTICKS	Bears hold the the stock (bearish marubuzo)	Strong bearish movement

Table 6.2 Other Technical Tools 3 Bearish Movement

### Derivative-Put Option

Current Market Price is 9205 (30 Aug 2018)

Purchased two put option expiry on 27 Sept 2018

Option Premium = 140 Stop loss is next resistance level =9459

**2 Put option=  $2 \times 140 \times 75 = 21,000$  Cost**

Target Price next support level =8159 scrip has breached target and reached the lowest price at the end of the month or on expiry date scrip quoting at 7517

Premium on 27 sept 2018 is =1657, **2 put option receivable amount =  $2 \times 1657 \times 75 = 2,48,550$**

**Total profit =  $2,48,550 - 21,000 = 2,27,550$**

OR else we can go for **Straddle Position**

Taking long as well as short option simultaneously to mitigate the loss

<b>Long call (Call Option)</b>	<b>Short call (Put Option)</b>
Exercise price 9200	Exercise price 9200
Premium =238	Premium =140
2 options total cost =35,700 ( $2 \times 75 \times 238$ )	2 option total cost = $2 \times 75 \times 140 = 21,000$

Expiry Premium = 0	Expiry Premium = 1657
Total loss =35700	Total receivable amount =248550
Final total loss =35700	Final profit for this option =227550

Total profit for this situation =  $227550 - 35700 = 1,91,850$

### **Situation-3 Head and shoulders Top Pattern**

It is one of the most common and most reliable chart patterns. It is formed by the Left shoulder, head and Right-hand shoulder



Table 6.4 Head and shoulders Top Pattern

**Identification** – In this pattern first we can see uptrend After prices drop from the peak of the left-hand shoulder and once it starts a rally to a new high and after it will start decline it reaches lower point than left shoulder bottom. This we call it as head for the chart. A final advance to peak more economical than that followed by a decline in prices from the right-hand shoulder.’

A Neckline has drawn from the bottom of the Left shoulder, head, and Right Shoulder. When Neckline has breached will receive a confirmation for decline price

Estimated price down according to some research papers

Neckline price is 7166 and top of head price is 7965. If neckline breaches, Scrip will down by  $(7965-7166) 799$  points from Neckline price ( it move a same distance from the neckline)

**Volumes-**Volume is heavy on the left shoulder after that Volume declined when left shoulder dips from the peak, and again volumes rally up to the top of head similarly trend will continue till right shoulder ultimately. Between each rally, Volumes will gradually diminish and the neckline is also broken with low volume. This would indicate a negative signal ( downside ).

**Duration** – 2 to 3 months

INDICATORS	INDICATION	IMPLICATION
MACD	Under Redline and below signalline	It is Below signal line and histograms Strong bearish signal it will continue few more days
RSI	34.38	Potent bearish (RSI near to 30)
VOLUMES	Gradually decline	Volumes indicates strong bearish
CANDLESTICKS	Bearish	Strong bearish movement

Table 6.3 Other Technical Tools Head and shoulders Top Pattern

To encash this situation better to enter input option **Stop loss is 7355** (Neckline breached day high price)

### **Derivative-Put Option**

AT the money option exercise price 7200 pe Market Price on broken 7233 (21-Jan-2019)

Option premium on 21 Jan 2019 (Expiry on 31 Jan 2019)=152.05

The target price has made according to the next best support level 6654

Entered in 2 put options =  $75 \times 152.05 \times 2 = 22,807.05$

**Total Paid =22,807.05**

On 25 Jan 2019, it has reached the target level we can exit before expiry

Option premium on that day = 672

**Total receivable amount =  $672 \times 75 \times 2 = 1,01,250$  Final profit=78,442.95.**

## Situation 4- Rounding bottom and V-bottom

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Table6.5 situation 4 Rounding bottom and V bottom



### Rounding Bottom

This Pattern form as a result of a very gradual shift in supply and demand. This indicates the prior trend is going to reversal. Once it reaches trend reversal low or high, then it starts rally opposite side High or low.

**Volume** - Volume decline Throughout the bottom level of Rounding bottom. Once it reaches bottom level volume rally from bottom to top

Rounding bottom is very rare

INDICATORS	INDICATION	IMPLICATION
MACD	Above signal line and redline	It is above the signal line Near to healthy support level Strong Bullish signal it will continue a few more days
RSI	62.38	Strong Bullish RSI above 50
VOLUMES	Followed Pattern	Steady bullish (volumes were gradually declined till reaches bottom and then started rally towards high )
CANDLESTICKS	Bullish marubozu	Strong upside movement

Table 6.4- Other Technical tools Rounding bottom

### **Derivative - Call option**

At the money Exercise price, 6900 Premium on ( 21 Feb 2019) is 181.7

The market price on that date =6830 **Stop loss is 6702** ( lowest price on this pattern)

Suppose if we Enter in 2 call options (expiry on 28 March 2018)

**Total amount paid =75\*2\*181.7 =27,255 Target price 7210**(Next Best resistance level according pattern)

Scrip has reached the target price on 12 Mar 2019 Premium on that day =395.5

**Total amount receivables =75\*2\*395.5=59,325**

**Final Profit = 32,070**

### **V bottom**

It is one the top reversal pattern This pattern gradually change the trend with little Indication

Price action – prices fluctuate very quickly either up or down very quickly

Volume – Volumes rally throughout the pattern

Regularly it happens (Especially volatile stocks)

Technical Indication - once it reached to bottom level, It indicates buy signal. Moreover, we need to check candlesticks and other technical tools

Candlestick pattern - In the bottom level, it Hammer candle. Hammer indicates a trend is going to be the reversal

INDICATORS	INDICATION	IMPLICATION
MACD	Above signal and redline	It is above the signal line Near to healthy support level Strong Bullish signal it will continue a few more days
RSI	68.37	Strong Bullish (RSI more than 50 and near to 70)
VOLUMES	Followed Pattern	Steady bullish (volumes were gradually declined till reaches bottom and then started rally towards high )
CANDLESTICKS	Bullish marubozu	Strong upside movement

Table 6.5 Other Technical tools V bottom

To encash this situation, It would be better to enter in call option

### **Derivative call option**

Current Market Price 6479 ( Bottom level of **v bottom pattern** ) on 26 Mar 2019

Call Option strike price 6400 ( At the money option) Expiry on 25 Apr 2019

The premium for that option is 310.5 **Target price 7209** ( next best resistance level

**Stop loss price is 6480**

Suppose we entered in 2 call options

Total premium paid is  $2 * 310.5 * 75 = 46,575$

The target price has reached on 9 Apr 2019 Premium on that day is 704

Total receivable on that day  $2 * 75 * 704 = 1,05,600$

**Total profit = 59,02**

## **BAJAJ FINANCE**

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NSE:BAJFINANCE, D 3597.10 ▲ +14.55 (+0.41%) O:3597.10 H:3597.10 L:3597.10 C:3597.10



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Chart 6.7 Bajaj finance overview

**BAJAJ Finance-** It is a subsidiary company of Bajaj finserv, and it is one of the Indian based NBFC. This company involved in wealth management, SME lending's, and consumer finance

The above chart represents the last one year chart for BAJAJ FINANCE. Resistance level and support level has created based on this chart.

A resistance level is **3582** and Support level for **2005**.



## Bajaj finance Bullish rectangle

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NSE:BAJFINANCE, D 3565.85 ▼ -16.70 (-0.47%) O:3597.10 H:3599.00 L:3550.00 C:3565.85



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Chart 6.8 Bullish rectangle

A bullish rectangle is formed when the price movement has restricted between support and resistance level. Generally, this pattern indicates consolidation phase or indecision. In this phase, the price will fluctuate several times between the resistance and support level before its breaches.

Volumes- Volume decline Throughout the level of a bullish rectangle. Once it breaches bottom level (resistance level), it indicates the rally is going to start, and volumes increase automatically.

INDICATORS	INDICATION	IMPLICATION
MACD	Above red line and signal line	It is above the signal line Near to strong support level Strong Bullish signal it will continue a few more days
RSI	66.54	Strong Bullish RSI more than 50
VOLUMES	Followed Pattern	Steady bullish (volumes were gradually declined till reaches breach point and then started rally towards high )
CANDLESTICKS	Bullish marubozu	Bulls hold the market

Table 6.6 **Other Technical tools** Bullish rectangle

It breached at the point 2800 to encash this situation it would be advisable to take a long position on this stock,

### Derivative - Call option

At the money Exercise price, 2800 Premium on ( 11 march 2019) is 66.74

The market price on that date =2780 **Stop loss is 2768** ( lowest price on this pattern)

Suppose if we Enter in 10 call options (expiry on 28 March 2019)

**The total amount paid =** $250 * 10 * 66.74 = 1,66,850$  **Target price is 3000** (Next Best resistance level according to the pattern) Scrip has reached the target price on 28 Mar 2019 Premium on that day = 195.68

**Total amount receivables =** $250 * 10 * 195.68 = 489200$  **Final Profit =**322350

## Pattern 2

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NSE:BAJFINANCE, D 3564.10 ▼ -18.45 (-0.51%) O:3597.10 H:3599.00 L:3563.00 C:3564.10



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Chart 6.9 V formation spike

### V formation

It is one the top reversal pattern This pattern gradually change the trend with little Indication

Price action – prices fluctuate very quickly either up or down very rapidly

Volume – Volumes rally throughout the pattern

Regularly it happens (Especially volatile stocks)

Technical Indication - once it reached to bottom level, It indicates buy signal. Moreover, we need to check candlesticks and other technical tools before taking the position

In the above diagram, Initial v formation has formed at 2660 after It went down to 240 at this price stock has formed spinning top (key reversal candlestick pattern )

INDICATORS	INDICATION	IMPLICATION
MACD	Above Red line and Signal line	It is above the signal line Near to strong support level Strong Bullish signal it will continue a few more days
RSI	58	Strong Bullish RSI more than 50
VOLUMES	Followed Pattern	Steady bullish (volumes were gradually declined till reaches breach point and then started rally towards high )
CANDLESTICKS	Spinning top	Strong up movement

Table 6.7 Technical tools v formation

#### Derivative - Call option

At the money Exercise price 2500 Premium on ( 11 Jan 2019) is 76.30

The market price on that date =2501 **Stop loss is 2451** ( next best support level)

Suppose if we Enter in 10 call options (expiry on 31 Jan 2019)

**The total amount paid =250\*10\*178.50= 190750** **Target price is 2650** (Next Best resistance level according to a pattern) Scrip has reached the target price on 23 Jan 2019 Premium on that day = 178.50

**Total amount receivables =250 \*10\*178.50= 446250** **Final Profit =255500**

## Larsen & Toubro

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NSE:LT, D 1371.50 ▼ -20.65 (-1.48%) O:1393.45 H:1398.00 L:1360.50 C:1371.50



Chart 6.10 Larsen & Toubro overview

**L&T Larsen & Toubro Limited-** It is an Indian multinational conglomerate company and its headquarters located in Mumbai. This company deals with construction, heavy engineering work, IT and financial service

The above chart represents the last one year chart of L&T. Resistance level and support level has created based on 1 year chart.

The resistance level is **1605** and Support level for **1196**.

At the beginning of 2019 L&T has shown the bearish trend that we can see in the below graph it has formed a double top



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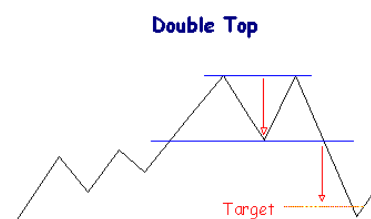
Chart6.11 Double top

**DOUBLE TOP-** Generally, the double top pattern can be identified by observing two peaks of same level price fluctuations, and the bottom neckline has created on the basis bottoms of double toplines

### Technical Indication

Neckline has drawn at the bottom of 2 peaks  
 target can we decide with the help of neckline

Target price can be calculated by the difference  
 between bottom price(neckline price ) and peak  
 price



The target is measured vertically from the highest point to the bottom of the trough between the 2 peaks. It is then projected down from the breakout below the neckline.

Here, in this case, the neckline price is 1343, and the top peak price is 1458 difference is =115.  
 If second-bottom peak breaches the neckline, then our target price is the price is 1343-  
 115=1228

Volumes- volumes are less in the second peak, but once it reaches the level we can see a dramatical increment in sizes Take a short position once it breaks the neckline along with these technical check tools for confirmation. In additions double top stock has also formed bearish candle that we can see in below graph

INDICATORS	INDICATION	IMPLICATION
MACD	Below Redline and signal line	It is below the signal line Near to healthy resistance level Strong bearish signal it will see few more days
RSI	34.3	Bears holds the market RSI less than 50
VOLUMES	Followed Pattern	Strong bearish (volumes were gradually declined till reaches breach point and then started rally towards high ))
CANDLESTICKS	Bearish marubuzo	downtrend

Table 6.8 Double top pattern technicals

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Chart 6.12 Bearish segment

### Derivative – Put option

At the money Exercise price, 1360 Premium on ( 14 jan 2019) is 25.35

The market price on that date = 1361 **Stop loss is 1370** ( lowest price on this pattern)

Suppose if we Enter in 10 call options (expiry on 29 jan 2019)

**The total amount paid =  $375 \times 10 \times 25.35 = 95062$**  **Target price is 1270** (Next Best support level according to the pattern)

Scrip has reached the target price on 29 jan 2019 Premium on that day =90.25

**Total amount receivables =  $375 \times 10 \times 90.25 = 338438$**  **Final Profit =243375**

## CHAPTER 7

### FINDINGS AND RECOMMENDATIONS

## FINDINGS AND RECOMMENDATIONS

### Findings :

Biased opinion: most of the research calls of a company is based on fundamental analysis than technical analysis, Even though it shows stable Technical analysis. It negatively impacts the success rate of calls

Example- JUBILANT FOOD (DOMINOS) research department has mentioned call on this stock buy-side target price of 1580 Current market price 1480 apart from the fundamentals all technical indicators have shown downtrend finally at the month end it went down to 1220.

Research report- Research department is not publishing any short term research reports for positional traders. The more keen long term and it is hard to find reports on Sensex index-based companies short term reports

Target price and stop-loss – Target price for research calls are not even close to technical indicators, and most of the values are considering based on fundamental analysis. Stop loss is more near to the current market price. It is easily reachable by fluctuation.

Technical indicators' mixed signals- In some cases, one of the technical indicators will show a buy signal, and another sign will show a sell signal. This confuses trading decisions, so it impacts the success rate of research call.

No proper update – Once they publish calls if it fails they do not conduct a review on previous requests, and they don't update last views

### Recommendation

1. It will be significant input for clients or investors if they hold a study on recent applications Under the areas of scope, Market information and sentiment of investors. 2. They need to update their mobile trading app and make it simpler to avoid confusion 3. Terminals have a lot of technical issues it misleads the traders, there is always a mismatch between entered price and exited price 4. It will be a great idea if they work on Structured product for other than HNI clients



## CHAPTER 8

### LEARNINGS

## **Learnings**

- I explored different types of charts and patterns and its formation view along with volume indicators
- I got know about how to use technical statistical tools to evaluates the stock movement and trends
- I have learned and applied different derivative strategies to mitigate the risk and encash the opportunities.
- I also observed in derivative price movements like gamma and theta fluctuation and worked with client acquisition department.