INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, ECONOMICS & MANAGEMENT

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CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	**RANA PLAZA: A FAILURE OF GOVERNANCE** *DR. REVATHI IYER & DR. C N NARAYANA*	1
2.	**CUSTOMERS' EXPECTATION AND MANAGEMENT'S PERCEPTION OF SERVICE QUALITY: A STUDY OF HOTEL INDUSTRY IN SELECTED CITIES OF TIGRAY REGION, ETHIOPIA** *GUESH BERHE GEBREMICHAEL & DR. AMARINDER SINGH*	7
3.	**STATUS OF TRIBAL WOMEN IN AGRICULTURE** *DR. HEMA SRIKUMAR & C. ATHENA*	16
4.	**WOMEN EMPOWERMENT THROUGH DISTRICT CO-OPERATIVE BANKS (DCBs) IN LUCKNOW AND AMBEDKAR NAGAR DISTRICTS IN UTTAR PRADESH** *K. ANBUMANI & DR. X.L.X.WILSON*	18
5.	**AN ASSESSMENT OF THE AWARENESS OF EMPLOYEE STATE INSURANCE CORPORATION AND ITS BENEFITS AMONG THE BENEFICIARIES IN COIMBATORE** *DR. N.A. KRISHNAMURTHI & D. SASIKALA*	38
6.	**AN EMPIRICAL STUDY OF PROFITABILITY ANALYSIS OF SELECTED COMPANIES IN INDIAN PAINT INDUSTRY** *S.KAMALADEVI & DR. A. VIJAYAKUMAR*	41
7.	**PERFORMANCE ANALYSIS OF DISTRICT CENTRAL CO-OPERATIVE BANKS (DCCBs) IN TAMIL NADU - A STUDY** *K.MARAGATHAM & DR. P.KANNAPIRAN*	45
8.	**PROFITABILITY AND LIQUIDITY RATIOS ANALYSIS: AN EMPIRICAL STUDY OF SELECTED CEMENT COMPANIES IN ANDHRA PRADESH** *B R MURTHY, V KIRANMAI & G. MALLAYYA*	49
9.	**MICRO, SMALL AND MEDIUM ENTERPRISE IN INDIA: PERFORMANCE, TRENDS AND CHALLENGES** *DR. N. LALITHA & DR. G. ARTI*	53
10.	**ROLE OF PRIMARY AGRICULTURAL CO-OPERATIVE SOCIETY (PACS) IN AGRICULTURAL DEVELOPMENT IN INDIA** *DR. YASHODA*	58
11.	**THE USE STUDY OF NEW COMMUNICATION TECHNOLOGY FOR ELECTRONIC COMMERCE CONSUMER** *NIU LUNG-GUANG*	61
12.	**FALLING LABOUR'S SHARE OF INCOME** *NEHA GUPTA*	70
13.	**TRENDS OF FDI IN INDIAN RETAIL SECTOR** *DR. S. G. VAIDYA*	74
14.	**A STUDY ON THE BANKING OMBUDSMAN SCHEME** *SHITAL GANESH KENE*	76
15.	**TESTING TECHNICAL INDICATORS: A STUDY WITH SPECIAL REFERENCE TO CNX IT** *S. NAGARAJAN*	80
16.	**GREEN HRM – A NEW PERSPECTIVE TO PROMOTE ENVIRONMENT MANAGEMENT SYSTEM INITIATIVES** *AMRITA P. TAIDE*	85
17.	**LENDING PRACTICES OF PRIVATE AND PUBLIC BANKS OF TAKHATPUR: A COMPARATIVE STUDY** *SWATI PANDEY & DR. ARCHANA AGRAWAL*	88
18.	**IDENTIFICATION OF SIGNIFICANT FINANCIAL RATIOS FOR DIAGNOSIS OF FINANCIAL DISTRESS IN INDIAN POWER INDUSTRIES BY PARALLEL ANALYSIS USING MONTE CARLO SIMULATION** *PARAG RAY & DR. G. SUNITHA*	96
19.	**IMPACT OF NABARD IN JAMMU AND KASHMIR ECONOMY THE STUDY OF CREDIT FACILITIES AND CREDIT ISSUES IN BARAMULLA DISTRICT** *RIZWAN QAYOOM*	100
20.	**REASONS AND FACTORS INFLUENCING SMSE: LEARNINGS OF SICKNESS IN UNREGISTERED INDIAN INDUSTRIES** *UMME KULSUM*	103
	REQUEST FOR FEEDBACK & DISCLAIMER	112

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TESTING TECHNICAL INDICATORS: A STUDY WITH SPECIAL REFERENCE TO CNX IT

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ABSTRACT

There are numerous technical tools available to predict future trend of index prices. All tools may not be effective for all the companies and at all times. The purpose of this study is to find out the performance of technical tools in predicting the index price movement. The research is based on secondary data collected from various websites. The data is collected for two different time periods representing the bullish and bearish seasons. The technical indicators taken for the study are Relative Strength Index (RSI), Money Flow Index (MFI) and On Balance Volume (OBV). From the study it is found that Relative Strength Index, Money Flow Index and On Bonus Volume are effective in predicting the index movement of CNX IT during the Bullish period and during the Bearish period, Stochastic Oscillator is deemed effective.

KEYWORDS

MFI, RSI, OBV, technical analysis, technical indicators.

1. INTRODUCTION

Technical analysis is a method of evaluating securities by analyzing statistics generated by market activity, past prices and volume. Technical analysts do not attempt to measure a security's intrinsic value; instead they look at stock charts for patterns and indicators that will determine a stock's future performance. Technical analysis has become increasingly popular over the past several years, as more and more people believe that the historical performance of a stock is a strong indication of future performance.

The use of past performance should come as no surprise. People using fundamental analysis have always looked at the past performance of companies by comparing fiscal data from previous quarters and years to determine future growth. The difference lies in the technical analyst's belief that securities move according to very predictable trends and patterns. These trends continue until something happens to change the trend, and until this change occurs, price levels are predictable.

There are many instances of investors successfully trading a security using only their knowledge of the security's chart, without even understanding what the company does. However, although technical analysis is a terrific tool, most agree it is much more effective when used in combination with fundamental analysis.

The methods used to analyze and predict the performance of a company's stock fall into two broad categories: fundamental and technical analysis.

Those who use technical analysis look for peaks, bottoms, trends, patterns and other factors affecting a stock's price movement and then make buy/sell decisions based on those factors. It is a technique many people attempt, but few are truly successful at it. The world of technical analysis is huge today. There are literally hundreds of different patterns and indicators that investors claim to have success with. We have tried to keep this tutorial as short as possible. Our goal is to introduce you to the different types of stock charts and the various technical analysis tools available to investors.

1.1 HISTORY OF THE STOCK EXCHANGE

The working of Stock Exchanges in India started in 1875. BSE is the oldest stock market in India. The history of Indian stock trading starts with 318 persons taking membership in Native Share and Stock Brokers Association, which we now know by the name Bombay Stock Exchange or BSE in short. In 1965, BSE got permanent recognition from the Government of India.

1.2 INDEX PARAMETERS

The 30 stock Sensitive Index or SENSEX was first compiled in 1986. The SENSEX is compiled based on the performance of the stocks of 30 financially sound benchmark companies. The NIFTY is compiled based on the performance of the stock of 50 financially sound benchmark companies.

2. STATEMENT OF THE PROBLEM

Several investors have gained as well as lost in the stock market. One way to determine the stock price is fundamental analysis, which in turn is composed of economy, industry and company. The other way is technical analysis, which says that the past trends will repeat in the future.

The question that arises here is how market index moving whether towards efficient or inefficient. So that losses and gains can be estimated with the movement of the market index.

3. OBJECTIVES OF THE STUDY

1. To gain knowledge of the equity market and the instruments being traded in Indian stock market.
2. To analysis the index price movement of CNX IT.
3. To find out at which a suitable level to entry is and exit the trade in CNX IT index.

4. SOURCES OF DATA

The data employed in the study consists of Monthly indices CNX IT, Nifty Future Index for the period January 2012 to December 2016. The prices used are Monthly Open, High and Close prices. These data will be collected from National Stock Exchange website.

5. DATA PERIOD

The period of data is from January 2012 To December 2016 - (For the past 05 Years).

6. LIMITATIONS OF THE STUDY

The results may not give accurate picture as there could be many other factors Influence the Market Index.

7. TOOLS USED FOR ANALYSIS

The following tools were used to analyze the data

a) Relative Strength Index (RSI)
b) Money Flow Index (MFI)
c) On Balance Volume (OBV)

a) RELATIVE STRENGTH INDEX (RSI)

The RSI (Relative Strength Index) is one of the most popular momentum oscillators in Technical Analysis use today. It was introduced in a 1978 book by J. Welles Wilder. RSI helps to signal overbought and oversold conditions in a security. The indicator is plotted in a range between zero and 100. A reading above 70 is used to suggest that a security is overbought, while a reading below 30 is used to suggest that it is oversold. This indicator helps traders to identify whether a security's price has been unreasonably pushed to current levels and whether a reversal may be on the way.

The standard calculation for RSI uses 14 trading days as the basis, which can be adjusted to meet the needs of the user. If the trading period is adjusted to use fewer days, the RSI will be more volatile and will be used for shorter term trades.

FORMULA

$$RSI = 100 - \frac{100}{1 + RS}$$

$$\text{Average Gain} = \text{Total Gains} / n$$

$$\text{Average Loss} = \text{Total Loss} / n$$

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

(n=number of periods taken)

When the average gain is greater than the average loss, the RSI rises because RS will be greater than 1. Conversely, when the average loss is greater than average gain, the RSI declaims because RS will be less than 1. Note: if the average loss ever becomes zero, RSI become 100 by definition.

OVER BOUGHT / OVER SOLD ZONES

Wilder recommended using 70 and 30 and overbought and over sold levels respectively. If the RSI rises above 30 it is considered bullish for the underlying stock. If the RSI falls below 70 it is a bearish signal. Basically, the RSI is a measure of the strength of a recent trend:

- RSI is considered strongly bullish if the 14-day RSI exceeds 70 this means the security has trended up strongly over the past 14 days.
- Some would consider the security to be overbought at these levels, and a potential selling point might thus be reached when the RSI exceeds 70;
- If the 14-day RSI is between 50 and 70, the security has moved up over the past 14 days; however, the uptrend has not been very pronounced;
- If the 14-day RSI is between 30 and 50, the security has moved down over the past 14 days; however, the downtrend has not been very strong;
- If the 14-day RSI is below 30, the security has trended strongly lower over the past 14 days and the RSI is considered strongly bearish. Some would consider the security to be oversold at these levels, and an RSI reading below 30 might thus mark a potential buying point.

b) MONEY FLOW INDEX (MFI)

Money flow index was discovered by Created by Gene Quong and Avrum Soudack. Money flow is positive when the typical price rises. This is due to buying pressure. A ratio of positive and negative money flow is then plugged into an RSI formula to create an oscillator that moves between zero and one hundred. As a momentum oscillator tied to volume the money flow index (MFI) is best suited to identify reversals and price extremes with a variety of signals.

FORMULA

Money Flow Index = 100 - (100/ (1 + Money Ratio))

c) ON BALANCE VOLUME (OBV)

On Balance Volume (OBV) measures buying and selling pressure as a cumulative indicator that adds volume on up days and subtracts volume on down days. OBV was developed by Joe Granville and introduced in his 1963 book, Granville's New Key to Stock Market Profits. It was one of the first indicators to measure positive and negative volume flow. Chartists can look for divergences between OBV and price to predict price movements or use OBV to confirm price trends.

FORMULA

If the closing price is above the prior close price then:

Current OBV = Previous OBV + Current Volume

If the closing price is below the prior close price then:

Current OBV = Previous OBV - Current Volume

If the closing prices equals the prior close price then:

Current OBV = Previous OBV (no change)

8. ANALYSIS AND INTERPRETATION

TABLE 1

Date	Open	High	Low	Close	MFI	RSI	OBV
1/3/2012	5597.5	5626.95	5517.95	5535	14 Days MFI	14 Days RSI	12055
2/1/2012	5301.75	5347.75	5066.65	5129.6			33835
3/1/2012	5195.3	5218.45	5155.7	5180.7			24665
4/2/2012	5276.05	5429.55	5275.15	5418.4			37675
5/1/2012	5193.85	5257	5193.85	5218.35			54534
6/1/2012	5169.5	5203.1	5165.85	5192.3			40906
7/2/2012	5083.85	5094.25	5015.45	5086.7			32063
8/1/2012	4775.55	4820.1	4768.2	4813.2			23747
9/4/2012	4790.65	4882.85	4769.45	4804.2			37254
10/1/2012	4828.35	4833.25	4759.45	4793.65			58105
11/1/2012	4303.3	4452.4	4303.3	4431.15			46013
12/3/2012	4833.1	4860.95	4778.95	4812.6			37263
1/2/2013	3850.45	3914.9	3776.75	3838.15			57679
2/1/2013	4055.25	4060.4	3932.65	3984.5			50163
3/1/2013	3808.65	3855.3	3650.8	3704.95	47.76814	**97.84366**	63073
4/1/2013	4330.35	4414.45	4284.5	4357.65	48.49776	**95.52681**	86057
5/1/2013	4592.4	4704.35	4543.15	4688.35	54.32169	**94.72053**	68735
6/3/2013	4016.75	4067.15	3977.75	3999.4	47.26411	**96.44708**	56640
7/1/2013	3819.25	3819.25	3732.45	3752.85	48.20649	**96.50064**	76224
8/1/2013	3827	3931.6	3827	3926.8	46.8955	**96.08052**	64590
9/3/2013	2974.5	3192.25	2902.1	3107.05	52.68257	**96.82001**	86260
10/1/2013	2585.7	2802.25	2585.7	2686.95	52.25253	**96.93858**	64613
11/1/2013	2322.2	2466.9	2322.2	2449.95	47.59206	**97.10638**	45507
12/2/2013	2215.6	2222.65	2170	2187	54.31414	**97.27191**	108890
1/2/2014	2187.35	2233.8	2167.8	2225.75	49.99398	**96.96144**	84857
2/3/2014	2104.8	2105.6	2042.25	2094.1	49.47044	**97.69322**	67125
3/3/2014	2296	2335.6	2280.25	2318.7	47.02449	**96.50041**	88878
4/1/2014	2650.2	2781.6	2650.2	2770.85	58.10048	**95.84585**	128481
5/1/2014	3138.6	3217.55	3121.5	3206.2	57.32987	**94.45218**	91459
6/2/2014	3515.05	3552.05	3480.5	3497.65	48.73239	**95.27946**	66224
7/1/2014	4334.7	4374.55	4284.25	4330.05	**63.645**	**94.1344**	121581
8/1/2014	4644.05	4649.95	4602.75	4618.35	59.40369	**91.54974**	85655
9/2/2014	5043.9	5141.55	5043.9	5122.1	58.66704	**88.99256**	50338
10/1/2014	5112.25	5192.3	4978.15	5048.8	**63.97176**	**89.87646**	93710
11/3/2014	5315.8	5397.5	5309.6	5364.2	51.68352	**82.32216**	76696
12/1/2014	5797.15	5843.2	5797.15	5818.4	53.90732	72.00756	96786
1/2/2015	5554.85	5619.45	5423.45	5594.15	56.41774	71.63816	122825
2/2/2015	5787.3	5832	5724.8	5766.7	48.49711	59.98183	102392
3/2/2015	5947.6	5967.55	5842.3	5855.95	53.31748	59.68098	86208
4/1/2015	5947.85	6021.75	5914.7	5985.8	55.03691	49.85907	102913
5/1/2015	5852.35	5852.35	5704.2	5761.95	54.48987	64.80325	121220
6/1/2015	5877.8	5949.6	5837	5928.3	47.31266	66.49026	108234
7/1/2015	6139.25	6144.25	6045.6	6086.85	45.69129	68.21004	97216
8/3/2015	5936.5	5987.8	5908.7	5974.9	47.62237	74.02964	86851
9/1/2015	6583.75	6645.55	6532.15	6613.4	39.53223	75.2478	107673
10/1/2015	6666.45	6666.45	6554.4	6613.25	39.41648	77.13918	98630
11/2/2015	6645	6745.65	6602.95	6703.6	48.00793	**80.01624**	122187
12/1/2015	7484.8	7511.05	7436.15	7491.1	39.93218	72.3152	108568
1/4/2016	6990.75	6995.1	6884.9	6971.25	50.53283	**84.91054**	122392
2/1/2016	6688.55	6918.7	6628.05	6666.3	49.56581	**89.67345**	139159
3/1/2016	7021.45	7192.35	7021.45	7148.1	49.99468	**85.68589**	159432
4/1/2016	6722.8	6752.1	6680.65	6718.35	47.01354	**89.75318**	146204
5/2/2016	6533.45	6604.4	6525.1	6538.5	48.71936	**90.9945**	133507
6/1/2016	6579.05	6640.5	6558.95	6624.7	59.04396	**91.14056**	164744
7/1/2016	6293.65	6356.5	6264.75	6335.1	53.73563	**91.43062**	140491
8/1/2016	5407.65	5474.85	5325.45	5451.25	51.76985	**94.43756**	122017
9/1/2016	5709	5771.3	5658.75	5678.9	51.99527	**94.276**	105643
10/3/2016	6271.2	6333.85	6261.25	6278.7	51.94205	**92.61411**	91761
11/1/2016	5814.9	5924.15	5803.45	5893.25	51.13757	**94.85465**	117658
12/1/2016	6126.55	6171.55	6115.85	6139	50.13163	**94.32969**	107221

CHART 1: SHOWING RSI OF CNX IT

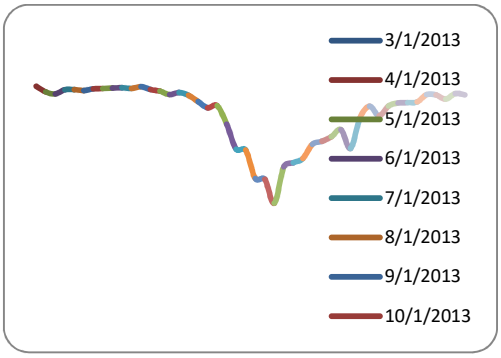


CHART 2: SHOWING MFI OF CNX IT

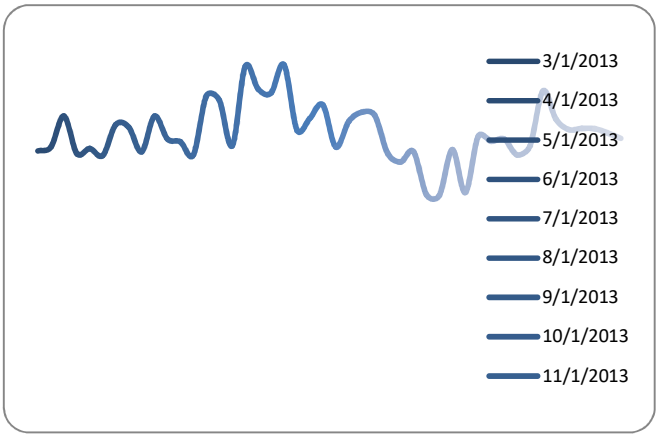
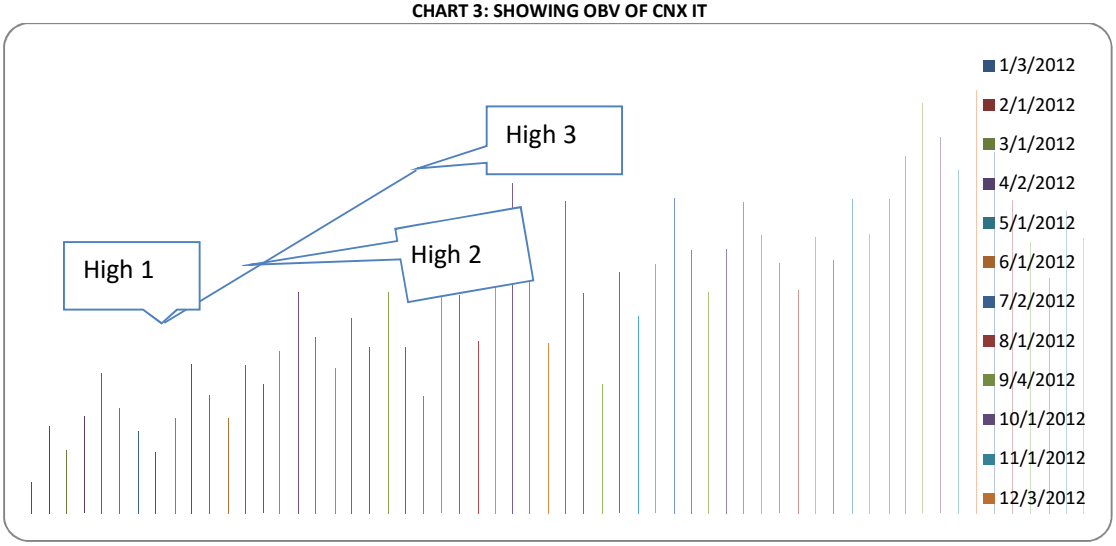


CHART 3: SHOWING OBV OF CNX IT



INTERPRETATION

- RSI is considered strongly bullish in this study because it exceeds 70 mark levels in maximum cases. This means the security has trended up strongly over the past 14 days. RSI is between 50 and 70 indicates that the security has not been hold uptrend.
- MFI is considered that the security moves with normal ups and downs in 14 days MFI because the researcher could not able to find overbought zones and oversold zones too.
- A rising OBV reflects positive volume pressure that can lead to higher prices. That can be explain through high 1, high 2 (higher high), high 3 (higher high) and More buying pressure will increase the volume that will automatically leads to increase the OBV. This is also applicable for lower lows.

9. FINDINGS

- RSI shown maximum bullish in this research due to buying pressure.
- RSI is below 30, the security has trended strongly lower over the past 14 days and the RSI is considered strongly bearish. But in this research the researcher could not able to find oversold zones.
- MFI is clearly shown that there is normal buying pressures because the research could not able to find overbought zones.
- The higher highs depicted bullish signals. OBI is also holding more highs and higher highs.
- This bearish difference warned stock traders that the recent price increases were lacking strong commitment by buyers.

10. CONCLUSION

This study concentrated on tools such as RSI, MFI, and OBV used to find the bullish and bearish signals. This study is to focus the forecasting of future price movements based on an examination of past price movements. Based on the finding from this study, researcher would say that CNX IT indices having more bullish signals compare with bearish signals. The Investors having an option to do trading in CNX IT and It would provide opportunities to test bullish growth. But Technical Analysis does not give absolute predictions about the future. Instead it can be used as an anticipatory tool.

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