

**A PROJECT REPORT**  
(18MBAPR407)  
On the Topic  
**TECHNICAL ANALYSIS OF SELECTED SECURITIES FROM NSE INDIA**

By  
**DEEPTI RAVI NAYAK**  
USN: 1CY18MBA12  
MBA 4<sup>th</sup> Semester

Submitted to VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
in partial fulfillment of the requirements for the award of the degree of  
MASTER OF BUSINESS ADMINISTRATION



Under the Guidance of

INTERNAL GUIDE  
**Dr. Prakash B. Yaragol**  
Professor

EXTERNAL GUIDE  
**Mr. Lokapal Sanjay**  
Business Associate,  
Geojit Financial Services Ltd



**DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION**  
**C M R INSTITUTE OF TECHNOLOGY**

#132, AECS Layout, ITPL Main Road, Kundalahalli,  
BENGALURU-560037

**Batch 2018-20**

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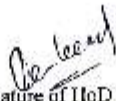
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No. 137 AECU/2018  
T. Park Road  
Bengaluru-560037  
T: +91 80 2952 4662/72  
F: +91 80 2952 4620  
E: info@cmrit.ac.in  
www.cmrit.ac.in

## CERTIFICATE

This is to certify that **Ms. Deepthi Ravi Nayak** bearing USN **1CY18MBA12** is a bonafide student of Master of Business Administration Programme of the Institute (2018-20 Batch), affiliated to Visvesvaraya Technological University, Belagavi. Project report on **TECHNICAL ANALYSIS OF SELECTED SECURITIES FROM NSE INDIA** is prepared by her under the guidance of **Dr. Prakash B. Yaragol**, in partial fulfillment of the requirements for the award of the degree of Master of Business Administration of Visvesvaraya Technological University, Belagavi in Karnataka.

  
Signature of Internal Guide

  
Signature of HoD  
Head of the Department  
Department of MBA  
CM - IT-PG Studies  
Bangalore-560 037  
Evaluators

  
Signature of Principal  
Principal  
CMR Institute of Technology  
Bangalore - 560037

1) Name of external evaluator

Signature with Date

2) \_\_\_\_\_  
Name of internal evaluator

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Affiliated to Visvesvaraya Technological University, Approved by AICTE New Delhi,  
Accredited by NBA New Delhi, Recognised by Government of Karnataka

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## **GOWDER LOKAPAL SANJAY**

**BUSINESS ASSOCIATE**  
**GEOJIT FINANCIAL SERVICES LTD**  
SHENVI COMPLEX  
II Floor, Karwar Road, ANKOLA - 581314 (N.K.)  
Phone : 08388-232353; 232255; 231522

SEBI (Sub Broker)  
Regn. No. BSE: INS 0117 89612 / 01-08067  
NSE: INS 231786810 / 23-08-067

Date: 25-02-2020

### **TO whomsoever it may concern**

This is to certify that Ms. Deepti Nayak (USN: 1CY18MBA12), student from MBA, CMRIT Bangalore has successfully completed her academic project titled "BUYING AND SELLING DECISIONS BASED ON TECHNICAL ANALYSIS OF SELECTED SECURITIES FROM NSE INDIA: WITH SPECIAL REFERENCE TO GEOJIT FINANCIAL SERVICES LTD. ANKOLA".

The period of the project was from, 6th January 2020 to 14th February 2020.

Her performance and conduct during the internship period was good.



**Gowder Lokapal Sanjay**

**Business Associate,**

**Geojit Financial Services Ltd. Ankola**



## DECLARATION

I, **Ms. Deepti Ravi Nayak** hereby declare that the Project report entitled **TECHNICAL ANALYSIS OF SELECTED SECURITIES FROM NSE INDIA** prepared by me under the guidance of **Dr. Prakash B. Yaragol**, faculty of MBA Department, CMR Institute of Technology and external assistance by **Mr. Lokpal Sanjay**, Business Associate, Geojit Financial Services Ltd. I also declare that this project work is towards the partial fulfillment of the university regulations for the award of degree of Master of Business Administration by Visvesvaraya Technological University, Belagavi. I have undergone a summer project for a period of six weeks. I further declare that this project is based on the original study undertaken by me and has not been submitted to any other University/Institution for the award of any degree/diploma.

Place:

  
DEEPTI RAVI NAYAK

Date:

USN:1CY18MBA12

## **ACKNOWLEDGEMENT**

I have been fortunate enough to get good timely advice and support from a host of people to whom I shall remain grateful.

I take this opportunity to express my heartfelt thanks to **Dr. Sanjay Jain**, Principal, CMR Institute of Technology, Bangalore, for his support and cooperation to undertake and complete the project work.

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I acknowledge the insights provided by my External Guide **Mr. Lokpal Sanjay**, Business Associate, Geojit Financial Services Ltd which helped me to a great extent in completion of the project work.

And finally, there is deepest of thanks for the patience and cooperation of the family and friends, without whom the endeavour would not have been possible.

**MS. DEEPTI RAVI NAYAK**

**USN: 1CY18MBA12**

# TABLE OF CONTENTS

Chapter No.	CONTENTS	Page No.
	Certificate Declaration Acknowledgement List of Table List of Charts	
	<b>EXECUTIVE SUMMARY</b>	1
<b>1</b>	<b>INTRODUCTION</b> 1.1 Industry Profile 1.2 Company Profile Promoters, Vision, Mission, Quality Policy. Products / services, Infrastructure facilities, Competitors' information, SWOT Analysis, Future growth and prospects and Financial Statement Analysis	2 2-6 7-16
<b>2</b>	<b>CONCEPTUAL BACKGROUND AND LITERATURE REVIEW</b> 2.1 Theoretical Background of the Study 2.2 Literature Review 2.3 Research Gap	17-18 19-21 21
<b>3</b>	<b>RESEARCH DESIGN</b> 3.1 Statement of the Problem 3.2 Need for the Study 3.3 Objectives of the Study 3.4 Scope of the Study 3.5 Research Methodology 3.6 Hypotheses 3.7 Limitations of the Study 3.8 Chapter scheme	22 22 22 23 23 23 24 24
<b>4</b>	<b>DATA ANALYSIS AND INTERPRETATION</b>	25-39
<b>5</b>	<b>SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION</b> 5.1 Findings of the Study 5.2 Suggestions 5.3 Conclusion	40 40 41
	<b>BIBLIOGRAPHY</b>	
	<b>ANNEXURE</b>	

## LIST OF TABLES

Chart No.	Title of Tables	Page No.
1	List of competitors	11&12
2	Reserve to equity	13
3	Intangible assets to tangible asset ratio	14
4	Current ratio	15
5	Trade receivables ratio to trade payable ratio	16
6	Short term Buy/Sell decision based on call provided by moving average analysis	31
7	Long term Buy/Sell decision based on call provided by moving average analysis	38

## LIST OF CHARTS AND GRAPHS

Chart No.	Title of Charts	Page No.
1	Reserve to equity ratio graph	13
2	Intangible assets to tangible asset ratio graph	14
3	Current ratio graph	15
4	Trade receivables ratio to trade payable ratio graph	16
5	Short term analysis chart	
5.1	State bank of India	26
5.2	HDFC Bank	27
5.3	ICICI Bank	28
5.4	Axis Bank	29
5.5	Canara bank	30
6	Chart showing overall feasibility of moving average for short term	32
7	Long term analysis chart	
7.1	State bank of India	33
7.2	HDFC Bank	35
7.3	ICICI Bank	36
7.4	Axis Bank	37
7.5	Canara bank	39
8	Chart showing overall feasibility of moving average for long term	39



## **EXECUTIVE SUMMARY**

There has been strong strategic analysis from many investors on the stock market. Various strategies for investment decisions have been developed. The project seeks to use the principle of scientific research in the acquisition and selling of equity decision making. Stocks from the market covering 1 and 5 sectors were taken into account. That was divided in the short (3 months) and long (1 years), respectively. For short-term decision-making an incremental combination of 14 days of moving and 21 days of moving was introduced. A basic running average of 50 days & 200 days has been used for long-term decision-making. The current research allows an investor to determine whether to purchase or sell decisions using these analysis techniques. However, before implementing the order, he must accept the analyst's advice to balance his own.

# CHAPTER 1

## INTRODUCTION

Staffing is also important for learners to acquire work experience and not to be less conscious of the job environment while working. Students believe the internship is really important. Stages give students the much needed ability to participate and gain professional knowledge in their area of interest. An intern will easily obtain a practical experience which is required to excel in the business climate. There are internships in diverse industries, businesses, and cultures. Stages can be free, partially payable, or unpaid. That may be part-time, or full-time.

Internship program is one of essential requirement for the honor of MBA degree according to MBA curriculum of Visveshwaraya Technological University, Belagavi. The main objective of this internship program is to fulfill the gap between academics and corporate requirement along with organization study.

It was a good experience in Geojit financial services ltd. During this internship program I learnt many things regarding operations of the organization, learnt about work place environment and how to balance the personal life and professional life. Over all it was a great experience filled with lots of learning and joy.

### **1.1 INDUSTRY PROFILE:**

Securities market is a part of the broader stock system where it is possible to purchase and sell the listed securities according to the demand and availability of that particular security.

It has several roles on the stock exchange. The first and foremost important aim of the stock exchange is to collect public funds to give liquidity to firms that they can use to develop the company to grow their business. Another essential aim of the stock exchange is to represent the buyers and to give the general public the ability to compete in the business and thereby making money.

Capital market is classified into following segments:

1. Primary Market
2. Secondary Market

### **1. Primary Market:**

Primary market is a market which issues new securities on the stock exchange. This fund raising activity is being carried out to meet the long-term capital needs of the company. You can sell the shares on a face value, a discount or a premium basis. The way primary market securities are issued requires numerous types of intermediaries such as merchant bankers, issue managers, underwriters, registrars, lead managers, issuing bankers, trustees, etc.

Modes of raising funds in Primary Market:

- Public Issue
- Right Issue
- Private Placements
- Preferential Issue

#### 1. Public Issue:

One of the essential and commonly used means of collecting funds from the general public for long-term needs is the public problem. When the needs for funding are immense, the firms go to shares publicly. Indian business concern regulated by company act rules, 1956

#### 2. Right Issue:

This is an extremely important securities issue process. In Right Issue Company, by issuing more shares to its existing shareholders at a discounted rate lower than the market price, it gains more capital.

#### 3. Private Placements:

Private placement is a collecting process by securities sales. Private placement is made where very little investment is required by the enterprise. This differs completely from the

public issue and is the right issue because there are no securities available on the open market in private placements and only certain private groups have the opportunity to participate in securities issue.

#### 4. Preferential Issue:

Preferential problem is a bit like private placement, but some features differentiate from private placements. A preference problem can be defined as the allocation of securities to a selected group of people, mainly shares and debentures. The company act 1956, governs that. This approach is useful in quickly raising the fund.

## **2. Secondary Market:**

The secondary market can be described as the 'trading market of the securities originally issued by the firms.' In several cases, secondary markets have a crucial role to play in the country's economic development.

## **STOCK EXCHANGES:**

Stock exchange is an exchange place where the buying and selling of securities of listed companies are take place. Stock exchanges make the stock more liquid than the physical documents transaction. This will beneficial to the investors by many ways.

However, the world's first stock market was set up in Antwerp, Belgium in 1400s, but they are not dealing in buying and selling of shares of listed companies.

London Stock Exchange was formed in the year 1801, but it started dealing in shares from the year 1825. Due to some restrictions the London stock exchange failed to establish as a global leader but still this is the main stock exchange for entire Europe.

The New York Stock Exchange is an American stock exchange, established in the year 1792. In the year 1817 it becomes more organized and recognized. It is the world's largest stock exchange by its market capitalization.

## **STOCK EXCHANGES IN INDIA**

The trade method can be dated to 1875 in India. There are 26 official bourses in India from January 2019 onwards. In this, only seven stock markets are currently operating. While there are 26 stock shares, there are only two leading stock bursaries recognized by many Indian investors. They are as follows:

1. National Stock Exchange
2. Bombay Stock Exchange

### **1. National Stock Exchange:**

In 1992, the Indian Limited National Stock Exchange was created. This is India's first new electronic stock exchange with full automation of displays. At the No. 11 rank of the world's largest bonds, NSE had over US\$ 2.27 billion as of April 2018 of gross market capitalization. NSE flagship index is Neat 50, the weighted average of 50 stocks in 12 diverse sectors by Indian firms. Another relevant NSE index is Neat Next 50. The free float market capitalization is that of the Nice 50 firms.

Trading in following segments is offered by NSE India:-

Equity

Equity Derivatives

Interest Rate Futures

Debt Market

### **2. Bombay Stock Exchange:**

Bombay stock exchange is the leading and the oldest stock exchange in entire Asia, which was founded on 9<sup>th</sup> of July 1875 in Mumbai, Maharashtra. In the year 1957 BSE becomes the first stock exchange which is recognized by Government of India. Presently there are nearly 6000 companies which are registered in BSE.

BSE Sensex is a value weighted index which is consisting of 30 biggest and the most active stocks of various sectors. For the calculation of Sensex value 100 is taken on 1<sup>st</sup> April 1979 and the base year as 1978-1979. Sensex constitutes of following 31 stocks

1. Asian Paints
2. Axis Bank
3. Bajaj Auto
4. Bajaj Finance
5. Bharti Airtel
6. Coal India
7. HDFC Bank
8. HCL Technologies
9. Hero MotoCorp
10. Hindustan Unilever
11. Housing Development Finance Corporation
12. ICICI Bank
13. IndusInd Bank
14. Infosys
15. ITC
16. Kotak Mahindra Bank
17. Larsen& Toubro
18. Mahindra & Mahindra
19. Maruti Suzuki
20. NTPC
21. Oil and Natural Gas Corporation
22. Power Grid Corporation of India
23. Reliance Industries
24. State Bank of India
25. Sun Pharmaceutical
26. Tata Consultancy Services
27. Tata Motors
28. Tata Motors DVR
29. Tata Steel
30. Vedanta

## **1.2COMPANY PROFILE:**

Geojit Financial Services Ltd. is an investment management corporation established in 1987. Geojit Financial Services Ltd. is headquartered in Kochi, India and has 479 plus offices throughout India.

Geojit became a public limited company in the year 1994, a new name of Geojit Services Ltd., and is also listed on both the National Stock Exchange and Bombay Stock Exchange.

Geojit Financial Services Limited has 30 plus years of presence in the Indian Stock Market business. It provides about 10, 00,000 clients with varying fanatical services. Geojit Financial Services Ltd. became the country's first stock trader to deliver Internet Trading with the launch of the first Bank Payment Gateway \* in 2000.

In the year 2013, the company became the country's first stock trader by launching India's first application for trade in social media (Face book).

### **VISION:**

Become one of the most trusted and globally reputed financial distribution company.

### **MISSION:**

We would like to make a positive effect on our clients, consumers, staff, shareholders and society. We hope to help create a healthier future.

Our devoted environments provide our integrated goods and facilities of good quality.

We provide our colleagues with relaxing and thrilling experiences. We want to be part of our industry's most trustworthy era by bringing more values and ethics into our everyday practices.

**PRODUCTS AND SERVICES PROVIDED BY GEOJIT:**

Equity Cash

Equity Derivatives

Currency future

Portfolio Management Services

IPO's

Life Insurance and General Insurance

E-Insurance

Mutual funds

Custody Accounts

Margin Trading

Financial Planning



**PROMOTERS AND MANAGEMENT:**

Mr. C. J. George,

(Managing Director and Promoter)

Mr. C. J. George(Managing Director and Promoter)
Mr. Satish Menon(Executive Director)
Mr. A. Balakrishnan (Executive Director)
Mr. Sanjeev Kumar Rajan(CFO)
Mrs. Jaya Jacob Alexander(HR Chief)
Mr. A. D. Kurian(Chairman and Non-Executive Independent Director)
Mr. Mahesh Vyas(Non-Executive Independent Director)
Mr. RamanathanBupathy (Non-Executive Independent Director)
Mr. Radhakrishnan Nair(Non-Executive Independent Director)
Mr. Punnoose George(Non-Executive Director)
Mr. Sanjay Kaul(Non-Executive Director)
Mrs. Mohana Nair(Additional Director)

## **SWOT ANALYSIS:**

### **STRENGTH:**

- Well-known Indian investment service provider
- Providing diverse services
- The network is widely distributed worldwide
- Great experience with 10, 00,000 customers
- Strong inventory base
- Enhanced branding

### **WEEKNESS:**

- Advertisement fail
- Conflicts of control
- Fees relative to rival fees are very high

### **OPPORTUNITY:**

- Financial business development
- Increased urban and rural spending patterns
- Technology enhancement and application acceptance

### **THREATS:**

- Strong competition from foreign firms
- Unfavorable stock market world

## COMPETITORS:

There are many foreign as well as domestic investment companies are there which are giving tough competition to the Geojit Financial Services Ltd. by their facilities and improved facilities.

Some basic comparison of competitors with the Geojit Financial Services Ltd. given as follow:

**Table 1: List of competitors**

	COMPETITOR S	GEOJIT	KARVY	ANGEL	SHAREKHA N	ZERODHA	RELIGAR E
	FEATURES						
1	Type of Broker	Full Time Broker	Full Time Broker	Full Time Broker	Full Time Broker	Discount Broker	Full Time Broker
2	Supported Exchanges	BSE, NSE, MCX-SX	BSE, NSE, MCX	NSE, BSE, MCX	NSE, BSE, MCX, MSEI	NSE, BSE, MCX, NCDEX	BSE, NSE, MCX-SX
3	Account Type	Online Trading.	Retail Broker	Angel Diet	Classic Account	Standard Plan	Online Plan
4	3 in 1 account	No	No	No	No	No	No
5	Charting	Yes	Yes	Yes	Yes	Yes	Yes
6	Automated Trading	No	Yes	No	No	Yes	No
7	SMS alerts	Yes	Yes	Yes	Yes	Yes	Yes

8	Trading Platform	Self	OMNES YS, NEST	Angel Swift, Angel Eye,  Speed Pro, Angel Lite	Trade Tiger	Kite Web, Kite android/iso/ coin	Odlin Diet
9	Commodities	No	YES	Yes	Yes	Yes	Yes
10	Online Chart	No	YES	Yes	No	No	No

### **FINANCIAL ANALYSIS:**

The financial statements of a business is genuinely fascinating term for the businessman, who wants to spend money in that particular firm. Financial forecasting helps to update and evaluate the financial conditions of the business. However, we can access various kinds of financial information including balance sheet, exchange, and account gain & loss. This ensures that we can determine and define the existing financial circumstances for the company.

### **RATIO ANALYSIS:**

The ratio analysis is a very useful tool for determining the company's financial conditions. Examination of the ratio is beneficial not only to internal parties of the company but also to external parties.

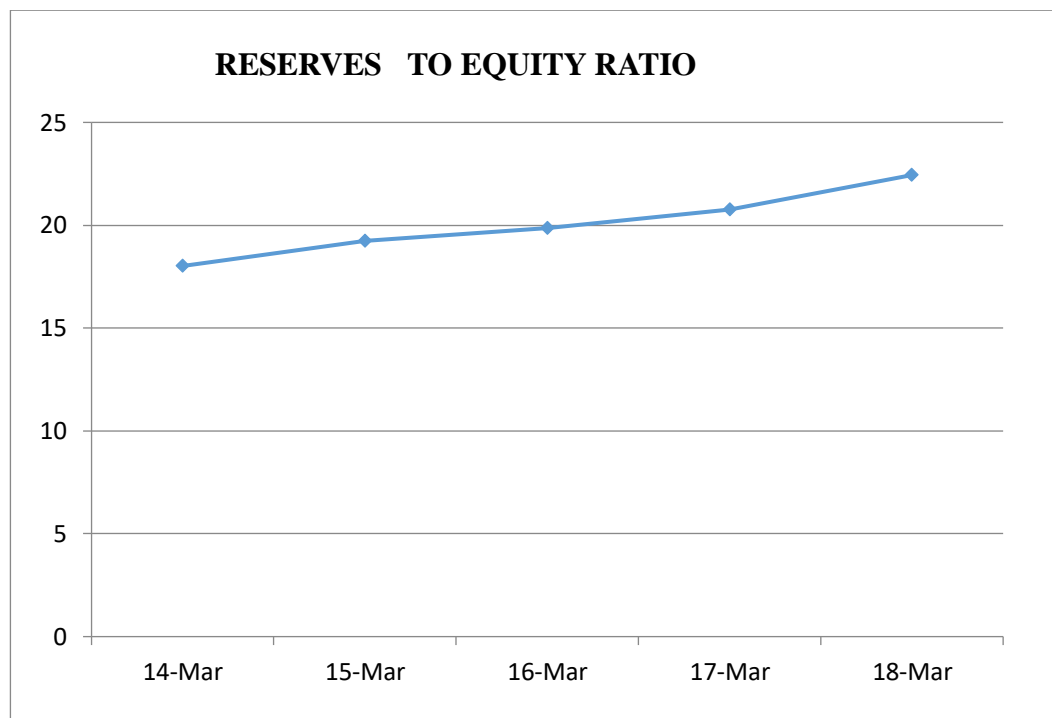
#### **1. RESEVES TO EQUITY RATIO**

$$\text{Reserves to equity ratio} = \frac{\text{Total reserves}}{\text{Total equity capital}}$$

**TABLE 2: RESEVES TO EQUITY RATIO**

<b>Particulars</b>	<b>March 14</b>	<b>March 15</b>	<b>March 16</b>	<b>March 17</b>	<b>March 18</b>
Reserves	411.59	445.38	466.88	488.85	534
Owners' equity	22.84	23.14	23.49	23.55	23.79
Ratio	18.02	19.24	19.87	20.75	22.44

**CHART 1: RESEVES TO EQUITY RATIOGRAPH**



The figure above shows capital to equity ratio. It is appreciable to remember that this ratio is undergoing a strong upward trend. This ensures that the company can repay its earnings in the form of reserves.

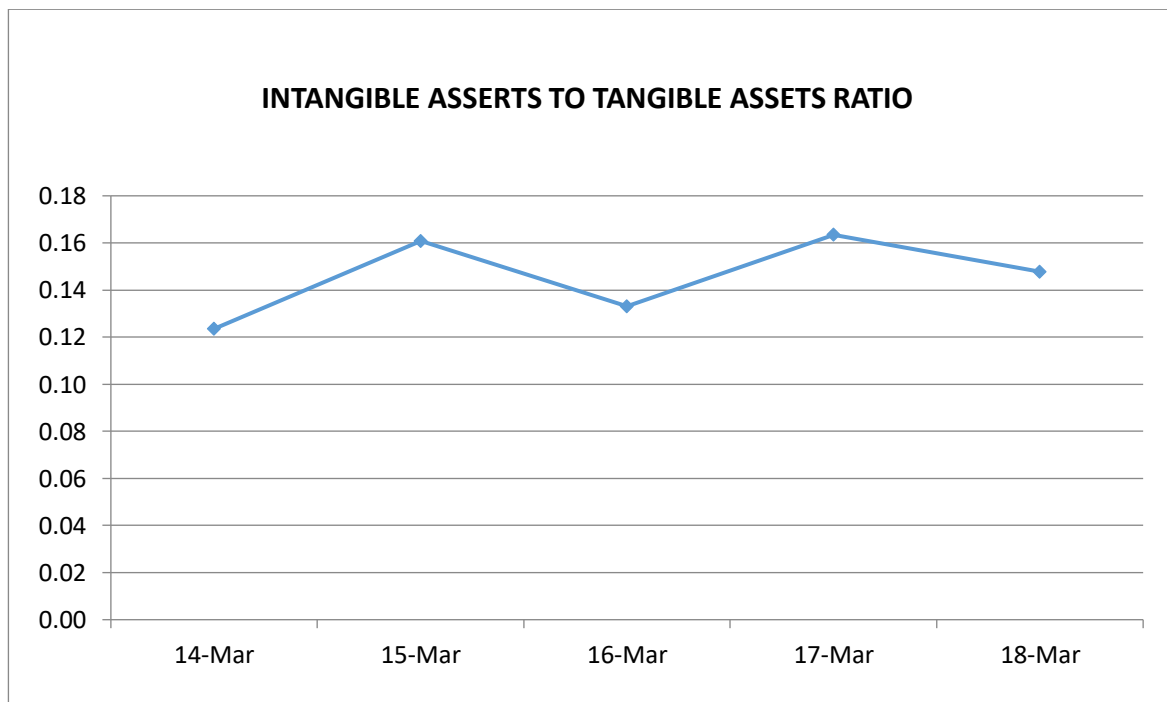
## 2. INTANGIBLE ASSETS TO TANGIBAL ASSETS RATIO

$$\text{Intangibleassetstotangibleassetsratio} = \frac{\text{Totalintangibleassets}}{\text{Totaltangibleassets}}$$

**Table 3: INTANGIBLE ASSETS TO TANGIBAL ASSETS RATIO**

Particulars	March 14	March 15	March 16	March 17	March 18
Intangible assets	5.93	8.37	7.33	8.48	7.67
Tangible assets	48.01	52.08	55.04	51.89	51.89
Ratio	0.12	0.16	0.13	0.16	0.14

**CHART 2: INTANGIBLE ASSETS TO TANGIBAL ASSETS RATIO GRAPH**



The above diagram is showing intangible assets to tangible assets ratio. Even though there is parallel growth in tangible and intangible assets.

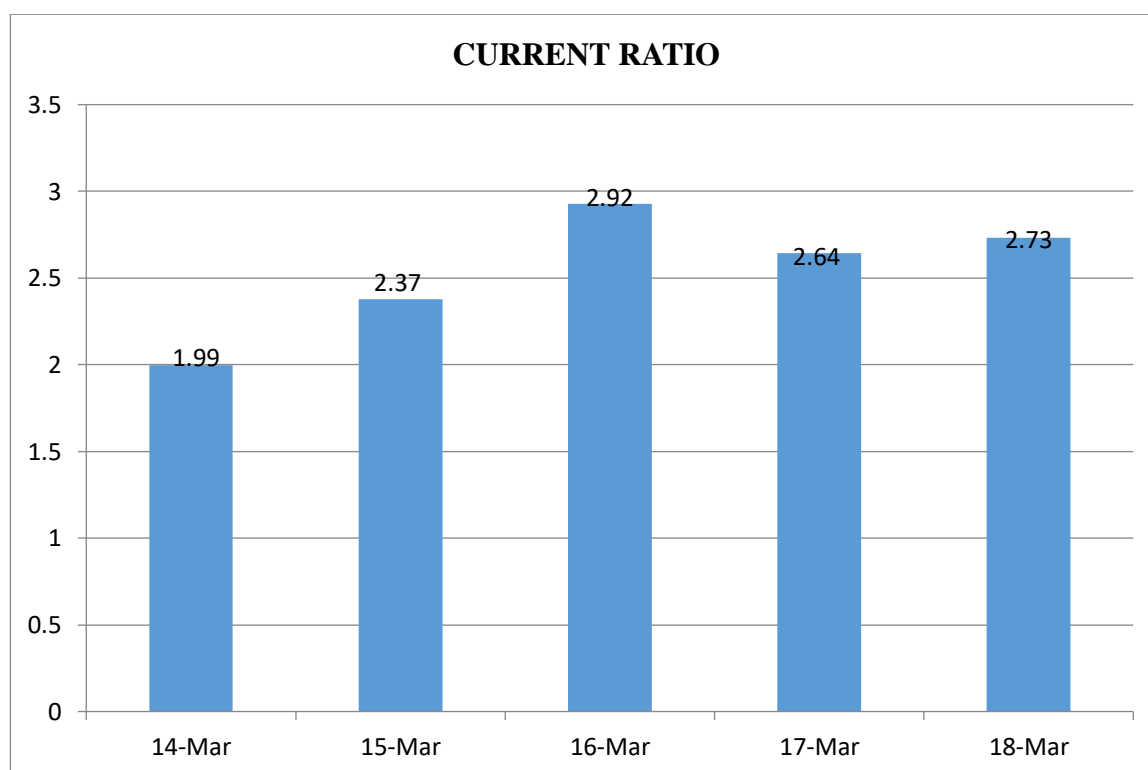
### 3. CURRENT RATIO:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

**Table 4: current ratio**

Particulars	14-March	15-March	16-March	17-March	18-March
Total current assets	496.78	496.45	480.64	645.96	637.11
Total current liabilities	248.6	208.78	164.12	244.4	233.04
Ratio	1.99	2.37	2.92	2.64	2.73

**CHART 3: CURRENT RATIO GRAPH**



The current ratio is a sort of liquidity ratio that tests a company's willingness to meet its short-term & long-term obligations. The current ratio is perfect as 2:1. Geojit Financial Services Ltd.'s current ratio for 2014 is approximately 2:1 and still over 2:1 in 2015, 2016, 2017, 2018. It means that the capacity of the company to meet its short-term commitments over the long term is high. And we would claim the business is in a strong spot.

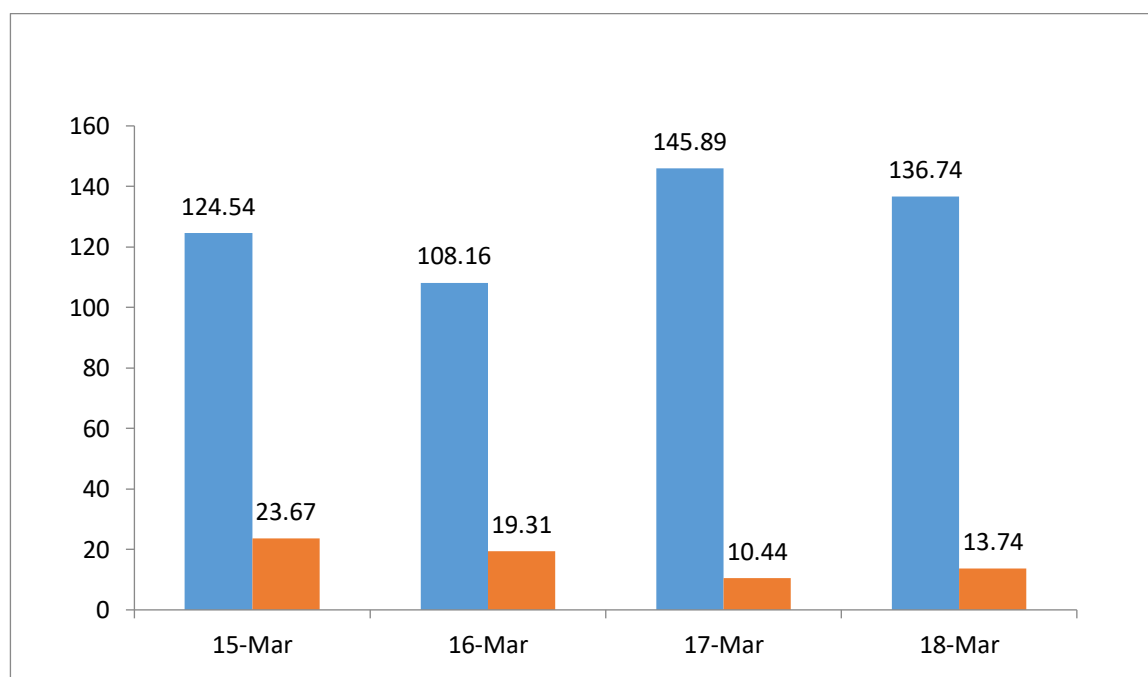
#### 4. TRADE RECIVABLES TO TRADE PAYABLES RATIO:

$$\text{Trade receivables to trade payables ratio} = \frac{\text{Trade receivables}}{\text{Trade payables}}$$

**Table 5: TRADE RECIVABLES TO TRADE PAYABLES RATIO:**

Particulars	14-March	15-March	16-March	17-March	18-March
Trade receivables	113.81	124.54	108.16	145.89	136.74
Trade payables	15.73	23.67	19.31	10.44	13.74
ratio	7.24	5.26	5.60	13.97	9.95

**CHART 4: TRADE RECIVABLES TO TRADE PAYABLES RATIO GRAPH**



This is an unusual ratio found in the corporate governance literature. It is common for corporate to reduce the debtors period and increase the creditors period. This concept is called as negative working capital approach. This indicates that the organization having less liability to pay but, at the same time the trade receivable amount is very high.



## CHAPTER -2

### **CONCEPTUAL BACKGROUND AND LITERATURE REVIEW**

#### **2.1 THEORETICAL BACKGROUND OF THE STUDY**

The definition of technological research is very important. It is used for the estimation of theories and identification of market opportunities by the isolation of quantifiable indications from trade operation, development and duration, among others. In comparison to actual agents attempting to analyse the standard safety criterion, particular observers are assessing the consistency or lack of a defense based on instances of substantial performance change, exchange signals and separate conceptual mechanic assemblies.

**Overall Technical analysis is entirely based on the following 3 main assumptions.**

**a) The capital market discounts everything:-**

Scientific experts are confident that everything from the fundamental elements of an enterprise to general sector products to brain research ads is valued in stocks as of now. This expels the need to consider the elements individually, before making a conditional decision. The only thing left is to analyse the shifts in valuation that specialized economists view for a given capital market portfolio as a result of free market activity.

**b) Price moves in trends:-**

Technical analysis suggests that prices shift in a pattern or direction that can be divided into three categories of patterns, namely short, medium and long-term ones. It can be clarified in simple terms, because stock values are more likely to continue in the past

**c) History tends to repeat itself:-**

Specialized analysts are optimistic that history will recur itself in general. The obsolete notion of improvements of importance is also attributed to promote brain science, and would usually be completely inevitably reliant on emotions such as anxiety or fervour. To grasp trends, advanced analysis uses schematic models to interpret these sentiments & consequent business innovations. While certain forms of technical analysis have been used for more than 100 years, they are only acknowledged to be valid in the light of the evidence, revealing patterns of value inventions that sometimes rehash themselves.

## **Technical analysis tool I have used:**

### **Moving averages analysis:**

Moving averages are one of the most important statistical tools for the acquisition and disposal of shares used in capital markets. It is one of the best tools for measuring demand acceleration. It's very quick and easy to understand to implement.

There are many varieties of moving averages in use including simple moving average, weighted moving average, exponential moving average, triangular moving average, vector moving average, hull moving average, double exponential moving average and many more.

#### **A) Simple moving averages:**

A simple moving average can be defined as “an arithmetic mean of recent closing prices of a particular stock or commodity”.

$$\text{Simple moving averages} = \frac{P_1 + P_2 + \dots + P_n}{N}$$

Where,

$P_1, P_2, \dots, P_n$  means price of the stock or commodity in a particular day.

$N$  represents no of days selected for calculation of MV.

#### **B) The exponential moving average:**

The exponential moving average can be explained by this. Exponential moving average gives more weighting or importance, to recent price data than the simple moving average does.

$$\text{Exponential moving average} = [\text{Close EMA} - \text{previous EMA}] * \left(\frac{2}{n+1}\right) + \text{previous EMA}$$

## 2.2 LITERATURE REVIEW

1. **ShyamSundar & Ram Kumar Kakani, (2006)**, in their article “**Profiting from Technical Analysis in Indian Markets**”, He said that two moving midpoints, to be precise, SMA and DMA were used in Technical Research to measure results as an exchange norm to beat advertisements. They took an inquiry multi-year timeframe and information from the NSE. They find that these moving midpoints were successful and also think about uncovering how by using the DMA additional ostensible returns can be generated.

2. **Cheoi Ho Park and Scott H. Irwin, (2004)**, in their article “**The Profitability of Technical Analysis**”, The investigation paper shows that advertising participants have traditionally used specialised investigations in remote trading and future markets, and that about 30 to 40 percent of professionals agree that specialised investigations are x-factor in deciding on time-skyline cost growth for up to half a year. Taking all into account, they found credible evidence that simple specialised devices were successful at any rate up to the time of the 1990s in the multitude of theoretical markets.

3. **Ben R Marsfalla& Martin R Youngs, (2006)**, in their article “**Market Timing with Technical Analysis**”, they discussed the efficacy of the candle-specialized test quantitative market timing process in the U.S. Value Showcase. Using great factual system, they discovered that candle exchange rules are not very helpful when more than 1-1-1992 to 31-12-2002 are linked to DJIA component stocks. Neither uptrend nor bear fire, it does not seem fair depending on the ones exchanging choices solely on these procedures.

4. **Jiali Fang and Yafeng Qin, (2010)** in their article, “**Technical Market Indicators An Overview**”, current explanation on the specialized examination consistency to a great extent centers around cost based like moving midpoints rules, hybrid tenets. They audit observationally productivity of a wide range of 93 specialized pointers. They audit the accuracy of signs of 93 advertise markers in S&P 500 returns. In end part, they referenced they didn't discover markers gives benefit also, outflank purchase and hold methodology.

**5. Valeriy Zakamuli (2010)**, in his article “**The Real Life Performance of Market With Moving Average and Time Series Momentum Rules**”, they revisit the theories about the success of such timing techniques, the moving averages and the momentum laws of the time series. Market timing strategy success usually involves some data-mining bias, and it fails to consider any major market frictions. In the medium term, therefore, investors have to be mindful that the timing strategy of the stock market is underperforming when contrasting it with passive strategy.

**6. Dr. (Prof.) Prabhat Srivastava, (2015)** in his article “**The profitability of five popular variation of moving averages-on Indian market index S&P0CNX Nifty 50 during January 2004 – December 2014**”, the test article applies to the gainfulness of five well-known moving average varieties. To assess results they took Clever 50 shutting costs and the exchanging vehicle is future, they took 3 trade standard of moving averages and evaluated the results with buy and keep technique, in all the exchange theory moving normal beat straight every other difference in the moving average. Conclusion is that all moving averages are profitable but profitability depends on when we use the average moving.

**7. Valeriy Zakamuliny, (2016)** in their article “**Profitability of Market Timing with Moving Averages**”, they remember that the best technique for normal movement is genuinely superior to the connected buy and hold approach. Market timing execution is frequently misrepresented in their observations, and they often show timings to function in any money dependent single market. The timing strategy on the market is less risky, but it does bring down the danger that will bring down the arrival and thus reduce long-term capital growth.

**8. Yufeng Han & Ke Yang, Guofu Zhou(2009)** ), In their paper "**Probability of cross-section analysis of technical analysis**, "they documented that applying the TA's moving average time strategy to the portfolio is always better than buying and holding strategies. Its performance is not related to the momentum strategy and it is different in the business cycle. In addition, abnormal returns are not sensitive, to changes in investor sentiments, defaults, & liquidity risks.

**9. Mathangi and Kiruthika (2016)**, in their paper they studied variations in the returns of companies in various sectors. Under BSE Sensex, they took six companies from different sectors and found that less volatile stocks generated more returns than higher volatile stocks by implementing various methods for technical analysis.

**10. MohdNaved (2013)**, in his research paper “**Technical Analysis of Indian Financial Market with the Help of Technical Indicators**”, many stock market metrics such as clever stocks were used to realise the viability of moving average study. This study showed that the MV analysis is one of the best tools in stock market for effective trading and profit making.

**11. Danilo GuimaraesRomos, Marina Garcia Pena, ViniciusSobreiro and Herbert Kimura (2018)**, in their research paper “**Examination of the profitability of technical analysis based on moving average strategies in BRICS**”, They analysed the feasibility of stock exchange technology analyses at the financial markets of the BRICS countries. At the end of the report, they conclude that competent stock analysis can help investors make good decisions, when additional criteria are added to the basic analysis.

**12. Ram Kumar Kakani and ShyamSundhar (2006)**, in their research paper “**Profitability from Technical Analysis in Indian Equity Markets: Using Moving Averages**”, for several stocks they suggested a moving average analysis over a 15-year period (1991 to 2005). In their research they find that the moving average approach in the Indian stock market is a highly profitable method of investing.

### **2.3 RESEARCH GAP**

- Daily market view
- Daily stock view

## **CHAPTER -3**

### **RESEARCH DESIGN**

#### **3.1 STATEMENT OF PROBLEM**

Technical analysts are a valuable instrument for making investing choices on the equity market for an investor. Many tools and maps are readily accessible to traders and limits them to technological analytics. But how can the right or sufficient technological framework for decisions be found, is the real problem. It will vary between individuals. Such techniques can work with others, but the same methods are not so useful for some.

#### **3.2 NEED FOR THE STUDY:**

The reason for the exam is to know that technical analysis may or may not provide a clear description for the investment process. In other words, it means researching moving average analyses that are useful for buying or selling signals properly or not. For the analysis selected stocks from each specified group were considered from NSE India.

I also have been trading on the stock market for the past 2 years, so finding the right technical method for making investment decisions is important for me.

The research focuses primarily on simple moving average analysis for long-term investment decision and on exponential moving average investment decision making for short-term investment decision making.

#### **3.3 OBJECTIVES OF THE STUDY:**

- To define sufficient scientific analyses to receive signals and to examine the efficiency of moving average approaches with various durations (short and long term);
- Estimate the association of calls with profitability
- To give the traders appropriate advice on purchasing selling decisions
- Researching the current industry environment to consider industry dynamics
- To assess the stock market trend by moving average research

### **3.4 SCOPE OF THE STUDY:**

The larger term of the stock industry is technical research. The focus of this research was on the efficiency of moving average strategies for the acquisition or disposal of securities decisions for various durations. Research spans a 6 week period from 3/01/2019 to 18/02/2019. (Short term and long term) analysis.

The thesis leads to the efficacy of a rigorous mean framework for decision making on investments.

### **3.5 RESEARCH METHODOLOGY:**

#### **1. Method of sampling**

Convenience Random sampling technique is used for this study.

Sample unit is selected stocks from NSE and BSE.

#### **2. Sample Size**

A sample covering 1 sectors and 5 each from that sector is been considered. This has been further split in to short term (1month) and long term (1year).

#### **3. Research Techniques**

- i. Moving average indicator has been used for the study.
- ii. For short term decision making 14 days exponential moving average and 21 days exponential moving average indicator has been used.
- iii. For long term decision making 50 days simple moving average and 200 days simple moving average indicator has been used.

### **3.6 Hypothesis:**

Ho: Null Hypothesis: Moving average analysis is not feasible for investment decision making and for generate buy or sell decision.

H1: Alternative Hypothesis: Moving average analysis is feasible for investment decision making and generating buy or sell signals.

### **3.7 LIMITARIONS OF THE STUDY:**

- Technical research is based solely on historical evidence, and is thus one of the main disadvantages of technical analysis
- For companies which are more competitive in nature, moving average analysis does not work
- For every time span the moving average may be estimated. Typically moving average of short spam duration has more uncertainty relative to long periods, so investors have more reservations about implementing the order
- Moving average technology can overlook such essential marketing conditions as it depends entirely on past data

### **3.8 CHAPTER SCHEME:**

The chapter scheme is the project report is planned to be under

Chapter 1	Introduction
Chapter 2	Conceptual background and literature review
Chapter 3	Research design
Chapter 4	Data analysis and Interpretation
Chapter 5	Summary of findings, suggestion and conclusions



## CHAPTER-4

### DATAANALYSIS AND INTERPRETATION

#### MOVING AVERAGE ANALYSIS:

Moving average is one of the most powerful technological instruments often used in securities purchases and sales. There are numerous facts about moveable averages that are employed, namely simple, average, exponential, weighted, triangular, hull, double exponential and double exponential and average moving variable and many others.

For long-term decisions and an exponential moving average for short-term decisional decision making, we used a simple moving average analysis. Our average moving calculation is based on the closing price at a certain date of the selected securities.

#### BUYING AND SELLING DECISION MAKING BASED ON MOVING AVERAGE ANALYSIS:

##### 1) FOR SHORT TERM

For short term decision making we have considered 14 days and 21 days exponential moving average (closing value). Red line denotes 14 days exponential moving average (closing value) and white line represents 21days exponential moving average (closing value)

##### Calculation of deviation:

For buy call:  $S1 - S0/S0$

For sell call:  $S0 - S1/S0$

- Positive deviation indicates profit.
- At the same time negative deviation indicates loss.

## BANKING SECTOR:

### 5) SHORT TERM ANALYSIS:

CHART NO 5.1: STATE BANK OF INDIA



On December 12, 2018, the 14-day exponential moving average line cuts / lies above the 21-day exponential moving average line @281.22, suggesting a short-term buy signal. Afterwards it is noted that

On January 24 , 2019, the 14-day exponential moving average line cuts / lies below the 21-day exponential moving average line @295.26 signals a short-term sell warning and the market traded @271.2 by the end of February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
12/12/2018	BUY	281.22	295.26	0.0499	4.99
24/01/2019	SELL	295.26	271.2	0.0814875	8.15

## CHART NO 5.2: HDFC BANK



The 14-day exponential moving average line cuts / looks below the 21-day exponential moving average line @1964.71 on January 29th, 2019, indicating a short-term sell notice.

On February 5, 2019, 14 days of exponential moving average line falls / is above the 21 days exponential moving average line @1958.52, signaling a short-term buy alert.

The 14-day exponential moving average line falls / is below the 21-day exponential moving average line @1959.64 on February 8, 2019, signaling a short-term selling warning and the stock traded @1875 at the end of February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
29/01/2019	SELL	1964.71	1958.52	0.00315059	0.32
5/2/2019	BUY	1958.52	1959.64	0.0006	0.06
8/2/2019	SELL	1959.64	1875	0.0432	4.32

**CHART NO 5.3: ICICI BANK**



On December 14, 2018, the 14-day exponential moving average line cuts / lies above the 21-day exponential moving average line @350.92, suggesting a short-term buy signal.

On January 28, 2019, the 14-day exponential moving average line cuts / lie below the 21-day exponential moving average line @366.16 signals a short-term selling signal

And the stock closed @350, at the end of February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
14/12/2018	BUY	350.92	366.16	0.0434	4.34
28/01/2019	SELL	366.16	350	0.0441	4.41

### CHART NO 5.4: AXIS BANK



On 12<sup>th</sup> of December 2018, 14 days exponential moving average line cuts/lies above the 21days exponential moving average line @611.76, it indicates buy signal for the short term.

And at the end of February 2019 the stock traded @716.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
12/12/2018	BUY	611.76	716	0.1704	17.04

**CHART NO 5.4: CANARA BANK**



On December 12, 2018, the 14-day exponential moving average line cuts / lies above the 21-day exponential moving average line @251.54 signals a short-term buy alert.

On January 23, 2019, the 14-day exponential moving average line cuts / lie below the 21-day exponential moving average line @272.95, suggesting a short-term selling signal

And the stock closed @230, at the end of February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
12/12/2018	BUY	251.54	272.95	0.0851	8.51
23/01/2019	SELL	272.95	230	0.1574	15.74

## Buy or sell decisions based on calls provided by moving average analysis

### (For short term)

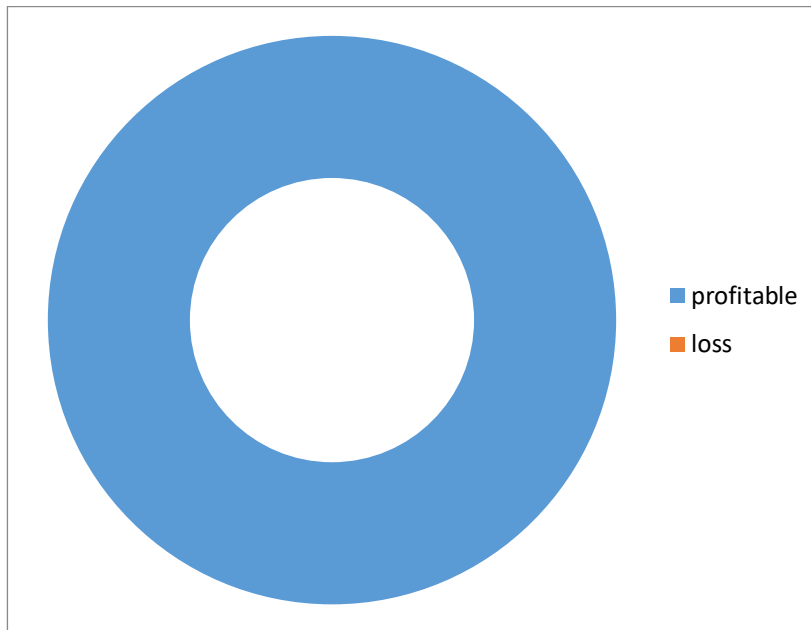
Buy signals are used to earn maximum profit and sell signals are very much helpful in, to reduce the losses. Avoiding losses also one kind of profit in terms of finance, so these signals are very essential ones.

(Buy signal: - to earn profit and sell signal: - to avoid loss.)

**Table No 6: Buy or sell decisions based on calls provided by moving average analysis for short term**

SECTORS	SN	STOCKS	DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
A.BANKING SCCTOR	1	SBIN	12/12/2018	BUY	281.22	295.26	0.0499	4.99
			24/01/2019	SELL	295.26	271.2	0.08148	8.15
	2	HDFC BANK	29/01/2019	SELL	1964.71	1958.52	0.00315	0.32
			5/2/2019	BUY	1958.52	1959.64	0.0006	0.06
			8/2/2019	SELL	1959.64	1875	0.0432	4.32
	3	ICICI BANK	14/12/2018	BUY	350.92	366.16	0.0434	4.34
			28/01/2019	SELL	366.16	350	0.0441	4.41
	4	AXIS BANK	12/12/2018	BUY	611.75	716	0.1704	17.04
	5	CANARA BANK	12/12/2018	BUY	251.54	272.95	0.0851	8.51
			23/01/2019	SELL	272.95	230	0.1574	15.74

**Chart no 6: showing overall feasibility of signals provided by the moving average analysis:**



**INTERPRETATION:**

Moving average analysis produced over all 27 signals for a total of 15 separate stocks from 1 main sectors in a time period of 3 months. Out of 27 signals all 27 signals indicating the investor's lucrative position if they sell for the short term according to signals given by the moving average analysis.

The level of accuracy is 100%. While this thesis has demonstrated that moving average analysis is possible for short-term investment decision making.

**2) FOR LONG TERM**

For long term decision making we have considered 50 days and 200 days simple moving average (closing value). Red line denotes 50 days simple moving average (closing value) and white line represents 200 days simple moving average (closing value).



## 7) LONG TERM ANALYSIS:

**CHART NO 7.1: STATE BANK OF INDIA**



On 12<sup>th</sup> of March 2018, 50 days simple moving average line cuts/lies below the 200 days simple moving average line @291.03, it indicates sell signal for the long term.

On 30<sup>th</sup> August 2018, 50 days simple moving average line cuts/lies above the 200days simple moving average line @281.04, it indicates buy signal for the long term.

At the end of February 2019 the stock traded @278.84.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
12/3/2018	SELL	291.03	281.04	0.0343	3.43
30/08/2018	BUY	281.04	278.84	-0.0078	-0.78

## CHART NO 7.2: HDFC BANK



On October 22, 2018, 50 days of simple moving average line cuts / lies below the 200-day simple moving average line @1889.77, it suggests a long-term selling warning.

On January 2nd, 2019, 50 days of simple moving average line cuts / lies above the 200days simple moving average line @1873.52, signaling long-term buy signal.

The portfolio exchanged @1862 in late February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
22/10/2018	SELL	1889.77	1873.52	0.0086	0.86
2/1/2019	BUY	1873.52	1867	-0.0035	-0.35

### CHART NO 7.3: ICICI BANK



On March 13, 2018, 50 simple moving average line cuts / lines below the 200-day simple moving average line @302.43 signify long-term selling warning.

On July 9, 2018, 50 days of simple moving average line cuts / lie over the 200days simple moving average line @305.10, signaling long-term buy signal.

The portfolio traded @354 in late February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
13/04/2018	SELL	302.43	305.1	-0.0088	-0.88
9/7/2018	BUY	305.1	354	0.1603	16.03

**CHART NO 7.4: AXIS BANK**



On April 20, 2018, 50 days of simple moving average line cuts / lies below the 200-day simple moving average line @611.24, indicating long-term selling signal.

On August 14, 2018, 50 simple moving average line cuts / lies above the 200-day simple moving average line @541.67 suggest long-term buy warning.

The portfolio traded @714 in late February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
20/04/2018	SELL	611.24	541.67	0.1138	11.38
14/08/2018	BUY	541.67	714	0.3181	31.81

## CHART NO 7.5: CANARA BANK



On February 15 , 2018, 50 days of simple moving average line cuts / lines below the 200-day simple moving average line @353.68, indicating long-term selling signal.

On January 3rd, 2019, 50 days of simple moving average line cuts / lies above the 200days simple moving average line @257.07, indicating long-term buy signal.

The portfolio traded @264.09 in late February 2019.

Here is the result of the signals based on moving average analysis:-

DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
15/02/2018	SELL	353.68	257.07	0.2732	27.32
3/1/2019	BUY	257.07	264.09	0.0273	2.73

**Buy or sell decisions based on calls provided by moving average analysis  
(For long-term)**

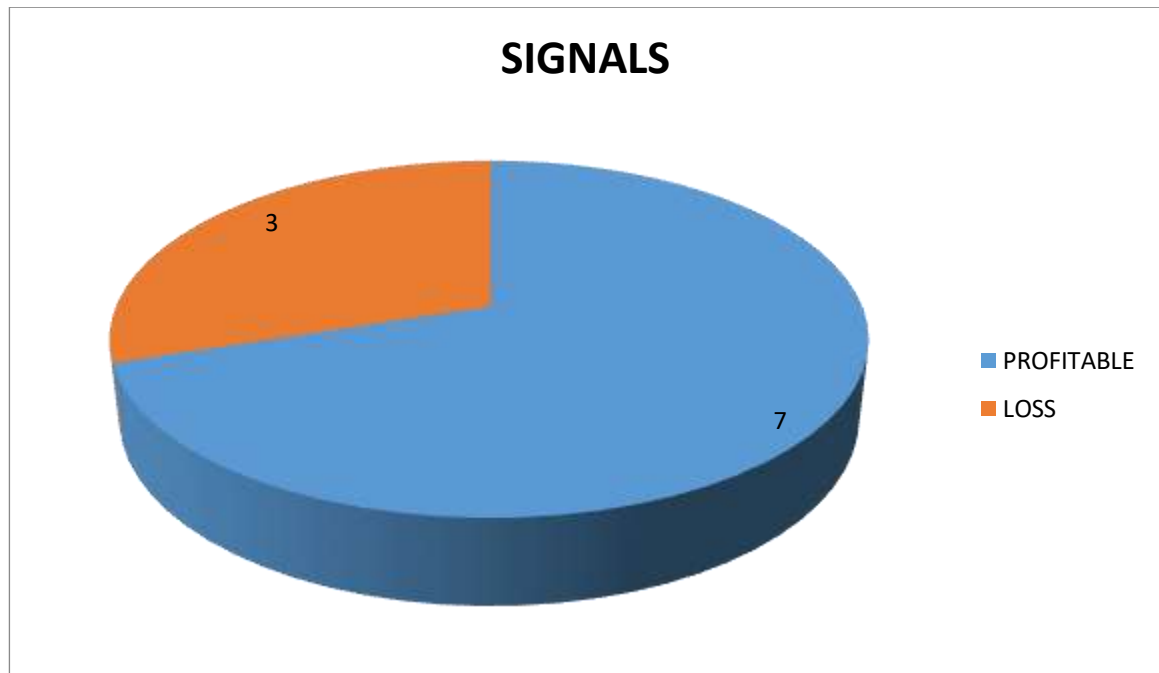
In order to minimize costs, buy signals are used to gain full benefit and sell signals are also beneficial. In terms of finance, avoiding losses often implies one kind of gains, so these signals are really important.

(Buy signal: - to earn profit and sell signal: - to avoid loss.)

**TABLE NO 7: Buy or sell decisions based on calls provided by moving average analysis for long term**

SECTORS	SN	STOCKS	DATE	SIGNAL	PRICE (P0)	END.P (P1)	DEVIATION	PROFIT %
BANKING SCCTOR	1	SBIN	12/3/2018	SELL	291.03	281.04	0.0343	3.43
			30/08/2018	BUY	281.04	278.84	-0.0078	-0.78
	2	HDFC BANK	22/10/2018	SELL	1889.77	1873.52	0.0086	0.86
			2/1/2019	BUY	1873.52	1867	-0.0035	-0.35
	3	ICICI BANK	13/04/2018	SELL	302.43	305.1	-0.0088	-0.88
			9/7/2018	BUY	305.1	354	0.1603	16.03
	4	AXIS BANK	20/04/2018	SELL	611.24	541.67	0.1138	11.38
			14/08/2018	BUY	541.67	714	0.3181	31.81
	5	CANARA BANK	15/02/2018	SELL	353.68	257.07	0.2732	27.32
			3/1/2019	BUY	257.07	264.09	0.0273	2.73

**CHART NO 8: SHOWING FEASIBILITY OF SIGNALS PROVIDED BY MOVING AVERAGE ANALYSIS:**



The chart above reflects the viability of indications for long-term decision making by moving average analyses of the banking sector. 7 out of 10 signals produced profits for the investor and 3 signals did not produce profits, meaning 70 percent precision is given by moving average banking sector research for long-term investment.

Analysis of many of the failures shows that the loss is less than 1 percent. This implies the reliability of this method.

## **CHAPTER-5**

### **SUMMARY OF FINDINGS, SUGGESTIONS, AND CONCLUSION**

#### **5.1 FINDINGS OF THE STUDY**

1. Simple MA analysis for the long term decision making.
2. Exponential MA analysis for short term decision making.

#### **5.2 SUGGESTION**

There are plenty of tools available for both academic research and scientific analysis. When an investor makes use of his own data or data created on the websites, they may decide to invest according to the guidance of the analyst. However, the final challenge needs to be taken up where differences exist.

1. Suggested using exponential moving average (14days and 21 days- closing figure) for short term buy or sell calls.
2. For long term, simple moving average (50days and 200 days) has to be used for buy or sell calls.
3. It may be noted in the above analysis there are few select stocks where signals cannot be detected over more than 2 years. In such cases data related to 3 years historical data needs to be calculated
4. In the long run power sector is not indicating any trends for 1 year. Similarly high volatility is observed in banking sector.
5. RSI technique is also a powerful tool which can supplement the analysis. The same has not been considered and is one of the key limitations of the study.



### **5.3 CONCLUSION:**

The investor are commonly employed in the fundamental and technical analyses when collecting stocks. However, financial literacy is critical for fundamental research,

Few people have it. Very few people. Financial literacy is not necessary for technological study. Investors should be able to interpret and interpret graphs.

Technical analysts are also commonly adopted. Although there are several technological research methods available, the following are quickly measured, performed and adopted.

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## ANNEXURE:

### BALANCE SHEET OF GEOJIT FINANCIAL SERVICES LIMITED:

PARTICULARS	18-Mar	17-Mar	16-Mar	15-Mar	14-Mar
EQUITIES AND LIABILITIES					
SHAREHOLDER'S FUNDS					
Equity Share Capital	23.79	23.55	23.49	23.14	22.84
Total Share Capital	23.79	23.55	23.49	23.14	22.84
Reserves and Surplus	534	488.85	466.88	445.38	411.59
Total Reserves and Surplus	534	488.85	466.88	445.38	411.59
Total Shareholders' Funds	557.79	512.41	490.37	468.52	434.42
Equity Share Application Money	0.02	0.08	0.05	0	0
Minority Interest	54.95	53.22	47.97	40.39	36.73
NON-CURRENT LIABILITIES					
Other Long Term Liabilities	1.56	1.41	2.17	2.45	1.72
Long Term Provisions	4.61	6.74	2.16	1.56	1.35
Total Non-Current Liabilities	6.17	8.15	4.33	4.01	3.07
CURRENT LIABILITIES					
Short Term Borrowings	0	5.5	0	4.54	15
Trade Payables	13.74	10.44	19.31	23.67	15.73
Other Current Liabilities	218.24	226.82	144.07	128.59	214.57
Short Term Provisions	1.07	1.64	0.74	51.98	3.29
Total Current Liabilities	233.04	244.4	164.12	208.78	248.6
Total Capital And Liabilities	851.98	818.26	706.84	721.7	722.82
ASSETS					
NON-CURRENT ASSETS					
Tangible Assets	51.89	51.89	55.04	52.08	48.01
Intangible Assets	7.67	8.48	7.33	8.37	5.93
Capital Work-In-Progress	0	0	0.33	0	0
Fixed Assets	59.56	60.37	62.7	60.45	53.94
Non-Current Investments	2.46	2.86	1.71	1.88	1.7
Deferred Tax Assets [Net]	4.85	3.34	3.39	5.09	5.73
Long Term Loans And Advances	146.57	105.52	123.26	122.64	129.34

Other Non-Current Assets	1.43	0.21	0.26	0.31	0.45
Total Non-Current Assets	214.87	172.31	226.2	225.25	226.04
CURRENT ASSETS					
Current Investments	183.38	161.9	76.39	103.32	112.81
Trade Receivables	136.74	145.89	108.16	124.54	113.81
Cash And Cash Equivalents	260.58	252.49	208.97	204.52	154.79
Short Term Loans And Advances	32	36.19	31.99	29.98	19.37
Other Current Assets	24.41	49.48	55.13	34.09	96
Total Current Assets	637.11	645.96	480.64	496.45	496.78
Total Assets	851.98	818.26	706.84	721.7	722.82
OTHER ADDITIONAL INFORMATION					
CONTINGENT LIABILITIES, COMMITMENTS					
Contingent Liabilities	52.77	188.77	84.91	204.3	174.86
Other Earnings	0	0	16.3	17.32	0
BONUS DETAILS					
Bonus Equity Share Capital	10.61	10.61	10.61	10.61	10.61
NON-CURRENT INVESTMENTS					
Non-Current Investments Unquoted Book Value	2.46	2.86	1.71	1.88	1.7
CURRENT INVESTMENTS					
Current Investments Unquoted Book Value	183.38	161.9	76.39	103.32	112.81