

indicators generate whipsaws, but oscillators may be accustomed to generate overbought and oversold signals to perceive momentum as well as divergences between price and the indicator in a volatile market. However, oscillators fail to spawn good results in strong trending markets. In such scenario MACD can generate good results both in trending as well as volatile market by functioning as trend following indicators as well as oscillators.

According to **Achelis Steven B (2005)** Time Series Forecasting indicator has advantages over classic moving averages. In contrast to a moving average, a Time Series Forecast does not exhibit as much delay when adjusting to price changes as moving average does.

Murphy John J (1999) acknowledged the significance of volume indicators in determination of market trend. He explained how to interpret the liquidity indicators like open interest to understand the derivative segment, accumulation distribution line to know the market strength and OBV indicator to know how smart money moves in the market and volume moving average to understand the money flow in accumulation or distribution of a particular share.

Penn David (2009) noticed that the most accurate momentum information comes from the price itself, traditional momentum indicators are often better used in non-traditional ways and many technical indicators that are not considered to be momentum indicators can actually form the basis of a momentum technician's method of entering and exiting markets.

Murphy John J (1999) cited some useful strategies for trades according to him the best price level to buy a stock is the nearest support level also the best price level to sell a stock is in the vicinity of resistance levels. He also stated that use of moving averages, MACD, ADX, trend lines, volume and oscillators like RSI and Stochastic are useful for generating and confirming trading signals.

However **Thorp Wayne (2000)** clarifies that there is no such thing as a universally profit making indicator rather; different conditions dictate the use of different technical indicators.

Wong Wing-Keung, Manzur Meher and Chew Boon-Kiat (2003) acknowledged the role of technical analysis in signaling the timing of entry and exit trades. Using moving average and RSI indicators on Singapore data, the results indicate that the indicators can be used to generate a significantly positive return. Their study revealed that member

firms of Singapore Stock Exchange (SES) tend to enjoy substantial profits by applying technical indicators.

Beyoglu Belin and Ivanov Martin (2008) have analyzed 559 CAN SLIM stocks for the year 2007 with the help of back testing procedure of TradeStation trading platform and applying the rate of return on investment ratio. According to them the Moving Average Crossover strategy gives more opportunities to earn high profits.

According to **Sincere Mike (2004)** study of price and volume indicators can help to understand the strength and weakness of the market. Stock charts along with the volume indicators can be used to identify market tops and bottoms.

Furthermore, **Todd Timothy and MetghalchiMassoud (2010)** made comparative analysis of three common technical trading indicators (simple moving average, RSI and Parabolic SAR) with the buy-and-hold strategy for the American S&P 500 index with its 17 years' data is undertaken. According to them in some, but not all the market situations, technical indicators can be used as predictive tools of upcoming market direction. They acknowledged RSI as a robust indicator among all.

Hsu Po-Hsuan and Kuan Chung-Ming (2005) put forward that simple trading rules and investor's strategies are profitable for the samples of relatively young markets (NASDAQ Composite and Russell 2000) but not for those of more mature markets (DJIA and S&P 500) in comparison of buy-and-hold strategy. For arriving at this conclusion they examined the profitability of technical analysis using four main indices (DJIA, S&P 500, NASDAQ, Russell) from both relatively mature and young markets for judging profitability of filter rules (FR), moving averages (MA), support-and-resistance (SR), channel breakouts(CB), and on-balance volume averages (OBV) with the help of return on investment ratio.

Barber Brad M. and Odean Terrance (2000) conducted survey of more than sixty six thousand retail investors to evaluate their trading results with the help of statistical tools and ratios like return on investment, geometric mean return, etc. According to them individual investors who hold common stocks directly pay a tremendous performance penalty for active trading which is caused owing to their overconfidence which eventually results into poor performance of individual investors. Finally, they concluded that trading (whether based on technical indicators, or else) is hazardous to wealth.

Whereas **Courter Mack (2010)** suggested that investors can reduce risk in his portfolio with the help of moving averages. Using the S&P 500 as a proxy investment, he found that 200-day moving average strategy works best during trending markets, but fails in sideways markets. His study also confirmed that the 50-day/200-day crossover system is superior to the 50-day or 200-day moving averages by themselves.

Lento Camillo (2008) recommended the view of using a combination of different technical indicators. According to him, the combination of different technical indicators can generate more profitable results than the results generated by any individual technical indicator. For supporting his view, he examined the success rate of technical indicators (ADX, Bollinger Band, Moving Average, Parabolic SAR, Stochastic Oscillator, RSI, Ultimate Oscillator, MACD, CCI, ROI) on the S&P 500 from January 1950 to March 2008. The annualized returns from trading rules are compared with buy-and-hold strategy. Profitability is determined by comparing the returns generated by the trading signal and the buy-and-hold return, calculated by using return on investment ratio. The results of the study supported that a better performance can be achieved by the combined use of indicators, in the form of giving more powerful, and profitable trading signal.

Boghdadi and OmranSherin (2013) proposed use of optimization for solving problem of determining appropriate parameters of technical indicators for profitable decision making. In their study, they tested the results of Double Exponential Moving Average Crossovers, RSI, MACD and MARS (Moving Average RSI) indicators on 30 years of historical data of DJIA to study the utility value of optimization.

Eric Dejan, Andjelic Goran and RedzepagicSrdjan (2009) studied application of various parameters of MACD (Moving Average Convergence Divergence) and the RVI (Relative Volatility Index) indicators for profitable entry and exit positions. They covered the sample representing stocks which are continually traded on the financial market of the Republic of Serbia. The main goal of the research is to identify the most profitable parameters of the MACD and RVI indicators with the help of optimization. The main hypothesis of the research is that the use of optimization for discovering profitable parameters of MACD and RVI indicators. Research results indicate significant possibilities in the application of MACD and RVI indicators of technical analysis as functions of making optimum decisions on investment. Their

study confirmed the main hypothesis that the use of optimization for discovering profitable parameters of MACD and RVI indicators. The results also imply that the MACD and RVI indicators are effective upon formulating and optimizing investment strategy on financial market in transitional countries. They concluded that investment strategy that comprises the optimization of technical analysis indicators is more profitable than the one that is based on simple buy & hold approach. Specifically, it is important to determine optimal parameters of the MACD and RVI indicators for each stock separately for better results.

According to **Zamansky and Stolz M (1999)** explained the importance of money management while back testing and optimizing the results for designing the trading plan. They pointed out that most of the traders focus on optimizing the trading system rules without considering money management which is not a prudent practice of designing the profitable trading plan.

Boobalan C (2014) studied application of technical indicators for profitable investment decisions His study deals with charts of five companies listed in NSE (i.e. WIPRO, SBIN, GAIL, ONGC, ITC) for the period between February 2011 and March 2014 for testing the profitability of Exponential moving average, MACD and RSI. According to him, technical analysis can predict the ideal investment decision of the stock market. But more accurate predictions of stock prices of companies are possible by the study of fundamentals of companies along with technical analysis.

2.4 SUMMARY

This chapter includes reviews on the studies conducted in the area of EMH, Fundamental analysis, Behavior finance and Technical analysis, which deal with stock price behavior. It also includes reviews of studies in the area of technical charts and indicators. By conducting these reviews, it is found that there has been no dearth for both theoretical and empirical literature on the stock price behavior theories. Furthermore a good number of diverse literatures exist on the subject relating to study of transactions triggered by technical indicators with the help of back-testing procedure and profitability ratios. But no sufficient studies have been conducted with the help of charting software and back-testing on historical stock price data pertaining to inter comparison of returns generated by each technical indicator with itself over a period of time

and with returns of buy and hold strategy in Indian context (especially in CNX NIFTY stocks) This gap that is lacking part of the research works in the earlier studies has given an opportunity to extend the similar work (which was done in reference to foreign stock exchanges) for Indian stock exchange. Henceforth this topic is selected to fill the research gap which is uncovered while reviewing available literature.

REFERENCES

1. Fama Eugene F (1998). Market efficiency, long-term returns, and behavioral finance *Journal of Financial Economics*. vol 49. pp 283 -306
2. Bhatt Babaraju K and Chauhan Apurva A (2014). Behavioral Finance: A New Paradigm of Finance. *International Journal of Application or Innovation in Engineering & Management*. vol 3, Issue 2, February 2014, pp 359-362
3. Malkiel Burton G (2003). The Efficient Market Hypothesis and Its Critics. *Journal of Economic Perspective*. vol 17, no 1, Winter 2003. pp 59 – 82,
4. Stefan Iulia (2009). Testing The Efficient Markets Hypothesis: A Behavioral Approach To The Current Economic Crisis. USA: *University of California*. Thesis Retrieved November 23, 2014 from econ.berkeley.edu: [https:// www.econ. berkeley.edu/sites/default/files/iulia_stefan_thesis.pdf](https://www.econ.berkeley.edu/sites/default/files/iulia_stefan_thesis.pdf)
5. The New York Times (2013, October, 21). Folbre Nancy. The Inefficient Market Hypothesis. Retrieved April 14, 2014 from The New York Times: <http://economix.blogs.nytimes.com/2013/10/21/the-inefficient-market-hypothesis/>
6. Abarbanell Jeffery S and Bushee Brian J (1998). Abnormal Returns to a Fundamental Analysis Strategy. *The Accounting Review* vol. 73, no. 1 January 1998. pp. 19-45 Retrieved January 14, 2015 from faculty.haas.berkeley.edu: [http:// faculty. haas.berkeley.edu /kli/papers/Abarbanell%26Bushee-1998TAR.pdf](http://faculty.haas.berkeley.edu/kli/papers/Abarbanell%26Bushee-1998TAR.pdf)
7. The Economic Times (2007, April, 9). How to survive stock market blues? Retrieved 2014, April 17 from The Economic Times: [http:// articles. economictimes. indiatimes.com/2007-04-09/news/28419104_1_stock-market-investment-plan-wild-swings](http://articles.economictimes.indiatimes.com/2007-04-09/news/28419104_1_stock-market-investment-plan-wild-swings)

8. KhanifarHossein, Jamshidi Nasser and Mohammadinejad Mohammadbagher (2012). Studying affecting factors on analysts' decisions regarding, share analysis in Tehran Stock Exchange: A Fundamental Analysis Approach. *European Journal of Economics, Finance and Administrative Sciences*, issue 44 (2012). Retrieved December 11,2014 from slideshare.net: [http:// www.slideshare.net /seadinxhaferi / article-b-6-27492818](http://www.slideshare.net/seadinxhaferi/article-b-6-27492818)
9. The Economics Times (2013, June, 5). Doshi Jaimit. Advice for first-time investors in the stock market. Retrieved January 17, 2015 from The Economics Times: http://articles.economictimes.indiatimes.com/2013-06-05/news/39764726_1_stock-market-auto-stock-first-trade
10. BaresaSuzana, Bogdan Sinisa and Ivanovic Zoran (2012). Strategy of stock valuation by fundamental analysis. *UTMS Journal of Economics*. Special issue 4 (1): pp 45– 51 Retrieved utmsjoe.mk: March 29, 2013 from [http:// utmsjoe.mk/files /Vol.%204%20 No.%201/1-5-B-Baresa-Bogdan-Ivanovic.pdf](http://utmsjoe.mk/files/Vol.%204%20No.%201/1-5-B-Baresa-Bogdan-Ivanovic.pdf)
11. The Economics Times (2011, May, 22). SriramKavita. How to maximize your stock returns. Retrieved December 1, 2014, from The Economics Times: [http:// articles.economictimes.indiatimes.com/2011-05-22/news/29571320_1_stock-market-stock-price-movements-growth](http://articles.economictimes.indiatimes.com/2011-05-22/news/29571320_1_stock-market-stock-price-movements-growth)
12. Lutey Matt, Crum Michael and Rayome David (2013). Outperforming the broad market: An application of Can slim Strategy. *American Society of Business and Behavioral Sciences eJournal*. vol. 9, no. 1; summer 2013., pp 90-97 Retrieved June 14,2014 from asbbs.org : http://asbbs.org/files/2013/eJournal_2013.pdf
13. Banerjee Prithviraj, Deb Soumya G and Banerjee Pradip (2013). *Abnormal Returns to a Fundamental Analysis Strategy: Evidence from India*. Paper presented in The India Finance Conference 2013. Indian Institute of Management, Ahmedabad. Retrieved December 18,2014 from ssrn.com : <http://ssrn.com/abstract=2379311>
14. The Economics Times (2015, February, 6). Agrawal Raamdeo. Identify good stocks at early stage to make huge profits. Retrieved March 1, 2015, from The Economics Times : http://articles.economictimes.indiatimes.com/2015-02-06/news/58878775_1_reamdeo-agrawal-md-co-founder-lakh-crore