**Introduction**

A stock, share, or equity market denotes to the exchange marketplace and the collection of buyers and sellers of equity stocks where the issuing and trading of equities or stocks are held. It has great impact on financial market economy and every investor wants to get some benefits from that. These might also include securities registered on a stock exchange so that investors choose one or more company to buy its stock and sell it and thus they earn money effortlessly.

Basically, the price of a stock is determined by its market share and the volume of its transactions [1]. The more a share is traded, the more valuable they are, and conversely, if a share is traded at a lower volume, it is less important to some traders and its value decreases by default [2]. Therefore, the important fact is if the direction of the market is successfully predicted then the investors will be better guided.

Moreover, predicting the future values of share market is essential task while making the correct decision whether to buy or sell the share [3]. But it is one of the most difficult tasks to predict stock market trends. Because there are various economic factors which affect the market trends like interest rate, economic outlook, inflation, change in economic policies etc[4]. These factors make the stock market a nonlinear and dynamic system.

In stock market the prediction techniques can plays a crucial role in bringing more investors at one place. For decades, stock market investors use their heuristic strategy to predict the stock trends to ensuring risk-free profits. But, the crucial risk in this trading is the dynamic nature of stock prices [5]. This nonlinear and dynamic nature of stock price sometimes refers investors to take wrong or immature prediction in buying/selling stocks which later lead them in enormous loss. With this aim in mind, many researchers trying to develop an intelligent decision system for stock price forecasting.

Thus, it can be assumed that stock price forecasts are based on data available to the public that have some predictive relationship with future stock returns [6]. After exploring various stock value from various stock exchange websites there are some common values like date-wise opening value, closing value, highest value, lowest value, average value etc. Furthermore, these huge amounts of data are generated by various website forced the researchers to apply data mining techniques to make investment decisions.

Although according to numerous reports stock prices are not randomly generated values. The behavior of stock prices can be treated as a discrete time series model which is based on a set of well-defined numerical data items [7]. Alongside because of nonlinearity nature of these data, it is quite complicated task to plotting these stock values in a time series and predicting real-time series values. Besides many data mining techniques play important role in stock market data to find hidden patterns and increasing the certain level of forecasting accuracy.

Since, it is mandatory to finding a solution for this challenging problem in order to analyze trends of stock prices with adequate information for decision making. Recent advances in statistical approach hold the promise of allowing time series algorithms to extract discriminative information from data. To predict an outcome based on time series data, Auto Regressive Integrated Moving Average (ARIMA) is used as the time series algorithm to analyze and predict future stock prices based on historical patterns. converts a non-stationary data to a stationary data before working on it [7]. Moreover, it recommends that ARIMA is a better algorithmic approach than forecasting directly, as it gives more authentic results.

Again, considering the repeating nature and seasonal effect [8], exponential smoothing [9] is a family of forecasting methods which has been applied for smoothing time series data. Moreover, triple exponential smoothing, also known as Holt Winter’s Exponential Smoothing [10] which calculates a trend line for the data as well as seasonal indices to forecast more accurately.

The structure of the paper is as follows. Section II highlights related literature on stock price prediction. Section III puts forward the model to forecast stock trends with minimum error in detail. Section IV report the data set and describes the experimental results thus obtained followed by the concluding remarks and future work Section V.

**Conclusion:**

A large number of studies have shown that analysts with a variety of backgrounds is a major theme of forecasting. On this basis, we conclude that our proposed meta model has a precise forecast and much application value.

The meta model, presented in this paper combines a set of time series algorithm in stock price prediction as well as identifies which algorithm performs better for a particular company’s stock data. Also, the noise value has also been tuned based on the train data pattern considering the seasonal and growth nature. This yields the stock forecasting more accurately and let the buyer/seller knows the pick time for selling/buying stock.

Though, the meta model consider the forecasting performance measurement works on comparing the actual and prediction value, hence, previous exponential or regression algorithm may work fine. But, the challenges of showing the trend like the upward or downwards nature or season of the stock price, our time series model (TELR) performs better than others.

The core decision point for an investor is to know the season of the highest and lowest peak of stock value for buying/selling stock. Hence, this stock price forecasting model will spread the advantage and leave the disadvantage away, finally get a good forecasting result. Therefore, it will help investors to help investors reduce risks and make wiser decisions as well as can perceive the trend of its change. In addition, these findings provide additional information about the asset fundamental values and can be regarded as one of the leading indicators of the stock market.

However, the parameters of the model (algorithm) could be dynamically changed while fitting data into it considering the error rate and seasonal effect of that algorithm. Also, a mathematical combination of different time series models’ prediction for a particular date could come with more accurate prophecy. In a word, more research on other indicators of stock market is needed get a better accuracy in the stock prediction and research.

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The first and mandatory step for proper forecasting is to

extract the features that are strongly related to the dataset,

which are nothing but the trend and seasonality of sales [4].