Problem Introduction

Two of India's biggest stock exchanges BSE and NSE, collectively clear trades combining to greater than 40,000 crores every day. As you might already be aware, a lot of trading happens on the basis of technical and fundamental analysis.

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

Moving average use the past data to smoothen the price curve. For the purpose of this assignment, we will be using 20 Day and 50 Day moving averages.

Now that you know about the concept of Moving average, you shall be wondering how to use it to determine whether to buy or sell a stock.

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.
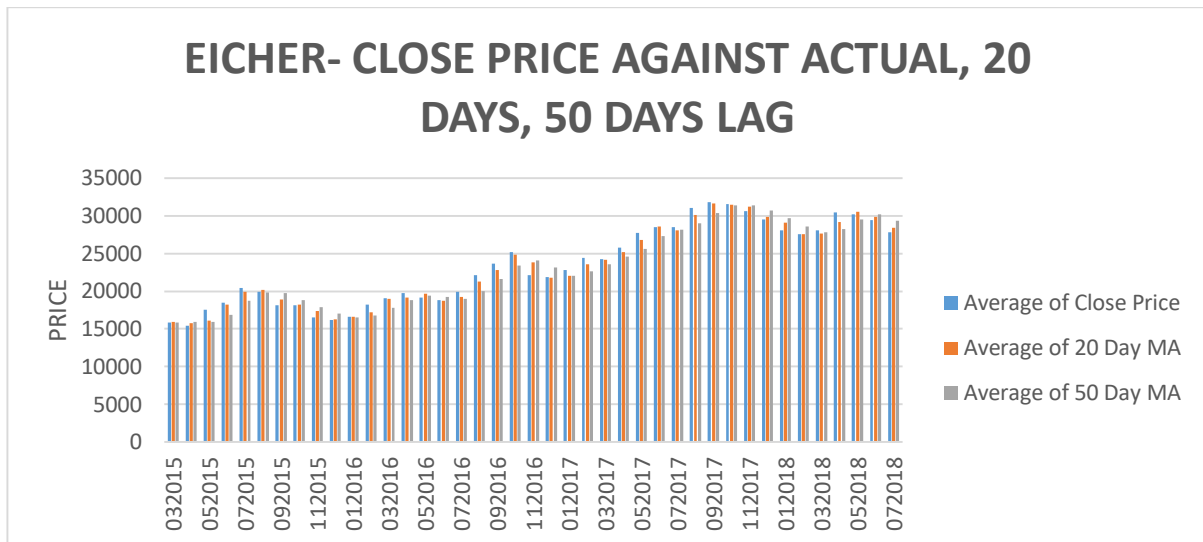
SUMMARY

- **BAJAJ**
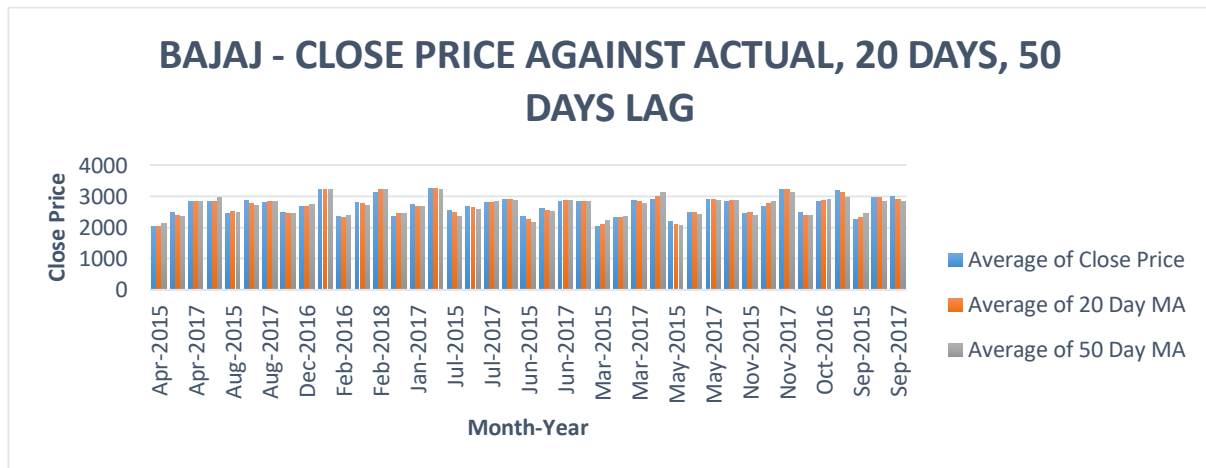
- The above plot defines month level distribution for the average actual close price, 20 Days and 50 Days lag.

- When we compare distribution over actual close price, 20 days and 50 days lag, We can say 20 days captures the good variation of actual close price comparing to the 50 days.
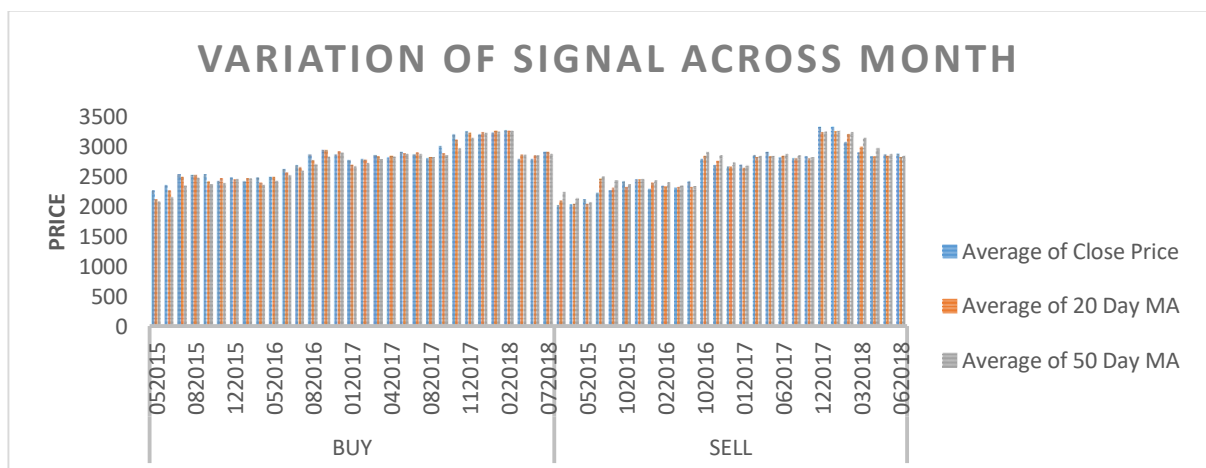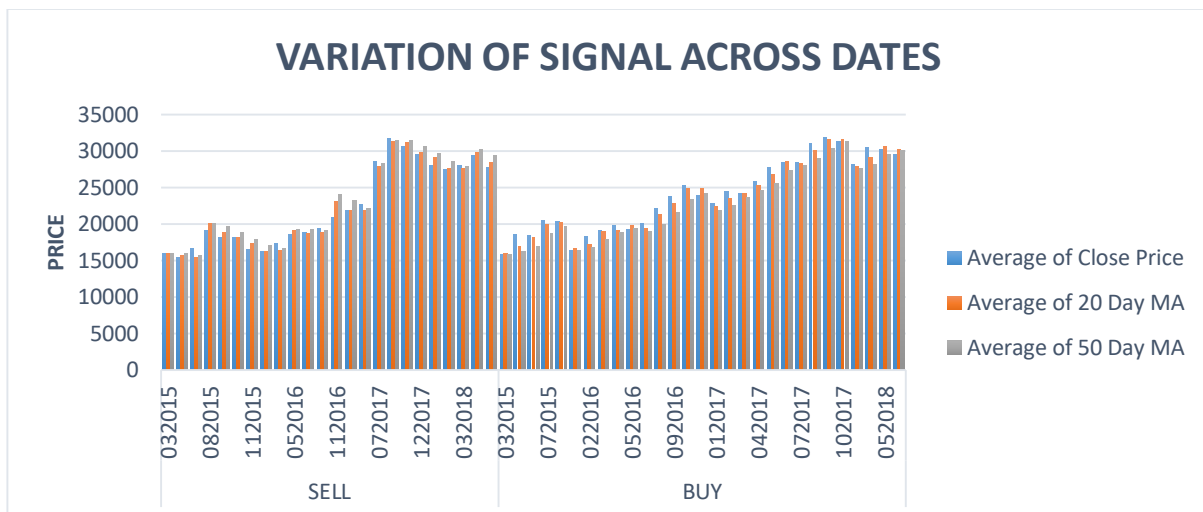

- The above plot defines the variation of the signal across dates.

- We can see there is more variation at a month level data

- As year increases, we can observe that there is an increasing pattern of both buy and sell.

- **EICHER**

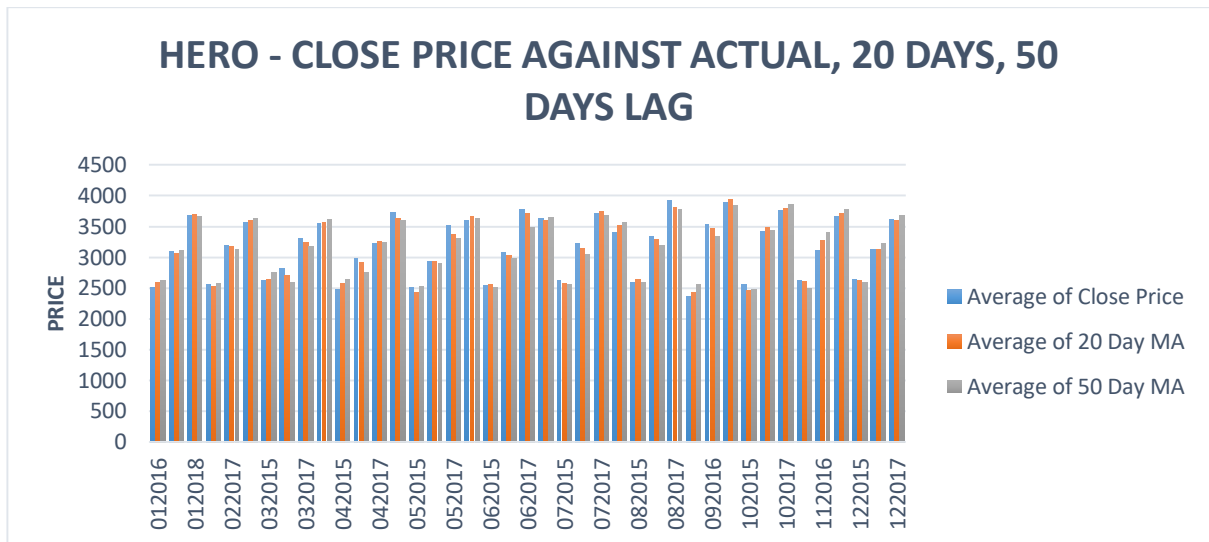**EICHER- CLOSE PRICE AGAINST ACTUAL, 20 DAYS, 50 DAYS LAG**

- The above plot defines month level distribution for the average actual close price, 20 Days and 50 Days lag.

- When we compare distribution over actual close price, 20 days and 50 days lag, We can say 20 days captures the good variation of actual close price comparing to the 50 days.
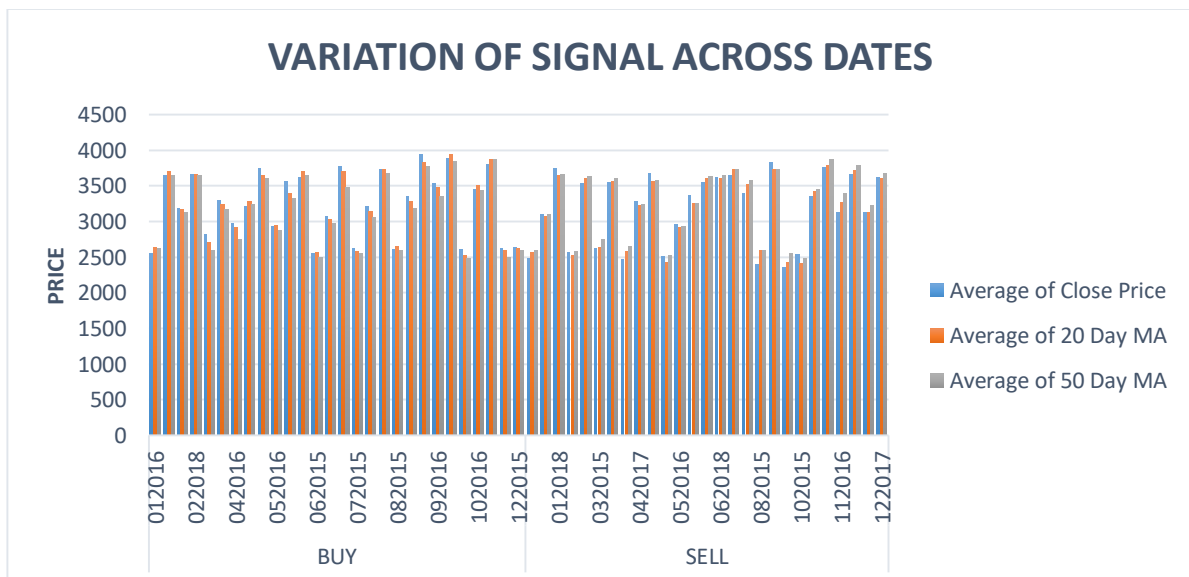

VARIATION OF SIGNAL ACROSS DATES

- The above plot defines the variation of the signal across dates.

- We can see there is more variation at a month level data.

- There seems no particular pattern showing over the plot, But we can just say as we move over the months, there is an increasing price over both sell and buy with slight variation.

- **HERO MOTOCORP**

HERO - CLOSE PRICE AGAINST ACTUAL, 20 DAYS, 50 DAYS LAG
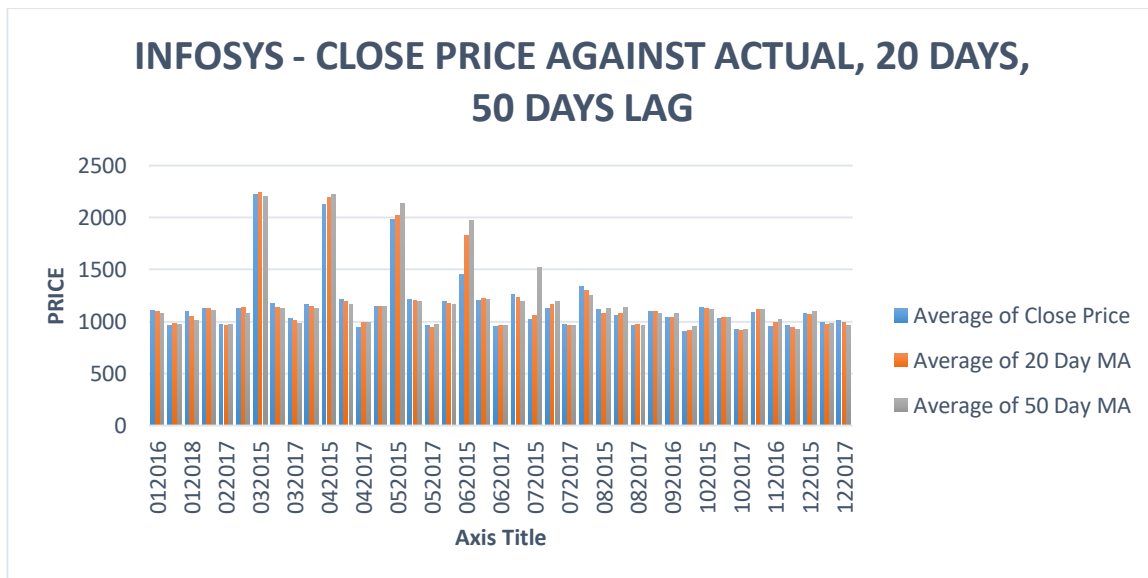
- The above plot defines month level distribution for the average actual close price, 20 Days and 50 Days lag.

- When we compare distribution over actual close price, 20 days and 50 days lag, We can say 20 days captures the good variation of actual close price comparing to the 50 days.

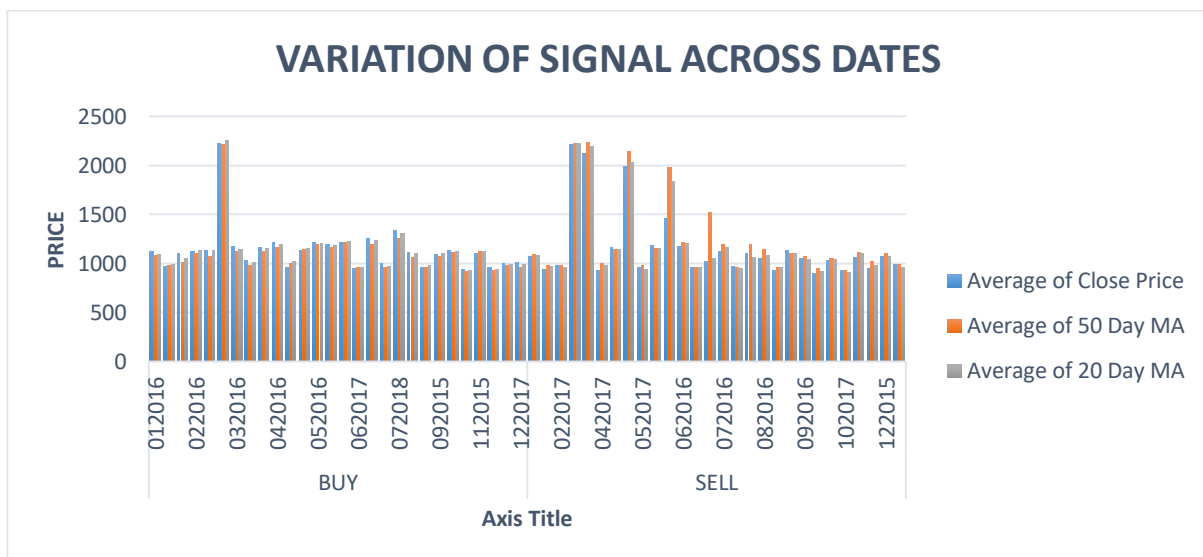**VARIATION OF SIGNAL ACROSS DATES**

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- There seems no particular pattern showing over the plot.

- **INFOSYS**

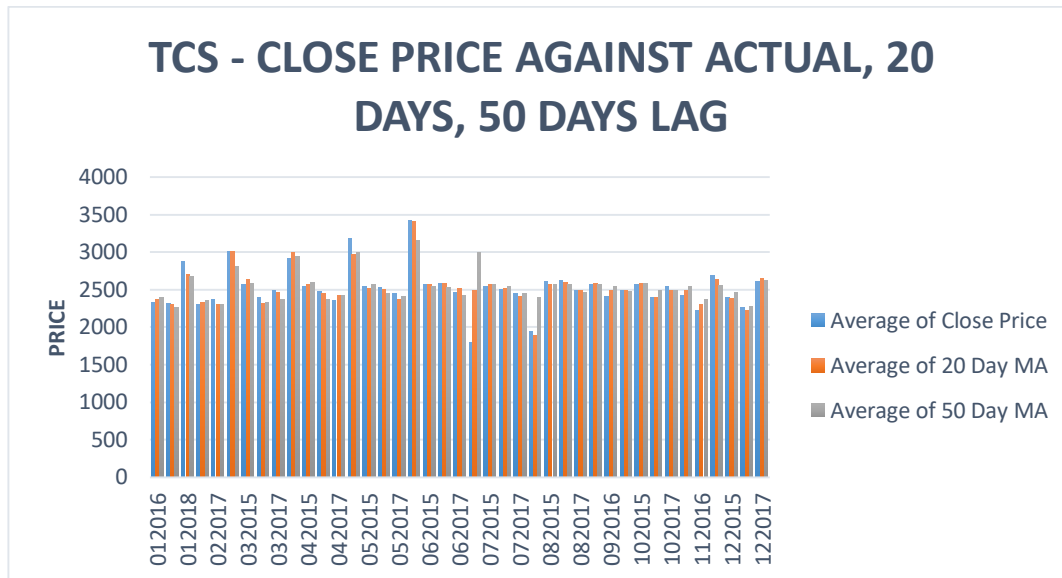INFOSYS - CLOSE PRICE AGAINST ACTUAL, 20 DAYS, 50 DAYS LAG

- The above plot defines month level distribution for the average actual close price, 20 Days and 50 Days lag.

- When we compare distribution over actual close price, 20 days and 50 days lag, We can say 20 days captures the good variation of actual close price comparing to the 50 days.

VARIATION OF SIGNAL ACROSS DATES

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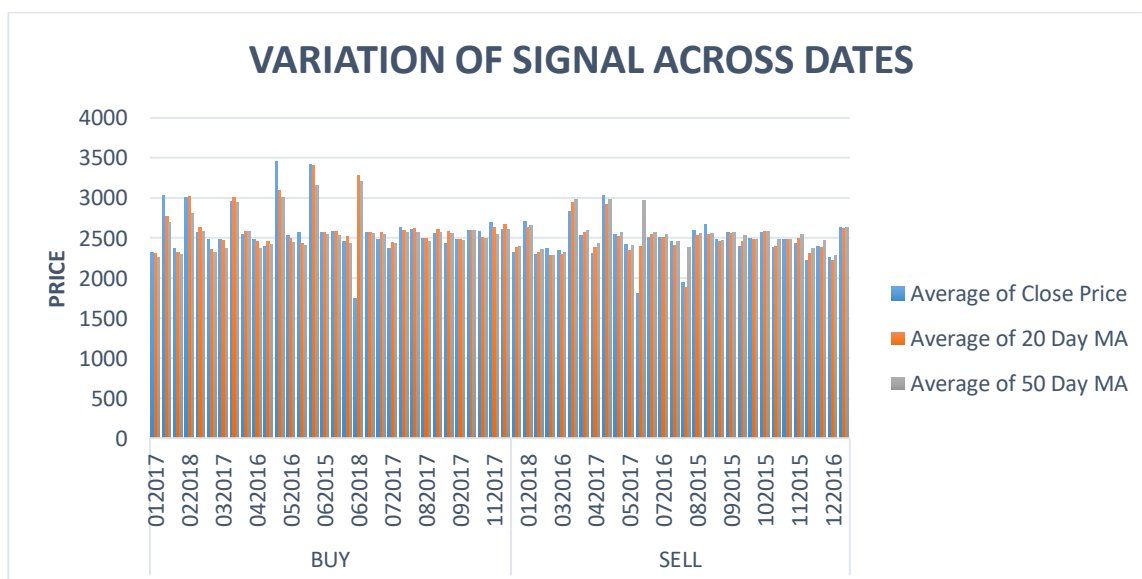
- There seems no particular pattern showing over the plot. Except some months, there is no much increase or decrease of prices and 20, 50 days lags. It is almost less than 1500

- **TCS**

- The above plot defines month level distribution for the average actual close price, 20 Days and 50 Days lag.
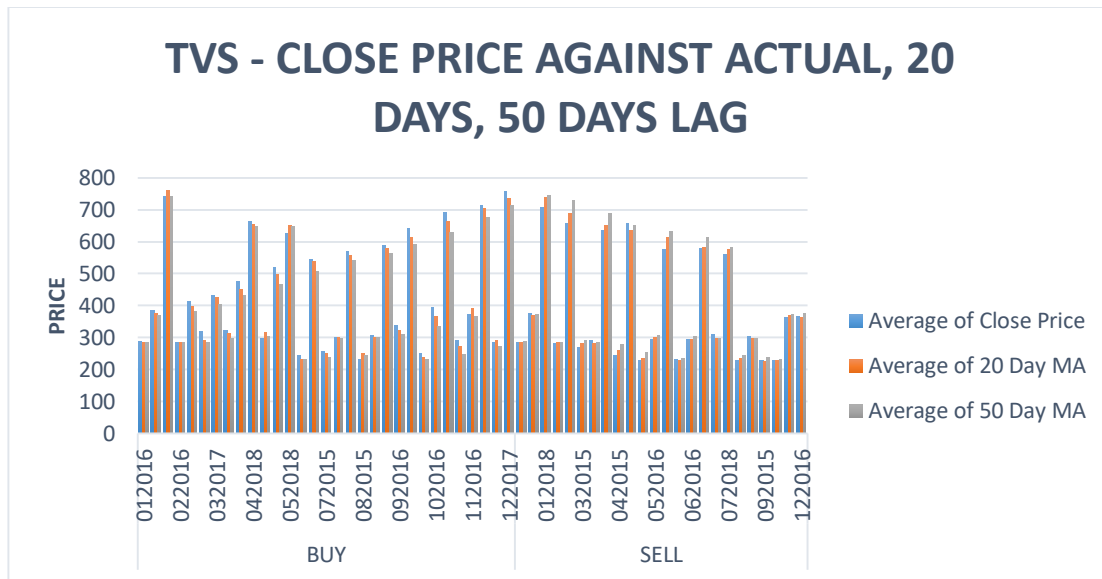
- When we compare distribution over actual close price, 20 days and 50 days lag, We can say 20 days captures the good variation of actual close price comparing to the 50 days.
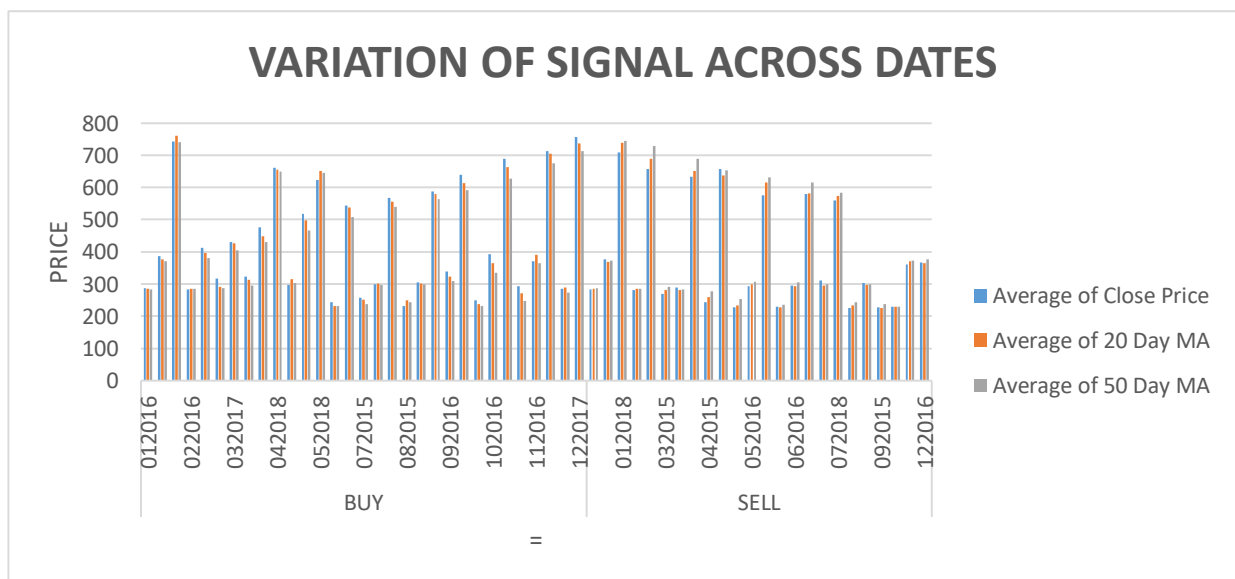

- The above plot defines the variation of the signal across dates.

- We can see there is more variation at a month level data.

- There seems no particular pattern showing over the plot. Except some months, there is no much increase or decrease of prices and 20, 50 days lags. It is almost less than 3000.

- **TVS**

- The above plot defines month level distribution for the average actual close price, 20 Days and 50 Days lag.

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- The above plot defines the variation of the signal across dates.

- We can see there is more variation at a month level data.

- There seems no particular pattern showing over the plot.