Forecasting Future Trend Through Technical Analysis- A Study Of Indian Stock Market – Pre-Covid19 Picktime

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Abstract: This paper compares many common technical trading indicators with combination of leading and lagging price trackers. Data used in the study from 1st November 2016 to 31st November 2017 for Reliance ltd. By study we found that Ultimate oscillator represents the buying pressure with the different momentum in range of ultimate oscillator. Chart of reliance Investor can easily decide the Entry and Exit point in the market. Preferable Exit or selling time for trader is 7-mar-2017, 6-april-2017 and 16-july-2017. Spread between PVO line and signal line indicates market volatility of the share price. MACD histogram indicates spread and its range between MACD and signal line. Histogram is positive (bullish time) when its >0 and when its <0 means histogram is negative (bearish time) for RELIANCE shares. By following simple rules of the technical analysis investor can forecasting future price momentum and decide the entry and exit point, their investment can be secure by doing it.

KEY WORDS

Stocks market, Technical analysis, Risk, Investment, Return, indicators, trading

INTRODUCTION

Technical analysis is a trading tool employed to evaluate securities and attempt to forecast their future movement by analyzing statistics gathered from trading activity, such as price movement and volume. Unlike fundamental analysts who attempt to evaluate a security's intrinsic value, technical analyst focus on charts of price movement and various analytical tools to evaluate a security's strength or weakness and forecast future price changes. Technical analysis helps in determining the future levels by examining the past price movements and trading volumes of stocks and indices. Naturally, all investors would like their investments to appreciate rapidly in price, but stocks, which may satisfy this wish, tend to be accompanied by a substantially greater amount of risk. Then how many investors are normally willing to accept. However, it is important to understand that investors can be very conscious when it comes to stock ownership. Companies from Pharmaceutical sector is selected on Stratified sampling technique is significant as it helps in understanding the intrinsic value of shares and to know whether the shares are undervalued or overvalued or correctly priced. It becomes essential to know the performance of the company so that the investment will be duly giving returns and ensure safety of the investment.

REVIEW OF LITERATURE:-

Chang, Metghalchi, and Chan (2006) made a study on Technical Trading Strategies and Cross-National Information Linkage: The Case of Taiwan Stock Exchange. They tested four prevalent moving average technical trading rules for Taiwan stock market through this study. They used daily Taiwan stock exchanges weighted price index from data stream from 1983 to 2002. After that, they investigated predictive power of trading strategies over buy-and- hold strategy. They made suggestion from the results of this study that, technical rules were predictive for Taiwan stock market applying the information reflected in the U.S. stock markets to project Taiwan stock market. This movement was comparable to using Taiwan stock market information in isolation because the two markets were strongly correlated.

C. Boobalan (2014) study on technical analysis in Indian stock companies and the study is for the period of January to march 2014 which is mostly focuses on the risk and return identification and interpret from the past price movement on the bases of the available data, in the study companies is selected from the various sectors of the Indian market. The main idea of the study is to give better suggestion to the investors to invest and identifies the important of the technical analysis for investors.

Wong, Manzurand Chew (2003) focused on the role of technical analysis in signaling the timing of stock market entry and exit. Test statistics are introduced to test the performance of the most established of the trend followers, the Moving Average, and the most frequently used counter- trend indicator, the Relative Strength Index. Using Singapore data, the results indicated that the indicators can be used to generate significantly positive return. It is found that member firms of Singapore Stock Exchange (SES) tend to enjoy substantial profits by applying technical indicators.

Blume, Easley, and Ohara (1994) investigated the information role of volume and its applicability for technical analysis. The authors developed a new equilibrium model in which aggregate supply is fixed and traders receive signals with differing quality. The paper showed how volume, information precision, and price movements relate, and demonstrate how sequences of volume and price can

be information. Technical analysis thus arises as a natural component agents learning process. As the analysis suggests, introducing volume unrelated to the underlying information structure would survey weakly the ability of uninformed traders to interpret market information accurately.

Mr. Suresh A.S (may 2013) main focused of the study is both of the analysis technical and fundamental. In the study for both he used different types of the tools and techniques as per the market requirement. For the technical analysis main four factors considered time, price, volume and width. Also worked as per the Dow Theory 1900s and it results. The results is shows as per the movement of the upward and the downward price trend and also different kind of charts and graphs author used for better result declaration. The main tool is relative strength and moving average price of the different stocks.

Sakshi varshney (April 2014) revealed the importance of the technical analysis by stating the rate of return in investments and the possibility of default and bankruptcy risk. He opined that in an uncertain world, investors can formulate a probability distribution of the possible rates of return. Author finds that Indian pharmaceutical sector would continue to experience strong growth in upcoming years. In 2013-14 Indian Pharmaceutical stocks have shown an uprising trend in the market largely driven by companies' strong performance, increase in cash flows, and business in the U.S. market and rupee depreciation over the last few quarters.

RESEARCH METHODOLOGY
Present research study of technical analysis is for forecasting future trend and momentum in the share prices. The main objective of research is to gives suitable investment suggestions to an investor related to buying & selling for selected company Reliance LTD. Reliance is selected for the research on the basis of high market capitalization for the selected time. Data collected for the period from 1st November 2016 to 31st November 2017 (daily closing price). Research conducted with different statistic tools like William's %R, Ultimate Oscillator, MACD, Stochastic Oscillator, Relative strength index, Percentage Volume Oscillator and Bollinger Band. Study mainly focuses on to understand the price movement of the share by combining both the leading and lagging indicators for better forecasting of share prices.

 ➢ **Indicators of technical analysis:-**
The different indicators that used for the research study on reliance last one year performance is given below.
 1. **WILLIAM'S %R:-**
William's %R Developed by Larry Williams and its reflects the level of the close relative to the highest high for the look-back period. Williams %R, sometimes referred to as the Williams Percent Range, is a momentum indicator that measures overbought and oversold levels, comparable to a stochastic oscillator. The Williams %R is used to establish entry and exit points in the market. It compares the close of a stock to the high-low range over a period of time, typically 14 days.

$$\%R = (Highest\ High - Close)/(Highest\ High - Lowest\ Low) * -100$$

 ✓ Lowest Low = lowest low for the look-back period
 ✓ Highest High = highest high for the look-back period

 2. **MACD (Moving Average Convergence/Divergence Oscillator):-**
Developed by Gerald Appel in the late seventies, the Moving Average Convergence/Divergence oscillator (MACD) is one of the simplest and most effective momentum indicators available. The MACD turns two trend-following indicators, moving averages, into a momentum oscillator by subtracting the longer moving average from the shorter moving average. As a result, the MACD offers the best of both worlds: trend following and momentum. The MACD fluctuates above and below the zero line as the moving averages converge, cross and diverge. Traders can look for signal line crossovers, centerline crossovers and divergences to generate signals. Because the MACD is unbounded, it is not particularly useful for identifying overbought and oversold levels.

 3. **ULTIMATE OSCILLATOR:-**
Developed by Larry Williams in 1976 and featured in Stocks & Commodities Magazine in 1985, the Ultimate Oscillator is a momentum oscillator designed to capture momentum across three different timeframes. The multiple timeframe objectives seek to avoid the pitfalls of other oscillators. Many momentum oscillators surge at the beginning of a strong advance and then form a bearish divergence as the advance continues. This is because they are stuck with one timeframe. The Ultimate Oscillator attempts to correct this fault by incorporating longer timeframes into the basic formula. Williams identified a buy signal a based on a bullish divergence and a sell signal based on a bearish divergence.

 4. **BOLLINGER BAND:-**
Developed by John Bollinger, Bollinger Bands are volatility bands placed above and below a moving average. Volatility is based on the standard deviation, which changes as volatility increases and decreases. The bands automatically widen when volatility increases and narrow when volatility decreases. This dynamic nature of Bollinger Bands also means they can be used on different securities

with the standard settings. For signals, Bollinger Bands can be used to identify M-Tops and W-Bottoms or to determine the strength of the trend.

5.   PERCENTAGE VOLUME OSCILLATOR:-

The Percentage Volume Oscillator (PVO) is a momentum oscillator for volume. The PVO measures the difference between two volume-based moving averages as a percentage of the larger moving average. As with MACD and the Percentage Price Oscillator (PPO), it is shown with a signal line, a histogram and a centerline. The PVO is positive when the shorter volume EMA is above the longer volume EMA and negative when the shorter volume EMA is below. This indicator can be used to define the ups and downs for volume, which can then be used to confirm or refute other signals. Typically, a breakout or support break is validated when the PVO is rising or positive.

6.   STOCHASTIC OSCILLATOR:-

Developed by George C. Lane in the late 1950s, the Stochastic Oscillator is a momentum indicator that shows the location of the close relative to the high-low range over a set number of periods. It follows the speed or the momentum of price. As a rule, the momentum changes direction before price." As such, bullish and bearish divergences in the Stochastic Oscillator can be used to foreshadow reversals. This was the first, and most important, signal that Lane identified. Lane also used this oscillator to identify bull and bear set-ups to anticipate a future reversal. Because the Stochastic Oscillator is range bound, is also useful for identifying overbought and oversold levels.

Calculation:-

$$\%K = (\text{Current Close - Lowest Low})/(\text{Highest High - Lowest Low}) * 100$$

$$\%D = 3\text{-day SMA of }\%K$$

7.   RELATIVE STRENGTH INDEX (RSI):-

Developed by J. Welles Wilder, the Relative Strength Index (RSI) is a momentum oscillator that measures the speed and change of price movements. RSI oscillates between zero and 100. Traditionally, and according to Wilder, RSI is considered overbought when above 70 and oversold when below 30. Signals can also be generated by looking for divergences, failure swings, and centerline crossovers. RSI can also be used to identify the general trend.

DATA ANALYSIS

Above mention all the statistical tools are applied to identify the price movement for reliance ltd for selected time duration.

➢ **Williams %R Chart:-**
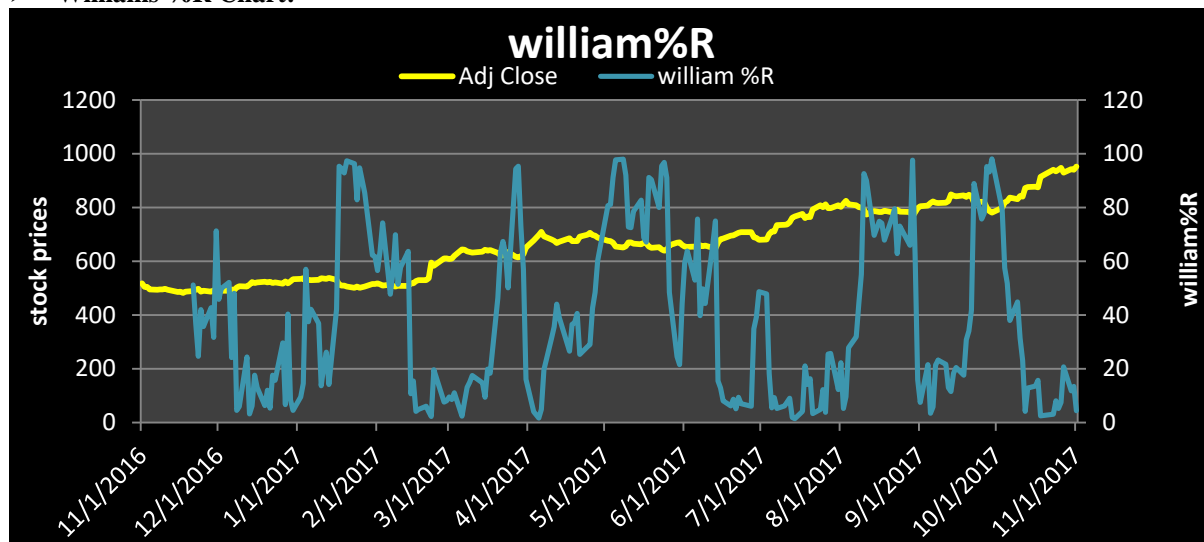
Interpretation:-

The level below the range of 20 indicates overbought level and indicates the bearish market for the price of the reliance. In between dec-2016 to jan-2017 and july-2017 to Aug-2017 times indicates the overbought level (4.68 to 14) for investors and in near future they will start their entry in market. The middle range of 20 to 80 indicates stable growth and less fluctuation in the price. The Feb-

2017 to Mar-2017 period is stable or we can say that less fluctuation time for the RELIANCE share prices. The present month dec-2017 indicates overbought level, which mean in near future bullish market will creates for the reliance stock and entry is preferable.

➢ **MACD Chart of reliance:-**
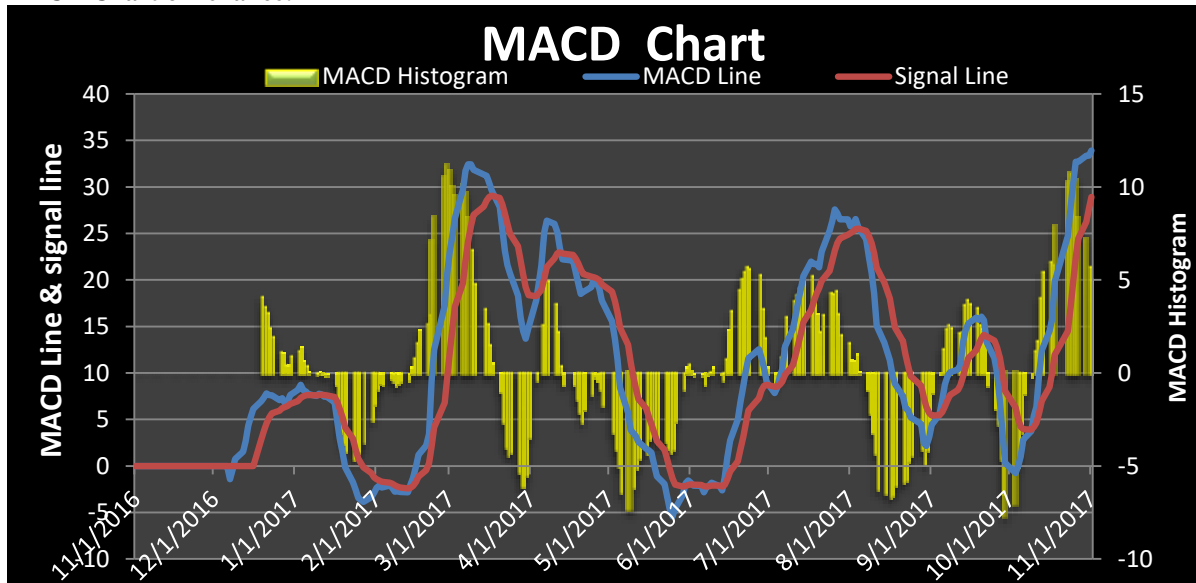
Interpretation:-

From the MACD chart we identify below things for RELIANCE share market trends. Convergence time indicates the closeness of the two different moving average and here in the chart most of the time both of the lines are close with each other, indicates less volatility for the stock MACD line cross up side to signal line indicates bullish market. 15-fab-2017 to 17-mar-2017 times indicates bullish time for RELIANCE trader. Also oct-2017 and nov-2017 is bullish for the investors. MACD line cross down side to signal line indicates bearish time for the investor. In last year 17-aep-2017 to 2-june-2017 times is very low or bearish for investor buying signal is preferable in the bearish market.

❖ **Ultimate oscillator chart:-**
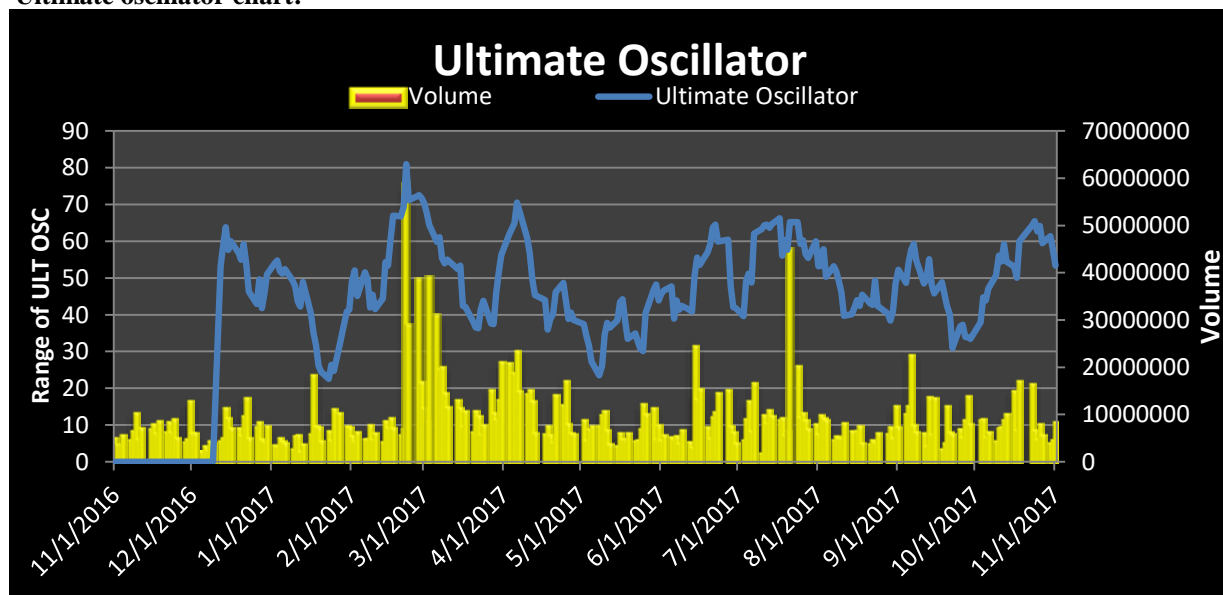
Interpretation:-

Above chart is about range of ultimate oscillator and the volume of RELIANCE. Ultimate oscillator represents the buying pressure with the different momentum in range of ultimate oscillator. From the above chart investor of reliance can track that when line of UO is maximum its mean the buying pressure is high in market and its reflect in term of volumes of the reliance. **Ex.** UO line reach the level of 80.89 at the same time volume buying level is 59820500. (23-fab-2017) The same thing when UO reach minimum level

in the chart the buying pressure is low and investor can stop purchasing or try to sell current available stock. **Ex.** UO is on the range of 26.35 its mean in the market buying stability is created in volume of 10683800.

➢ **Bollinger Band Chart:-**
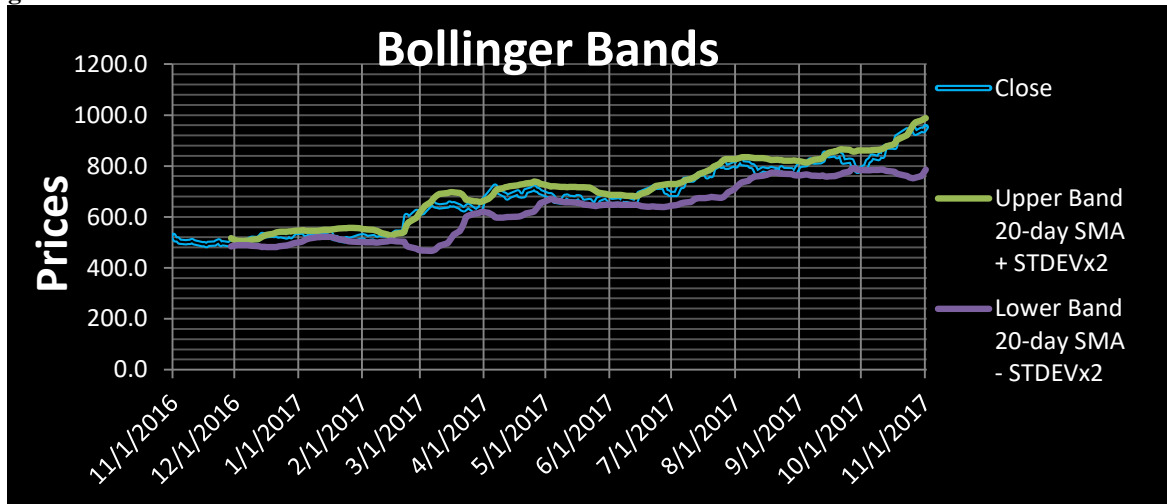
Interpretation:-

Above Bollinger band chart indicates the maximum market volatility for the RELIANCE share prices. When Bollinger band is widen it mean the volatility in market is high, indicates chances of high fluctuation in market. **Ex**. Date of 10-Mar-2017 to 15-Mar-2017 spread between bands is high. LBB is on 467.68 & UBB is on 697.1 levels. Same thing when Bollinger band is narrow means less fluctuation chances in market. **Ex.** 16-dec-2016 and 2nd-Jun-2017 indicates less volatility period. At the time of 22-Fab & 23-Oct 2017 the closing price cross the upper Bollinger band its mean at that time selling is preferable for the reliance stock. Date of May-5-2017 and sep-28-2017 when closing prices cross the lower Bollinger band down side way and its indicates the bearish market time for the investors and at that time buying pressure is too high for the RELIANCE stocks.
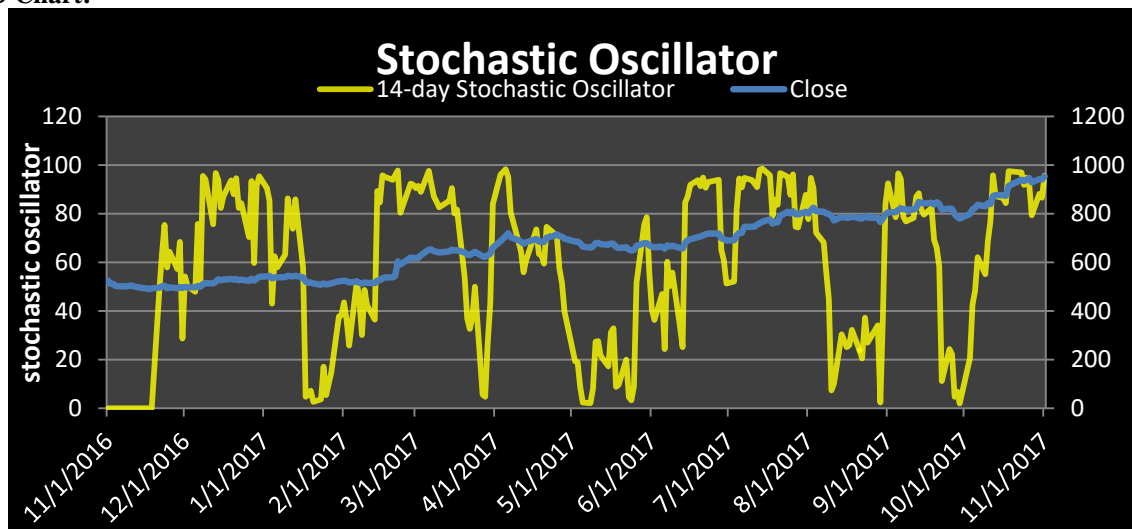
❖ **PVO chart:-**
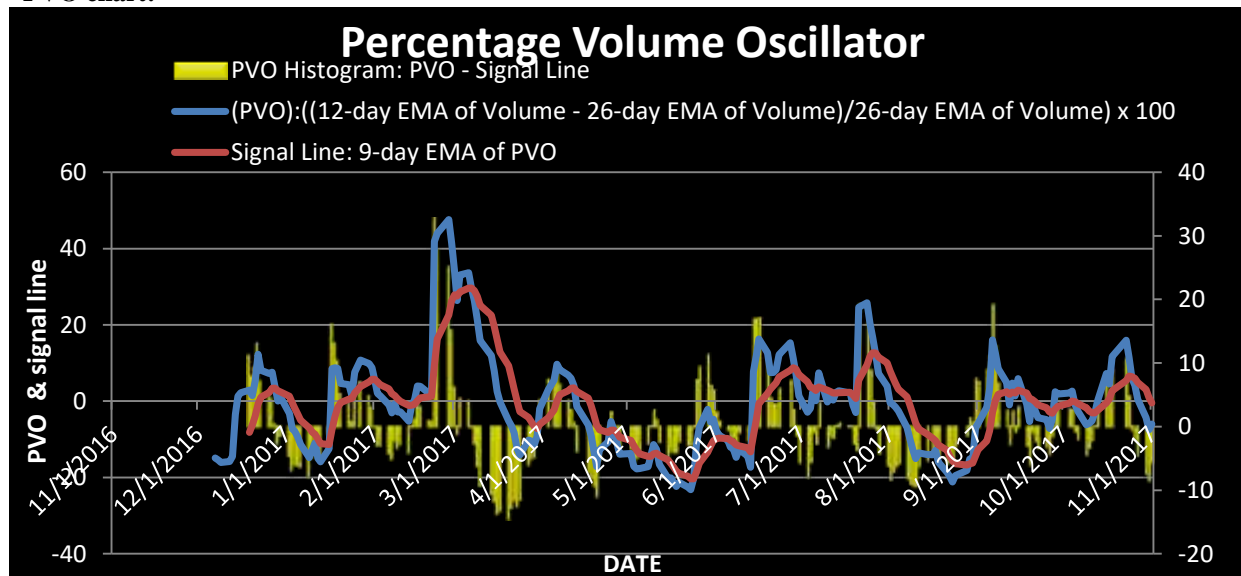
Interpretation:-

Above chart is about percentage volume oscillator of reliance shares volume of last one year momentum. When PVO line cross signal line indicate positive market trend means bullish market, providing selling pressure on investors. Ex. Mar-2017 indicates bullish trend for reliance stocks. Same thing for PVO line when it goes down give signal of bearish market time for the investor,

investor can easily track that momentum and secure their investment by buying the stocks. Ex. Time period of Aug-2017 to end of Sep-2017 was bearish market. PVO histogram is gives signal in terms of positive when >0 and negative when its <0, positive side for bullish market and negative is for bearish market time. PVO is provides future trend and momentum in market by analyzing the volume of the different time frame.

❖ **SO Chart:-**

Interpretation:-

Above chart indicate the RELIANCE last year momentum of stochastic oscillator and closing price of share. SO line when cross the level of 80 it indicates the overbought is happen and price move down in near future, so 17-Fab-2017, 27-jun-2017 and 6-sep-2017 was major level of overbought for the RELIANCE investors and SO range is respectively 95.18, 94.95 and 94.20.Time of overbought the price of reliance reach minimum level in the market and after prices goes upside in market. **Ex.** In first level closing price of reliance move 544.55 to 603.08 in markets. When the time of oversold level initial time price reach maximum level then after it move down side way. **Ex.** Aug-4-2017 the reliance price is 811.08 to 773.12 in near future.

❖ **RSI chart:-**
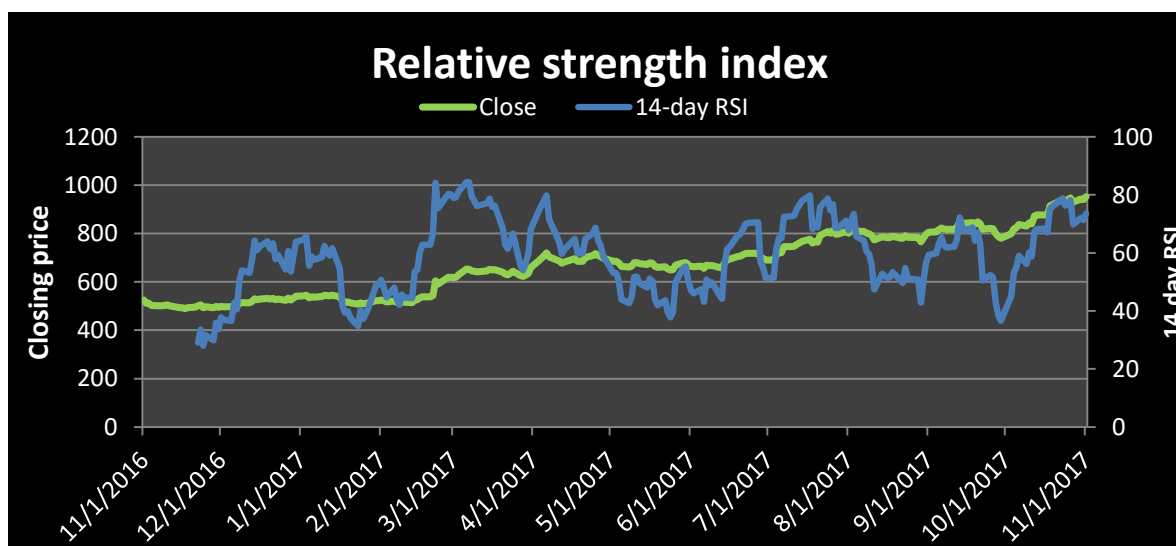
Interpretation:-

Above chart indicate 14 day RSI and closing price of reliance for the 1 year period. RSI is reflecting the price momentum with respect to average gain and loss for the period of time. When RSI line is above the range of 70 it mean the market having oversold

level for bearish divergence time. **Ex**. The date of feb-22-2017 having RSI level on 84.68 its too high and that time prices reach 591.71 high price level transform in oversold level means most of the trader try to sold their RELIANCE share. When market having RSI line below the range of 30 indicate overbought level and bullish divergence for the respected time. **Ex.** Only one time frame is blow level of 30 date is 24-nov-2016. At that time price level of reliance is 493.09. From the chart reliance Investor can easily decide the Entry and Exit point in the market. **Ex**. Bullish divergence is for Entry and Bearish divergence is for Exit time indicator for trader. Preferable Exit or selling time for trader is 7-mar-2017, 6-april-2017 and 16-july-2017. at the same time price level is on maximum level for the RELIANCE shares.

CONCLUSION:-

Technical analysis has its strengths, most importantly its timeliness. Technical analysis is concerned with what is actually happening in a market. This discipline also has its weaknesses, namely its reliance, for the most part, on normal probabilities and repetition in trading patterns. Technical analysis can help to find out the future trend in market by using different tools and its chart Patten. Ultimate oscillator represents the buying pressure with the different momentum in range of ultimate oscillator. Chart of reliance Investor can easily decide the Entry and Exit point in the market. Preferable Exit or selling time for trader is 7-mar-2017, 6-april-2017 and 16-july-2017. Spread between PVO line and signal line indicates market volatility of the share price. MACD histogram indicates spread and its range between MACD and signal line. Histogram is positive (bullish time) when its >0 and when its <0 means histogram is negative (bearish time) for RELIANCE shares. By following simple rules of the technical analysis investor can forecasting future price momentum and decide the entry and exit point, their investment can be secure by doing it.

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