TECHNICAL ANALYSIS OF IT SECTOR USING PIVOT CALCULATOR

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ABSTRACT

This Paper titled "Technical Analysis of IT sector using pivot calculator of Nifty companies " was undertaken to analyse the IT sector of Nifty companies using the technical tools Pivot calculator. Dow theory is applied to analyse the companies. Based on which the price movement is predicted in Short term, Medium term and Long term .For short term past 1 month data is used. For the Medium term past 3 month data and for the Long term past 1 year data is used. From this it is found that Pivot tool is better than other tools such as Fibonacci analysis, Moving average ,Elliot wave etc in the analysis of the company. Since pivot tool use High, Low and Close values compare to other tools .The resistance and support values are found for each IT sector nifty companies and the strategies to buy the share is mentioned for short term , medium term and long term investors.

KEYWORDS: *Nifty, National Stock Exchange, IT sector, Bombay Stock Exchange, SENSEX,*

INTRODUCTION

The Indian stock market today is actually comprised of two key entities and over 20 other exchanges. These 2 primary entities are the Bombay Stock Exchange Limited and the NSE or the National Stock Exchange of India Limited. There is an interesting past history regarding where the two markets originated from. During the 1850's, the first stock exchange in India was established when the East India Company created and developed a "community" of brokers.

By 1860, there were already 60 broker members of the exchange. As of 1874 and the results of a rapidly expanding share trading industry, these brokers gathered regularly (at a well-known location which is now known as Dalal Street) in order to conduct their business. Stockbrokers began gathering in front of Mumbai's Town Hall, conducting their meeting underneath Banyan trees, and the Indian stock market was born.

Although there are actually over 20 different stock exchanges in India today, but the two most powerful ones are the two mentioned above. The Bombay Stock Exchange Limited oftentimes referred to as the BSE, was originally established in 1875. Interestingly enough, it is the oldest stock market on the entire Asian continent that has been operating since the very beginning. Today there are over 4,700 companies listed on the BSE as well as over 7,700 stock exchange scripts.

The National Stock Exchange of India Limited, or NSE as it is called, is an Indian stock market based in the city of Mumbai and was originally established only 18 years ago in 1992. In that short period of time, it has grown to nearly 1,600 company listings and has a current market capitalization of 47, 01,923 Rupees. It was predicted that the NSE would be the largest stock exchange in India where market capitalization was considered when 2009 ended.

Up until the 1980's there was no way to measure or scale the ups and downs in stock values. However, in 1986, the BSE implemented SENSEX, which was a stock index. Three years later, India

witnessed the launch of the BSE National Index. It was renamed the BSE-100 Index in October of 1996 because it was comprised of 100 different stocks listed with India's 5 major stock exchanges. These 5 major markets were Ahmedabad, Calcutta, Delhi, Madras, and Mumbai. Additionally, the dollar-linked version of the BSE-100 was launched in May of 2006.

REVIEW OF LITERATURE

Cervello Royoa. R, Guijarroa. F & Michniuk. K.(2015),in his study propose the risk adjustable trading rule based on technical analysis and new definition of flag pattern. The Efficient market hypothesis says that based on the historical price it is not possible to predict the market by developing a strategy.

Kavajecz and Odders-White (2004) show that support and resistance levels coincide with peaks in depth on the limit order book 1 and moving average forecasts reveal information about the relative position of depth on the book. They also show that these relationships stem from technical rules locating depth already in place on the limit order book. Practitioners' reliance on technical analysis is well documented.

Frankel and Froot (1990) noted that market professionals tend to include technical analysis in forecasting the market.

The guiding principle of technical analysis is to identify and go along with the trend. When there is a trend, whether started by random or fundamental factors, technical methods will tend to generate signals in the same direction. This reinforces the original trend, especially when many investors rely on the technical indicators. Thus, even if the original trend were a random occurrence, the subsequent prediction made by the technical indicator could be self-fulfilling. This self-fulfilling nature leads to the formation of speculative bubbles (see, for example, Froot et al., 1992).

Conrad and Kaul (1988) found that weekly returns were positively autocorrelated, particularly for portfolios of small stocks.

Lui and Mole (1998) report the results of a questionnaire survey conducted in February 1995 on the use by foreign exchange dealers in Hong Kong of fundamental and technical analyses. They found that over 85% of respondents relyon both methods and, again, technical analysis was more popular at shorter time horizons. This paper aims at carrying out Technical Analysis of the securities of the selected companies in Indian stock market.

Treynor and Ferguson (1985) has established the first theoretical model to apply technical analysis and model describes that investors choose strategies to hold a security for a particular time period either long or short in order to get benefit from it later after they receive private information at particular point of time. The model concludes that this private information is helpful only with the combination of some additional or further information.

Brown and Jennings (1992) in the article on outperformance of technical analysis says that portfolio strategies works so well when the market does not contain all relevant information and there are only few investors who are well aware of that information.

William Brock, Josef Lakonishok and Blake LeBaron(1992) In his article describes that technical analysis is helpful in predicting future price movements by observing past prices and their trends and it also discuss that movements in supply and demand can also be seen from charts and graphs. According to the article, Technical analysis has been considered to be the most original form of investment and the oldest technique in this regard is presented by Charles Dow which can range from very simple to the extremes.

OBJECTIVES OF THE STUDY
PRIMARY OBJECTIVE

✿ To perform the technical analysis of IT sector in Nifty and predict the price movement for 1 month, 3 month and One year.
✿ To study the trends in the stock prices using technical analysis and to use this information to determine the attractiveness of the script for the purpose of investment.

SECONDARY OBJECTIVE

◈ To find out the price movement using the Historical data.
◈ To find the price movement using the technical tool Pivot calculator.

SCOPE OF STUDY

✇ This study focuses only on the five IT Sector stocks of Nifty companies.
✇ The study uses the technical tool Pivot point calculator only.
✇ The study uses only the past one year historical data.
✇ The study will assist the investor while making investor decision on the five IT sector stocks of nifty50 companies to invest in for achieving higher returns.

LIMITATION OF THE STUDY

⌑ The study is confined only to the technical tool Pivot calculator not using the Fibonacci calculator, Moving average, Elliot wave and Gantt theory.
⌑ Economic factors like inflation, deflation and interest rates have not been considered under this study

RESEARCH METHODOLOGY

In this study, descriptive research design is done to analyze the future price movement of five Nifty companies. The future price is calculated based on the past Historical data of the daily closing, high and low prices for the past 1 month, 3 months and 1 year. Secondary data is collected from NSE website. Daily closing prices, High and low prices were collected from 25/07/2013 to 25/07/2014 for the following IT sector companies listed in Nifty50

1. HCL TECHNOLOGIES LTD
2. INFOSYS TECHNOLOGIES LTD
3. TATA CONSULTANCY SERVICES LTD
4. TECH MAHINDRA LTD
5. WIPRO LTD

SAMPLE SIZE

✧ Sample period consists of daily observations (Total no of days) of the closing price, High and low price of the individual scrip's.
✧ Random sampling of IT sector companies of the Nifty50 is considered for the technical analysis.

TECHNICAL TOOLS

- PIVOT CALCULATOR

PIVOT CALCULATOR

Floor traders use pivot points to find intraday support/resistance levels. Pivot points are found by a simple calculation which involves the open, high, low and close for the previous day of any particular stock or index. It is said that when a price hover below a pivot or pivot support/resistance and breaks up through it then it's a buy signal (or vice versa for a sell signal). Or if the prices are above the pivot it is considered bullish and if they are below then bearish.

The most common way to use pivot points are as reference points for entering trades if you're other favorite indicators are also giving the same directional signal. Market Makers can use the pivot points to create a market by shifting the price around between levels to entice buyers or sellers of a stock into a trade. This can best be seen on low volume trading days as the prices fluctuate between the calculated points.

CALCULATIONS

Many variations exist for calculating the pivot point and its related support and resistance levels.

THE TRADITIONAL METHOD

Pivot point = $(H + L + C)/3$
First support = $(2 * Pivot) - H$
First resistance = $(2 * Pivot) - L$
Second support = $Pivot - (H - L)$
Second resistance = $Pivot + (H - L)$
Third support = $Pivot - (H-L)*2$
Third resistance = $Pivot + (H-L)*2$

DATA ANALYSIS AND INTERPRETATION

HCL TECHNOLOGIES LTD

The values for the pivot point, resistance (R1, R2, R3), support (S1, S2, S3) are calculated using their respective formulae. The calculated values of these parameters are given in table 1

Table 1 Estimated technical values of HCL TECHNOLOGIES LTD

PIVOT CALC	1month	PIVOT CALC	3month	PIVOT CALC	1 year
R3	1823.6	R3	1966.7	R3	2542.6
R2	1706.0	R2	1777.5	R2	2066.3
R1	1644.1	R1	1679.9	R1	1824.3
PIVOT	1526.5	PIVOT	1490.7	PIVOT	1348
S1	1464.6	S1	1393.1	S1	1106
S2	1347.0	S2	1203.9	S2	629.7
S3	1285.1	S3	1106.3	S3	387.7

DOW THEORY	S3	S2	S1	PIVOT	R1	R2	R3
SHORT TERM	1285.1	1347.0	1464.6	1526.5	1644.1	1706.0	1823.6
MEDIUM	1966.7	1777.5	1679.9	1490.7	1393.1	1203.9	1106.3
LONG TERM	2542.6	2066.3	1824.3	1348	1106	629.7	387.7

PIVOT CALCULATOR

Short term investors buy above the pivot point 1526.5.
Medium term investors buy above the pivot point 1490.7
Long term investors buy above the pivot point 1348
Similarly the calculation of Pivot point is done for the other IT sector stocks of the Nifty companies and given in Table 2 .

Name of the company	Resistance/support	PIVOT CALC		
		Short-term	Medium-term	Long-term
HCL TECHNOLOGIES LTD	R3	1823.6	1966.7	2542.6
	R2	1706.0	1777.5	2066.3
	R1	1644.1	1679.9	1824.3
	PIVOT	1526.5	1490.7	1348
	S1	1464.6	1393.1	1106
	S2	1347.0	1203.9	629.7
	S3	1285.1	1106.3	387.7
INFOSYS TECHNOLOGIES LTD	R3	3729.8	4114.8	4811.3
	R2	3580.9	3773.4	4330.6
	R1	3466.5	3562.8	3841.4
	PIVOT	3317.6	3221.4	3360.7
	S1	3203.2	3010.8	2871.5
	S2	3054.3	2669.4	2390.8
	S3	2939.9	2458.8	1901.6
TATA CONSULTANCY SERVICES LTD	R3	3039.5	3352.9	3834.0
	R2	2826.9	2983.6	3224.1
	R1	2716.3	2794.6	2914.9
	PIVOT	2503.7	2425.3	2305.0
	S1	2393.1	2236.3	1995.8
	S2	2180.5	1867.0	1385.9
	S3	2069.9	1678.0	1076.7
TECH MAHINDRA	R3	2446.1	2731.9	3546.2
	R2	2319.3	242.2	2869.3
	R1	2248	2319.4	2523.0
	PIVOT	2121.2	2049.7	1846.1
	S1	2049.9	1906.9	1499.8
	S2	1923.1	1637.2	822.96
	S3	1851.8	1494.4	476.63
WIPRO LTD	R3	632.7	687.36	895.03

R2	606.35	633.68	753.01
R1	578.7	592.36	652.03
PIVOT	552.35	538.68	510.01
S1	524.7	497.36	409.03
S2	498.35	443.68	267.01
S3	470.7	402.36	166.03

SUMMARY OF FINDINGS

The Pivot point values are found for the following 5 Nifty companies and are mentioned in Table 3

TABLE 3 PIVOT POINT VALUES

	PIVOT POINT		
NIFTY COMPANIES	**SHORT**	**MEDIUM**	**LONG**
HCL TECHNOLOGIES LTD	1526.5	1490.7	1348
INFOSYS TECHNOLOGIES LTD	3317.6	3221.4	3360.7
TATA CONSULTANCY SERVICES LTD	2503.7	2425.3	2305.0
TECH MAHINDRA	2121.2	2049.7	1846.1
WIPRO LTD	552.35	538.68	510.01

CONCLUSION

From the pivot point values the strategy to buy the share is to buy above the Pivot point. Above the pivot point exhibit the bullish trend and below the pivot point exhibits the bearish trend.Pivot calculator has more accuracy, it uses 3 values High, Low and Close values compare to other tools.

DIRECTION FOR FUTURE RESEARCH

This study about is IT sector stocks of the Nifty companies and uses the technical tool Pivot calculator. Further the tools such as Fibonacci Analysis ,Moving average, Elliott wave and Candle stick can also used for further research. The remaining sector stocks of the Nifty companies can also used for further direction of research.

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