

Problem Introduction

Two of India's biggest stock exchanges BSE and NSE, collectively clear trades combining to greater than 40,000 crores every day.

One of the most basic technical analysis used by a lot of stock traders is the Moving Average Method.

For the purpose of this assignment, we will be using 20 Day and 50 Day moving averages.

When the shorter-term moving average crosses above the longer-term moving average, it is a signal to **BUY**, as it indicates that the trend is shifting up. This is known as a Golden Cross.

On the opposite when the shorter term moving average crosses below the longer term moving average, it is a signal to **SELL**, as it indicates the trend is shifting down. It is sometimes referred to as the Death Cross.

Please note that it is important that the Moving Averages Cross each other in order to generate a signal. Merely being above or below is not sufficient to generate a signal.

When the signal is neither buy nor sell, it is classified as hold. If you already own the stock, keep it and if you don't then don't buy it now.

Stock Market Analysis - Summary (Assignment)

The dataset had been extracted from the NSE website. The Stock price data provided is from 1-Jan-2015 to 31-July-2018 for six stocks Eicher Motors, Hero, Bajaj Auto, TVS Motors, Infosys and TCS.

The following table shows the minimum and maximum Close prices of all the stocks.

| Stock | Min (Close Price) | Max (Close Price) | Change (%) |
|-------|-------------------|-------------------|------------|
|-------|-------------------|-------------------|------------|

| | | | |
|----------------|---------|---------|----------|
| Bajaj | 1949.4 | 3409.5 | 174.9 % |
| TCS | 1721.2 | 3604.8 | 209.43 % |
| TVS | 213.55 | 785.3 | 367.74 % |
| Infosys | 873.5 | 2326.6 | 266.35 % |
| Eicher | 14320.6 | 32786.4 | 228.95 % |
| Hero | 2279.8 | 4047.3 | 177.53 % |

We can infer that the TVS is among the most volatile stocks.

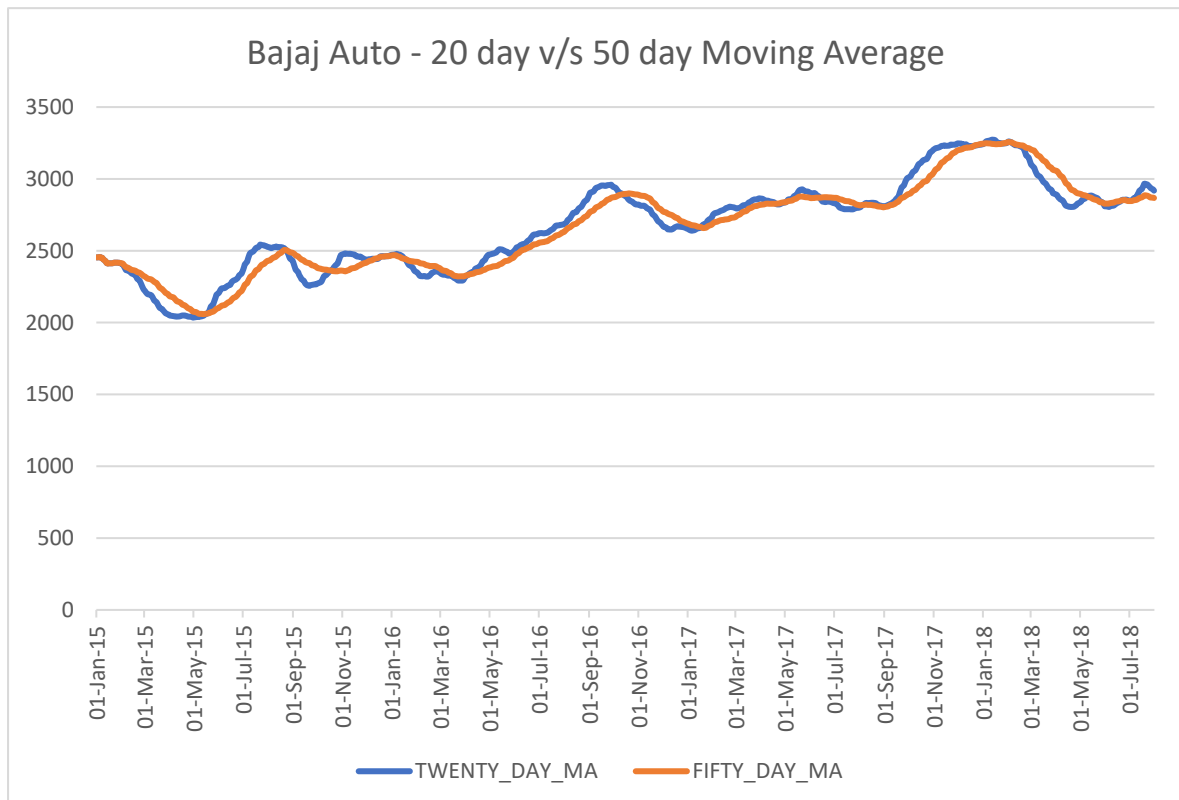
Thus, a new table containing the date, close price, 20 Day MA and 50 Day MA has been extracted from 'bajaj auto' and is named 'bajaj1'. The following visualization shows the 20 Day MA, 50 Day MA and notice the crossover points, this is where we need to BUY/SELL.

Bajaj_Auto Analysis:

(Refer the excel attached for details)



export_Bajaj_Auto.xls



In order to BUY or SELL the stock, the Moving Average concept is applied. Moving average use the past data to smoothen the price curve. When the shorter-term moving average

crosses above the longer-term moving average, it is a signal to BUY. But, when the shorter term moving average crosses below the longer term moving average, it is a signal to SELL.

An interesting fact to note is that no BUY/SELL has happened on Weekends (Sat/Sun). And most transactions were on Monday and Thursday. This comes from trending

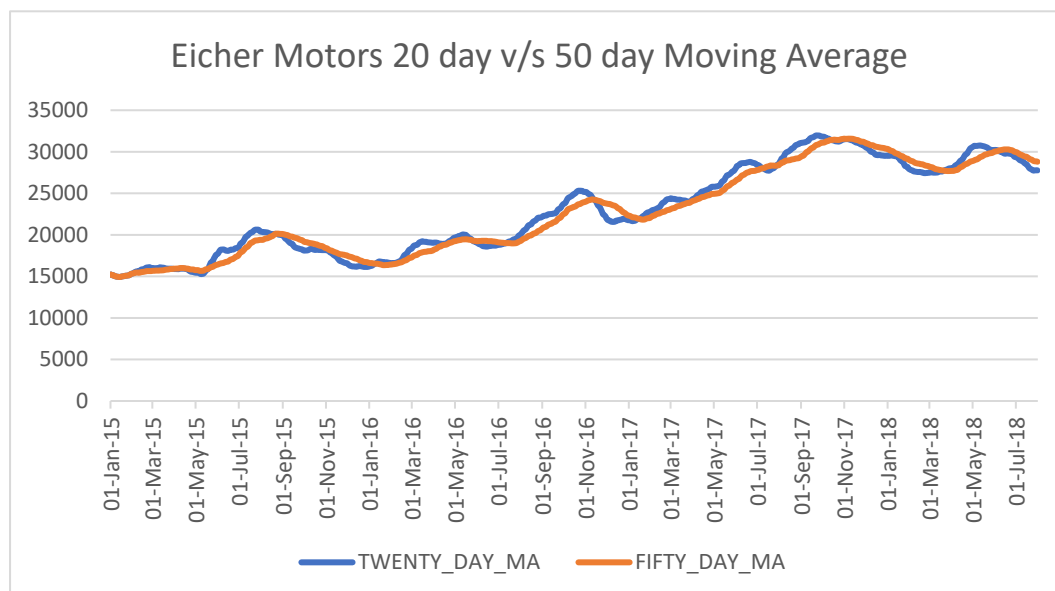
| Day | BUY/SELL |
|-----------|----------|
| Monday | 7 |
| Tuesda | 5 |
| Wednesday | 2 |
| Thursday | 7 |
| Friday | 2 |

Eicher Motor Analysis:

(Refer the excel attached for details)



Eicher_Motors.xlsx



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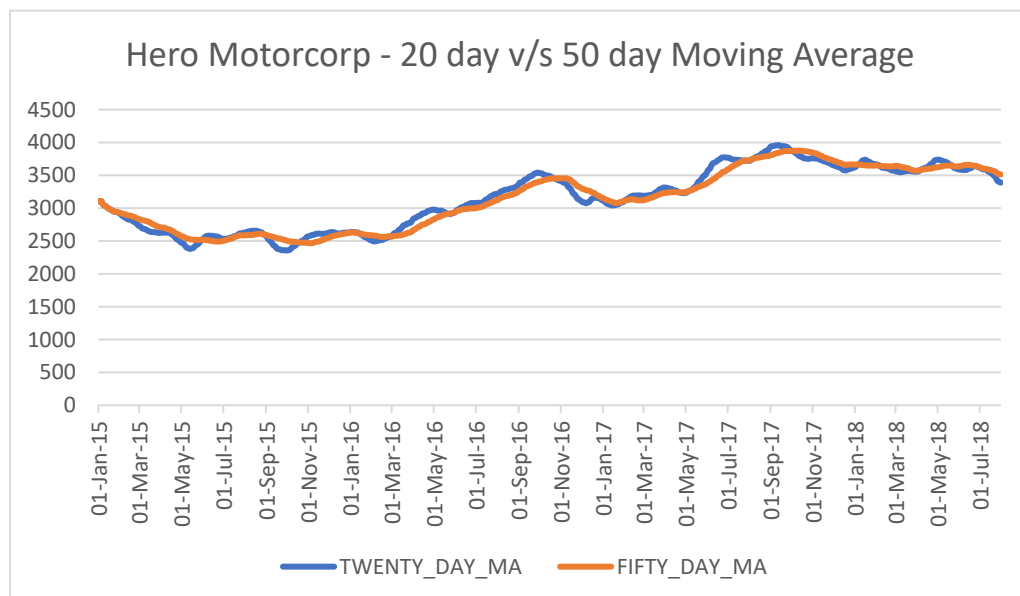
| Day | BUY/SELL |
|-----------|----------|
| Monday | 4 |
| Tuesda | 3 |
| Wednesday | 2 |
| Thursday | 1 |
| Friday | 3 |

Hero Motor Corp Analysis:

(Refer attached file for details)



Hero_Motorcorp.xlsx



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| Day | BUY/SELL |
|-----|----------|
|-----|----------|

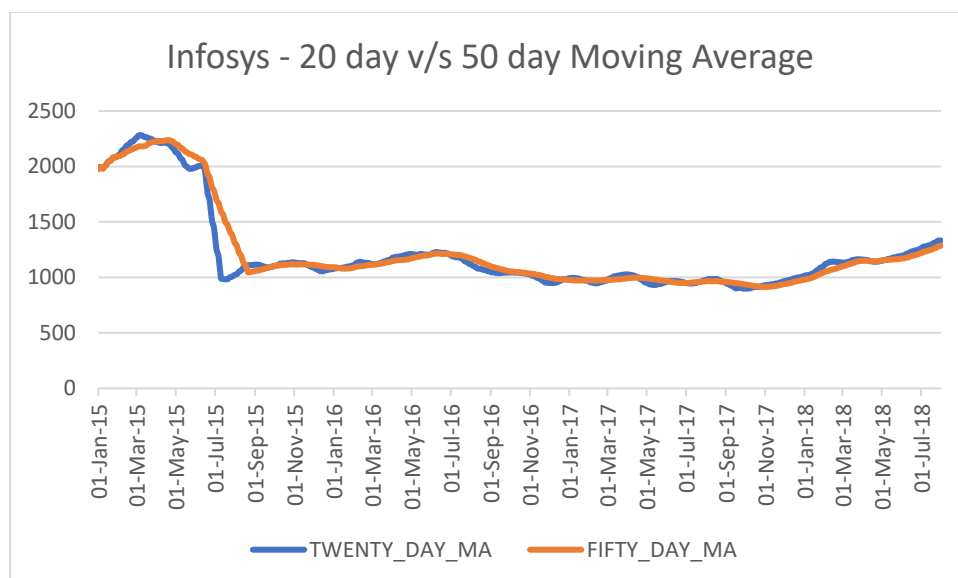
| | |
|------------------|---|
| Monday | 7 |
| Tuesda | 5 |
| Wednesday | 2 |
| Thursday | 1 |
| Friday | 3 |

Infosys Analysis:

(Refer attached file for details)



Infosys.xlsx



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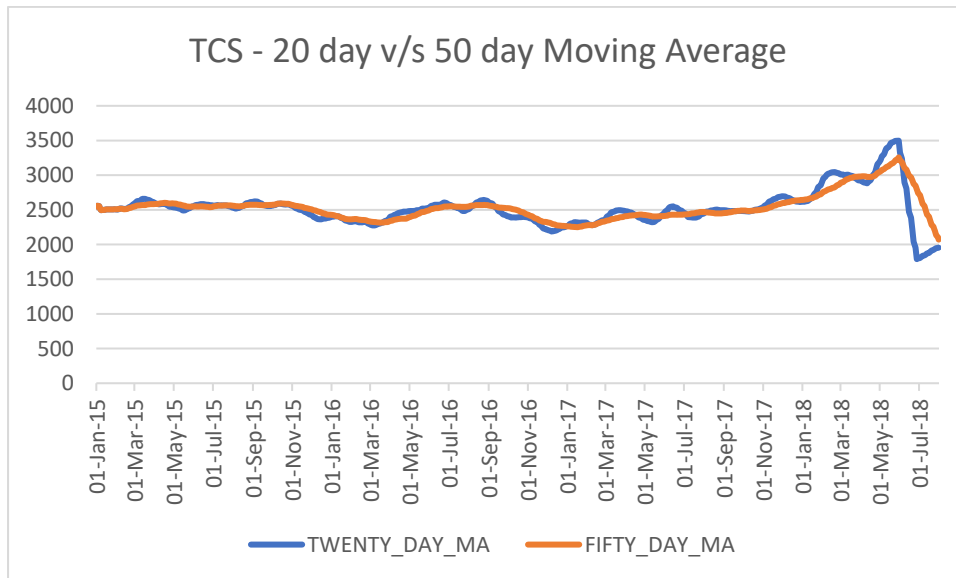
An interesting fact to note is that no BUY/SELL has happened on Weekends (Sat/Sun). And most transactions were on Monday and Thursday. This comes from trending

| Day | BUY/SELL |
|------------------|-----------------|
| Monday | 4 |
| Tuesda | 6 |
| Wednesday | 2 |
| Thursday | 2 |

| | |
|---------------|----------|
| Friday | 4 |
|---------------|----------|

TCS Analysis:

(Refer attached file for details)



In order to BUY or SELL the stock, the Moving Average concept is applied. Moving average use the past data to smoothen the price curve. When the shorter-term moving average crosses above the longer-term moving average, it is a signal to BUY. But, when the shorter term moving average crosses below the longer term moving average, it is a signal to SELL.

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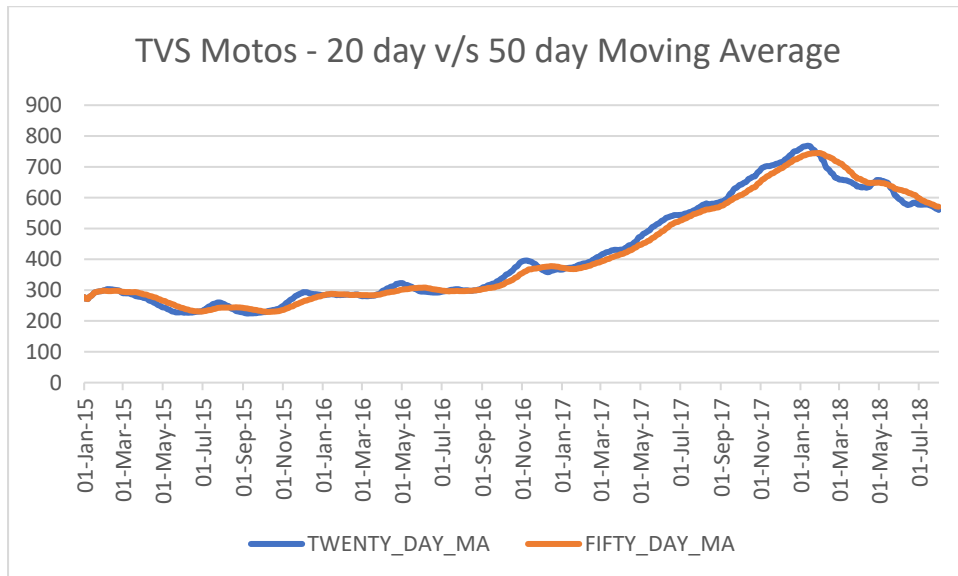
| Day | BUY/SELL |
|------------------|----------|
| Monday | 7 |
| Tuesda | 8 |
| Wednesday | 3 |
| Thursday | 3 |
| Friday | 5 |

TVS_Motors Analysis:

(Refer attached file for details)



tv_s_motors.xlsx



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An interesting fact to note is that no BUY/SELL has happened on Weekends (Sat/Sun). And most transactions were on Monday and Thursday. This comes from trending

| Day | BUY/SELL |
|-----------|----------|
| Monday | 3 |
| Tuesda | 1 |
| Wednesday | 5 |
| Thursday | 5 |
| Friday | 3 |