PROJECT REPORT - 17MBAPR407

A STUDY ON TECHNICAL ANALYSIS IN SELECTED SECTORS
AT KARVY STOCK BROKING LTD, HUBLI
BY
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1AY17MBA22
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	EXTERNAL GUIDE
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MARCH-2019

Date: 16TH Feb 2019

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to Certify that **Mr. Lakku .B. Yamakar–** bearing **USN: 1AY17MBA22,** an MBA student of **Acharya Institute of Technology, Bangalore** had done his Major Concurrent Project entitled **"A Study on Technical analysis in selected sectors "** at Karvy Stock Broking Limited, during the period 3rd January 2019 to 16th February 2019 in our Hubli branch under the guidance of Mr. Siddayya Hiremath – Cluster Manager. KSBL, Hubli.

He has completed the project work and submitted the report on the same.

We wish him all the best in his Future Endeavours.

For Karvy Stock Broking Pvt Ltd

Mr.Siddayya Hiremath

Cluster Manager-KSBL Hubli.

ACHARYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Approved by AICTE, New Delhi and Accredited by NBA and NAAC)

Date: 04/04/2019

CERTIFICATE

This is to certify that **Mr. Lakku Babu Yamakar** bearing USN **1AY17MBA22** is a bonafide student of Master of Business Administration course of the Institute 2017-19 batch, affiliated to Visvesvaraya Technological University, Belagavi. Project report on **"A Study on Technical analysis in Selected Sectors at KARVY Stock Brokings Ltd, Hubballi"** is prepared by him under the guidance of **Prof. Om Prakash. C**, in partial fulfillment of the requirements for the award of the degree of Master of Business Administration, Visvesvaraya Technological University, Belagavi, Karnataka.

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Signature of Principal/Dean Academics

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DECLERATION

I, **LAKKU YAMAKAR** hereby declare that the project report entitled "A STUDY ON TECHNICAL ANALYSIS IN SELECTED SECTORS AT KARVY STOCK BROKING LIMITED, HUBLI. Prepared by me under the guidance of **Mr. OM PRAKASH. C. ASST, PROFESSOR DEPT OF MBA**, Acharya Institute of Technology, Bangalore and external assistance by **Mr. SIDDAYYA HIREMATH, C.M, KARVY STOCK BROKING LIMITED, HUBLI**. 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 42 days. I further declare that this project is based on the original study undertaken by me and has been submitted for the award of any degree/diploma from any other university / institution.

Place: BANGLORE   **Signature of the student**

Date: 10/04/2019

ACKNOWLEDGEMENT

I wish to express my sincere thanks to our respected principal, **Dr. Prakash M.R**, beloved dean-academics, **Dr. Devarajaiah R M**, and deep sense of gratitude to **Dr. M. M. Bagali**, HOD, Acharya Institute of Technology, Bangalore for their kind support and encouragement in completion of the internship report.

I would like to thank **Prof. Om Prakash. C.** Asst. Professor, department of MBA Acharya Institute of Technology, Bangalore. And external guide **Mr. Siddayya Hiremath**, C M, Karvy Stock Broking Limited, Hubli. Who gave me golden opportunity to do this wonderful project in the esteemed organization, which helped me to learn various concepts.

Finally, I express my sincere thanks to my parents, friends and all the staff of MBA department of AIT for their valuable suggestions in completing this report.

Place: **BANGLORE**   LAKKU YAMAKAR

Date: 10/04/19   USN: 1AY17MBA22

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EXECUTIVE SUMMARY

This study was undertaken at "Karvy Stock Broking Ltd". At Hubli. Karvy Stock Broking is a top service provider organization and is positioned in the main five in the country. The stock market or capital market provides the industry with a large amount of capital needed by the industry, In this way the whole business and economic development are encouraged, the financial exchange plays an important role in business improvement. More and more people are attracted to the stock market because of the returns they receive compared to bank deposits, saving account mutual funds etc

The project focuses on technical analysis in the information technology, banking, automobile and media industries. It emphasizes how powerful the company is and what strategies investors can take to buy, hold and sell stocks.

Technical analysis is a trading tool that analyzes statistical data collected from trading activities, such as stock trading, price fluctuations, and trading volume to determine trading opportunities. Technical analysts use price movement charts and various analytical tools to assess the strengths and weaknesses of securities. Technical analysis is a term used to determine the process of forecasting future price changes based on historical price fluctuations in inventory schemes.

Technical analysis is based on testing previous price changes to predict future price movements. Just like weather forecasts, the technical analysis does not predict an absolute future. Alternatively, technical analysis can help investors predict how prices will change over time. This analysis applies to shares, indices, commodities, futures contracts or a negotiable instrument whose price is affected by supply and demand.

Technical analysts focus on price history. Technical analysts choose to study two basic market data, price and quantity. Compared with key analysts, technical analysts are mainly anticipating price action in the short term. They are not committed to buying and holding policies.

The pointer utilized in this report is the RSI (Relative Strength Index), which estimates the speed and change of value developments, while MACD (Moving Average Index), which clarifies the connection between two moving normal costs, ROC (Rate Change) communicated as a proportion between an adjustment in one variable with respect to a comparing change in another.

The targets of specialized examination is to make benefit from exchanging by watching market examples and insights, realizing when to enter and leave the market, particularly when it starts to move, settling on the correct exchanging choices.

CHAPTER 1

INTRODUCTION

INTRODUCTION TO THE STUDY

Project work is a part of academic activity of Visvesvaraya Technological University, Belgaum. It is an underlying to cross over any barrier between the information and its application through a progression of development to the understudy of MBA program that enable to achieve knowledge and explore to the industry.

A meaningful six week project has exposed me to the corporate culture at KARVY STOCK BROKING LIMITED at Hubli. This project training served as the right platform to implement the theoretical imbibed concepts in a best possible way.

It was interesting to learn in an organization like KARVY STOCK BROKING LIMITED. This is committed with the society's wellbeing and ethical standards. All though the human resources are grouped into various levels of responsibility, the company keeps an open door policy to encourage free intrapersonal interaction which I believe is real strength of any organization. It exposed to the quality of work culture, timelines and cooperativeness in the company.

The interaction with the company gave an insight and a first experience of the industrial scenario in the competitive environment outside the realms of the company. Learnt how to interact with customers, how to behave with the superiors, subordinates, and how to retain the customers. It helps students to apply their skill in practical field under the guidance of experienced practitioners.

It helps to learn company ethics, organization behaviour, rules, provision, etc., once the students finish the academy students can easily fit to the companies by learning norms through this project program. It boosts confident level among the students. This program adds academic value and ability to earn academic credit. It also gives the opportunity to make valuable future jobs.

All together it was a good learning experience to carry the project in the company like KARVY STOCK BROKING LIMITED and I thankful to all the people who have helped to complete my project, without which the project would not have been success.

1.1 INDUSTRY PROFILE

A stock market, equity market or share market is a collection of stock buyers and stock sellers (a loose network of economic transactions, not a physical facility or discrete entity) of stocks (also known as shares), which represent ownership requirements for the businesses; these may include securities listed on a public stock exchange ans securieties that are only traded privately. Examples of the latter include private company stocks sold to investors through equity crowdfunding funds. The stock exchange lists the shares of common stock and other types of securities, such as Corporate bonds and convertible bonds.

Growth & Development of the Study:

Stock Exchange is a wider term when we start to think about. It plays a vital role in India's economy. It is a place where stock brokers and traders can buy and sell the stocks and securities. It can also be called as a kind of continuous auction. Mainly, the two important Indian Stock Exchange markets are Bombay Stock exchange (BSE) also known as the Bull market and National Stock Exchange (NSE) also known as the bear market. They both play a vital role in the Indian stock market.

Indian Stock exchange market witnessed a boom in 2017. This became easier because of various reasons. Like, India's economic fundamentals improved gradually and the - Government of India seriously intended for the economic reforms.

Indian equities have seen unusually high volatility in CY2018. BSE Sensex and NSE Nifty managed to return 3 to 6 % only. The year 2018 was not good for Indian stock market. Sensex was down 8.39 points or 0.02% at 36068.33 and Nifty up 2.60 points or 0.02% at 10862.55

National Stock Exchange (NSE):

Currency: Indian rupee (₹)

CEO : VikramLimaye (17 Jul 2017–)

Indices : NIFTY 50; NIFTY NEXT 50; NIFTY 500

Founded : 1992, Mumbai

The National Stock Exchange of India Limited is India's leading stock exchange located in Mumbai . The NSE was formed in 1992 as the first demutualized electronic exchange in the country NSE was the first exchange in the country to provide a modern, fully automated screen-based electronic trading system. According to the World Federation of Exchanges (WFE), the National Stock Exchange of India (NSE) is India's leading stock exchange between January and June 2018 and the second largest stock exchange in the world. NSE launched electronic screen-based transactions in 1994, derivatives trading (in the form of stock index futures) and online trading in 2000, each of the first in India.

NSE has a fully integrated business model including our exchange listings, trading services, settlement services, indices, market data sources, technology solutions and financial education products.

NSE is a pioneer in technology, ensuring the reliability and performance of its systems through innovative culture and technology investments. NSE believes in the scale and breadth of its products and services, and its continued leadership in multiple asset classes in India and around the world makes it highly reactive market demand and change, and providing innovation in trade and non-trade businesses, providing high quality data and services to market participants and customers.

NSE also played an vital role in the creation of National Securities Depository Limited (NSDL), which allows investors to securely hold and transfer their stocks and bonds electronically. It also allows investors to hold and trade as little as one or bond.

This not only makes it easy to hold financial instruments, but more importantly, it eliminates the need for paper documents and greatly reduces counterfeit or fake certificates and fraudulent events that had plagued the Indian stock market. The security of NSDL combined with the transparency provided by NSE, lower transaction price and efficiency, greatly enhances the attractiveness of the Indian stock market to domestic and international investors.

NIFTY50:

The NIFTY 50 index is National Stock Exchange of India's benchmark broad based stock market index for the Indian equity market. It represents the weighted average of 50 Indian company stocks in 12 industries, one of the two major stock indices used in India, the other being the BSE sensex.

Nifty is owned and managed by India Index Services and Products Inc. (IISL), a wholly owned subsidiary of NSE Strategic Investments Limited. The International Institute of Space Law and Standard & Poor's signed a marketing and licensing agreement for the co-branded stock index until 2013. The Nifty 50 was launched on April 1, 1996 and is one of Nifty's many stock indices.

The NIFTY 50 Index has become India's largest single financial product, with an ecosystem of exchange-traded funds (domestic and offshore), exchange-traded futures and options (NSE in India, CME abroad and Singapore Stock Exchange), Other index funds and over-the-counter derivatives (mainly offshore). NIFTY 50 is the most actively traded contract in the world. The WFE, IOMA and FIA surveys support NSE leadership.

NIFTY 50 covers 12 industries in the Indian economy (as of October 7, 2017) and provides investment managers with a portfolio of investments in the Indian market. During the 2008-12 period, due to the rise of NIFTY Bank, NIFTY IT, NIFTY Pharma, NIFTY SERV SECTOR, NIFTY Next 50 and other industry indices, the NIFTY 50 50 index's share of NSE market value decreased from 65% to 29%. NIFTY 50 The index gives 29.70% weight to financial services, industrial manufacturing has a weight of 0.73%, and the agricultural sector has zero weight.

Bombay Stock Exchange (BSE):

Talking about the Bombay Stock Exchange, the Dalal Street investors bagged approximately five million crores. By this achieved gain, BSE's market capitalization is 157 lakh crore currently. The experts declared that the last year could also be termed as that of small and mid-cap stocks. This is because, the BSE's small–cap index is up by 60 per cent and mid cap index is up by 48 per cent. Whereas the pharma stock lost substantial ground, the real estate stocks made a distinctive comeback.

The year 2017 also witnessed as many as 153 initial public offers hitting the Indian stock market and also raised 11.6 billion US dollars. An EY report said that this IPO activity "looks well" for the year 2018 also. Return of foreign institutional investors will create a bullish investment climate. India will be made a highly attractive emerging market in the coming time, by the combination of primary market growth and overall growth. However, the market players declared that the coming year might not be as smooth as the previous one. At the time where India's revenue collection is declining, the Government has increased its borrowing from other nations. This is a major increasing macro concern along with growing fiscal deficit. Also the prices of crude are rallying leading to a huge rise in inflation. Inflation sometimes leads to insidious impact on the stock market. When there is uncertainty, the risk premium tends to increase, which leads to higher expected returns from the stock market. If inflation will keep on increasing, the minimum return on stock investment will also increase by which the market valuation will become less. If the estimated earnings will not reach to a certain break up point share prices will continue to fall. Overall, it can be said that last year the market was dominated by the bull whereas this year it is likely to be overtaken by the bear market.

1.2 COMPANY PROFILE :

Introduction :

On an important night in the summer of 1982, five young people working for a well-known chartered accounting firm decided that it was time for them to create a company that would soon become a landmark in the financial services sector.

They come from the ordinary middle class background. They had two assets; one was their education and the other is an unstoppable desire for success. They had many against them: the environment is not conducive to entrepreneurship; technology is not fully supported, financial markets are largely unregulated; their headquarter is in Hyderabad, and most of the major players in the financial sector are in Mumbai or other subways, while wolves then at the door. The possibility seems to be insurmountable. Over the years, these extraordinary young people's attitude of "never say die" has placed them in a good position. They insisted on their dreams, burning midnight oil, embracing technology, letting it work for them, and through pure determination, eventually overcame all obstacles. The first is the registry business, then the brokerage business, and the rest becomes a lesson for every young person to follow. Since its inception in the financial sector for over 30 years, the Karvy Group has a wealth of experience and a wide range of services. Known for its integrity, quality service and customer-centric approach, Karvy has created a niche market for itself. The group provides stockbroking, registrars and transfer services, data analysis, data management and more. We are proud to be able to connect with you in every area of your life through our various services.

Karvy Stock Broking is the brokerage division of the Karvy Group, providing practical, customizable solutions for corporate, institutional and individual investors. With cutting-edge technology and professional management, we have always thrived and become the leader in the industry. Our comprehensive trading account helps clients deal with a variety of investment paths in an integrated manner, providing them with easy trading convenience.

The Karvy Group was founded in 1983 and is located in Hyderabad, India. Karvy is one of the best players in almost every area of its operations. Karvy Computer share Limited is India's largest registrar and transfer agent, with a customer base of nearly 500 blue chip companies, managing accounts with more than Rs 2 crore. Karvy Stock Brokers Limited is a member of the National Stock Exchange of India and the Bombay Stock Exchange and is one of the top five stockbrokers in India. With more than 6,000,000 active accounts, it ranks among the top five Indian depository participants registered with NSDL and CDSL. Karvy COM trades, NCDEX and MCX members rank among the top three commodity brokers in the country. Karvy Insurance Brokers is registered as a broker at IRDA and ranks among the top five insurance agents in the country. Registered as an agent at AMFI, Karvy is also one of the highest mutual funds. Managed Rs 5,000 crore. Karvy Realty Services started in 2006 and soon became a broker who added value in the real estate sector.

Karvy has 575 offices over 375 locations across India and overseas at Dubai and New York. More than 9,000 highly qualified employees Karvy.

KARVY is a comprehensive integrated financial services provider, ranking among the top five in all business sectors, serving more than 16 million individuals of different identities and providing investment services to more than 300 companies in India. KARVY covers all financial services such as stockbroking, depository participants, financial product distribution - mutual funds, bonds, time deposits, stocks, Insurance brokers, commodity brokers, personal financial advisory services, commercial banking and corporate finance, equity placement, IPO, etc. Karvy has a professional management team that is involved in the technical, operational and research fields of all walks of life.

The birth of Karvy in 1981 was small. It began with a small group of chartered accounting firms' visions and businesses, and they founded the flagship company Karvy Consultants Limited. It began with consulting and financial accounting automation and entered the registration and sharing accounting field in 1985. Since then, they have grown with their experience and the highest level of expertise... providing better service and new services. In order to innovate, diversify and in the process, Karvy has become one of India's leading integrated financial services companies.

Therefore, in the past 20 years, Karvy has gone through the path of success and established a reputation as an integrated financial service provider to provide a wide range of services. They achieve this through quality service routes, breakthrough service innovations, service diversity and ultimately service as a whole.

1.3 PROMOTORS :

Table No : 1.1 showing promotors of the company

Name:	Karvy Stock Broking Limited
Name of Directors:	- Mr C. Parthasarathy - Chairman and Managing Director - Mr M. Yugandhar - Managing Director - Mr M. S. Ramakrishna – Director - Mr Rajiv R. Singh – CEO Stock Broking
Line of Business:	Financial Service Group
Established:	1983
Contact no:	0836-235 3961

1.4 VISION, MISION AND QULAITY POLICY

Vision of Karvy:

To achieve and sustain market leadership, Karvy shall aim for complete customer satisfaction, by combining its human and technology resources, to provide world class quality services. In the process Karvy shall strive to meet and exceed customer's satisfaction and set industry standards.

Mission of Karvy:

Our mission is to be a leading, preferred services provider to our customers, and we aim to achieve this leadership position by building an innovative, enterprising and technology driven organization which will set the highest standards of service and business ethics.

Quality Policy:

To achieve and retain leadership, Karvy shall aim for complete customer satisfaction, by combining its human and technological resources, to provide superior quality financial services. In the process, Karvy will strive to exceed Customer's expectations.

1.5 PRODUCT/ SERVICE PROFILE:

The Karvy Group is the premier integrated financial services provider and ranks among the top five in the country in its business unit. The group serves more than 70 million individual investors of different identities and provides investment services to more than 600 companies. The Karvy Group has established its own business through more than 450 branches (or 1,000 offices) covering more than 600 towns.

Karvy covers all financial services, namely stockbrokings, deposit participants, financial product distribution (including mutual funds, bonds and time deposits), commodity brokerage, personal financial advisory services, commercial banking and corporate finance, wealth management, NBFC, and more.

The Group has professional management and is involved in the technical, operational and research fields throughout the financial industry. The Karvy Group has evolved over the past three decades, and today it assumes a lot of avatars. Broadly speaking, the group pursues two lines of business and can be graphically represented as follows:

Equity Derivatives	Mutual fund	Currency
Commodity	Margin Funding	Online Investment Platform
Tax Saving Investment	PAN card	

Figure 1.1 showing product and service profile

Products Provided by the Karvy:

➤ **Equity:**
Karvy website (karvyonline.com) offers various options while trading in equities such as Delivery, Day trading, Buy Today Sell Tomorrow (BTST), After Market Order (AMO), Market Order, Limit Order, Cover Order, Basket Order and Bracket order.

➤ **Future and Options:**
This instrument is a great tool for speculation and its provides a good leverage opportunity.

➤ **Currency:**
Currency Derivatives has also emerged as an important and new asset class for investors.

➤ **Commodity:**
Commodities are goods that are normally used as inputs in production of other goods and services.

➤ **Mutual Funds:**
Karvy provide a platform to invest in Mutual Funds in a hassle-free, simple and convenient manner

➤ **Exchange Trading Funds:**

Exchange-traded funds or exchange-traded funds are securities that are traded on exchanges, such as individual stocks.

➤ **Margin Funding:**
The funds that brokerages arrange to finance investors share purchases.

➤ **IPOs:**

An initial public offering (IPO) is the sale of securities to the public in a primary market.

➤ **NCDs / BONDs:**

Non-convertible bonds (NCDs) are bonds that cannot be converted into stocks or shares.

> **Fixed Deposits:**

Corporate time deposits refer to corporate deposits with a fixed rate of return over a fixed period of time.

1.6 ORGANIZATION STRUCTURE:
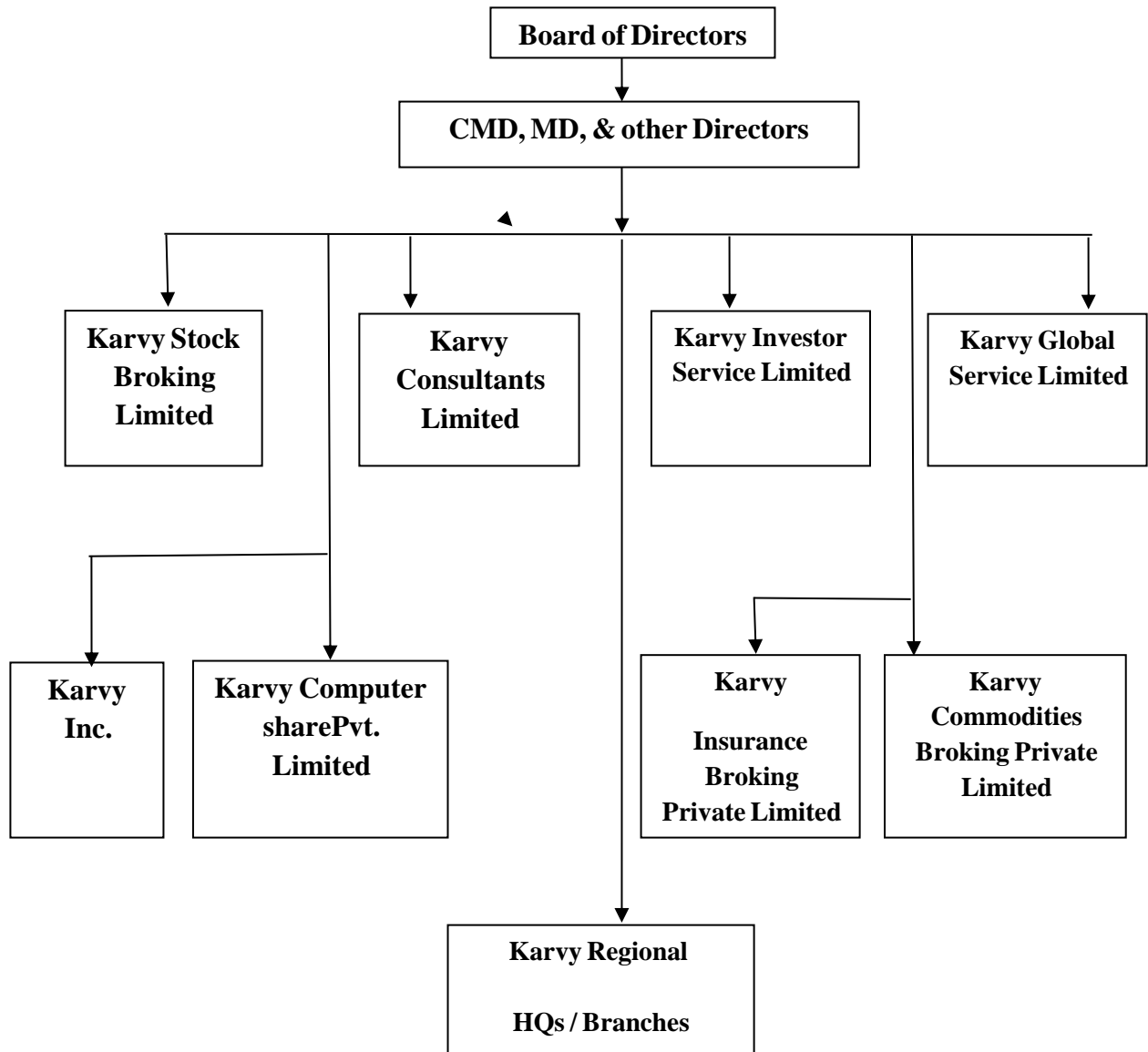
Figure 1.2 showing organization structure of the company

Karvy's organizational structure can be seen as completing departmental operations and supporting functional departments. Below the Operations Divisions there are sub divisions namely Registry and Investor Services (RIS), Depository Participant (DP), Broking Services, Financial Product Distribution (FPD).

Below the Support Functions, there are sub divisions namely Accounts, System, Human Resource Development, and Administration, Purchase & Stores. The heads of these departments control the daily affairs of the company. These department heads are directly reports to the director. Board of Directors directly appoints department heads. The departmental heads does place a responsibilities among various positions.

In Karvy, Departments are inter-related. Majority of decisions are taken by the board members. While taking important decision the department managers are also consulted and their suggestions are also considered. Hence entering style of management is followed in Karvy

1.7 COMPETITOR'S INFORMATION:

Karvy serves a wide range of all financial products such as consulting services, mutual funds, bonds, insurance etc, so all the companies who offer these services are the competitors of the Karvy. There are many competitors for Karvy on this basis and almost all of them offer the services which Karvy offers.

Few major competitors are:

1. Geojit financial services Limited
2. India Infoline Financial Limited
3. Angel Broking Limited
4. ICICI Securities Limited
5. Reliance Money Limited
6. Kotak securities Limited
7. Eastern financiers
8. Zerodha

1.8 SWOT ANALYSIS:

It is often used for business development and marketing, but it is also a great tool for long-term investment strategies. You should carefully analyze these points when making any investment decisions about your company. As such, here are different aspects to consider when making

Strength:

- Qualified and experienced workforce.

- Strong Customer Relationship.

- Wide spread branches and brokers network.

- Company using updated software (Zeus) to maintain client's transactions properly.

- Strong communication network.

- Differentiated products

- Good Brand image.

- Company quickly adapt the new technology.

Weakness:

- No presence in rural areas.
- Brokerage cost is high compare to competitors.

Opportunities:

- Marketing at rural and semi-urban areas.

- Positive outlook of people towards financial products.

- Earnings of urban youths.

Threats:

- Competition from other stock broking company.

- Market Uncertainty.
- Govt rules and regulations.
- Changes in political and economic conditions.

1.9 FUTURE GROWTH AND PROSPECTS

Knowledge and Research Resources

Constitution:
- Experience and comprehensive research team in Hyderabad and Mumbai more than 35 members strong research team for equities and exclusive research team for commodities futures.

Operational Verticals:
- Research on multiple verticals as well as report generation for ad-hoc research requirement, generation and distribution of up to date and active calls for our customers and affiliates in various market segments (cash and future/options) and calls issued on multiple verticals-intraday recommendations positional calls and hedge strategies.

1.10 FINANCIAL STATEMENT:

PARTICULARS	2016	2017	2018
Current Ratio	0.81	0.92	0.94
Net Profit Ratio	10.78	3.29	12.27
Debt/Equity Ratio	2.40	2.68	2.25
Current Assets Turnover Ratio	0.45	0.41	0.44
Total Asset Turnover Ratio	0.16	0.14	0.15

1.2 Table showing Ratio Analysis of the Company

INTERPRETATION:

Current Ratio:

Current ratio increased in the 2018 compared to 2016 and 2017 i.e. 0.94. It shows increase in liquidity position and there is sufficient of working capital and the position is satisfactory. And also it shows the company is better financial strain.

Net Profit Ratio:

Net profit ratio increased in the year 2017 compared to 2016. It shows company is able to control its cost.

Debt/Equity Ratio:

Debt equity ratio has gradually decreased that shows the company has paid off its debt in the year 2018.

Current Assets Turnover Ratio:

Current asset turnover ratio increased in the year 2018 compared to 2017 it shows that the company is more efficient it indicates the company is using its assets efficiently to generate sales.

Total Asset Turnover Ratio:

The total asset turnover ratio of 0.16 times implies the Karvy Stock Broking Private Limited generates a sale of Rs.0.16 for one rupee investment in fixed and currents together.

CHAPTER 2
CONCEPTUAL BACKGROUND AND LITERATURE REVIEW

2.1 THEORITICAL BACKGROUND OF THE STUDY

INTRODUCTION TO TOPIC:

A Study on Technical Analysis in selected sectors at Karvy Stock Broking Ltd

TECHNICAL ANALYSIS:

The movements in share prices are analysed predominantly through two approaches, namely, Fundamental analysis and Technical analysis. In fundamental approach, share price are analyzed on the basis of economic .industry and company statistics. If the price of share is lower than the intrinsic value, an investor will buy it. If the price is higher than the intrinsic value, he will sell it and earn profit. Technical analysis, involves the study of stock price movement in the security market. If there is an upward trend in price movement, an investor may purchase the scrip. With the onset of fall price, he may sell it and move the scrip. Both fundamental and technical analysis aim at ensuring a good return on investment.

Technical analysis is a trading tool that analyzes securities and attempts to predict future trends by analyzing statistics collected from trading activities, such as price changes and trading volumes.

Technical analysts study the behaviour of the price of the stock to determine the future price. The main goal of technical analysis are to be able to profit from trading by observing market patterns and statistics, to know when to enter and exit a market, especially when it starts to shift, and to not let emotions impact on trading decisions.

The importance of technical analysis is that the investor is capable of conducting a thorough technical analysis of stock charts. Technical analysis is a term used to determine the process of forecasting future price movements based on the past price movements within stock charts.

Technical analysis is the process of identifying trend reversal at an early stage to formulate the buying and selling strategies. Using several indicators, an investor analyses the relationship between price-volume and supply-demand for the overall market, as well as the individual market.

A technical analyst, is a securities researcher who analyses investments based on past market prices and technical indicators. Technicians believe that short-term price motions are the result of supply and demand forces in the market for a given security. Instead of trying to measure the underlying value of securities, technical analysts use stock charts to identify patterns and trends that indicate what the stock will do in the future.

Technical analysts or technicians focus on charts of price movement and various analytical tools to evaluate a security's strength or weakness. Technical analysis uses models and trading rules based on price and volume changes, such as relative strength index, moving average, regression line, inter-market and intra-market price correlation, business cycle, stock market cycle, or recall by chart pattern.

A primary principle of technical analysis is that a market's price reflects all related information impacting that market. As a result, technical analysts look at past records of securities or commodity trading patterns rather than external drivers such as economics, fundamentals, and news events. It is believed that price action move to repeat itself due to the collective, patterned behaviour of investors. Hence technical analysis concentrate on identifiable price trends and conditions.

Technical analysts trust that investors collectively repeat the behavior of the investors that preceded them. To a technician, the emotions in the market may be illogical, but they exist. Because investor behavior repeats itself so frequently, technicians believe that recognizable (and predictable) price patterns will develop on a chart. Identification of these patterns can allow the technician to select trades that have a higher probability of success. Technical analysis is not restricted to charting, but it always considers price trends.

Technical analysts also use a variety of market indicators, some of which are mathematical changes in prices, including up and down, up/down data, and other inputs. These indicators are used to help acquire whether an asset is trending, and if it is, its probability of its direction and of continuation. Technicians also look for relationships between price/volume index and market indicators. Examples include the relative strength index, and MACD.

Technical analysis is often contrasted with fundamental analysis, the study of economic factors that affect the way investor's price financial markets. Technical analysis holds that prices already indicate all such trends before investors are aware of them. Uncovering those trends is

what technical indicators are planned to do, imperfect as they may be. Fundamental indicators are subject to the same constraint, naturally. Some traders use technical or fundamental analysis exclusively, while others use both types for trading selections which conceivably is the most logical approach. Users of technical analysis are generally called technicians or market technicians. Some prefer the term technical market analyst or market analyst. An older term, chartist is sometimes used, but as the discipline has expanded and rationalize, the use of the term chartist has become less popular, as it is only one aspect of technical analysis.

Characteristics:

Technical analysis is based on price and transaction volume transformation implementation models and trading rules, such as relative strength index, moving average, regression, inter-market and intra-market price correlation, cycle or usually by identifying chart patterns.

Technical analysis stands in opposite of fundamental analysis approach to security and stock analysis. Technical analysis analyses price, volume and other market information, whereas fundamental analysis looks at the actual information of the company, market, currency or commodity. Most large brokerage, trading group, or financial institution will usually have both a technical analysis and fundamental analysis team.

Technicians believe that investors collectively repeat the behavior of the investors that introduce them. "Everyone wants to go to the next Microsoft," "If the stock reaches $50 again, I will buy it," "The technology of this company will completely change its industry, so this stock will soar" - these are It is an example of investor sentiment retelling itself. To a technician, the sentiment in the market may be irrational, but they exist. Because investor behavior repeats itself so often, technical analyst believe that recognizable (and predictable) price patterns will develop on a chart.

Technical analysis is not limited to charting, but it always evaluates price trends. For example, many technicians monitor surveys of investor emotion. These surveys display the attitude of market participants, specifically whether they are bearish or bullish.

Technical analysts use these surveys to help determine if trends will continue or if they will reverse; when surveys report extreme investor sentiment, they are most likely to expect changes. For example, a survey showing a huge bullishness confirms that the uptrend may be reversed - provided that most investors are optimistic that they have bought the market (expected prices will rise). And because most investors are bullish and investing, it is believed

that few buyers follow. This leaves more capable sellers than buyers, despite the bullish sentiment. This recommends that prices will trend down, and is an example of contrarian trading.

Important terms used in the Technical analysis

Support and resistance are price levels at which movement should stop and opposite direction. Suppose support/resistance as levels that act as a floor or a ceiling to future price movements.

Supports- A price level below the current market price, at which buying interest should be able to overcome selling pressure and thus keep the price from going any lower.

Resistance - A price level above the current market price, at which selling pressure should be strong enough to overcome buying pressure and thus keep the price from going any higher.

One of two things can happen when a stock price comes near a support/resistance level. On the one hand, it can act as a opposite point.

Technical analysis has the following assumptions:

• Interactions of the supply and demand determine the market value of the scrip. The market discounts everything. The price of the security quoted state the hopes, fear and inside information of the market players. Inside information on the issue of bonus shares and the right issues may support the prices. The loss of earnings ad information regarding forthcoming labour problems may results in a fall in prices. These factors may cause a shift in demand and supply, changing the direction of the trends.

• The market always moves in a trend. Except for minor differences, the stock prices moves in trends. The price may create definite pattern too. The trend may either increase or decrease. It continues for some time and differences then reverses.

• It is said that history repeat itself and this is so true in stock market. In a rising market, the investor's psychology is positive and they purchase shares and greater volumes, driving the prices higher, In a downward, they may be especially keen to get out of the market by selling the shares, thus plunging shares prices .Technical analysts believe that past prices predict the future.

Tools used for the study:

Chart patterns

- Line charts
- Japanese candlestick chart

Indicators of the study

- Relative strength index(RSI)
- Rate of change (ROC)
- Moving average convergence divergence (MACD) indicator

1. **RELATIVE STRENGTH INDEX (RSI)**

The Relative Strength Index (RSI) is a technical measure used in the technical analysis of financial markets. It is calculated to chart the present and historical strength or weakness of a market based on the closing prices of a recent trading period. The indicator should not be unbalanced with relative strength.

The RSI is categorized as a momentum vary, measuring the velocity and magnitude of directional price movements. Impulse is the rate of the rise or fall in price. The RSI measures momentum as the ratio of higher closes to lower closes: stocks which have had more or stronger positive alternatives have a higher RSI than stocks which have had more or stronger negative changes

RSI was developed by Wells Wilder. It is an oscillator used to identify the intrinsic technical strength and weakness of a particular scrip or market. RSI can be calculated for scrip by assume the following formula.

$$\textbf{Relative strength index} = \textbf{100} - \left[\frac{\textbf{100}}{\textbf{1} + RS}\right]$$

$$RS = \frac{\textbf{Average gain per day}}{\textbf{Average loss per day}}$$

RSI can be calculated for any numbers of days depending on technical analysts and the time frame of trading adopted in a particular stock market. RSI is calculated for 5,7,9, and 14 days.

If the period considered is longer, the probability of getting the wrong signals reduced. Reactionary or sustained rise or fall in the price of the scrip is foretold by the RSI.

Monthly data of INFY used f or RSI. The RSI is most typically used on a 30 days timeframe, calculated on a scale from 0 to 100, with high and low levels marked at 70 and 30, respectively. Shorter or longer timeframes are used for alternatively shorter or longer outlooks. More maximal high and low levels—80 and 20, or 90 and 10—occur less frequently but indicate stronger momentum.

Figure 2.1- Showing Over Sold and Over Bought

Source of data : Zerodha Kite Application

Five uses of the Relative Strength Index:

1. **Tops and Bottoms.** The Relative Strength Index (RSI) usually tops above 70 and bottoms below 30. It usually categorize these tops and bottoms before the underlying price chart.

2. **Chart Formations.** The Relative Strength Index generally forms chart patterns such as head and shoulders or triangles that may or may not be visible on the price chart.

3. **Failure Swings.** (also called as support or resistance penetrations or breakouts). This is where the Relative Strength Index (RSI) exceed a previous high (peak) or falls below a recent low (trough).

4. **Support and Resistance.** The Relative Strength Index display, sometimes more clearly than price themselves, levels of support and resistance.

5. **Divergences.** As discussed above, separation arise when the price makes a new high (or low) that is not confirmed by a new high (or low) in the Relative Strength Index. Prices usually correct and switch in the direction of the Relative Strength Index.

2. RATE OF CHANGE (ROC)

Rate of change indicator, or the ROC, measures the rate of change between the current price and the price "n" numbers of the days in the past. ROC helps in determine the over brought and oversold position in scrip. It is also useful in identifying the trend reversal. Closing prices are used to calculate the ROC. Daily closing price are used or the daily ROC and weekly closing price for weekly ROC. Calculation of ROC for 12 weeks or 12 months is most popular.

The Rate of Change (ROC) indicator, also known as momentum, is a pure momentum oscillator that measures the percentage change in price from one period to the next. The ROC estimates that the current price is compared to the price before the "n" period.

The Rate of Change (ROC) indicator evaluates the percentage change of the current price as compared to the price a certain number of periods ago.

The volume rate of change index is used to gauge the volatility in a security's volume. Rate of change is a strong indicator when evaluate a security's capacity to push through major resistance.

Procedure:

ROC can be calculated on two ways. In the 1st method, the current closing price is expressed as a percentage of the 12 days or weeks in the past. Suppose the price of AB Company's share is ₹12 and price 12days ago was ₹10 then the ROC is obtained by using the equations.

12/10*100 =120per cent.

In the 2nd method, the percentage variation between the current price and the price 12days in the past is calculated. In this method, both positive and negative values can be arrived at.
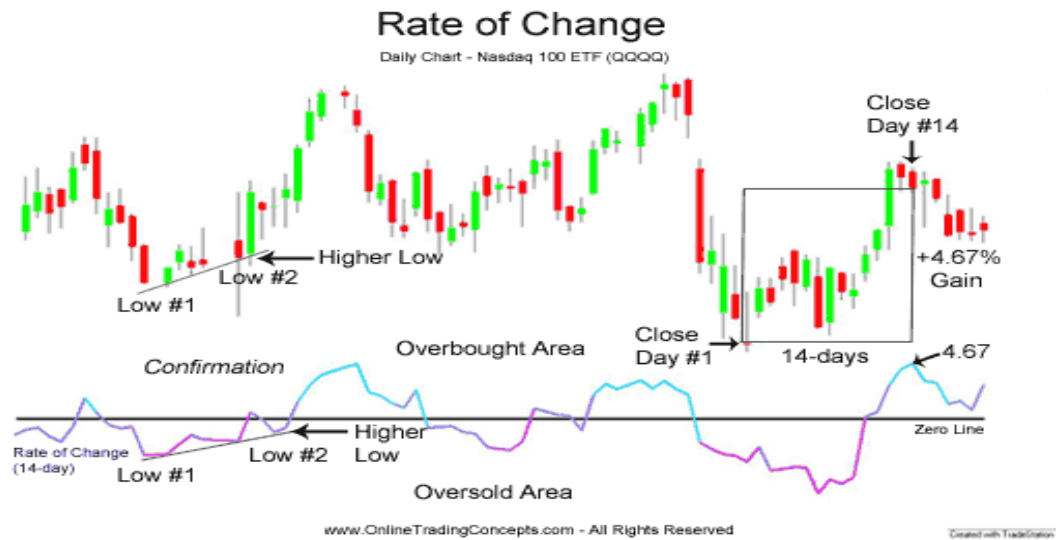
Figure 2.2- Showing Rate of change

Source of data : Google

3. MOVING AVERAGE CONVERGENCE DIVERGENCE (MACD) INDICATOR:
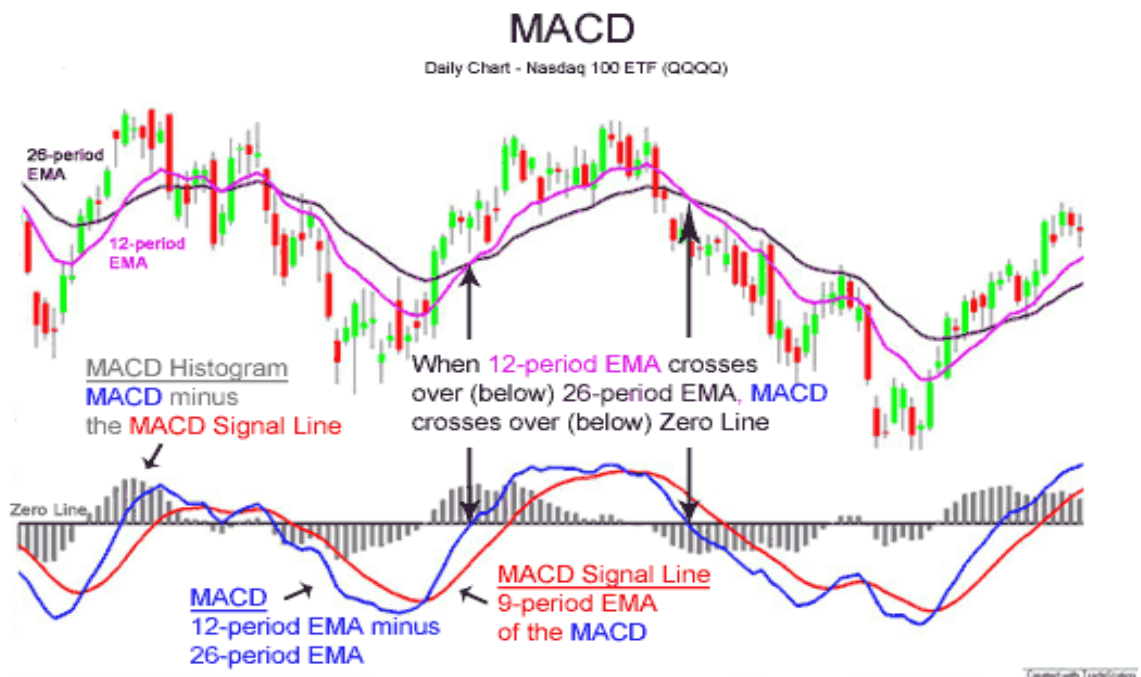
Figure 2.3- Showing moving average Convergence and Divergence

Source of data : Google

Moving average convergence divergence (MACD) is the gap between two exponential moving averages. It measures the convergence and divergence between two exponential moving averages of varying periods, short – term and long-term exponential moving averages are calculated using closing prices. The Moving average convergence divergence considers the difference between the short term and long term exponential moving averages. Daily or weekly moving averages are also calculated. The 12-days and 26- days exponential averages and 12-days and 48- days exponential moving averages are common traders.

The Moving average convergence divergence (MACD) is the short term exponential moving averages (SEMA) minus the longer- term exponential moving averages (LEMA). If the value of SEMA is more than that of LEMA, the MACD is positive and vice versa. If both values are equal, the MACD will be zero.

$$\text{Moving average convergence divergence (MACD)} = 12\text{days EMA} - 26\text{days EMA}$$

Convergence takes place when moving averages moves towards each other. Divergence occurs when the shorter and longer moving averages moves away from each other. Usually, changes that occur in MACD are due to changes in the short-term moving. Further, the SEMA changes faster than the LEMA (longer exponential moving averages). The longer moving averages (26days) are slow and less reactive to price changes in the underlying stocks or index.

- The zero contours are the centre line and MACD line oscillates above and below this lines.
- When the MACD crosses over the zero line, it shows that the SEMA has crossed the LEMA.
- The direction of the moving averages crossover zero shows the direction of the price movement.
- The positive value of the MACD indicates that SEMA is above the LEMA and rising price trends.
- The negative MACD values show that SEMA is below the LEMA and declining trends.

MACD signal line: The signal line is trigger line that signals buy or sell strategy .when the MACD penetrates the signal line from below and moves above, it gives a buy signal. Likewise when it falls below the MACD signal line , it indicates a bearish market.

$$Signalline\ =\ 9days\ EMA\ of\ MACD\ line.$$

- When the MACD crosses the signal line from below ,it is a bullish crossover
- When the MACD crosses the signal line from above ,it is a bearish crossover
- Depending on the strength of the movement , the crossover may be for a few days or few weeks.

MACD histogram, The MACD-histogram is the difference between the MACD value and the signal line (EMA) values. The change in the MACD histogram occurs before the change occurs in MACD. It shows trend changes earlier than the MACD signal line. Sometimes, it may cause more false signals. A technical chart usually gives the MACD histogram along with the MACD indicators. The MACD histogram helps to identify the centre line crossovers and divergence without difficulty.

$$MACD\ histogram\ =\ MACDline - Signalline$$

The following points about the MACD histogram should be noted:

- The MACD histogram crosses the zero line when MACD crosses the signal line(EMA)
- The value on the MACD histogram is positive when the value of MACD is greater than the value of the signal line.
- The value on the MACD histogram is negative when the value of MACD is lesser than the value of the signal line
- When the value of MACD histogram is above the zero line, it is buy signal
- When MACD histogram intersects the zero line downwards with negativevalues, it s sell signal.

OVERVIEW OF SELECTED SECTORS

1. INFORMATION TECHNOLOGY

The global sourcing market in India continues to increase at a higher pace compared to the IT-BPM industry. In 2017-18, the global IT and ITeS market (excluding hardware) reached $185-190 billion, while the global procurement market grew 1.7 times to $173-178 billion. India remained the world's top sourcing destination in 2017-18 with a share of 55 per cent. Indian IT & ITeS companies have set up over 1,000 global delivery centers around 200 cities in the world.

More importantly, the industry has led the economic evolution of the country and altered the perception of India in the global economy. India's cost competitiveness in providing IT services is about three to four times cheaper than in the US and remains the mainstay of its USP (Unique Selling Proposition) in the global sourcing market. However, India is also gaining distinction in terms of intellectual capital with several global IT firms setting up their innovation centers in India.

The IT industry has also created outstanding demand in the Indian education sector, especially for engineering and computer science. The Indian IT and ITeS industry is divided into 4 major parts – IT services, Business Process Management (BPM), software products and engineering services, and hardware.

India has come out on top with the highest proportion of digital talent in the nation at 76 per cent compared to the global average of 56 per cent!

The internet industry in India is likely to double to reach US$ 260 billion by 2020, growing to 7.5 per cent of gross domestic product (GDP). The number of internet users in India is expected to reach 730 million by 2020, encourage by fast adoption of digital technology, according to a report by National Association of Software and Services Companies (NASSCOM).

Indian IT exports are projected to increase at 7-9 per cent in 2018-19 to US$ 135 billion, in addition to adding 130,000-150,000 new jobs during the same period.

Indian IT and BPM industry is expected to grow to US$ 350 billion by 2025 and BPM is expected to account for US$ 50-55 billion out of the total revenue.

e-commerce market in India is set to grow at 30 per cent annually to hit US$ 200 billion gross merchandise value by 2026.

Indian technology companies expect India's digital economy to have the ability to reach US$ 4 trillion by 2022, as against the Government of India's estimate of US$ 1 trillion.

Rise in mobile-phone penetration and decrease in data costs will add 500 million new internet users in India over the next 5 years creating opportunities for new businesses, as per private equity and venture capital firm Omidyar Network.

Digital payment in India is expected to grow from 32 per cent in 2013-14 to 62 per cent in 2017-18 in terms of volume of transactions.

Employees from 12 Indian start-ups, such as Flipkart, Snapdeal, Makemytrip, Naukri, Ola, etc., have built 700 start-ups themselves, expanding the Indian startup ecosystem. India ranks third in the global start-up ecosystem with more than 4,200 start-ups.

Total spending on IT by banking and security firms in India is expected to grow 6.7 per cent year-on-year to US$ 89 billion by 2019!

India's Personal Computer shipment advanced 11.4 per cent year-on-year to 9.56 million units in 2018 on the back of rise in the quantum of large projects.

The public cloud services market in India is slated to grow 35.9 per cent to reach US$ 1.3 billion according to IT consultancy, Gartner. Increased penetration of internet (including in rural areas) and rapid emergence of e-commerce are the main drivers for continued growth of data centre co-location and hosting market in India. The Indian Healthcare Information Technology (IT) market is valued at US$ 1 billion currently and is expected to increase 1.5 times by 2020. India's B2B (Business to Business) e-commerce market is expected to reach US$ 700 billion by 2020 whereas the business to consumer (B2C) e-commerce market is expected to reach US$ 102 billion by 2020.

Cross-border online shopping by Indians is expected to increase 85 per cent in 2017, and total online spending is projected to rise 31 per cent to Rs 8.75 lakh crore (US$ 128 billion) by 2018!!!.

India is the topmost off shoring destination for IT companies across the world. Having proven its capabilities in delivering both on-shore and off-shore services to global clients, emerging technologies now offer an entire new range of opportunities for top IT firms in India. US$ 150

billion Indian IT industry's export revenue to grow at 7-8% and domestic market revenue is projected to grow at 10-11 per cent in 2018-19.

2. BANKING SECTOR

The banking sector has been playing main role from last couple of years, throwing up huge opportunities for wealth creation on the way. As the Indian economy does well with over 8% growth in recent times, banks tend to be one of the biggest beneficiaries due to the demand for credit and the fact that market conditions are suitable for increasing the loan book. In fact, post the global financial dilemma of 2009 and 2010, the banking index delivered a return of 83% during May 2009 until October 2010, compared to a return of 40% delivered by the wide market.

However, of late, banking stocks have been crushed down due to reduced credit off take, pressure on yields etc. which is flowing into valuations inducing downgrades in this sector. Since November 2010, these stocks have delivered a negative return of 20% compared to -14% of the Nifty. The Public Sector Unit Bank index has performed even worse with a negative return of 29%. With the Reserve Bank of India raising its key policy rates by 250 basis points (a basis point is a hundredth of a per centage point) since March 2010, there has been an overall increase.

Although a bank can generate income in a different ways including transaction fees and financial advice, the main source is through charging interest on the money it offers.
As interest rates rise, credit growth moves to slow down due to higher borrowing costs. In fact, since the beginning of the year, credit growth has fallen from 23.3% in January 2011 to 21.9% in April 2011, and the deposit growth rate has risen from 16% in January 2011 to 17.90% in April 2011. Despite this, the choice of private sector banks is not performing well.

In addition to cooperative credit institutions, the Indian banking system includes 27 public banks, 26 private banks, 46 foreign banks, 56 regional rural banks, 1,574 city cooperative banks and 93,913 rural cooperative banks. Public-sector banks control more than 70 per cent of the banking system assets, thereby leaving a comparatively smaller share for its private peeps. Banks are also encouraging their clients to manage their finances using mobile phones.

As the Reserve Bank of India (RBI) allows more aspects such as unlimited fund transfers between wallets and bank accounts, mobile wallets are expected to become strong players in the financial ecosystem.

According to the Digital Financial Inclusion Center (CDFI) report, India's unorganized retail industry has huge untapped potential in acquiring digital payment methods, as 63% of retailers are interested in using digital payments such as mobile and credit card payments. ICRA estimates that credit growth in India's banking sector would be at 7-8 per cent in FY 2018-19

As per the Reserve Bank of India (RBI), India's banking sector is adequately capitalized and well-regulated. The financial and economic conditions in the country are considerably superior to any other country in the world. Credit, market and liquidity risk studies recommends that Indian banks are generally strong and have withstood the global downturn well.

Indian banking industry has recently witnessed the rollout of modern banking models like payments and small finance banks. RBI's new plan may go a long way in helping the restructuring of the domestic banking industry.

The digital payments system in India has progressed most among 25 countries with India's Immediate Payment Service being the only system at level 5 in the Faster Payments Innovation Index .

In August 2017, Global rating agency Moody's announced that its outlook for the Indian banking system was strong.

3. AUTOMOBILE SECTOR

The Indian automobile industry is one of the immense in the world. The industry accounts for 7.8 per cent of the country's Gross Domestic Product (GDP). The Two Wheelers segment with 80 per cent market share is the leader of the Indian Auto market owing to a growing middle class and a young population. Moreover, the developing interest of the companies in exploring the rural markets further aided the growth of the sector. The overall Passenger Vehicle (PV) division has 14 per cent market share.

India is also a leading auto exporter and has strong export growth expectations for the near future. Overall automobile exports grew 15.81 per cent year-on-year between April-February 2018-19. In addition, some initiatives by the Indian government and important automotive

companies in the Indian market are expected to make India the world leader in 2W and four-wheeler (4W) markets by 2020. Production of passenger vehicles, commercial vehicles, three wheelers and two wheelers grew at 14.78 per cent year-on-year between April-February 2018-19 to 29,075,605 vehicles.

The auto industry is set to witness great changes in the form of electric vehicles (EVs), shared mobility, Bharat Stage-VI emission and safety norms. Electric cars in India are expected to get new green number plates and may also get free parking for 3 years along with toll waivers. India's electric vehicle (EV) sales increased to 56,000 in the 2018-2019, and India will rise further due to lower energy storage costs and government costs.

India goal to see 6 million electric and hybrid vehicles in India by 2020.

In order to keep up with the increasing demand, several auto makers have started investing heavily in various segments of the industry during the last few months. The industry has attracted Foreign Direct Investment (FDI) worth US$ 1.61 billion during the period of FY 2015 to FY 2018, according to data released by Department of Industrial Policy and Promotion (DIPP).

Some of the modern/planned investments and developments in the automobile sector in India are as follows:

- The only electric automaker in India, Mahindra and Mahindra Ltd, has partnered with Uber for deploying its electric sedan e-Verito and hatchback e2o Plus on Uber platforms in New Delhi and Hyderabad.
- Mahindra & Mahindra (M & M) is planning to make an additional investment of Rs 500 crore (US$ 77.23 million) for expanding the capacity for electric vehicles in its plant in Chakan.

Government Initiatives

The Government of India motivates foreign investment in the automobile sector and allows 100 per cent FDI under the automatic route.

Some of the recent schemes taken by the Government of India are -

- The Government of Karnataka is going to obtain electric vehicles under FAME Scheme and set up charging infrastructure across Bengaluru, according to Mr R V Deshpande, Minister for Large and Medium Industries of Karnataka.

- The Ministry of Heavy Industries, Government of India has shortlisted 11 cities in the country for introduction of electric vehicles (EVs) in their public transport systems under the FAME scheme.

- Energy Efficiency Services Limited (EESL), under Ministry for Power and New and Renewable Energy, Government of India, is planning to procure 10,000 e-vehicles via demand aggregation, and has already awarded undertakings to Tata Motors Ltd for 250 e-cars and to Mahindra and Mahindra for 150 e-cars.

- The government is planning to set up a committee to develop an institutional framework on large-scale adoption of electric vehicles in India as a viable clean energy mode, especially for shared mass transport, to help bring down infection level in major cities.

4. MEDIA

The Indian Media and Entertainment (M&E) industry is a sunrise sector for the economy and is making high growth steps. Proving its toughness to the world, the Indian M&E industry is on the cusp of a strong stage of growth, backed by rising consumer demand and enhancing advertising earnings. The industry has been generally driven by increasing digitization and higher internet usage over the last decade. Internet has almost become a popular media for entertainment for most of the people.

The Indian advertising industry is projected to be the 2nd rapidly growing advertising market in Asia after China. At present, advertising revenue accounts for around 0.45 per cent of India's gross domestic product.

Indian media and entertainment (M&E) industry grew at a CAGR of 18.55 per cent from 2011-2017; and is expected to grow at a compound annual growth rate of 13.9 per cent to touch US$ 37.55 billion by 2021 from US$ 22.75 billion in 2017.The industry provides employment to five million people, including both direct and indirect employment in FY 2018.

Over FY 2016-21, radio will likely grow at a CAGR of 16.1 per cent, while digital advertising will grow at 30.8 per cent. The largest segment, India's television industry, is expected to grow at a CAGR of 14.7 per cent, while print media is expected to grow at a CAGR of 7.3 per cent.

India is one of the highest spending and rapidly growing advertising market globally. The country's expenditure on advertising is expected to grow at 15 per cent to Rs 72,169 crore (US$

10.69 billion) by the end of 2019. Mobile advertisement spending in India is estimated to grow to Rs 10,000 crore (US$ 1.55 billion) by the end of 2019.

Retail advertising is expected to grow, including various players entering the food and beverage sector, e-commerce gaining more popularity in the country and testing of waters by domestic companies. The rural region is also a likely profitable target. However, growth of consumer goods retailed through the newer channels is now raising the growth of FMCG products in general trade. Tier II and Tier III are witnessing a fast progress in the modern trade segment.

Today, Fast Moving consumers' goods have become an essential part of human life. This sector is recession proof and created huge employment opportunity in India, hence becoming one of the key pillars of the Indian economy. FMCG companies should encash opportunities like increasing consumer income, changing consumer life style, aspiring rural consumer, consistent economic growth by utilizing its strengths. The competition from unorganized sector can be overcome by increasing brand awareness and by reducing cost through sharing resources such as distribution network. Favourable developments happening in demand side, supply side and systematic operators shows that this sector has very bright future.

2.2 LITERATURE REVIEW

Dukes and John A (2012) "Is gainful for individual money dealers" they have found that the technical analysis related with execution is negative. In the event that the individual cash dealers utilize technical analysis will experience the ill effects of the poor execution.

Hartono, Jogiyanto, Sulistiawan and Delhy [2015] ''execution of in declining worldwide market'' they discovered technical analysis performs better in the share trading system with high instability and a descending pattern than stable and uptrend markets. This article says that gets higher benefits by proposing the financial specialist whether to purchase, hold, or offer the securities.

Sulistiwan, Dedhy, Harton and Jagiyanto[2014]''can technical analysis signals distinguish value response around procuring declaration ?'' they have found that can identify value response previously, then after the fact the acquiring declaration. Be that as it may, is more benefical for winning declaration than subsequent to gaining declaration.

Neely and Christopher J [1997] ''Technical analysis in the remote trade advertise a layman's guide they have established that outside trade showcase utilize technical analysis broadly as each broker decipher the example of information before exchange, Customarily it was dismissed by market analyst yet after that it picks up its significant in light of private data, consecutive exchanging and part of hazard.

Fardousi and Basha [2014] ''favourable position of utilizing the technical analysis to anticipate the future cost on Amman stock trade '' they have established that technical analysis is utilized as apart of each market and they had attempted to know the limit of the technical analysis to foresee or apprsise what's to come. Their examination demonstrates that the technical analysis has Key energy to anticipate the future stock cost and furthermore it gives gainful proposoal wether to purchase, hold, or to offer the securities at the specific time.

Zaindhun and Rozaimah [2014] '' future exchanging signal utilizing a versatile calculation technical analysis pointer . movable moving normal ; exact review on Malaysian future market'' they have come to know technical analysis calculations , flexible moving normal are more helpful in future cost and pattern forecast.

Palmeri and Jsaon [2006] '' inability examines , social examination, and the basic routine of specialized correspondence instructional method '' in their exploration they have uncovered that the technical analysis which can encounter, learning, and material needs of the financial specialist with handicap. On the off change that information gathered by individual are in suitable then technical analysis give impaired answer.

Twibell and David A [2005] '' technical analysis has never gotten much regard in the venture group however the review demonstrates it might significant instrument ''they investigated and uncovered that technical analysis is very little successful as it uses graph examples of the past to foresee the future which is not fighting but rather noe a day's everyone needs to counsel specialized expert to think about the think about the future patterns before putting resources into any stocks. It is not reasonable for every one of the customer aside from who need to deal with the m missing data managing in today's market.

Tylore and Patrick [2005] "they have said that when individual utilize technical analysis to figure out if they are purchasing resources into solid organization or not. This technical analysis incorporates different techniques like moving normal, relative quality record, rate of the progress moving normal joining and disparity and so forth.. which in make sense of the course of future patterns whether it goes up or descends.

Rattiner and Jeffery H (2002) "birds eye contributing: technical analysis is incredible twofold chrck to principal investigation when arranging or rebalancing customer portfolios" they looked into established that technical analysis is not just use to decide the future pattern by utilizing past information however it proposes before putting resources into the securities and furthermore gives the flag when whether to purchase, hold, or offer it is identified with Dow theory, it helps in essential ecamination for arranging and rebalancing customer portfoloio.

Claude and Penny M (1995) "regular stock determination with an accentuation on mispriced resource: confirm from technical analysis" the article says that technical analysis has conquer the customary scholastic position. It helps a person in choosing which stocks to purchase and RSI helps in deciding the real qualities and shortcoming of the stocks.

Abbondante and Paul (2010) "exchangeing volume and stock files: a trial of technical analysis" the scientists had dissected the development of the individual stock value technical analysis and its significance on exchanging volume has been utilized. Consideration has been paid to examine the connection between exchanging volume and different stock records, despite the fact that stock lists can track general market drifts, exchanging volume could be utilized to figure future securities exchange patterns.

Arora and Nitin (2013) "testing of specialized proficiency making up for lost time in Indian sugar industry" for the review reason the information of Indian sugar industry has taken to attempt to test the theory of joining. It demonstrates that specialized wastefulness happens when there is administrative wastefulness. They have watched that technical analysis has discovered substantial amid pre-changes periods than post changes periods.

Schiff and William (2004) "focus on technical analysis" they have uncovered that technical analysis is a strategy which assesses securities by braking down past cost and volume design in the graphs shows future.

Holter James ''s the best practice'' he had found that the technical analysis manages value, value changing and future gauging, each financial specialist utilize to decide the execution and fate of the security, it is a market for a dealer before exchanging. It contains different instruments and techniques which help to get closer to genuine circumstance.

Basu (1977) examined that stocks having less price earnings ratios yields higher average returns than that of stocks having high price earnings ratio even when the data has been controlled.

Treynor and Forguson (1985) examined the future value of stocks which was joined with the valuable details in order to achieve unusual turnover. Many investor thinks that the only the prices movements affect the profit of the investor and the company, the future price assist to certify efficient utilization.

Frankel et al.,(1988) studied the stock using the model which was developed by him it has two basic approach they are fundamental and chartist or technical fundamentals use economic system to forecast but chartist use past behavior.

Taylor et al.,(1992) suggested that technical analysis and fundamental indicators are interrelated to each other while forecasting the future price most of the shock holder analysis the price using technical indicators.

Kho, B.C(1996) author determine the relationship among book values, earnings, dividend and market price of the share, impact of bonus issues, impact of security scam on equity return. During the research the author used thirty companies share price and the author also used correlation, regression and frequency distribution for interpreting data.

CHAPTER 3
RESEARCH DESIGN

STATEMENT OF PROBLEM:

When the market full of volatility, it is difficult to analyze data and sometimes indices can not work because of some good/bad news in the stock market. Depending on singal indiactor may vary the expected results.

NEED FOR THE STUDY:

- It helps in understanding the price movement.
- It is short term in nature and it is used to forecast the future price, generally used in trading and investment.

OBJECTIVE OF THE STUDY:

- To analyse the changes in the price movement of stocks.
- To understand the various indicators used in technical analysis, i.e. Relative Strength Index (RSI), Rate of Change ,(ROC) and Moving Average Convergence Divergence (MACD).

SCOPE OF THE STUDY:

- It is used to forecast price movements, as well as provide methods of entry and exits from trades.
- It is widely used by forex, equity, and commodity traders, to determine the short term as well as the long term trends of the market.

RESEARCH METHODOLOGY:

a. The present study is based on secondary data, i.e. NSE data, Annual reports of the company, Balance Sheets.

b. The tools used are : RSI, ROC and MACD

c. Sources of data : nseindia.com, investing.com, moneycontrol.com, karvyonline.com, screener websites and chart nexus.

CHAPTER 4
ANALYSIS AND INTERPRETATION

4.1 DATA ANALYSIS AND INTERPRETATION

RSI:

Relative strength index $= 100 - \left[\frac{100}{1+RS}\right]$

Interpretation:

To identify the tops and bottoms in the making

- One very important use of the RSI is that it foretells a rise or fall in a scrip.

- Whenever the RSI goes above 70, it is better to prepare for a downturn. (sell)

- Whenever the RSI goes below 30, it is better to prepare for an upturn. (buy)

- However the RSI goes above 70 or 30 much before the scrip makes the top or bottom. i.e RSI gives an early warning of the top or bottom.

- Once this top or bottom reached, one can expect a significant reaction in the scrip.

ROC;

Method to calculate ROC:

Method I

Take the current closing price and express this price as a % of the price 14 days/weeks in the past.

Suppose the price on any day is Rs.12 and the price 14 days ago was Rs.10, the ROC is obtained by:-

$$12/10 \times 100 = 120\%$$

Method II

In this method, the % variation between the current price and the price 14 days in the past is calculated.

$$12 / 10 \times 100 - 100 = 20\%.$$

ROC may be positive or negative

Interpretation:

- The major use of this oscillator is to identify the overbought and oversold zones.
- To identify the overbought zones look at the historic high values on the ROC chart for the scrip that is being studied.
- If the current value is near the historic high price, the scrip is said to be in overbought zone and vice versa.
- The overbought zone is above the zero or the 100 line and the oversold zone is below the zero or the 100 line.
- Technically one should buy scrip that is oversold and sell a scrip that is overbought.

NOTES:

- Relative Strength Index and Rate of Change is calculated for 14 days period.
- Moving Average Convergence Divergence (MACD) is calculated for 26 days and 12 days.

The process used for filtration of companies in each sector is based on Market Capitalization, Price-Earnings Ratio and Shareholding Pattern

INFORMATION TECHNOLOGY SECTOR

INFOSYS LIMITED

Table 4.1 showing RSI Calculation

Date	Open	High	Low	Close	change	gain	loss	RS value	RSI
09-10-2015	null	null	null	null					
12-10-2015	599.5	609.9	554.5	561.45					
13-10-2015	553.725	555.5	542.6	549.7	-11.75	0	11.75		
14-10-2015	545.725	557.775	543.6	548.8	-0.90002	0	0.900024		
15-10-2015	549.95	552.175	544.55	548.675	-0.125	0	0.125		
16-10-2015	549.5	550.7	545	547.45	-1.22498	0	1.224976		
19-10-2015	551	558	550.25	555.975	8.524964	8.524964	0		
20-10-2015	556.5	565	555.3	562.975	7	7	0		
21-10-2015	562.5	573.425	562.5	569.2	6.225036	6.225036	0		
23-10-2015	570.9	576.5	562.55	574.95	5.75	5.75	0		
26-10-2015	577	579.25	571.575	576.075	1.125	1.125	0		
27-10-2015	575	577.5	572.05	574.7	-1.375	0	1.375		
28-10-2015	572.25	579	569.5	576.6	1.899964	1.899964	0		
29-10-2015	576.55	577.95	568.025	572.525	-4.07495	0	4.074952		
30-10-2015	572.5	572.5	565	567.725	-4.80005	0	4.800048		
02-11-2015	565	567.9	557.05	565.6	-2.125	0	2.125		
03-11-2015	566.7	575.225	566.7	572.75	7.150024	7.150024	0	1.428436	58.82123
04-11-2015	575.05	578.8	566.15	568.4	-4.34998	0	4.349976	1.985509	66.50488
05-11-2015	571.475	572.5	559.7	561.45	-6.95001	0	6.950012	1.505496	60.08775
06-11-2015	561.5	571.95	561.45	569.15	7.700012	7.700012	0	1.822292	64.5678
09-11-2015	560	570	557.6	567.3	-1.85004	0	1.850036	1.777667	63.99857
10-11-2015	563.75	563.75	550.05	551.925	-15.375	0	15.375	0.900978	47.39551
13-11-2015	549.975	553	545	550.4	-1.52496	0	1.524964	0.703596	41.30062
16-11-2015	541.825	547	533.6	540.1	-10.3	0	10.30005	0.448079	30.94301

Daily Basis

Monthly Basis:

-

Figure 4.1 showing daily and monthly basis data of Infosys Ltd

Source of data : Zerodha Kite Application and Investing.com

Table 4.2 : Data of INFY

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	INFY	**16-Nov-15**	Sell Cross over below zero line	SELL	30.94	-6.25	535.86	2.319	56
2	INFY	**11-Jan-16**	Buy Cross over above zero line	BUY	42.69	-4.33	523.71		
3	INFY	**6-Jun-16**	Sell Cross over above zero line	SELL	64.61	4.32	628.41	38.179	210
4	INFY	**02-Jan-17**	Buy Cross over above zero line	BUY	32.96	-5.40	454.78		
5	INFY	**31-Mar-17**	Sell Cross over above zero line	SELL	51.56	0.039	507.12	9.279	193
6	INFY	**10-Oct-17**	Buy Cross over below zero line	BUY	61.37	2.54	464.06		
7	INFY	**23-Jan-18**	Sell Cross over above zero line	SELL	82.84	15.25	583.93	4.54	97
8	INFY	**18-Apr-18**	Buy Cross over above zero line	BUY	45.47	-2.43	558.56		

INTERPRETATION:

- From the above table it is stated that on 16/11/15, MACD gave short signal whereas RSI and ROC has not gave the short signal as the signal was weak and the price moved from 535.86 to 523.71 (2.319) on 11/1/16, however it took 56 days.

- From the above table it is clear that on 6/6/16, MACD gave a short signal whereas signal whereas RSI has also given the strong buy signal as it crosses overbought zone and ROC signal was weak and the price moved from 628.41 to 454.78 (38.179) on 02/01/17 , however it took 210 days.

- From the above table it is clear that on 02/1/17 , MACD gave a sell signal whereas RSI and ROC has not give the sell signal as the signal was weak and the price moved from 507.12 to 464.06 (9.279) on 10/10/17, however it took 193 days.

- From the above table it is stated that on 23/1/118 , MACD has not gave a sell signal whereas RSI overbought zone it indicates there is chances of decrease in price of the share and ROC has gave the sell signal as the signal and the price moved from 583.93 to 558.56 (4.54) on 18/4/18, however it took 97 days.

TATA CONSULTENCY SERVICES

Daily Basis

Monthly Basis:

Figure 4.2 showing daily and monthly basis data of TCS

Source of data : Zerodha Kite Application and Investing.com

Table 4.3 Data of TCS

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	TCS	29-Feb-16	Buy Cross over below zero line	BUY	33.06	-4.58	1088.40	-10.33	238
2	TCS	24-Oct-16	Sell Cross over below zero line	SELL	53.14	-0.13	1213.85		
3	TCS	31-Jan-17	Buy Cross over above zero line	BUY	39.73	-3.65	1114.90	-14.37	125
4	TCS	05-Jun-17	Sell Cross over above zero line	SELL	68.59	7.19	1301.97		
5	TCS	15-Dec-17	Buy Cross over above zero line	BUY	35.77	-5.22	1272.80	-19.28	49
6	TCS	02-Feb-18	Sell Cross over above zero line	SELL	70.01	13.59	1576.83		
7	TCS	04-Apr-18	Buy Cross over below zero line	BUY	49.92	0.84	1445.45	-29.99	183
8	TCS	04-Oct-18	Sell Cross over above zero line	SELL	45.79	0.91	2064.80		

INTERPRETATION:

- From the above table it is clear that on 29/02/2016, MACD gave a buy signal whereas RSI and ROC has not given the strong buy signal as the signal was weak and the price moved from 1088.4 to 1213.85 (-10.33) on 24/10/16, however it took 238 days.

- From the above table it is clear that on 31/01/17, MACD gave a buy signal whereas RSI and ROC has not given the buy signal as the signal was weak and the price moved from 1114.9 to 1301.97 (-14.34) on 05/06/17 , however it took 125 days.

- From the above table it is clear that on 15/12/17, MACD gave a buy signal whereas RSI and ROC has not given the buy signal as the signal was weak and the price moved from 1272.8 to 1576.83 (-19.28) on 02/02/18 ,however it took 49 days.

- From the above table it is clear that on 4/4/18, MACD gave a buy signal whereas RSI has also given the strong buy signal as it crosses overbought zone and ROC signal was weak and the price moved from 1445.45 to 2064.8 (-29.99) on 04/10/18, however it took 183 days.

BANKING SECTOR

HDFC BANK:

Table 4.4 showing RSI Calculation

Date	Open	High	Low	Close	Change	Gain	Loss	RS Value	RSI
10-02-2016	1155	1156.75	1110.5	1116.55		0	0		
11-02-2016	1110.3	1115.1	1058.05	1066.65	-49.9	0	49.90002		
12-02-2016	1079	1097.1	1067.2	1083.75	17.09998	17.09998	0		
15-02-2016	1093.4	1102	1076	1080.45	-3.30005	0	3.300049		
16-02-2016	1084.5	1090.45	1063.9	1077.15	-3.29993	0	3.299927		
17-02-2016	1078	1085.4	1060.15	1076.3	-0.84998	0	0.849975		
18-02-2016	1086.85	1086.85	1062.7	1069.1	-7.20007	0	7.200073		
19-02-2016	1065	1065.4	1046.2	1060.85	-8.25	0	8.25		
22-02-2016	1051	1063.75	1047.85	1058.4	-2.44995	0	2.449952		
23-02-20-16	1062	1062	1040	1051.1	-7.30005	0	7.300048		
24-02-2016	1050.8	1050.8	1018.55	1022.1	-29	0	29		
25-02-2016	1022	1049.5	1011.45	1042.65	20.55005	20.55005	0		
26-02-2016	1056.7	1059	1048.35	1053.7	11.04993	11.04993	0		
29-02-2016	1056	1078.5	1022.05	1060.3	6.600098	6.600098	0		
01-03-2016	1072	1073.5	1046.8	1069.45	9.149902	9.149902	0	0.577767	36.61929
02-03-2016	1081.95	1107	1077	1099.55	30.1001	30.1001	0	1.533658	60.53137

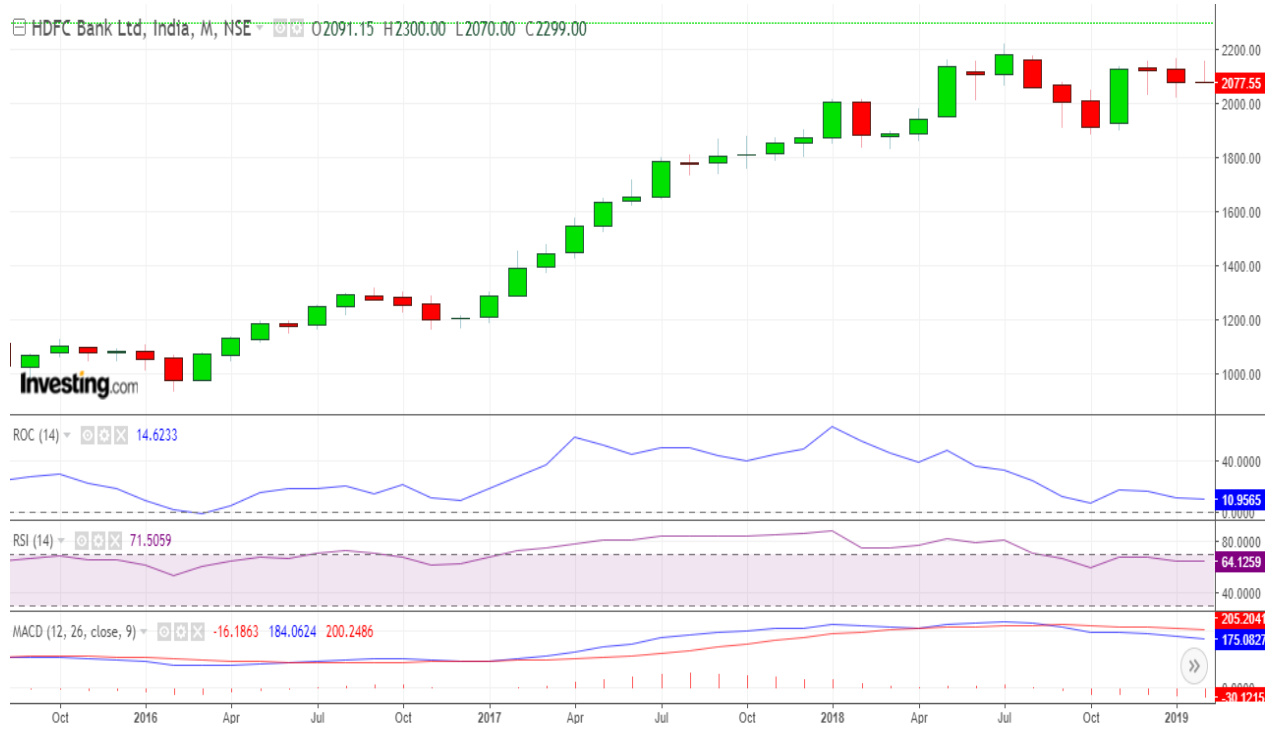**Daily Basis:**

Monthly Basis:

Figure 4.3 showing daily and monthly basis data of HDFC Bank

Source of data : Zerodha Kite Application and Investing.com

Table 4.5 Data of HDFC

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	HDFC	01-Mar-16	Buy Cross over below zero line	BUY	36.62	-4.22	1069.4	-20.81	
2	HDFC	09-Nov-16	Sell Cross over above zero line	SELL	43.97	0.673	1350.5		238
3	HDFC	23-Jan-17	Buy Cross over below zero line	BUY	55.71	3.77	1259.5	-35.98	
4	HDFC	01-Feb-18	Sell Cross over above zero line	SELL	72.72	12.99	1967.5		373
5	HDFC	21-Sep-18	Buy Cross over below zero line	BUY	37.33	-4.89	1839.4	-6.51	
6	HDFC	10-Dec-18	Sell Cross over above zero line	SELL	53.25	0.25	1967.5		80

INTERPRETATION:

- From the above table, it is clear that on 01/3/16, MACD and RSI gives a buy signal but whereas ROC has not given the buy signal. As the signal was weak and the price moved from 1069.45 to 1350.5 with a variation of (-20.81%) on 9/11/16 ,however it took 238 days

- From the above table, it is clear that on 23/1/17, MACD gives buy signal but whereas RSI and ROC has not given the signal to buy as the signal was weak and the price moved from 1259.75 to 1967.55 with a price variation of (-35.98%) on 01/02/18, however it took 373 days.

- From the above table, it is clear that on 21/09/2018, MACD and RSI gave buy signal. However ROC has not given buy signal. As the buy signal was strong and the price moved from 1839.4 to 1967.55 (-6.51%) on 10/12/2018, however it took 80 days to move.

ICICI BANK

Daily Basis:

Monthly Basis:

Figure 4.4 showing daily and monthly basis data of ICICI Bank

Source of data : Zerodha Kite Application and Investing.com

Table 4.6 Data of ICICI

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	ICICI	6-Jan-16	Sell Cross over below zero line	SELL	38.83	-0.78	227.36	36.66	50
2	ICICI	25-Feb-16	Buy Cross over below zero line	BUY	28.79	-12.6	166.36		
3	ICICI	29-May-17	Sell Cross over above zero line	SELL	64.45	4.75	286.27	8.78	142
4	ICICI	18-Oct-17	Buy Cross over below zero line	BUY	29.29	-4.79	263.15		
5	ICICI	23-Jan-18	Sell Cross over above zero line	SELL	80.94	15.02	362.3	36.30	178
6	ICICI	20-Jul-18	Buy Cross over below zero line	BUY	41.86	-4.18	265.80		

INTERPRETATION:

- From the above table, it is clear that on 6/1/2016, MACD gave sell signal. However RSI and ROC have not given sell signal. As the sell signal was weak and the price moved from 227.36 to 166.36 (36.67%) on 25/2/2016, however it took 50 days to move.

- From the above table, it is clear that on 29/05/2017, RSI gave strong sell signal. However ROC have not given sell signal. As the sell signal was weak and the price moved from 286.27 to 263.15 (8.78%) on 18/10/2017, however it took 142 days to move.

- From the above table, it is clear that on 23/01/2018, RSI gave sell signal as its on overbought zone. However MACD and ROC have not given sell signal. As the sell signal was weak and the price moved from 362.3 to 265.8 (36.3%) on 20/07/2018, however it took 178 days to move.

AUTOMOBILE SECTOR

MAHINDRA AND MAHINDRA LTD

Table 4.7 showing RSI Calculation

Date	Open	High	Low	Close	Change	Gain	Loss	RS Value	RSI
13-11-2015	622.7	629.75	621.35	625.7					
16-11-2015	625	644.325	619.1	638.95	13.25	13.25	0		
17-11-2015	639.5	649	634.75	644.4	5.450012	5.450012	0		
18-11-2015	642.5	652	637.15	639.15	-5.25	0	5.25		
19-11-2015	642.55	648.975	637.575	646.05	6.899964	6.899964	0		
20-11-2015	646.05	662.5	645.65	657.625	11.57501	11.57501	0		
23-11-2015	657.625	667.15	653.6	661.75	4.125	4.125	0		
24-11-2015	661.75	662.975	655.9	659.775	-1.97498	0	1.974976		
26-11-2015	662.475	676.975	658.5	673.125	13.34998	13.34998	0		
27-11-2015	678	686	674.7	675.6	2.474976	2.474976	0		
30-11-2015	676.5	684.9	675.85	682.75	7.150024	7.150024	0		
01-12-2015	685	690.75	678.25	684.45	1.700012	1.700012	0		
02-12-2015	687.5	688.475	681.75	685.225	0.774964	0	-0.77496		
03-12-2015	684.25	684.375	670.3	672.85	-12.375	0	12.375		
04-12-2015	667.8	671.6	656.125	657.65	-15.2	0	15.19995	1.939017	65.97502

Daily Basis:

Monthly Basis:

Figure 4.5 showing daily and monthly basis data of M&M

Source of data : Zerodha Kite Application and Investing.com

Table 4.8 Data of M&M

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	M&M	4-Dec-15	Sell Cross over above zero line	SELL	65.98	5.10	657.65		
2	M&M	11-Apr-16	Buy Cross over above zero line	BUY	53.39	1.10	618	6.415	342
3	M&M	7-Nov-16	Sell Cross over below zero line	SELL	55.66	3.34	688.98		
4	M&M	30-Nov-16	Buy Cross over below zero line	BUY	34.61	-11.1	592.55	16.273	23
5	M&M	2-Aug-17	Sell Cross over above zero line	SELL	58.16	3.22	707.3		
6	M&M	26-Sep-17	Buy Cross over below zero line	BUY	25.4	-5.27	623.58	13.426	55
7	M&M	4-May-18	Buy Cross over above zero line	BUY	67.71	8.91	854.3		
8	M&M	15-Oct-18	Sell Cross over below zero line	SELL	27.96	16.42	749	14.06	164

INTERPRETATION:

- From the above table it is stated that on 4/12/15, RSI gave a strong sell signal whereas MACD is near to sell signal and ROC has not given sell signal as the signal was weak. The price moved from 657.65 to 618 with price variation of (6.415%) on 11/4/16, however it took 342 days.

- From the above table it is stated that on 7/11/16, MACD gave a sell signal whereas RSI and ROC has not given sell signal as the signal was weak. The price moved from 688.98 to 592.55 with price variation of (16.273%) and on 30/11/16, however it took 23 days.

- From the above table it is stated that on 2/8/17, MACD gave a sell signal whereas RSI and ROC has not given sell signal as the signal was weak. The price moved from 707.30 to 623.58 with price variation of (13.426%) and on 26/9/17, however it took 55 days.

- From the above table it is stated that on 4/5/18, RSI gives a strong sell signal as it reaches overbought zone whereas MACD and ROC has not given sell signal as the signal was weak. The price moved from 845.3 to 749 with price variation of (14.06%) on 15/10/18, however it took 164 days.

ASHOK LEYLAND LTD

Daily Basis:

Monthly Basis:

Figure 4.6 showing daily and monthly basis data of Ashok Leyland Ltd

Source of data : Zerodha Kite Application and Investing.com

Table 4.9 Data of AL

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	AL	4-Apr-16	Sell Cross over above zero line	SELL	70.47	5.53	108.75		
2	AL	9-Sep-16	Buy Cross over below zero line	BUY	30.66	-5.73	76.45	42.25	177
3	AL	8-Feb-17	Sell Cross over above zero line	SELL	70.07	10.17	95.35		
4	AL	19-Apr-17	Buy Cross over below zero line	BUY	30.17	-4.24	81.3	17.28	70
5	AL	26-Oct-17	Sell Cross over above zero line	SELL	70.48	4.63	131.15		
6	AL	18-Dec-17	Buy Cross over below zero line	BUY	44.88	0.22	94.25	39.15	53
7	AL	4-May-18	Buy Cross over above zero line	BUY	69.93	5.40	163.95		
8	AL	30-Jul-18	Sell Cross over below zero line	SELL	37.54	-12.9	113	45.08	87

INTERPRITATION:

- From the above table it is stated that on 5/4/16, RSI indicates a strong sell signal as it reaches overbought zone whereas MACD and ROC has not given strong sell signal as the signal was weak. The price moved from 108.75 to 76.45 with price variation of (42.25%) on 29/9/16, however it took 177 days.

- From the above table it is stated that on 5/4/16, MACD and RSI indicates a sell signal whereas ROC has not given strong sell signal as the signal was weak. The price moved from 95.35 to 81.3 with price variation of (17.28%) on 19/4/17, however it took 70 days.

- From the above table it is stated that on 26/10/17, RSI indicates a strong sell signal as it reaches overbought zone whereas MACD and ROC has not given strong sell signal as the signal was weak. The price moved from 131.15 to 94.25 with price variation of (39.15%) on 18/12/17, however it took 53 days.

- From the above table it is stated that on 4/5/18, MACD and RSI indicates a sell signal whereas ROC has not given strong sell signal as the signal was weak. The price moved from 163.95 to 113 with price variation of (45.08%) on 30/7/18, however it took 87 days.

MEDIA & ENTERTAINMENT SECTOR

ZEE ENTERTAINMENT

Table 4.10 Showing RSI calculation

Date	Open	High	Low	Close	Change	Gain	Loss	RS Value	RSI
01-07-2015	367.9	368.95	362.05	363.8					
02-07-2015	363.85	371.4	363.8	369.1	5.300018	5.300018	0		
03-07-2015	368	370.8	367.2	369.4	0.299988	0	-0.29999		
06-07-2015	367	374.65	366.65	373.7	4.300018	4.300018	0		
07-07-2015	373.05	374.8	365.1	367.6	-6.10001	0	6.100006		
08-07-2015	365	368	354.35	355.85	-11.75	0	11.75		
09-07-2015	358.55	358.55	350	353	-2.85001	0	2.850006		
10-07-2015	351.8	364	351.8	361.15	8.149994	8.149994	0		
13-07-2015	364.7	380	360.4	373.75	12.60001	12.60001	0		
14-07-2015	374.95	375.5	367.25	374.5	0.75	0	-0.75		
15-07-2015	375.65	385.9	373.25	375.6	1.100006	1.100006	0		
16-07-2015	379.45	382.95	376.05	382.2	6.600006	6.600006	0		
17-07-2015	384.25	385	373.75	377.3	-4.90002	0	4.900024		
20-07-2015	376.5	381.4	370.8	378.65	1.350006	1.350006	0		
21-07-2015	377.3	389	377.3	387.2	8.550018	8.550018	0		
22-07-2015	387	408.2	387	407.25	20.04999	20.04999	0	2.553968	71.86244

Daily Basis:

Monthly Basis:

Figure 4.7 showing daily and monthly basis data of Zee Entertainment

Source of data : Zerodha Kite Application and Investing.com

Table 4.11 Data of ZEE ENT

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	ZEE ENT	22-Jul-15	Sell Cross over above zero line	SELL	71.86	10.336	407.25	6.096	212
2	ZEE ENT	19-Feb-16	Buy Cross over below zero line	BUY	46.395	-7.84	383.85		
3	ZEE ENT	4-Oct-16	Sell Cross over above zero line	SELL	84.694	8.7137	563.3	23.626	51
4	ZEE ENT	30-Nov-16	Buy Cross over below zero line	BUY	41.409	-9.98	455.65		
5	ZEE ENT	02-Jul-17	Sell Cross over above zero line	SELL	67.361	9.69	538.95	9.620	95
6	ZEE ENT	23-Oct-17	Buy Cross over below zero line	BUY	31.027	-5.47	491.65		
7	ZEE ENT	17-Jan-18	Sell Cross over above zero line	SELL	56.282	1.238	593.1	58.080	376
8	ZEE ENT	28-Jan-19	Buy Cross over below zero line	BUY	35.618	-17.4	373.3		

INTERPRETATION

- From the above table it is stated that on 22/7/15, RSI gave a sell signal whereas MACD and ROC is near to sell signal as the signal was comparatively strong. The price moved from 407.25 to 383.85 with price variation of (6.096%) on 19/2/16, however it took 212 days.

- From the above table it is stated that on 4/10/16, RSI gave a strong sell signal whereas MACD and ROC is near to sell signal as the signal was comparatively strong. The price moved from 563.30 to 455.65 with price variation of (23.626%) on 30/11/16, however it took 51 days.

- From the above table it is stated that on 20/7/16, RSI gave a strong sell signal whereas MACD and ROC is near to sell signal as the signal was comparatively strong. The price moved from 538.95 to 491.65 with price variation of (9.620%) on 23/10/17, however it took 95 days.

- From the above table it is stated that on 17/01/18, RSI gave a strong sell signal whereas MACD and ROC is near to sell signal as the signal was comparatively strong. The price moved from 593.1 to 373.3 with price variation of (58.080%) on 28/1/19, however it took 376 days.

DISH TV

Daily Basis:

Monthy Basis:

Figure 4.8 showing daily and monthly basis data of Dish Tv

Source of data : Zerodha Kite Application and Investing.com

Table 4.12 Data of DISH TV

SL. NO	STOCK	DATE	MACD	SIGNAL	RSI	ROC	PRICE	VARIATION IN %	NO. OF DAYS
1	DISH TV	12-Apr-15	Buy Cross over below zero line	BUY	45.65	-1.043	75.90	-33.5085	66
2	DISH TV	17-Jun-15	Sell Cross over above zero line	SELL	80.11	17.6198	114.15		
3	DISH TV	29-Feb-16	Buy Cross over below zero line	BUY	27.95	-16.97	67.75	-37.1521	380
4	DISH TV	15-Mar-17	Sell Cross over above zero line	SELL	81.37	15.4176	107.8		
5	DISH TV	23-Jun-17	Buy Cross over below zero line	BUY	22.60	-11.98	73.80	-14.3852	170
6	DISH TV	09-Jan-18	Sell Cross over above zero line	SELL	69.25	8.359	86.2		
7	DISH TV	22-Mar-18	Buy Cross over below zero line	BUY	42.32	-6.0754	67.25	-2.5362	167
8	DISH TV	05-Sep-18	Sell Cross over below zero line	SELL	46.45	2.449	69		

INTERPRETATION

- From the- above table it is stated that on 12/05/15, MACD gave a buy signal whereas RSI and ROC is near to buy signal as the signal was comparatively strong. The price moved from 75.9 to 114.15 with price variation of (-33.51%) on 17/6/15, however it took 66 days.

- From the above table it is stated that on 29/6/17, RSI and MACD gave a strong buy signal whereas ROC is near to buy signal as the signal was comparatively strong. The price moved from 67.75 to 107.8 with price variation of (-37.15%) on 15/3/17, however it took 380 days.

- From the above table it is stated that on 23/6/17, RSI gave a buy signal whereas MACD and ROC is near to buy signal as the signal was comparatively strong. The price moved from 73.80 to 86.20 with price variation of (-14.39%) on 9/1/18, however it took 170 days.

- From the above table it is stated that on 22/3/18, MACD gave a buy signal whereas RSI and ROC is near to buy signal as the signal was comparatively strong. The price moved from 67.25 to 69 with price variation of (-2.54%) on 5/9/18, however it took 167 days.

CHAPTER 5

FINDING CONCLUSION AND SUGGESTIONS

FINDINGS

1. **INFORMATION TECHNOLOGY SECTOR**

   - INFOYSIS has indicated MACD signal for three vocations however, RSI and ROC has not given strong indicators but in one vocation MACD has not given indicator whereas RSI has reached its overbought zone so, it indicates to investors go for short position.

   - TCS has indicated MACD signal for all the four vocations however, RSI and ROC has not given strong indicators but in one vocation RSI has reached its overbought zone and MACD also given single. Here the price of the stock moves very rapidly and it's a strong buy indicator for the investors.

   - In this sector the stocks selected data are related to two companies. Indicators are tested on 8 occasions and on all the occasion only MACD has given signal and the sectors reacted less than 40% at selling side and more than 35% at buying side. Out of 8 occasions, on 7 occasion, the price variation is less than 30% and on 1 occasion all the three indicator gave the same signal and the price variation was up to 38.179%.

2. BANKING SECTOR

- HDFC BANK has indicated MACD and RSI signal for two vocations however, ROC has not given strong indicators indicator so, it indicates to investors that go for long position.

- ICICI has indicated RSI signal for two vocations however, MACD and ROC has not given strong indicators but in one vocation MACD also given single. Here the price of the stock comes down very fast and it's a strong sell indicator for the investors.

- In this sector the stocks selected data are related to two companies. Indicators are tested on 6 occasions, out of which on 2 occasions only MACD has given signal,On 2 occasions RSI has given signal and on 2 occasions both MACD and RSI has given signal. Out of 6 occasions, on 3 occasion, the price variation is less than 20% and on 3 occasion all the three indicator gave the same signal and the price variation was up to 37%.

3. AUTOMOBILE SECTOR

- M&M has indicated MACD signal for two vocations and RSI for two vocations however, ROC has not given strong indicator but in one vocation RSI reaches overbought zone and given strong singnal with high price variation compare to other signals so, it strongly indicates to investors that go for short position.

- In ASHOK LAYLAND, MACD and RSI indicates sell signal whereas ROC singal was not strong but price varied 45.08% within 87 days

- In this sector the stocks selected data are related to two companies. Indicators are tested on 8 occasions, out of which on 4 occasions RSI has given signal,On 2 occasions MACD has given signal and on 2 occasions both MACD and RSI has given signal. Out of 8 occasions, on 5 occasion, the price variation is less than 20% and on 3 occasion all the three indicator gave the same signal (Especially RSI strong signal) and the price variation was up to 45%.

4. MEDIA & ENTERTAINMENT SECTOR

- ZEE ENTERTAINMENT has indicated RSI signal for all the four vocations however, MACD and ROC is near to sell signal as the signal was comparatively strong.

- DISH TV has indicated MACD signal for all the four vocations however, RSI and ROC has not given strong indicators but in one vocation RSI has reached its overbought zone and MACD also given single. Here the price of the stock comes down rapidly with price variation of (-37.15%) within 380 days and it was strong sell indicator for the investors.

- In this sector the stocks selected data are related to two companies. Indicators are tested on 8 occasions, out of which on 5 occasions RSI has given signal,On 2 occasions MACD has given signal and on 1 occasions both MACD and RSI has given signal. Out of 8 occasions, on 7 occasion, the price variation is less than 38% and on 1 occasion all the three indicator gave the same signal (Especially RSI strong signal) and the price variation was up to 58%.

SUGGESTIONS

1. **INFORMATION TECHNOLOGY SECTOR**

    - In this sector, it is suggested to the investors not to use only MACD as the indicator to make decision as the price variation is not reacting much. Therefore it is suggested to use MACD, RSI and ROC.

    - As per the current situation, it is suggested to the investors of INFOYSIS withdraw their investment as MACD , RSI and ROC has given short signal as on 07/02/2019.

    - As per the current situation, it is suggested to the investors of TCS withdraw their investment as RSI has given strong short signal as it reaches its overbought zone as on 07/02/2019.

2. **BANKING SECTOR**

    - In this sector, it is suggested to the investors to use all three indicators to make decision as the price variation is reacting much when it provides all three indicators. Therefore it is suggested to use MACD, RSI and ROC.
    - As per the current situation, it is suggested to the investors of HDFC BANK to withdraw their investments as the MACD and ROC has given short signal as on 08/02/2019.
    - As per the current situation, it is suggested to the investors of ICICI BANK to hold their investment positions as the indicators has not given any signal as on 08/02/2019.

3. **AUTOMOBILE SECTOR**

- In this sector, it is suggested to the investors use RSI as well as MACD as the indicator to make decision as the price variation is reacting much when RSI gives strong signal. Therefore it is suggested to use MACD, RSI and ROC.

- As per the current situation, it is suggested to the investors of M&M hold their investment positions as the indicators has not given any signal as on 08/02/2019.

- As per the current situation, it is suggested to the investors of ASHOK LEYLAND buy shares for long positions as RSI has reaches its oversold zone and indicating to go for buy as on 08/02/2019.

4. **MEDIA & ENTERTAINMENT SECTOR**

- In this sector, it is suggested to the investors use RSI as well as MACD as the indicator to make decision as the price variation is reacting much when RSI gives strong signal. Therefore it is suggested to use MACD, RSI and ROC.

- As per the current situation, it is suggested to the investors of ZEE ENT buy shares for long positions as MACD and RSI has given buy signal and indicating to go for buy as on 11/02/2019.

- As per the current situation, it is suggested to the investors of DISH TV buy shares for long positions as MACD and RSI has given buy signal and indicating to go for buy as on 11/02/2019.

CONCLUSION:

The training in Karvy Stock Broking Company has created a sense of practical exposure & enlightenment as to what actually an organization is & how theoretical concepts are practiced. However, after the training, it helped in building confidence to understand different management concepts in a pragmatic manner.

The training helped a lot in recalling the theoretical concepts, which were learnt in 3rd semester MBA course and also came across real problems faced by organization in technology, human resources etc.& the way in which the management tackled those problems.

During the period, it was observed that how communication acts as an important tool for the smooth functioning of the organization & how to communicate on different channels & with different grades of peoples.

Lastly, the company is having good market for its product and the prospects of the company continue to be positive. Whenever an investor is thinking to buy or sell the stocks of the company, it is vital to understand the market and industry in which it operates.

ANNEXURE

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DEPARTMENT OF MBA

PROJECT (17MBAPR407) -WEEKLY REPORT

NAME OF THE STUDENT: LAKKU BABU YAMAKAR

INTERNAL GUIDE: Prof, OM PRAKASH, C.

USN: 1AY17MBA22

COMPANY NAME: KARVY STOCK BROKING LTD, HUBLI.

WEEK	WORK UNDERTAKEN	EXTERNAL GUIDE SIGNATURE	INTERNAL GUIDE SIGNATURE
3rd Jan 2019 – 9th Jan 2019	Industry Profile and Company Profile		
10th Jan 2019 – 17th Jan 2019	Preparation of Research instrument for data collection		
18th Jan 2019 – 25th Jan 2019	Data collection		
26th Jan 2019 – 2nd Feb 2019	Analysis and finalization of report		
3rd Feb 2019 – 9th Feb 2019	Findings and Suggestions		
10th Feb 2019 – 16th Feb 2019	Conclusion and Final Report		
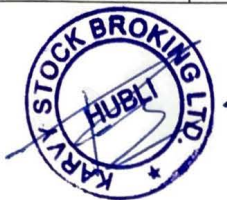
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