

Assignment - Stock Market Analysis

As part of this assignment we have done the stock price analysis of 6 Indian companies: Eicher Motors, Hero, Bajaj Auto, TVS Motors, Infosys and TCS using the moving average technique and used MySQL for the same.

The **Simple Moving Average (SMA)** is often used to identify trend direction and it can be used to generate potential buy, sell or hold **signals**. Using SQL we have calculated the SMA of the closing price of the stocks date-wise and calculated 20 Day and 50 Day moving averages as a first step.

Then we have used lag SQL function and difference between the 20 Days and 50 Days moving averages for all stocks to find out the **Moving Average Crossovers**.

The database named assignment has 19 tables with 888 rows each and 1 user defined function

Inference: - Initially for 50 days the signal is to Hold.

1. Stock of Bajaj has **12** favourable days to buy and **11** days to sell and rest of the days as **Hold**.
2. Stock of Eicher has **6** favourable days to buy and **7** days to sell and rest of the days as **Hold**.
3. Stock of Hero has **9** favourable days to buy and **9** days to sell and rest of the days as **Hold**.
4. Stock of Infosys has **9** favourable days to buy and **9** days to sell and rest of the days as **Hold**.
5. Stock of TCS has **12** favourable days to buy and **13** days to sell and rest of the days as **Hold**.
6. And TVS has **8** favourable days to buy and **8** days to sell and rest of the days as **Hold**.

This gives us that TVS has highest number of buy while TCS has highest number of favourable days to sell. Hero has minimum number of crosses which indicate that the stock lags lesser than other.

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

Stock	Min (Close Price)	Max (Close Price)	Average (Close Price)
Bajaj	1949.4	3409.5	2678.66
Eicher	14320.6	32786.4	23112.31
Hero	2279.8	4047.3	3157.95
Infosys	873.5	2326.6	1201.8
TCS	1721.2	3604.8	2518.67
TVS	213.55	785.3	421.38

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

With respect to the **Bajaj stock price analysis**, we have **BUY and SELL signal for 12 and 11 days** which is just **2.6 %** of the total time duration 899 days. Hence, the signal is HOLD (share-holder should keep stock and new buyer should refrain from buying) for Bajaj for most of the time. In general, HOLD signal is better than sell but worse than buy