

A STUDY ON EQUITY SHARE PRICE MOVEMENT OF SUN PHARMACEUTICALS INDUSTRIES LIMITED

Hemalatha K, Saravana Kumar S, Ram Kumar S

Assistant Professor, MBA, Sri Krishna College of Engineering and Technology, Tamilnadu, India
Student, MBA, Sri Krishna College of Engineering and Technology, Tamilnadu, India
Student, MBA, Sri Krishna College of Engineering and Technology, Tamilnadu, India

Abstract – Capital Market plays major role in the growth of economy and meeting country's socio economic goals. Stock market is the backbone of our country and it is essential to analyze the weakness of Indian stock market so as to assess the efficiency of Indian stock market and give suggestions to the investors to make their decisions on their investment. For the purpose of the study of stocks we chose National Stock Exchange. The study has used the monthly closing price of Sun pharmaceuticals industries limited for a period of 5 years from April 2010 to March 2015.

Key Words: Economy, National Stock Exchange, Capital Market

INTRODUCTION

There are various methods which are available to analyze securities and make a decision about the investment. It is broadly classified into 2 categories.

- ❖ Fundamental Analysis
- ❖ Technical Analysis

The method of analyzing the characteristics of the company in order to analyze the value of the company is called as fundamental analysis. But, technical analysis takes a completely different approach; it only takes account of the price movements of the company and the supply and demand for the particular period of time. There are various tools which are available to help technical analysis process which takes account of the demand and supply of the shares and also in what trend the shares may move in the near future and gives an idea to the investors for invest. In other words, technical analysis attempts to understand the emotions in the market by studying the market itself, as opposed to its components. If we understand the benefits and limitations of technical analysis, it will enable us to be a better trader or investor. In this tutorial, we explained about the basics

of the technical analysis and basic tools which any analysts primarily uses it to analyze.

Technical analysis uses the past prices and volume of the shares for evaluating the securities. Just as there are many investment styles on the fundamental side, there are also many different types of technical traders. Some analysts rely on chart patterns; others use technical indicators and oscillators, and most use some combination of the two. In any case, technical analyst's exclusive use of historical price and volume data is what separates them from their fundamental counterparts. In the fundamental analysis method we don't care about whether the stock is undervalued or overvalued, we take past trading data and where the society might move in the future.

The field of technical analysis is based on three assumptions:

- ❖ The market discounts everything.
- ❖ Price moves in trends.
- ❖ History tends to repeat itself.

OBJECTIVES OF THE STUDY

- ❖ To analyze the price movements of Sun pharmaceuticals industries limited and interpret the Corrections and trends by using Technical Analysis tools.
- ❖ To forecast the future trends and provide suitable suggestions to the investors.
- ❖ To identify the inherent technical strength and weakness of the Sun pharmaceuticals industries limited.

SCOPE OF THE STUDY

- ❖ The study covers for a period of 5 years from April 2010 to March 2015
- ❖ The study helps to find out the future trends in the prices of Sun pharmaceuticals industries limited equity share. Valuable hints can be identified by the investors for their future buying and selling.

RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. The various steps that are generally adopted by a researcher in studying research problem along with the logic behind them. It is necessary for the researcher to know not only the research methods/ techniques but also the methodology.

Analytical Research

Research Design was based on analytical research, on the other hand, the researcher has to use facts or information already available, and analyze these to make these to make a critical evaluation of the material.

Sources of Data

The main sources of data are collected through website, www.nseindia.com

Method of Data Collection

Secondary Data

We mainly used the secondary data for the purpose of the studying the price movements of the shares. The secondary data are those which have already been collected by someone else and which have already been passed through the statistical process. The secondary data which we used here are collected from the NSE website. The methods of collecting secondary data are published data or unpublished data. It takes short time and relatively low cost.

Statistical Tools Applied

The analysis of data is carried out for secondary data by the following method.

- ❖ Simple Moving Average.
- ❖ Exponential Moving Average.
- ❖ Relative Strength Index.

REVIEW OF LITERATURE

Frankal and froot (1990) showed that technical analysis has value in a model in which prices are not fully revealing and traders have rational conjectures about the relation between prices and signals.

Cesari and Cremonini (2003) make an extensive simulation comparison of popular dynamic strategies of asset allocation and find that technical analysis only performs well in Pacific markets.

Chitra (2011) observed that investors must also take into account various factors like Union Budget, company performance, political and social events, climatic conditions, etc., before taking a decision of investing in stocks. The scrip should also be fundamentally good. Therefore, it's advisable for a trader or investor to make technical analysis of stocks for better return of investments.

RajanSabari and Parimala (2013) examined in their research work that the technical analysis helps investors to analyse the financial strength of corporate, growth of earnings and profitability. Investors need to calculate the risk and return ratio before taking any trade.

Sowmya (2012) stated Technical analysis is a method of predicting future prices of a share based on its past performance. It is the method of evaluating securities by analysing statistics generated through market activity such as past prices and volume. Technical analysts use charts and other tools to identify patterns that can suggest future price movement of the share as they believe that the historical performance of stocks and markets are indications of future performance.

ANALYSIS AND INTERPRETATION

SIMPLE MOVING AVERAGE (SMA)

A simple moving average is formed by computing the average (mean) price of a specified number of periods. While it is possible to create moving averages from the open, the high, and the low data points, most moving averages are created using the closing price.

Formula to Calculate SMA

$SMA = (\text{Total closing prices} / \text{No. of Days})$

For example: a 10-day simple moving average is calculated by adding the closing prices for the last 10 days and dividing the total by 10.

$10+11+12+10+13+15+14+8+10+11=124$
 $(124/10) = 12.4$

TABLE 1

CALCULATION OF SIMPLE MOVING AVERAGE OF SUN PHARMACEUTICALS INDUSTRIES LIMITED FROM 1ST APRIL 2010 TO 1ST MARCH 2015 (5 YEARS)

Date	Close Price	10 SMA	Date	Close Price	10 SMA
01-Apr-10	1804.05	-	01-Oct-12	693.15	598.875
03-May-10	1573.4	-	01-Nov-12	701.45	619.5
01-Jun-10	1680.9	-	03-Dec-12	705.05	635.045
01-Jul-10	1752.65	-	01-Jan-13	739.5	653.96
02-Aug-10	1776.4	-	01-Feb-13	719.9	668.61
01-Sep-10	1750.55	-	01-Mar-13	799.35	688.88
01-Oct-10	2030.35	-	01-Apr-13	812.65	713.24
01-Nov-10	2190.7	-	02-May-13	967.05	746.475
01-Dec-10	448.65	-	03-Jun-13	1017.65	782.255
03-Jan-11	487.3	1549.495	01-Jul-13	1005	816.075
01-Feb-11	433.1	1412.4	01-Aug-13	568.25	803.585
01-Mar-11	446.2	1299.68	02-Sep-13	528.45	786.285
01-Apr-11	445.3	1176.12	01-Oct-13	590	774.78
02-May-11	465.3	1047.385	01-Nov-13	604.6	761.29

01-Jun-11	469.95	916.74	02-Dec-13	595.35	748.835
01-Jul-11	498	791.485	01-Jan-14	572.35	726.135
01-Aug-11	523.2	640.77	03-Feb-14	594.3	704.3
02-Sep-11	505.95	472.295	03-Mar-14	625.1	670.105
03-Oct-11	461.95	473.625	01-Apr-14	572.1	625.55
01-Nov-11	505.95	475.49	02-May-14	629.9	588.04
01-Dec-11	522.7	484.45	02-Jun-14	599.2	591.135
02-Jan-12	495.2	489.35	01-Jul-14	679.25	606.215
01-Feb-12	549.6	499.78	01-Aug-14	768.8	624.095
01-Mar-12	550.35	508.285	01-Sep-14	842.35	647.87
02-Apr-12	573.4	518.63	01-Oct-14	860.8	674.415
02-May-12	596.65	528.495	03-Nov-14	853.25	702.505
01-Jun-12	569.05	533.08	01-Dec-14	835.65	726.64
02-Jul-12	634.7	545.955	01-Jan-15	822.2	746.35
01-Aug-12	659.85	565.745	02-Feb-15	929.1	782.05
03-Sep-12	666.8	581.83	02-Mar-15	925.2	811.58

Interpretation

The above table shows the 10 days simple moving average of the Sun pharmaceuticals industries limited during the period of April 2010 to March 2015. A sell signal is generated when the closing price falls below its

moving average and a buy signal is generated when the closing price rise above its moving average. In the above table it shows that SMA starts at 1549.49 and ends with 811.58. The following periods are considered as the selling points Jan - Aug 2011, Oct 2011, Aug 2013 - Apr 2014 and buying points are Sep 2011, Nov 2011 - July 2013, May 2014 - Mar 2015.

EXPONENTIAL MOVING AVERAGE (EMA)

The shorter the EMA’s period, the more weight that will be applied to the most recent price. For example: a 10- period exponential moving average weighs the most recent price 18.18% while a 20-period EMA weighs the most recent price 9.52%. As we’ll see, the calculating and EMA is that the exponential moving average puts more weight on recent prices. As such, it will react quicker to recent price changes than a simple moving average.

Exponential Moving Average Calculation

Exponential Moving Averages can be specified in two ways – as a percent – based EMA or as a period – based EMA. A percent – based EMA has a percentage as its single parameter while a period – based EMA has a parameter that represents the duration of the EMA.

Formula for Exponential Moving Average

$$EMA \text{ (current)} = ((\text{Price (current)} - EMA \text{ (prev)}) * \text{Multiplier}) + EMA \text{ (prev)}$$

For a percentage – based EMA, “Multiplier” is equal to the EMA’S specified percentage. For a period – based EMA, “Multiplier” is equal to $2 / (1 + N)$

Where N is the specified number of period.

For example, a 10- period EMA’s Multiplier is calculated like this:

$$(2 / (\text{Time periods} + 1)) = (2 / (10+1)) = 0.1818$$

TABLE 2

CALCULATION OF EXPONENTIAL MOVING AVERAGE OF SUN PHARMACEUTICALS INDUSTRIES LIMITED FROM 1ST APRIL 2010 TO 1ST MARCH 2015 (5 YEARS)

Date	Close Price	10 EMA	Date	Close Price	10 EMA
01-Apr-10	1804.05	1804.05	01-Oct-12	693.15	671.543

03-May-10	1573.4	1762.533	01-Nov-12	701.45	694.644
01-Jun-10	1680.9	1592.75	03-Dec-12	705.05	702.098
01-Jul-10	1752.65	1693.815	01-Jan-13	739.5	711.251
02-Aug-10	1776.4	1756.925	01-Feb-13	719.9	735.972
01-Sep-10	1750.5	1771.747	01-Mar-13	799.35	734.201
01-Oct-10	2030.35	1800.914	01-Apr-13	812.65	801.744
01-Nov-10	2190.7	2059.213	02-May-13	967.05	840.442
01-Dec-10	448.65	1877.131	03-Jun-13	1017.65	976.158
03-Jan-11	487.3	455.607	01-Jul-13	1005	1015.373
01-Feb-11	433.1	477.544	01-Aug-13	568.25	926.385
01-Mar-11	446.2	435.458	02-Sep-13	528.45	561.086
01-Apr-11	445.3	446.038	01-Oct-13	590	539.529
02-May-11	465.3	448.9	01-Nov-13	604.6	592.628
01-Jun-11	469.95	466.137	02-Dec-13	595.35	602.935
01-Jul-11	498	474.999	01-Jan-14	572.35	591.21
01-Aug-11	523.2	502.536	03-Feb-14	594.3	576.301
02-Sep-11	505.95	520.095	03-Mar-14	625.1	599.844
03-Oct-11	461.95	498.03	01-Apr-14	572.1	615.56
01-Nov-11	505.95	469.87	02-May-14	629.9	582.504
01-Dec-11	522.7	508.965	02-Jun-14	599.2	624.374
02-Jan-12	495.2	517.75	01-Jul-14	679.25	613.609
01-Feb-12	549.6	504.992	01-Aug-14	768.8	695.369
01-Mar-12	550.35	549.735	01-Sep-14	842.35	782.039

02-Apr-12	573.4	554.499	01-Oct-14	860.8	845.671
02-May-12	596.65	577.585	03-Nov-14	853.25	859.441
01-Jun-12	569.05	591.682	01-Dec-14	835.65	850.082
02-Jul-12	634.7	580.867	01-Jan-15	822.2	833.229
01-Aug-12	659.85	639.227	02-Feb-15	929.1	841.442
03-Sep-12	666.8	661.101	02-Mar-15	925.2	928.398

Average gain = Total Gains / n
 Average loss = Total Loss / n

$$RS = \frac{\text{Average Gain}}{\text{Average Loss}}$$

$$\text{Average Gain} = 714.9/14 = 51.06429$$

$$\text{Average Loss} = 2053.65/14 = 146.6893$$

$$RS = 0.348112$$

$$RSI = 100 - (100 / 1 + RS) = 100 - (100 / 1 + 0.348112)$$

$$RSI = 25.82218$$

Interpretation

The above table shows the 10 days Exponential moving average of the Sun Pharmaceuticals Limited during the period of April 2010 to March 2015. A sell signal is generated when the closing price falls below its moving average and a buy signal is generated when the closing price rise above its moving average. In the above table it shows that EMA starts at 1804.05 and ends with 928.398. The following periods are considered as the selling points May 2010, Sep 2010, Dec 2010, Feb – Apr 2011, Sep – Oct 2011, Jan 2012, June 2012, Feb 2013, July – Sep 2013, Dec 2013, Jan 2014, April 2014, June 2014, Nov – Dec 2014, Jan 2015, Mar 2015 and Buying Points are June – Aug 2010, Oct – Nov 2010, Jan 2011, May – Aug 2011, Nov – Dec 2011, Feb – May 2012, July – Jan 2013, Mar – June 2013, Oct – Nov 2013, Feb – Mar 2014, May 2014, July – Oct 2014, Feb 2015.

RELATIVE STRENGTH INDEX

The Relative Strength Index Technical Indicator (RSI) is a price – following oscillator that ranges 0 and 100. When Wilder introduced the Relative Strength Index, he recommended using a 14-day RSI. Since then, the 9 – day and 25 – day Relative Strength Index indicators have also gained popularity.

A popular method of analyzing the RSI is to look for a divergence in which the security is making a new high, but the RSI is falling to surpass its previous high. This divergence is an indication of an impending reversal. When the Relative Strength Index then turns down and falls below its most recent trough, it was said to have completed a “failure swing”. The failure swing is considered a confirmation of the impending reversal.

Formula for Calculating RSI

$$RSI = 100 - (100 / 1 + RS)$$

TABLE 3

CALCULATION OF RSI OF SUN PHARMACEUTICALS INDUSTRIES LIMITED FROM 1ST APRIL 2010 TO 1ST MARCH 2015 (5 YEARS)

Date	Close Price	RSI	Date	Close Price	RSI
01-Apr-10	1804.05	-	01-Oct-12	693.15	71.10394
03-May-10	1573.4	-	01-Nov-12	701.45	74.82855
01-Jun-10	1680.9	-	03-Dec-12	705.05	84.40419
01-Jul-10	1752.65	-	01-Jan-13	739.5	83.97091
02-Aug-10	1776.4	-	01-Feb-13	719.9	78.44778
01-Sep-10	1750.55	-	01-Mar-13	799.35	88.15707
01-Oct-10	2030.35	-	01-Apr-13	812.65	86.79536
01-Nov-10	2190.7	-	02-May-13	967.05	90.76502
01-Dec-10	448.65	-	03-Jun-13	1017.65	91.23735
03-Jan-11	487.3	-	01-Jul-13	1005	88.66585
01-Feb-11	433.1	-	01-Aug-13	568.25	49.95732

01-Mar-11	446.2	-	02-Sep-13	528.45	44.17074
01-Apr-11	445.3	-	01-Oct-13	590	46.31496
02-May-11	465.3	25.82218	01-Nov-13	604.6	46.74482
01-Jun-11	469.95	25.94656	02-Dec-13	595.35	44.78845
01-Jul-11	498	29.0827	01-Jan-14	572.35	43.22665
01-Aug-11	523.2	26.73713	03-Feb-14	594.3	44.29917
02-Sep-11	505.95	24.38779	03-Mar-14	625.1	44.08908
03-Oct-11	461.95	23.21876	01-Apr-14	572.1	42.61812
01-Nov-11	505.95	24.82809	02-May-14	629.9	41.34974
01-Dec-11	522.7	15.87715	02-Jun-14	599.2	39.29378
02-Jan-12	495.2	9.170158	01-Jul-14	679.25	34.40108
01-Feb-12	549.6	62.98726	01-Aug-14	768.8	37.05861
01-Mar-12	550.35	58.98788	01-Sep-14	842.35	42.04529
02-Apr-12	573.4	71.94931	01-Oct-14	860.8	74.21571
02-May-12	596.65	72.81274	03-Nov-14	853.25	78.40154
01-Jun-12	569.05	67.35868	01-Dec-14	835.65	73.26892
02-Jul-12	634.7	71.06441	01-Jan-15	822.2	70.65692
01-Aug-12	659.85	72.46805	02-Feb-15	929.1	76.7278
03-Sep-12	666.8	71.02117	02-Mar-15	925.2	79.14911

Interpretation

The above table shows the 14 Month RSI value of Sun pharmaceuticals industries limited price during the period of April 2010 – March 2015. In this table the RSI values are shown the ranges from 0 to 100. The 70% and 30% used as a warning signal. In this period the high value of RSI is 91.23735 on June 2013 and low value is 9.170158 on Jan 2012. RSI values 70 and above indicate an

overbought market. This is considering as a selling point. RSI values 30 and below indicate an oversold market. This is considering as a buying point. The following dates are considered as a selling point Apr – May 2012, July 2012– July 2013 and Oct 2014 - March 2015. The following dates are considered as a buying/holding point May 2011- Mar 2012, June 2012 and Aug 2013 – Sep 2014.

SUGGESTIONS

- ❖ The investors should be trained to use the technical analysis tools. Since it will help them in their day to day investments to get more returns.
- ❖ The company should orient the investors to mainly watch the business, economic, social and Political factors that affect the supply and demand for securities.
- ❖ The investors can also use more number of charts which will depict a true picture on the movement of the securities.
- ❖ The investors should analyze market data in real time; plan your own market timing strategy to make money, regardless of upwards and downwards trending markets.
- ❖ Minute – by – Minute trading volume shows the reversal points of the market, and therefore when to buy and sell can be identified.
- ❖ “The trend is your Friend” is the motto of technical analysis. So the investor has to monitor the trend of stocks before investment.

CONCLUSION

Buying and selling of stock is not an easy task if you want to make money do it. Millions of investors have lost the money in past trying guessing stock price movements. In order to consistently make money in the stock market, investors have to be right over 70% of the time. So, this study on technical analysis in Sun pharmaceuticals industries limited will help the investors in analyzing the scripts based on the technical tools and oscillators to earn fruitful investment. Technical analysis is the art and science of chart patterns in order to better analyze and predict prices of a given security. It is also becoming popular with the younger generation.

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BIOGRAPHIES



I had completed my Bachelor's Degree in Commerce with Computer Application and Master in Business Administration with specialization in Finance & HR, Currently pursuing my Doctoral Degree in the area of Finance at Bharathiar University.



I had completed my Bachelor's Degree in Computer Science Engineering and currently pursuing my Master in Business Administration with specialization in Finance & Production at Sri Krishna College of Engineering & Technology.



I had completed my Bachelor's Degree in Mechanical Engineering and currently pursuing my Master in Business Administration with specialization in Finance & Production at Sri Krishna College of Engineering & Technology.