

FUNDAMENTAL AND TECHNICAL ANALYSIS OF EQUITIES – A STUDY

Author

MUSKA PAUL JEEVAN KUMAR,

MBA II year

Loyola academy, Alwal,
Secunderabad - 500010.

ABSTRACT

Equity investors in India are in the nascent stages, who are investing by following Fundamental and Technical analysis. Bollinger bands has been applied on a set of select 15 companies in the 1st phase and 2nd phase of technical's, MACD had indicated Gillette India co. for the investment based on Technical. In fundamental analysis performance measure tool Sortino and ROI picked 4 companies, on these 4 companies Beta had given Bluebird as high risk and Essar oil as the lower risk. This analysis is useful to the retail, HNI, QIB and MF's.

Key words: Bollinger Bands, Large cap, MACD, Mid cap, ROI, Sortino and Small cap.

INTRODUCTION

Investments in stocks have not been favored by many of the Indian investors, as the figures suggest that the share of equity investment in total assets owned by retail investors or individuals has come down to 4% in 2013 from 10% in 1995, suggesting that there is a steady decline in equity savings by Indian investors over the last two decades. Hence it is becoming extremely essential for investors to think positively and start investing as the rule reads 'high risk and high return'.

This study hence provides an insight into how an investor can make use of simple techniques under both Fundamental and Technical analysis to read and understand which stock is favorable and which is to be shunned. Fundamental analysis examines the economic environment, industry efficiency and company performance before making an investment decisions. Selection of investment starts from fundamental analysis. Fundamental analysis is a method that tries to predict the intrinsic value of a stock. It is based on the theory that the spot price of the asset tends to move towards its intrinsic value or real value. This can be done by using various tools such as Sortino, ROI, Beta etc.

Technical analysis on the other hand is the examination of past price movements to forecast the future price movements. Technical analysis helps in identifying trends or patterns and trade based on them as the trend unfolds, and thereby help investor to decide when to enter and when to exit the stock. Technical analysis is not absolute but believes that trend patterns tend to repeat overtime and this is sought to be an opportunity for the investors to take appropriate position and take advantage situation. Various tools such as Bollinger bands, MACD etc. can be used to identify these trends or patterns. By reading patterns developed out of these tools an investor can make a simple buy or sell decision.

REVIEW OF LITERATURE

Charles V. Biello & Micheal A. Gayed(2014): They had examined on the utility sector, which has unique characteristics relative to the other sectors of broader market. They had suggested that rolling performance in the sector is not only exploitable and also provides,

- Market volatility
- Seasonality
- & Extreme market movements

By considering above mentioned strategies, on the historical price behavior, they created a simple buy and rotate strategy. This study is limited to one sector and technical analysis, whereas my study is focused on the both technical and fundamental analysis across the sectors stocks were considered, hence this study is not having relevance to my study.

Kitloon, Jimmy Honga, Eeliza Wu(2014): They have done an empirical study on the price based technical indicator variables with respect to accounting variables to explain cross-sectional stock returns, by application of OLS and state-space model has been applied and they have found that accounting variables have long term effect on small-cap stocks. this analysis is limited to applied to Russell 3000 index for the period of 1999-2012. Whereas my study is focused on investment decisions across various capital segments, by applying Technical and Fundamental analysis taking NSE index as a base and the period being the year 2014. Hence this study has no relevance to my study.

Hemang Desai, Srinivasan Krishnamurthy, Kumar Venkatraman(2007): This study emphasized on the role of fundamental analysis in information arbitrage is carried out on the view point of short sellers. They have documented that magnitude of accruals, sales growth, gross margin, and SG&A expenses and value indicators such as book-to-market ratio and return momentum, to be correlated with the behavior of short sellers. They have focused on predicting short interest and future returns with an out-of-sample period, by distinguishing between valuation and arbitrage motivated short selling using fundamental analysis. Whereas this study used both Fundamental and Technical analysis to give insights into providing options to retail investors to make investment decisions keeping in mind their risk taking appetite.

Scott Richardson, Irem Tuna, Peter Wysocki(2009): This paper stressed on the advances made in research of accounting anomalies fundamental analysis by using investor forecasting activity. Their survey highlights recent research advances and findings on the fundamental analysis and accounting anomalies research, taking investment professionals and academics as source. On the other hand my study is in accordance to investment decisions by considering fundamental and technical analysis in cross-sectional equity segment.

Hendrik Bessembinder and kalok Chan(1997): This study was carried out on the basis of a previous study carried out earlier in 1992, that technical analysis in various forms affect forecast power of U.S. equity index returns. This study examines the effect of forecast ability attributable to return measurements arising from non-synchronous trading pattern. They have eliminated this limitation of non-synchronous trading by being selective while selecting stocks and found out forecast power could be consistent with market efficiency. My study is based on application of

Fundamental and Technical analysis on selective cross-sectional Indian stocks, to provide simple buy and sell signals for investors across the scale of risk.

Venkates CK, Dr. Madhu Tyagi, Dr. Ganesh L(2012): This paper analyzed various selected stocks across Information Technology, Banking, and Pharmacy sectors over a period of ten years from 2001-2010, to establish relationship between their accounting information and their returns. They have carried out their research to find out short term changes in firm's operating efficiency, profitability and financial policy, using F SCORE. This paper aims to show that investor make portfolio construction based on simple historical financial performance. On the other hand, my project focuses on the simple idea of making investment decisions, by applying Fundamental and Technical analysis on a select set of stocks across sectors to identify best investment options for an investor.

Stephen Sault (2009): This paper studies the relationship between Fundamental and Technical analysis to understand whether these two are substitutes or compliments to one another, and whether they can be integrated to provide superior results, with relation to valuation of shares. My project provides an insight to how an investor can use simple tools under both Fundamental and Technical analysis to zero in on one stock under each analysis. Hence this study has no relevance to my study.

Keerthi Gunuraj Kulkarni(2013): This paper evaluates various stocks across various sectors using analytical tools, to understand the efficiency of Fundamental and Technical analysis. They have intended on developing a "stock selection criteria" based on which stocks have been analyzed. Whereas my study focuses on the application of Fundamental and Technical analysis to assist investors to take simple buy or sell positions.

Christopher J Neely Paul A. Weller: This article emphasizes the use of Technical analysis to derive the importance of market efficiency in foreign exchange market. They have studied the effects of technical rules over dollar exchange rates over a period of 15 years between 1970s and 80s. They have observed pattern of excess returns to Technical trading rules as being consistent with an adaptive markets view of the world. My study uses both Fundamental and Technical analysis to give insight into the investment decision making for short and long term.

Branka Marasovic, Tea Poklepovic, Zdravka Aljinovic: This paper deals with the use of Markowitz optimization model alongside use of Fundamental and Technical analysis with various filters to see whether these models are complementary to one another or otherwise in the process of portfolio optimization. This was applied to a sample of stocks from the Croatian stock market. Whereas my study is based on the application of Fundamental and Technical analysis with different filters over selected cross-sectional stocks from the Indian stock market, to help make investment decisions.

OBJECTIVES

1. To find the buying signal by using technical analysis of bollinger and macd on select companies.
2. To know the high and lower risk by using fundamental analysis of performance measure tool and roi on select companies.

NEED: Contrary to the trend in developed nations, India has seen a decreasing trend in investment in equities over the last decade, suggesting that there is increasing misconceptions about equities becoming less attractive. But this has not been the real picture as the stock markets in India have performed really well over the past decade. This is due to lack of investor education, which has been addressed by the SEBI. This study aims at providing insight into investing in equities by simple use of Fundamental and Technical Analysis, which are easily understandable by a wide class of investors in India.

SCOPE: This analysis has been emphasized for the period of one year i.e., 2014 on select companies based on market capitalization. Technical analysis Bollinger and MACD has been applied on 6 months historical data. Fundamental analysis has been considered for one year to measure the return on investments. In this study two tools were considered for both the Technical and Fundamental analysis to recommend companies based on risk perspective, to the investor fraternity.

RESEARCH METHODOLOGY: This analysis has been done based on secondary data by using descriptive statistical tools.

Technical Analysis

1. Bollinger bands: Bollinger bands are bands of volatility placed on either side of the moving average band (i.e. middle band). Volatility suggests standard deviation; it changes with change in volatility.

Middle band = 20 day Simple Moving Average (SMA).

Upper band = 20-day SMA + (20-day standard deviation of price x 2)

Lower band = 20-day SMA – (20-day standard deviation of price x 2)

2. MACD

MACD line = (12 day EMA – 26 day EMA)

Signal Line = 9 day EMA of MACD line

MACD Histogram = MACD line – Signal line

Fundamental Analysis

- 1) Sortino ratio: Sortino ratio is used to measure the portfolio risk associated with a portfolio. A higher ratio is always favorable as it suggests better performance of the portfolio with respect to the risk it carries with it.

$$\text{Sortino ratio} = (\mathbf{R_p} - \mathbf{R_f}) / \sigma_d$$

2) $\text{ROI} = \frac{\text{Current value} - \text{Base value}}{\text{Base value}}$

- 3) BETA

$$\beta = \frac{\text{Cov}(r_a, r_b)}{\text{Var}(r_b)}$$

LIMITATIONS

1. For Fundamental analysis calendar year data has been considered.
2. 20 days simple moving average has been considered for Bollinger and 26 days of simple moving average has been considered for MACD in Technical analysis.

DATA ANALYSIS

TECHNICAL ANALYSIS

CAP SEGMENT	COMPANY	FILTER 1	OUTCOME	FILTER 2	RESULT
	COMPANY	BOLLINGER BANDS			
	INFOSYS	BOLLINGER BANDS			
	ITC	BOLLINGER BANDS			
LARGE CAP	RELIANCE	BOLLINGER BANDS			
	ONGC	BOLLINGER BANDS			
	ITC	BOLLINGER BANDS	ITC	MACD	
	BLUEDART	BOLLINGER BANDS			
	GILLETTE	BOLLINGER BANDS	GILLETTE	MACD	GILLETTE
MID CAP	KANSAINER	BOLLINGER BANDS			
	SUNDARAM FIN	BOLLINGER BANDS			
	UNITED SPIRITS	BOLLINGER BANDS			
	CENTRAL BANK	BOLLINGER BANDS			
	ESSAR OIL	BOLLINGER BANDS			
SMALL CAP	PRETIGE ESTATE	BOLLINGER BANDS			
	SJVN	BOLLINGER BANDS	SJVN	MACD	
	WOCK PHARMA	BOLLINGER BANDS			

Interpretation: The above table of Technical analysis indicates that, 15 stocks were considered based on Market capitalization based on Market Capitalization, such as large, mid, and small cap.

Filter-I: To select the company from each segment Bollinger bands had been used as the 1st filter and observed that ITC from large cap, Gillette from mid cap, and SJVN from small cap were near to lower band which are giving buy signal.

Filter-II: MACD has been applied on 3 companies which were selected based on Bollinger bands. The MACD charts indicate that, signal line of buying is giving to G

illette India co. when it is compared with other 2 companies. Hence, with this Technical analysis Gillette will be recommended for investors who follow technical analysis.

FUNDAMENTAL ANALYSIS

COMPANY	SORTINO	ROI	BETA
LARGE CAP			
INFOSYS	0.04%	-0.43121	
ITC	0.02%	0.14361	
ONGC	0.02%	0.184832	
RELIANCE	0.02%	0.002644	
TCS	0.03%	0.18806	
MID CAP			
BLUEDART	0.05%	0.90352	1.05059
GILLETTE	0.03%	0.60221	
KANSAINER	0.02%	0.737795	
SUNDARAMFIN	0.02%	1.08766	0.30791
UNITED SPIRITS	0.03%	0.06733	
SMALL CAP			
CENTRAL BANK	0.02%	0.762271	
ESSAR OIL	0.02%	0.96596	0.03413
PRESTIGE ESTATES	0.02%	0.484501	
SJVN	0.02%	0.163507	
WOCK PHARMA	0.02%	1.18387	0.187266

Interpretation: Fundamental analysis has been applied to suggest 2 companies based on high and low risk. This analysis has been bifurcated in two phases, the 1st phase of Sortino ratio has been applied on the 15 companies which were selected based on the market capital.

Phase-I: The 1st phase the performance measure tool Sortino and ROI were considered with the help of the analysis, Bluedart, Sundaram Finance, Essar oil and Wockhart Pharma have been selected.

Phase-II: Risk (Beta) has been applied on the 4 companies, which were selected based on the 1st phase and found that Bluedart is having higher risk, Essar oil is having lower risk among the 4 companies. Hence, this analysis indicates that, high risk investors can consider Bluedart and low risk investors can consider Essar oil.

FINDINGS:

1. Technical analysis, Bollinger bands had given signal to 3 companies from Large, Mid and Small cap. 1st phase of Technical analysis picked ITC, Gillette, and SJVN.
2. MACD has been applied on the above 3 companies that were picked by Bollinger bands had indicated buying signal in Gillette.
3. Fundamental analysis of Sortino ratio and ROI suggested Bluedart, Sundaram Finance, Essar Oil and Wockhart Pharma.
4. The Beta has been indicated that higher risk and Essar oil having the lower risk, among the 4 companies, selected from the first phase of Fundamental analysis.

CONCLUSION: I conclude the analysis of Fundamental and Technical study on select companies. This study has been emphasized for the period of one year i.e., 2004, on the select companies which were based on capitalization of the market. In Technical analysis Bollinger bands and MACD has been considered which were based on standard deviations and moving averages. In Fundamental analysis, performance measure tool Sortino and ROI were considered to pick companies which were analyzed in 2nd phase by Beta. Hence, there is a scope for the further study to pick a company in Equity segment by using both the analysis of Technical and Fundamental to recommend 1 company for the investment in shorter and longer term with risk.

BIBLIOGRAPHY:

- http://stockcharts.com/school/doku.php?id=chart_school:technical_indicators:moving_average_convergence_divergence_macd
<http://www.nseindia.com/>
http://www.financeformulas.net/Return_on_Investment.html
http://www.researchgate.net/post/Technical_analysis_versus_fundamental_analysis
<http://stockfetcher.com/stock-screens?gclid=COH5ho7u3sMCFQwnjgodAIUAkA>
http://stockcharts.com/school/doku.php?id=chart_school:technical_indicators:bollinger_bands
http://en.tradimo.com/tradipedia/sortino-ratio_40335/

Conflict of Interest Reported: Nil; Source of Funding: None Reported.